
Chapter 1

Introduction

Monitoring of both land treatment and water quality is the best way to document the effectiveness of nonpoint source pollution control efforts. The purposes of the United States Environmental Protection Agency (USEPA) Section 319 National Monitoring Program (NMP) are to provide credible documentation of the feasibility of controlling nonpoint sources, and to improve the technical understanding of nonpoint source pollution and the effectiveness of nonpoint source control technology and approaches. These objectives are to be achieved through intensive monitoring and evaluation of a subset of watershed projects funded under Section 319 (USEPA, 1991).

The Section 319 NMP projects comprise a small subset of nonpoint source pollution control projects funded under Section 319 of the Clean Water Act as amended in 1987. The development of NMP projects has largely been accomplished through negotiations among States, USEPA Regions, and USEPA Headquarters.

The selection criteria used by USEPA for Section 319 NMP projects are primarily based on the components listed below. In addition to the specific criteria, emphasis is placed on projects that have a high probability of documenting water quality improvements from nonpoint source controls over a 5- to 10-year period.

- Documentation of the water quality problem, which includes identification of the pollutants of primary concern, the sources of those pollutants, and the impact on designated uses of the water resources.
- Comprehensive watershed description.
- Well-defined critical area that encompasses the major sources of pollution being delivered to the impaired water resource. Delineation of a critical area should be based on the primary pollutants causing the impairment, the sources of the pollutants, and the delivery system of the pollutants to the impaired water resource.
- A watershed implementation plan that uses appropriate best management practice (BMP) systems. A system of BMPs is a combination of individual BMPs designed to reduce a specific nonpoint source problem in a given location. These BMP systems should address the primary pollutants of concern and should be installed and utilized on the critical area.
- Quantitative and realistic water quality and land treatment objectives and goals.
- High level of expected implementation and landowner participation.
- Clearly defined nonpoint source monitoring program objectives.
- Water quality and land treatment monitoring designs that have a high probability of documenting changes in water quality that are associated with the implementation of land treatment.
- Well-established institutional arrangements and multi-year, up-front funding for project planning and implementation.
- Effective and ongoing information and education programs.
- Effective technology transfer mechanisms.

Minimum tracking and reporting requirements for land treatment and surface water quality monitoring have been established by USEPA for the NMP projects (USEPA, 1991). These requirements (see Appendix 1) were set forth based upon past efforts (e.g. Rural Clean Water Program) to evaluate the effectiveness of watershed projects.

USEPA developed a software package, the NonPoint Source Management System (NPSMS), to help the 319 National Monitoring Program projects track and report land management and water quality information (Dressing and Hill, 1996). NPSMS has three data files: 1) a Management File for information regarding water quality problems within the project area and plans to address those problems; 2) a Monitoring Plan File for the monitoring designs, stations, and parameters; and 3) an Annual Report File for annual implementation and water quality data. NPSMS version 4.2 is currently used by National Monitoring Program projects, operating in a WindowsTM environment. (USEPA, 1996a).

This publication is an annual report on 28 Section 319 NMP projects approved as of September 1, 2009. Project profiles (Chapter 2) were prepared by the North Carolina State University (NCSU) Water Quality Group under the USEPA contract entitled National Nonpoint Source Watershed Project Studies. Profiles have been reviewed and edited by personnel associated with each project.

The 27 surface water monitoring projects selected as Section 319 NMP projects are Lightwood Knot Creek (Alabama), Oak Creek Canyon (Arizona), Morro Bay (California), Jordan Cove Urban Watershed (Connecticut), Kickapoo Creek (Illinois), Lake Pittsfield (Illinois), Waukegan River (Illinois), Sny Magill Watershed (Iowa), Walnut Creek (Iowa), Corsica River Watershed, (Maryland), Warner Creek Watershed (Maryland), Eagle River (Michigan), Sycamore Creek Watershed (Michigan), Whitewater River Watershed (Minnesota), Elm Creek Watershed (Nebraska), New York City Watershed (New York), Long Creek Watershed (North Carolina), Peacheater Creek (Oklahoma), Upper Grande Ronde Basin (Oregon), Pequea and Mill Creek Watershed (Pennsylvania), Stroud Preserve Watersheds (Pennsylvania), Swatara Creek Watershed (Pennsylvania), Villanova University Stormwater Best Management Practice (Pennsylvania), Bad River (South Dakota), Lake Champlain Basin Watersheds (Vermont), Totten and Eld Inlet (Washington), and Otter Creek (Wisconsin). Snake River Plain, Idaho, is a pilot ground water project.

Five of the projects focus on urban or mining sources, while the others primarily address agricultural sources. Nearly all of the projects address river or stream problems, while several projects are intended to directly benefit a lake, estuary, or bay. One of the projects is focused on ground water protection. The progress made by these projects will be showcased in this report.

Each project profile includes a project overview, project background, project design, and maps showing the location of the project in the state and the location of water quality monitoring stations. In the project background section, water resources are identified and water quality and project area characteristics are described. The project design section outlines the water quality monitoring program and nonpoint source control strategy. Project budgets and project contacts are also presented.

The Appendices include the minimum reporting requirements for Section 319 NMP projects (Appendix I), a list of abbreviations (Appendix II), and a glossary of terms (Appendix III) used in the project profiles. A list of project documents and other relevant publications for each project is included in Appendix IV.

REFERENCES

Dressing, S.A. and J. Hill. 1996. Nonpoint Source Management System Software: A Tool for Tracking Water Quality and Land Treatment. IN: *Proceedings Watershed '96 Moving Ahead Together Technical Conference and Exposition*. Water Environment Federation, Alexandria, VA, p. 560-562.

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