

**FSH -2509.19 – NATIONAL BEST MANAGEMENT PRACTICES
CHAPTER 10 – NATIONAL CORE BEST MANAGEMENT PRACTICES**

The National Best Management Practices (BMPs) Program consists of four components: 1) a set of National Core BMPs, 2) a set of standardized monitoring protocols to evaluate implementation and effectiveness of those core BMPs, 3) corresponding National direction in the Forest Service Directive System, and 4) a data management and reporting structure.

01 – AUTHORITY

See FSM 2501 for authorities related to Water Quality Management.

In addition to the authorities listed in FSM 2501, the National BMP Program is guided by the land management planning regulation at Title 36, Code of Federal Regulations, section 219.8 (a)(4), which requires the Chief of the Forest Service to establish requirements for National best management practices for water quality in the Forest Service Directive System.

02 – OBJECTIVES

The primary objective of this Handbook is to establish a Nationally consistent, adaptive management approach to address nonpoint source pollution on National Forest System (NFS) lands. Specifically:

1. Provide a system of BMP implementation for the control of nonpoint source pollution on all NFS lands to avoid, minimize, or mitigate adverse effects to soil, water quality, and riparian resources to meet the intent of applicable Federal, tribal, State, and local water quality laws and regulations, Executive orders, and the U. S. Department of Agriculture (USDA) directives.
2. Provide a consistent process to monitor, evaluate, document, and report Forest Service efforts to implement BMPs and the effectiveness of those BMPs at protecting water quality at National, regional, and forest or grassland scales.
3. Provide a method to identify BMP implementation or effectiveness problems, assessed through monitoring, and adjust land and resource management accordingly.

03 – POLICY

In addition to the general policy statements in FSM 2532, these specific policy statements apply to the National BMP Program.

1. Provide a consistent National approach for applying the Forest Service nonpoint source pollution management strategy for water quality protection on National Forest System (NFS) lands.

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2. Incorporate adaptive management principles to manage water quality on NFS lands through application of BMPs, monitoring of their implementation and effectiveness, and using the monitoring results to improve land and resource management activities.
3. Promote and apply National core BMPs to land and resource management activities as the primary method to address non-point sources of water pollution, and to meet established local, State, tribal, or National water quality goals.
 - a. Use applicable regional, State, tribal, and local BMPs and land management plan requirements, direction and guidance, BMP monitoring information, and professional judgment to develop site-specific BMP prescriptions to meet the objectives of the National Core BMPs.
 - b. Properly install and maintain appropriate site-specific BMP prescriptions to avoid, minimize, or mitigate impacts of current management activities on soil, water, and riparian resources to maintain or improve chemical, physical and biological water quality.
4. Monitor BMP implementation and effectiveness using National Core BMP monitoring protocols and reporting systems.
 - a. Monitor BMP implementation using field evaluations to determine whether site-specific BMP prescriptions have been implemented and maintained as planned.
 - b. Monitor BMP effectiveness using field evaluations of appropriate indicators to determine if the applied practices are meeting the desired objective(s).
 - c. Perform data quality checks and store BMP monitoring data in the National BMP data management system.
 - d. Analyze the monitoring data for trends in BMP implementation and effectiveness and report results at National, regional, and forest or grassland levels.
5. Use BMP monitoring results to inform adaptive management decisions and determine whether there is a need to change management activities, the BMPs, the monitoring program, or the land management plan.
 - a. Use the results of BMP monitoring and best available scientific information, in collaboration with Federal, State, tribal and local agencies and partners as appropriate, to improve administrative procedures and BMPs.
 - b. Initiate corrective actions where BMP implementation or effectiveness monitoring indicates that BMP objectives were not met. Conduct implementation and effectiveness monitoring on corrective actions and document adjustments.

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- c. Coordinate with appropriate Federal, State, tribal, or Local agencies regarding any changes in water quality designated beneficial uses and/or standards as necessary.
6. Document and share findings of BMP monitoring with appropriate Federal, State, tribal, and local agencies and partners.

04 – RESPONSIBILITY

Responsibilities that apply to this section are listed in FSM 2532.04.

05 – DEFINITIONS

In addition to the definitions in FSM 2532.05, the following definitions apply to this section only:

Adaptive Management. A system of management practices based on clearly identified intended outcomes and monitoring to determine if management actions are meeting those outcomes; and, if not, to facilitate management changes that will best ensure that those outcomes are met or re-evaluated. Adaptive management stems from the recognition that knowledge about natural resource systems is sometimes uncertain (36 CFR 220.3).

Adaptive Monitoring. A monitoring system that uses the data collected to alter the sampling design and the protocols used evolve as new information emerges and specific management questions and concerns change (Lindenmayer and Likens 2007).

Aquatic Management Zone (AMZ). An administratively designated zone adjacent to stream channels and other waterbodies. The AMZ is delineated for applying special management controls aimed at maintaining and improving water quality or other water- and riparian-dependent values, including groundwater-dependent ecosystems. The width of the AMZ is determined based on site-specific factors and local requirements. AMZ delineation may encompass the floodplain and riparian areas when present. AMZ designation can have synergistic benefits to other resources, such as maintaining and improving aquatic and riparian-dependent resources, visual and aesthetic quality, wildlife habitat, and recreation opportunities. AMZs include designations such as Stream Management Zones, Riparian Reserves, and Riparian Conservation Areas. AMZs are inclusive of riparian areas as described in the planning rule (36 CFR 219.8 (a)(3)).

Beneficial Use (Designated Use). Those uses specified in State or tribal water quality standards for each water body or segment whether or not they are being attained (40 CFR 131.3). Types of uses include: public water supplies; protection and propagation of fish, shellfish, and wildlife; recreation; agriculture; industry; navigation; marinas; groundwater recharge; aquifer protection; and hydroelectric power (EPA 2007).

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Effectiveness Monitoring. Monitoring to evaluate whether the specified BMPs had the anticipated effect in achieving the desired conditions, goals, and objectives for water quality (MacDonald et al., 1991).

Implementation Monitoring. Monitoring to evaluate whether BMPs were carried out as planned and specified in the environmental assessment, environmental impact statement, other planning document, permit, or contract (MacDonald et al., 1991); how well they were applied; and whether the appropriate BMPs were selected.

Regional BMP Supplement. Additional or more specific BMPs established by the regions, to be used in conjunction with the National Core BMPs.

Reporting period. The period of time, not to exceed three years, determined by the Washington Office Director of Watershed, Fish, Wildlife, Air, and Rare Plants as the base monitoring period in which a valid set of BMP monitoring data will be collected and reported at the National scale.

Site-specific BMP prescriptions. Site-specific techniques implemented to control nonpoint source pollution. Site-specific BMP prescriptions are determined during the project planning process and are described in decision documents that outline how the National Core BMPs will be applied based on local site conditions. State and local BMPs, regional Forest Service guidance, land management plan standards and guidelines, monitoring results, and professional judgment are used to develop site-specific BMP prescriptions (FS-990a).

Water quality. The physical, chemical, radiological, and biological (including microbiological) characteristics of the water resource.

Water resource. All surface waterbodies and groundwater on National Forest System lands.

Waterbody. Features such as rivers, streams, reservoirs, lakes, ponds, aquifers, wet meadows, fens, bogs, marshes, and wetlands. A waterbody may be perennial, intermittent, or ephemeral.

06 – REFERENCES

In addition to the references in FSM 2532.06, the following references apply to this section only:

MacDonald, L.H., A.W. Smart and R.C. Wissmar. 1991. *Monitoring Guidelines to Evaluate Effects of Forestry Activities on Streams in the Pacific Northwest and Alaska.* EPA 910/9-91-001. Seattle, WA: U.S. Environmental Protection Agency and University of Washington. 166 pp.

WO AMENDMENT
EFFECTIVE DATE:

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U.S. Environmental Protection Agency (EPA). 2007. *Water Quality Standards Handbook: Second Edition – web version*. EPA-823-B-94-005. Washington, DC: U.S. Environmental Protection Agency, Office of Water.
(<http://www.epa.gov/waterscience/standards/handbook/>)

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This chapter provides direction for a process of developing and maintaining the National Core Best Management Practices (BMPs). The National Core BMPs can be found at http://www.fs.fed.us/biology/resources/pubs/watershed/FS_National_Core_BMPs_April2012.pdf

10.3 – POLICY

1. Use of the National Core BMPs provides a structure for Agency consistency, accountability, and monitoring of BMP implementation and effectiveness.
2. The National Core BMPs provide general, non-prescriptive direction for protecting water quality in the execution of land and resource management activities that commonly occur on all NFS lands.
 - a. The National Core BMPs do not supersede or replace existing and currently used regional, State, tribal, or forest or grassland BMPs.
 - b. The National Core BMPs require the use of site-specific prescriptions based on existing State, tribal, and local BMPs, Forest Service regional guidance, land management plans, BMP monitoring results and professional judgment to achieve water quality protection.

11 – RESOURCE CATEGORIES FOR NATIONAL CORE BMPS

Use an interdisciplinary process to develop National Core BMPs for appropriate resource categories and to provide a structure to facilitate BMP monitoring. See the National Core BMP Technical Guide Volume 1 (http://www.fs.fed.us/biology/resources/pubs/watershed/FS_National_Core_BMPs_April2012.pdf) for the complete list of resource categories. Existing categories at the time of this Handbook development are described below.

11.1 – General Planning Activities

Provide direction for incorporating water quality protection and management in planning at the land management plan scale and the project scale.

11.2 – Aquatic Ecosystems Management Activities

Provide direction for restoration of aquatic ecosystems and for protecting water quality while working in or near water bodies.

11.3 – Chemical Use Management Activities

Provide direction for proper storage, transportation, handling, and use of chemical products to prevent adverse impacts to water quality.

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11.4 – Facilities and Non-recreation Special Uses Management Activities

Provide direction for protecting water quality during construction, operation, and restoration of facilities and facility sites, and other non-recreation special uses. Facilities may include buildings or other structures, impervious surfaces, access routes to private in-holdings, and water systems and/or waste systems for administrative uses or third-party purposes, such as concession sites, communication sites, and pipelines.

11.5 – Wildland Fire Management Activities

Provide direction to avoid or minimize adverse effects to water quality during wildland fire activities while not compromising firefighter and public safety.

11.6 – Minerals Management Activities

Provide direction for protecting water quality during the exploration and production of mineral and energy resources and reclamation of mined lands consistent with applicable mineral laws and regulations.

11.7 – Rangeland Management Activities

Provide direction to incorporate water quality protection into rangeland and grazing management planning and permit administration.

11.8 – Recreation Management Activities

Provide direction for protecting water quality while constructing and operating developed recreation sites and managing dispersed recreation uses.

11.9 – Road Management Activities

Provide direction to construct, operate, and maintain the road system on National Forest System (NFS) lands to avoid, minimize, or mitigate effects to water quality.

11.10 – Mechanical Vegetation Management Activities

Provide direction for protecting water quality as part of implementing mechanical vegetation treatments. This category does not include vegetation management activities using prescribed fire or chemical treatments (See sec. 11.3 for chemical treatments and sec. 11.5 of this Handbook for prescribed fire).

11.11 – Water Uses Management Activities

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Provide direction for protecting water quality during the construction and operation of water use developments and infrastructure consistent with applicable Federal and State laws and regulations for water use and allocation.

12 – FOCUS NATIONAL CORE BMPS ON WATER QUALITY

The primary intent of the National Core BMPs is to address the Clean Water Act (CWA) objective of maintaining and restoring the chemical, physical, and biological integrity of the Nation's waters. To that end, the National Core BMPs focus on controlling nonpoint sources of water pollution on NFS lands. Direction in the National Core BMPs to address soil, aquatic, and riparian resources should be included to the extent that those resources contribute to the maintenance and restoration of chemical, physical, and biological water quality.

13 – GENERAL NATURE OF THE NATIONAL CORE BMPS

The National Core BMPs apply to a wide range of activities on NFS lands across the nation. The National Core BMPs are general and non-prescriptive in nature so that they can be applied to all Forest Service regions and National forest and grassland units. When planning projects, consult applicable State, tribal, and local laws, regulations, and BMP programs, Forest Service regional guidance, and land management plans for criteria to develop site-specific BMP prescriptions consistent with the National Core BMPs to address local soils, topography, climate, vegetation types, site conditions, or State-specific requirements. Regions may supplement the National Core BMPs with additional practices to meet regional needs.

14 – SOURCE DOCUMENTS FOR NATIONAL CORE BMPS

Compile practices from Forest Service manuals, handbooks, contract and permit provisions, and policy statements, and from Federal, tribal, State, and local agencies, trade associations, or other organizations' guidance on water quality protection.

15 – MAINTENANCE OF THE NATIONAL CORE BMPS

The Forest Service strategy for nonpoint source pollution management is to adjust land and resource management practices as needed to improve water quality protection based on information gained from monitoring BMP implementation and effectiveness. The National Core BMPs may also need to be modified to reflect new information, changed circumstances, new technology, or new laws and regulations. At least every 5 years, review the National Core BMPs and any regional supplements using BMP monitoring results, best available science, and professional judgment to ensure that the National Core BMPs and site-specific BMP prescriptions are kept current and effective in protecting water quality on NFS lands.

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CHAPTER 20 – NATIONAL BEST MANAGEMENT PRACTICES IMPLEMENTATION**

This chapter provides direction for establishing a process for the selection and implementation of Best Management Practices (BMPs) to be used to control nonpoint sources of pollution on National Forest System (NFS) lands.

20.3 – POLICY

1. Plan components shall address applicable planning-level National Core BMPs when land management plans are developed or revised.
2. Plans for all new projects and activities shall incorporate the National Core BMPs. Projects or activities in which the site-specific planning process (for example, initial public scoping) was initiated prior to the date of this Handbook adoption may reference the National Core BMPs.

21 – LAND MANAGEMENT PLANNING

Establish plan components that address the identification, selection and implementation of BMPs for water quality, including desired conditions in the land management plan, consistent with Forest Service planning regulations (36 CFR 219) and the National BMP Program. Plan components related to water quality should be tailored to each individual plan area and meet or exceed applicable requirements which may include Federal, State, tribal, and local water quality laws and regulations.

22 – PROJECT PLANNING

Identify appropriate or required National Core BMPs related to the control of nonpoint source pollution during the project planning and environmental analysis stage. Select National Core BMPs that address activities, local conditions, values, and designated uses of water specific to the project. Develop site-specific BMP prescriptions based on the proposed activity and potential effects, water quality objectives, soils, topography, geology, vegetation, climate, and other site-specific factors. Refer to applicable Federal, State, tribal, and local laws and regulations, BMP programs, Forest Service regional guidance, the land management plan, other relevant information, and BMP monitoring results for criteria to assist in developing site-specific BMP prescriptions. Document the selected project BMPs and site-specific BMP prescriptions in the project file and decision document.

23 – PROJECT IMPLEMENTATION

Include the selected project BMPs and site-specific BMP prescriptions in any relevant documents, which may include implementation plans, contract provisions, special use authorizations, project plan specifications, or other project documents. Administer the project consistent with current Agency direction and procedures to ensure the site-specific BMP

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prescriptions are implemented as planned. Adjust site-specific BMP prescriptions as needed during project implementation to better fit actual site conditions. Routinely inspect the project or activity area during and following implementation to identify BMP deficiencies or maintenance needs. Correct any identified problems using established procedures, as soon as practical. Incorporate identified maintenance needs in operation and maintenance plans. Document BMP implementation in project records, daily logs, permit files, and other documents.

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This chapter provides direction for the process of developing and maintaining the National Core Best Management Practices (BMP) monitoring protocols. The protocols are for evaluating the implementation and effectiveness of the National Core BMPs in protecting water quality.

30.3 – POLICY

1. National Core BMP monitoring protocols provide for credible and objective interdisciplinary evaluation of BMP implementation and effectiveness at multiple scales.
2. National Core BMP monitoring protocols provide information for adaptive management of BMPs and project planning and implementation.
3. National Core BMP monitoring protocols utilize adaptive monitoring principles to provide for continuous improvement of the monitoring protocols and sampling design.

31 – NATIONAL BMP MONITORING STRUCTURE

Use an interdisciplinary process to develop a National monitoring procedure to assess the implementation and effectiveness of the National Core BMPs. Develop a consistent structure across administrative units and regions to efficiently demonstrate performance at multiple scales.

31.1 – Purpose

BMP monitoring is needed to:

1. Evaluate practices and adjust practices or land and resource management activities;
2. Document and report progress in meeting applicable established local, State, tribal, and National water quality goals;
3. Enhance internal and external understanding of BMPs;
4. Support the use of adaptive management in land management planning, project implementation and permit administration; and
5. Support National Environmental Policy Act (NEPA) analysis and decision-making.

31.2 – Monitoring Objectives

The National BMP monitoring objectives are to assess:

1. Whether appropriate BMPs are being used and applied as planned in land and resource management activities (implementation); and

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2. Whether the BMPs, as implemented, protect water quality (effectiveness).

Standardized National monitoring protocols address these two monitoring objectives for the National Core BMPs for use on all National Forest System (NFS) lands. Each monitoring protocol includes criteria to rate whether or not the BMP was adequately implemented and effective.

31.3 – National Sampling Design

Establish a National sampling design that will provide for evaluation of implementation and effectiveness of the National Core BMPs in each resource category within each Forest Service Region for the established reporting period.

Collect sufficient data to provide a valid data set for each applicable monitoring protocol for the established reporting period. Participation by each administrative unit in National BMP monitoring is necessary to determine whether monitoring objectives are met.

Monitoring protocols should be designed to evaluate projects representative of the activities and ecotypes on each National forest or grassland, with an emphasis on activities where water quality protection and pollution control is of the greatest relevance and concern.

32– NATIONAL CORE BMP MONITORING PROTOCOLS

Standardized National monitoring protocols evaluate whether the National Core BMPs and site-specific BMP prescriptions are implemented as planned, and whether they are effective in protecting water quality and preventing erosion and transport of sediment and other pollutants to water bodies.

32.1 – Protocol Goals

The goals of the National Core BMP monitoring protocols are to:

1. Assess the outcomes of each BMP in general, rather than evaluating the details of the individual site-specific prescriptions used.
2. Maximize efficiency in monitoring and data collection by limiting the questions asked in each protocol to those most essential and relevant to BMP implementation and effectiveness.
3. Provide for capture of information from site-specific BMP prescriptions important to evaluating BMP implementation and effectiveness at the administrative unit or larger scale.

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32.2 – Protocol Quality Assurance and Quality Control

Design the monitoring protocols to collect monitoring data and information that are comparable, repeatable, and accurate by using the following quality assurance and quality control (QA/QC) measures:

1. Select sample sites that are representative of the BMPs used in the various ecotypes that exist across all NFS lands.
2. Use a systematic approach for each site evaluation.
3. Establish a consistent set of protocols to maximize comparability of the data.
4. Provide written instructions for each protocol in sufficient detail so that people with a basic understanding of BMPs and the resource activity can successfully complete the evaluation in a consistent manner.
5. Use metrics that are largely or fully quantifiable to reduce subjectivity and increase the likelihood of identical or similar answers to each protocol question regardless of who collects the data.
6. Conduct QA/QC evaluations on a subset of all sample sites to evaluate the monitoring data.
7. Provide adequate training to all personnel involved in BMP monitoring activities.

32.3 – Sample Selection for Each Protocol

32.31 – Population Development and Site Selection

Describe criteria for establishing a population of potential sample sites on the administrative unit appropriate to the management activity and BMPs to be monitored in each protocol. Narrow the population to a final sample pool, where necessary, to further refine the population of interest. Select sample sites from the final sample pool to be monitored.

32.31a – Randomly Selected Sites

In order to achieve objective, representative data from sample sites and reduce bias, randomly select sample sites from the final sample pool are used for the National program analyses and target attainment.

32.31b – Non-randomly Selected Sites

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An administrative unit may choose to use the National Core BMP monitoring protocols to evaluate BMP implementation and effectiveness on specific projects, or in selected locations of special interest or concern. National Core BMP monitoring protocols could also be used as part of routine activity, program, project management, or land management plan monitoring and reviews.

32.4 – Monitoring Team

Recommend the composition of an interdisciplinary review team (IDT) appropriate to monitor each BMP within the corresponding protocol. The IDT should consist of the National forest or grassland staff needed to complete the monitoring, including those Resource Specialists who participated in the planning or administration of the land and resource management activities and appropriate watershed specialists. Include Line Officers, affected third parties, permit holders, representatives of Federal or State regulatory agencies, and other interested stakeholders as needed or appropriate.

32.5 – Implementation Monitoring

Describe a two-step process for implementation monitoring in each protocol. First, require a review of project documents to determine what site-specific BMPs prescriptions were intended for the project. Then include a field review process to assess whether the appropriate BMP prescriptions were selected and how well they were applied. The implementation portion of each monitoring protocol should address the implementation questions listed in section 32.51 below.

32.51 – Implementation Monitoring Questions

Include implementation questions responsive to the overall objective of determining whether appropriate BMPs are being used and applied as planned in land and resource management activities. Structure the implementation questions to obtain information to address the following issues:

1. Was water quality considered in project planning?
2. Were appropriate BMPs selected for the project?
3. Were the BMPs identified in the planning and decision documents included in the project contract, plan, or other document?
4. Were all site-specific BMP prescriptions implemented in the field as planned?
5. What corrective and adaptive management actions were taken or are needed to improve BMP implementation?

32.52 – Timing of Implementation Monitoring

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Specify when the implementation monitoring portion of the evaluation should be performed relative to the completion of the activity being monitored. In all cases, implementation monitoring is to be completed before the effectiveness monitoring is conducted.

32.53 – Implementation Monitoring Document Review

Specify that project documents are to be examined for site-specific BMP prescriptions. Relevant documents could include the administrative unit's land management plan, project NEPA documents, project plans, special use authorizations, contracts, and other planning, contract, or environmental documents. This document review should be completed prior to the field review.

32.54 – Field Review of Implementation Monitoring

Define the area at the project location to be evaluated for implementation of BMPs. Within each sample site, focus BMP monitoring on those areas expected to contribute or control sediment or other pollutants, or that can act as a conduit for pollutant delivery to water bodies, influence shading of waterbodies or alter hydraulics of water (for example, stream crossings). Provide criteria for rating how well site-specific BMP prescriptions are applied.

32.6 – Effectiveness Monitoring

Describe a field review process to assess evidence of sediment or other pollutants leaving the project area and entering the aquatic management zone (AMZ) or nearby waterbodies in each protocol. The effectiveness portion of each monitoring protocol should address the effectiveness questions listed in section 32.61 below.

32.61 – Effectiveness Monitoring Questions

Include effectiveness questions responsive to the overall objective of whether the BMPs, as implemented, protect water quality. Structure the effectiveness questions to obtain information to address the following issues:

1. Did the BMP prevent or control sediment and other pollutants from reaching the waterbody?
2. Where the BMP was not effective, what were the causes or conditions contributing to or associated with the effects?
3. What corrective and adaptive management actions were taken or are needed to improve BMP effectiveness?

32.62 – Timing of Effectiveness Monitoring

Specify when the effectiveness monitoring portion of the evaluation should be performed relative to the completion of the activity being monitored. Effectiveness should be evaluated in a time

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period when the BMP has been tested by factors (for example, precipitation and runoff) that influence BMP performance. In general, effectiveness monitoring should be completed after at least one major seasonal cycle for the area, that is, a wet or winter season. Depending upon the resource activity and BMPs monitored, effectiveness monitoring may or may not be completed in the same day or week as implementation monitoring. In all cases, effectiveness monitoring is to be performed after the implementation monitoring is completed.

32.63 – Field Review of Effectiveness Monitoring

Describe how BMP effectiveness is evaluated. The same area should be evaluated for both implementation and effectiveness. Evaluations should be made based on visual observations and measurements using consistent definitions and criteria. Provide criteria for rating how well site-specific BMP prescriptions have performed at protecting water quality.

32.7 – Protocol Maintenance

The National core BMP monitoring protocols may need to be modified, updated, or replaced based on new information, revised National Core BMPs, changed circumstances, new technology, new laws and regulations, or information gathered during use. Review the National core BMP monitoring protocols at a minimum following the completion of every 2 reporting periods using BMP monitoring results and best available science. Adjust as needed to ensure that the protocols remain an effective tool for gathering BMP monitoring information.

33 – EVALUATING OUTCOMES

Establish a method for each National core BMP monitoring protocol to separately rate the implementation and effectiveness of the National Core BMPs evaluated by that protocol. The methodology should utilize the results of each evaluation in a consistent and credible manner to assign an outcome rating for the evaluation. Analyze National Core BMP performance and trends over time using accepted analytical procedures at National, Regional, and forest or grassland scales.

33.1 – Implementation Outcomes

Implementation monitoring assesses project planning which includes site-specific BMP prescriptions in project planning documents and translation of those prescriptions into action document(s) such as contracts and permits. It also assesses operational execution of the planning, which includes application of specified prescriptions and corrective actions for those specified prescriptions and other issues identified during implementation. The implementation rating outcomes are as follows:

Implementation Rating	Interpretation
Fully Successful	Prescriptions are identified in project planning documents,

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	<u>All</u> prescriptions are translated into action documents, <u>All</u> specified prescriptions are implemented fully, and <u>All</u> necessary corrective actions identified during the project are implemented fully.
Mostly Successful	Prescriptions are identified in project planning documents, <u>Some</u> prescriptions are translated into action documents, <u>All</u> specified prescriptions are implemented fully, and <u>All</u> necessary corrective actions identified during the project are implemented fully.
Marginally Successful	Prescriptions are identified in project planning documents, <u>Some</u> or <u>all</u> prescriptions are translated into action documents, <u>Some</u> specified prescriptions are implemented fully, and <u>All</u> necessary corrective actions identified during the project are implemented fully.
Not Successful	Prescriptions are identified in project planning documents, <u>Some</u> or <u>no</u> prescriptions are translated into action documents, <u>Some</u> or <u>no</u> specified prescriptions are implemented fully, and <u>Some</u> or <u>no</u> necessary corrective actions identified during the project are implemented fully.
No BMPs	Site-specific BMP prescriptions were not developed or identified during project planning

33.2 – Effectiveness Outcomes

Effectiveness monitoring assesses the prevention of pollutants moving into a waterbody and prevention of physical or other damage to a waterbody. The effectiveness rating outcomes are as follows:

Effectiveness Rating	Interpretation
Effective	No pollutants reached the waterbody and there is no potential threat evident --and— No adverse effects to waterbody from the project or activity (e.g. physical disturbance)
Moderately Effective	No pollutants reached the waterbody however there is a potential threat evident --and/or—

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	Minor adverse effects to waterbody from the project or activity
Not Effective	Pollutants reached the waterbody or are very close to entering the waterbody --or-- Major adverse effects to waterbody from the project or activity

33.3 – Combined Evaluation Rating

Combine the implementation rating and effectiveness rating for each individual evaluation into one combined overall for the evaluation according to the following table:

Combined Rating		Implementation Rating				
		Fully Successful	Mostly Successful	Marginally Successful	Not Successful	No BMPs
Effectiveness Rating	Effective	Excellent	Excellent	Good	Fair	No Plan
	Moderately Effective	Good	Good	Fair	Fair	No Plan
	Not Effective	Fair	Fair	Poor	Poor	No Plan

34 – DATA MANAGEMENT

Develop data management capability within the Agency corporate information management system for storage, retrieval, and analysis of National Core BMP monitoring data. Use accepted quality assurance and quality control procedures. Use this database as the database of record for performance accountability tracking related to the National BMP Program.

Enter all monitoring data into the National Core BMP data management system to meet performance accountability needs and timelines. Periodically evaluate the data for completeness. Use the data management system to assign evaluation outcome ratings using the established method for each National core BMP monitoring protocol.

35 – MONITORING REPORT

Complete an evaluation of the National BMP monitoring results for each established reporting period and develop a report to document the implementation and effectiveness of BMPs used to protect water quality on NFS lands. The report should highlight trends in BMP implementation and effectiveness, general patterns by resource area, water quality effects found and their causes,

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and responses needed and completed. The report should be made available both internally and externally.

Use the information contained in the monitoring report to identify additional actions needed at National, Regional, and administrative unit scales to improve BMP implementation and effectiveness. These actions may include, but are not limited to, changes in typical site-specific BMP prescriptions for certain activities, increased awareness of water quality protection needs in project planning, improved transfer of planning information into project documents, refined contract or permit administration, or improved coordination with Federal, State, tribal, and local water resource or forestry agencies at regional or administrative unit scales.