

**Forest Service Manual
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Washington, DC**

**Forest Service Manual 2500 – Watershed and Air Management
Chapter 2510 – Watershed Planning**

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Date approved:

Responsible Staff:

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NEW POSTING NOTICE: This amendment is the first in a new numbering series corresponding to the year in which material was amended. Since this amendment replaces all text except Interim Directives (ID), do not check for the last transmittal received for this title. Replace the entire title text except ID's. Place this transmittal sheet at the front of the title and retain until the first transmittal of the next calendar year is received.

Digest: Following is an explanation of the changes throughout the directive by section.

2500: Please read the new posting notice carefully. These directions apply to this transmittal only.

Entire text, except ID's, is replaced. New text corresponds with text located in the National Information Center.

The electronic document names are shown above for ease in accessing them from the National Information Center.

Direction has not been changed. Some minor typographical and technical errors were corrected.

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Amendment numbers and dates noted above are listed for historical purposes only.

All subsequent amendments will be issued by document.

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2510.2 - Objectives

1. To identify and evaluate watershed condition or damage producing events that cause threat to life or property, site deterioration, water pollution, or unsatisfactory water yield, and plan appropriate corrective action on the contributing watershed.
2. To ensure appropriate liaison in connection with out-Service water resource development projects.
3. To identify and evaluate the potential use and enhancement opportunities of the soil and water resource by:
 - a. Ensuring the timely availability of soil and water resource information needed for the Forest and Rangeland Renewable Resources Planning Act (RPA) assessment and program and in land and resource management planning.
 - b. Developing and fully integrating watershed management goals and objectives into RPA and into land and resource management planning.

2510.3 - Policy

Protection and development of soil and water resources shall be components of land and resource management planning for National Forest System lands. Use soil and water surveys as an integral part of the land and resource management process. Identify significant soil and water resource capabilities, land base limitations, and the prescribed management activities in all land and resource management plans.

Design surveys to gather enough information to develop management alternatives that will protect and develop soil and water resources, and to evaluate management concerns and issues expressed by the general public. Respond to soil and water issues and concerns and incorporate the information into land and resource management planning efforts. Address each watershed planning issue and concern identified as significant for the planning area.

2510.4 - Responsibility

See FSM 2504 for overall watershed management responsibilities. The following additional responsibilities are specific to watershed planning:

2510.41 - Chief

The Chief shall:

1. Coordinate specialized surveys needed for watershed planning that involves more than one Region.

2. Develop standards, guidelines, and direction for field participation in planning and in construction liaison activity for out-Service water development projects.

2510.42 - Regional Forester

Each Regional Forester shall:

1. Establish Regional standards of performance, guides for surveys and plans, and criteria for capital investment accounts and inventories.
2. Establish Regional procedures for revision of program goals and targets following natural disasters.
3. Prepare position papers and recommendations for inter-Regional projects if assigned primary responsibility by the Washington Office; assist other Regions, as requested, when they have primary responsibility.
4. Ensure that Forest plans are revised to reflect changes brought about by authorized out-Service water resource development projects (FSM 1920).

2510.43 - Forest Supervisor

Each Forest Supervisor shall:

1. Include soil and water resource information in all Forest land and resource planning.
2. Investigate all significant natural disasters promptly, appraise their impact on goals and targets, and recommend program adjustments for consideration by the Regional Forester.

2510.6 - Planning Criteria

Develop criteria to guide all phases of planning. Use the Management Improvement Handbook (FSH 1309.11) to identify activities and watershed program outputs. The two principal outputs are actual acres of watershed improvements and actual acres of inventories accomplished. Report both in the Management Attainment Report (MAR).

Use effectiveness evaluations of alternatives when planning watershed condition improvements. Analyze economic efficiency, environmental quality, and social well-being. Use all three analyses to guide and determine priority for planning and implementing watershed condition improvements. Follow the guidelines for performing project effectiveness analyses contained in section 14, FSH 2509.12, Watershed Improvements Handbook.

2511 - Coordination With Land and Resource Management Planning

2511.02 - Objective

To provide integrated direction for the management, protection, and use of all resources under the principles of multiple use and sustained yield to meet the needs of the American people. Specific objectives related to planning for the soil and water resources are:

1. To resolve issues, concerns, and opportunities related to soil and water resources.
2. To provide direction, including development of standards, guidelines, and management practices to conserve, and, where appropriate, improve the quality of soil and water resources and riparian areas.
3. To establish watershed management goals, objectives, and targets for the planning area.
4. To provide direction for the watershed program management activity.
5. To analyze and display the effects of management alternatives on soil productivity, water quality, watershed condition, and riparian areas.

2511.03 - Policy

Coordinate watershed management programs and respond to goals and objectives developed through the land and resource management planning process (FSM 1920). Develop soil and water resource related management alternatives based on watershed condition surveys and soil and water resource inventories and investigations (FSM 2512, 2522, 2531, and 2542). Assign high priority for survey, inventory, and analyses to municipal water supply, flood source, and high-value or intensively managed watersheds. Include direction in land and resource management plans for conservation and appropriate enhancement of soil and water resources.

2511.1 - Soil and Water Inventories and Interpretations for Planning

The planning procedures hierarchy in FSM 1920 identifies complexities of planning situations and the type of management decision appropriate to each planning level.

Design soil and water inventories and interpretations to meet stated objectives of the plan being developed. Develop inventory and interpretive processes when designing the planning process; document them in the supporting information. Direction and guidelines for specific types of soil and water resource inventories are in FSM 2520 - 2550.

2511.2 - Conservation of Soil and Water Resources

To comply with National Forest Management Act regulations (36 CFR Part 219.28F), management instructions in handbooks must show specific ways to avoid or mitigate soil and

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water damage, and maintain or enhance productivity on specific sites. FSM 2509.1 identifies internal Service-wide handbooks that provide procedures for conserving soil and water resources. Regional Foresters may develop additional internal unit handbooks. (See 2509.2 for proper title of handbook number). Design handbooks with the objectives of protecting or improving soil productivity, water quality and quantity, watershed condition, and riparian areas. Respond to the specific requirements in 36 CFR 219, Subpart A, that relate to soil and water resources.

2512 - Soil and Water Surveys for National Assessment

2512.02 - Objective

To ensure timely availability of soil and water resource information needed for the periodic assessment required by the Forest and Rangeland Renewable Resources Planning Act (RPA), as amended.

2512.03 - Policy

Collect and maintain appropriate types and levels of soil and water resource information needed to establish achievable goals and targets to meet the needs of the RPA national assessment. Include the following:

1. Present situation and trends in watershed condition affecting soil stability, soil productivity, flood potential, water quality, and volume and timing of water yield.
2. Identified needs and opportunities for watershed improvements.
3. Current and projected levels of water quality, soil productivity, and water yields.
4. Types, levels, and estimates of investment costs for programs needed to meet soil and water resource goals.

2513 - Data Management

2513.02 - Objectives

1. To program complex analyses efficiently and accurately.
2. To facilitate the storage and retrieval of technical soil and water data.

Refer to FSM 6602 for overall objective in management of Forest Service Systems.

2513.03 - Policy

Develop and use national and interagency computer systems within guidelines established in FSM 6603. Provide input to national data bases as requested and train personnel to use appropriate computer systems.

Use automatic data processing techniques to:

1. Develop programs or models that improve capability to predict soil and water resources response to applied management practices.
2. Evaluate analytical techniques or programs developed by outside groups for possible use by Forest Service.
3. Coordinate data base management with the Washington Office.

2513.1 - Watershed Data Reference File

The Washington Office Watershed and Air Staff maintains the watershed reference file or user's guide that describes analytical techniques supported and approved for national application. The file is on the Ft. Collins computer.

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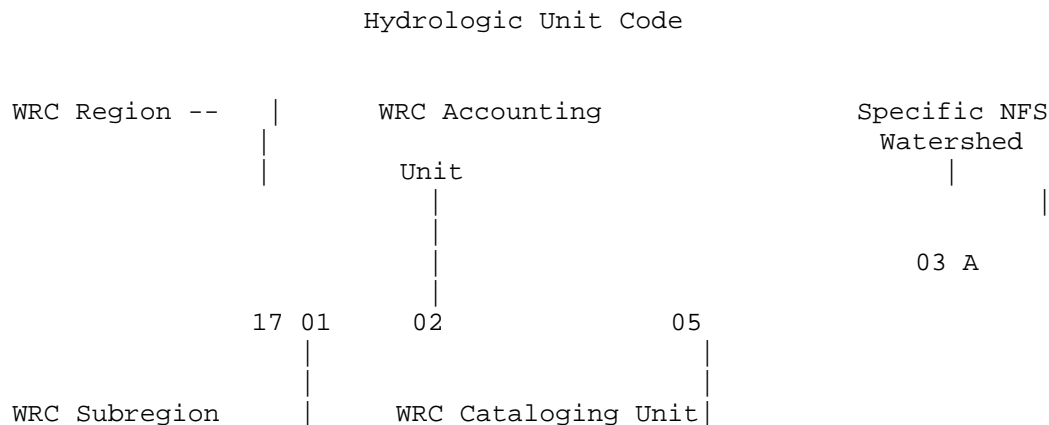
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2513.2 - Watershed Coding

Use the standardized numbering system code developed and coordinated with other Federal Agencies to facilitate data reporting and management. The watershed coding system consists of 6 fields containing 11 characters, for example: 17 01 02 05 03 A. The first 8 characters comprising the first 4 fields are the Hydrologic Unit Code found on hydrologic unit maps prepared by the U.S. Geological Survey in cooperation with the Water Resources Council (WRC). They are respectively: Water Resources Council Region, Water Resources Council Subregion, Water Resources Council Accounting Unit, and Water Resources Council Cataloging Unit, expressed numerically. The last 3 characters (fifth and sixth fields) are the specific National Forest System Watershed identification. The fifth field is composed of two numbers; the sixth field is a single character which can be either a number or a letter which represents a sub-watershed. It is shown graphically as follows:



Code all specific NFS watersheds using this 3 character system. More than 3 characters are not allowed. Coordinate numbers with other Regions and Forests if watershed boundaries cross administrative boundaries.