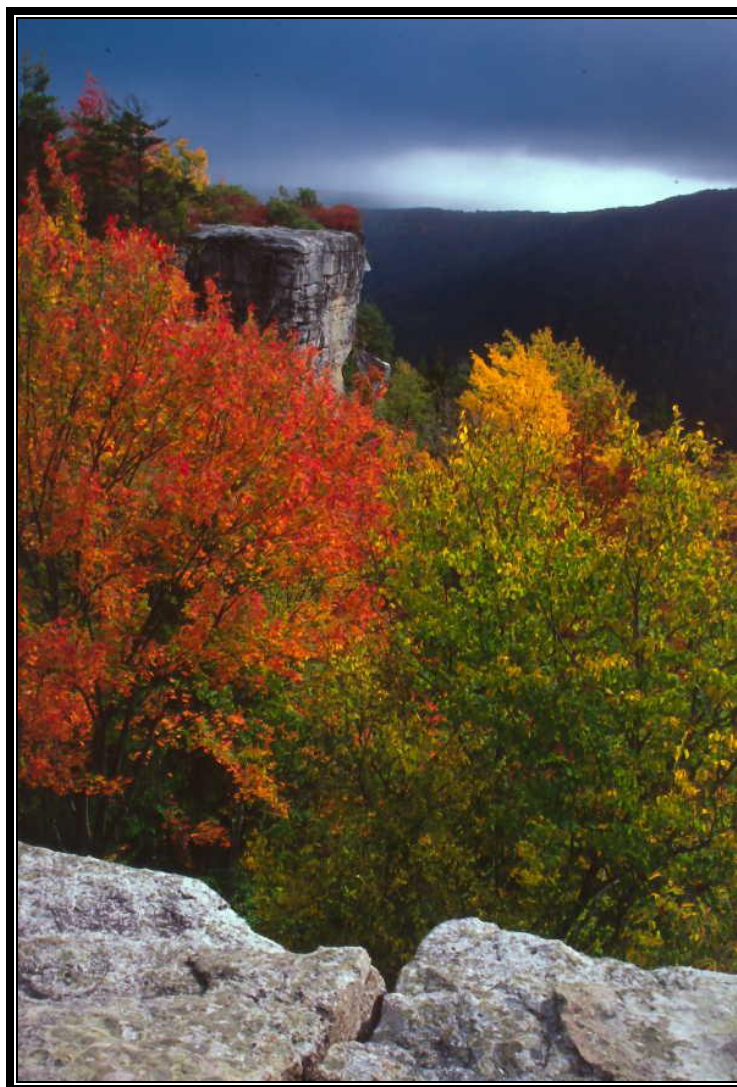


Monongahela National Forest
2007 Monitoring and Evaluation Report
for Fiscal Year 2006



September 2007

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its program and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202)720-2600 (voice and TDD). To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410 or call (202)720-5964 (voice and TDD). USDA is an equal Opportunity provider and employer.

Table of Contents

Table of Contents.....	3
Contributors.....	4
Purpose and Scope of Report	5
Background.....	5
Monitoring Types and Legal Requirements.....	5
Monitoring Program.....	6
Annual Monitoring Report	7
Air Resource.....	9
Botanical Resources.....	19
Soil Resource.....	23
Heritage Resources	34
Wildlife Resources.....	37
Timber Resources	51
Range Resources.....	57
Mineral Resources	65
Recreation Resources.....	69
Aquatic Resources	79
References	89

Contributors

The following Monongahela National Forest personnel contributed to the 2007 Annual Monitoring Report:

Name	Position	Contribution
John Calabrese	Heritage Resources Program Mgr	Heritage Resources section
Jennifer Condon	Soil Scientist	Range section
Stephanie Connolly	Forest Soil Scientist	Soils section
David Ede	Forest Planner	Writer-Editor
Catherine Johnson	Wildlife Biologist	Wildlife Section
Glen Juergens	Forest Silviculturist	Timber section
Kent Karriker	Forest Ecologist	Botanical Resources section
Mike Owen	Forest Aquatic Ecologist	Aquatic Resources section
Andrea Stacy	Air Quality Specialist	Air Quality section
Linda Tracy	Forest Geologist	Minerals section
Carol Whetsell	Acting Recreation Program Manager	Recreation section

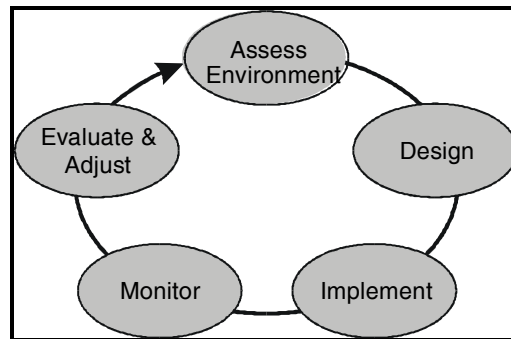
Purpose and Scope of This Report

Background

Land management is an adaptive process that includes social, economic, and ecological evaluations of conditions and trends that contribute to sustaining social, economic, and ecological systems. The Monongahela National Forest (Forest) is committed to collaborating internally and with other land management partners to provide highly credible resource information that meets a wide range of needs. Credible information requires inventory, monitoring, and evaluation activities that are appropriate, consistent, and effective.

Monitoring and evaluation are separate, sequential activities. Monitoring involves collecting data by observation or measurement. Evaluation involves analyzing and interpreting monitoring data. Information gained from monitoring and evaluation is used to determine how well the desired conditions, goals, objectives, and outcomes of the Forest’s Land and Resource Management Plan (Forest Plan) have been met. Monitoring and evaluation keep the Forest Plan up-to-date and responsive to changing conditions and issues, and provide the feedback mechanism for adaptive management (Figure 1). The results are used to identify if and when changes are needed to the Forest Plan or the way it is implemented.

Figure 1.
An Adaptive Management Learning Loop



The Forest has been monitoring and evaluating costs and resource conditions since the release of the 1986 Forest Plan, and it has produced an Annual Monitoring Report for many of those years. The last report was published in 2005. The 2006 Annual Report was deferred because the Forest was producing a revised Forest Plan that year, with a Final Environmental Impact Statement that presented and assessed many of the monitoring results and trends that would have normally appeared in an Annual Monitoring Report.

Monitoring Types and Legal Requirements

The Forest Plan addresses several types of monitoring that generally fall into four broad categories:

- Category 1: Required monitoring items related to the National Forest Management Act,
- Category 2: Attainment of goals and objectives,
- Category 3: Implementation of standards and guidelines, and
- Category 4: Effects of prescriptions and management practices.

Category 1 monitoring items are mandatory components of the Forest Plan, derived from the National Forest Management Act, and tiered to requirements found in planning regulations at 36 CFR (Code of Federal Regulations) 219. For the 1986 Forest Plan, these items include:

- Comparing outputs/services with those projected in the Forest Plan [219.12(k)(1)].
- Document measured prescriptions/effects, including significant changes in productivity of the land [219.12(k)(2)].
- Document cost of actual management practices in relationship to estimated costs [219.12(k)(3)].
- Lands are adequately restocked as specified in the Forest Plan [219.12(k)(5)].
- Lands identified as not suited for timber production are examined at least every 10 years [219.12(k)(5)].
- Evaluate maximum size limits for harvest areas [219.12(k)(5)].
- Destructive insects/disease do not increase to potentially damaging levels [219.12(k)(5)].
- Monitor population trends in indicator species as a result of habitat changes (219.19).

Not all of the results of these monitoring items are reported on an annual basis. For example, lands identified as not suited for timber production are typically reported for Forest Plan revision, which the Forest was completing in 2006.

Category 2 through 4 monitoring items are more flexible and are tailored to address issues raised through public comments and interdisciplinary team review, as translated into Forest-wide direction and management practices. These items are more likely to change through time as indicated through monitoring evaluation results and recommendations.

Monitoring Program

Many approaches to Forest Plan monitoring are currently being used throughout the agency. However, each monitoring program should: 1) meet the legal requirements of the planning regulations, 2) be consistent with corporate data standards and protocols, and 3) be developed by an interdisciplinary team that addresses the ecological, social and economic dimensions of Forest management in an integrated manner.

To meet these objectives, the Forest's monitoring program has a number of components. First the Forest Plan must have direction that provides broad, strategic guidance for monitoring. This direction is found on pages 247-260 in the 1986 Forest Plan.

Second, the broad, strategic direction in the Forest Plan should have an associated Monitoring Implementation Guide that provides specific, technical guidance. The 1986 Forest Plan did not have such a guide. In its place, Forest program managers and specialists developed their

own individual monitoring criteria and strategies. However, for the revised 2006 Plan a detailed Monitoring Implementation Guide is being developed.

Third, there are the monitoring activities that occur on an annual or other regular basis. The activities for Fiscal Year (FY) 2006 are described in this report.

Fourth, there is a tremendous amount of monitoring information collected over time. This information has to be documented and stored so that it can easily be retrieved, evaluated for trends, shared with the public and other stakeholders, or used by agency managers to foster better decisions. Otherwise it is of limited value. Therefore, information management should consist of:

- Management of the collection and storage of data,
- Evaluation and interpretation of data, and
- Sharing of information internally and externally.

Finally, there is the Annual Monitoring Report, which is described in more detail below.

Annual Monitoring Report

The 2006 Annual Monitoring Report provides an opportunity to track progress of implementation of Forest Plan decisions and the effectiveness of specific management practices. The focus of the evaluation is to provide short- and long-term guidance to ongoing management. The report may include components such as:

- Forest accomplishments for outputs of goods and services.
- Forest movement toward desired conditions or attainment of goals and objectives.
- Forest Plan Amendment Status.
- Status of other agency/institution cooperative monitoring.
- Summary of available information on MIS or TES species/habitats.
- Summary of large-scale or significant monitoring projects or programs.
- Update of research needs.
- Public participation/disclosure plan.

The 2006 report summarizes monitoring and evaluation efforts that were conducted in FY 2006 for resources and conditions on the Monongahela National Forest. For each resource area, there is a brief list of accomplishments in FY 2006, followed by a more detailed description of the monitoring and evaluation that occurred. The monitoring and evaluation sections are typically divided into three parts: 1) a description of how the monitoring is linked to the 1986 Forest Plan, 2) a description of the monitoring that was done and the results from that monitoring, and 3) an evaluation of the monitoring, including any conclusions that were made and any recommendations for changes to project implementation, Forest management direction, or future monitoring efforts.

View from North Fork Mountain on a Relatively Clear Day, May 2006

