



**New Mexico**

**Nonpoint Source**

**Management**

**Program**

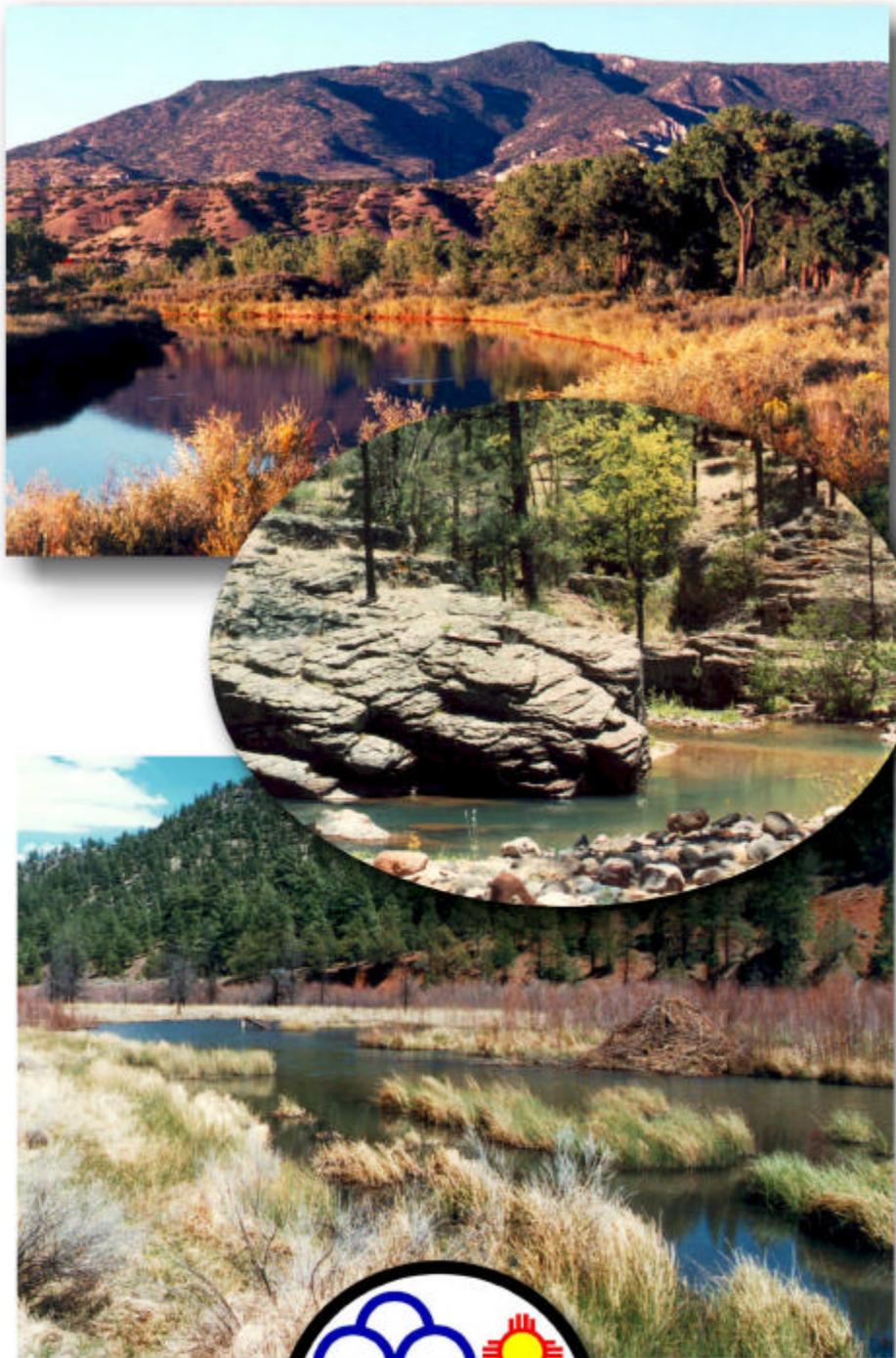
**December 1999**

**New Mexico**

**Environment Department**

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JAN 6 2000

Honorable Gary E. Johnson  
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State Capitol  
Santa Fe, New Mexico 87503

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SURFACE WATER  
QUALITY BUREAU

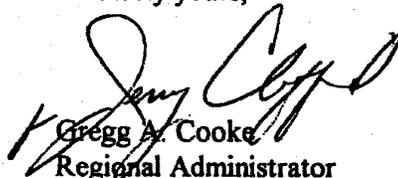
Dear Governor Johnson:

I am pleased to inform you of our approval of New Mexico's upgraded Nonpoint Source (NPS) Management Program and Assessment Report dated December 1999. This approval also updates the State's Water Quality Management Plan. We believe that New Mexico has developed a Management Program that outlines a prescribed approach to address water quality impairments of the State and will guide a dynamic and ultimately successful NPS Program.

New Mexico is to be complimented on the quality of the NPS Program plan document. It is extremely well organized and written, and provides clear objectives and priorities to carry out an effective program. The commitments of the plan are underscored by the mission statement "to implement progressive watershed-based restoration and protection programs with active assistance of all stakeholders, for all watersheds in New Mexico, and to meet water quality standards and designated uses of surface water and ground water resources." We are encouraged by the long term commitment of the State to continue to work through the Statewide NPS Task Force to achieve watershed protection in all watersheds by 2015. We are particularly pleased with the goal of instituting watershed management associations in high priority watersheds by 2005. We support the Environment Department's leadership and high level of coordination to work closely with all necessary agencies and entities to develop and implement the NPS Management Program. These partnerships will be critical to the success in implementing a NPS program that addresses the State's remaining water quality impacts.

We wish to congratulate the New Mexico Environment Department's Surface Water Quality Bureau for coordinating and developing a well designed plan which we believe will result in long term water quality protection and improvements. Thank you for your cooperation and support. We look forward to working with your staff to ensure a successful program.

Sincerely yours,



Gregg A. Cooke  
Regional Administrator

cc: Peter Maggiore, Secretary, New Mexico Environment Department (NMED)  
James Davis, Chief, Surface Water Quality Bureau, NMED

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**Public Comments and Responses**

## LIST OF ACRONYMS

<b>ACOE</b>	United States Department of the Army, Corps of Engineers
<b>AQCR</b>	Air Quality Control Region
<b>AFO</b>	Animal Feeding Operation
<b>BEHI</b>	Bank Erodibility Hazard Index
<b>BIA</b>	Bureau of Indian Affairs
<b>BLM</b>	Bureau of Land Management
<b>BMP</b>	Best Management Practices
<b>BOR</b>	United States Bureau of Reclamation
<b>CAFO</b>	Concentrated Animal Feeding Operation
<b>CFR</b>	Code of Federal Regulations
<b>COOP</b>	Cooperative Funds
<b>CRP</b>	Conservation Reserve Program
<b>CREP</b>	Conservation Reserve Enhancement Program
<b>CRMP</b>	Coordinated Resource Management Plan
<b>CSD</b>	Conservation Services Division
<b>CTA</b>	Conservation Technical Assistance
<b>CWA</b>	Clean Water Act (Federal Water Pollution Control Act)
<b>CWAP*</b>	Clean Water Action Plan
<b>CW-SRF</b>	Clean Water-State Revolving Fund
<b>CZARA</b>	Coastal Zone Act Reauthorization Amendments
<b>DOD</b>	United States Department of Defense
<b>DOE</b>	United States Department of Energy
<b>EA</b>	Environmental Assessment
<b>EIS</b>	Environmental Impact Statement
<b>EPA</b>	United States Environmental Protection Agency
<b>EQIP</b>	Environmental Quality Incentives Program
<b>ESA</b>	Endangered Species Act
<b>FAC</b>	Food and Agricultural Council
<b>FERC</b>	Federal Energy Regulatory Commission
<b>FIP</b>	Forest Incentives Program
<b>FLMP</b>	Forest Land Management Plan
<b>FLPMA</b>	Federal Land Policy and Management Act
<b>FOTG</b>	Field Office Technical Guide
<b>FSA</b>	Farm Service Agency
<b>FSB</b>	Financial Services Bureau
<b>FY</b>	Federal Fiscal Year
<b>GIS</b>	Geographic Information System
<b>GPRA</b>	Government Performance and Results Act
<b>GPS</b>	Global Positioning System
<b>GWQB</b>	Ground Water Quality Bureau
<b>HUC</b>	Hydrologic Unit Codes
<b>HUA</b>	Hydrologic Unit Area
<b>HWA</b>	Hazardous Waste Act
<b>HWMR</b>	Hazardous Waste Management Regulations

<b>IAWQ</b>	International Association for Water Quality
<b>IPM</b>	Integrated Pest Management
<b>IRM</b>	Integrated Resource Management
<b>ISC</b>	Interstate Stream Commission
<b>JPA</b>	Joint Powers Agreement
<b>LOU</b>	Letter of Understanding
<b>MAA</b>	Management Agency Agreement
<b>MAP</b>	Municipal Arterial Funds
<b>MOU</b>	Memorandum of Understanding
<b>NAWQA</b>	National Water Quality Assessment
<b>NCSU</b>	North Carolina State University
<b>NEPA</b>	National Environmental Policy Act
<b>NFMA</b>	National Forest Management Act
<b>NFS</b>	National Forest System
<b>NM</b>	New Mexico
<b>NMAC</b>	New Mexico Administrative Code
<b>NMCES</b>	New Mexico Cooperative Extension Service
<b>NMDA</b>	New Mexico Department of Agriculture
<b>NMDGF</b>	New Mexico Department of Game and Fish
<b>NMED</b>	New Mexico Environment Department
<b>NMEID</b>	New Mexico Environmental Improvement Division
<b>NMEMNRD</b>	New Mexico Energy, Minerals, and Natural Resources Department
<b>NMMA</b>	New Mexico Mining Association
<b>NMSA</b>	New Mexico Statutes Annotated
<b>NMSHTD</b>	New Mexico State Highway and Transportation Department
<b>NMSU</b>	New Mexico State University
<b>NMWQCC</b>	New Mexico Water Quality Control Commission
<b>NPS</b>	Nonpoint Source
<b>NRCS</b>	Natural Resources Conservation Service
<b>ORV</b>	Off-road vehicle
<b>OSE</b>	Office of the State Engineer
<b>OSHA</b>	Occupational Safety and Health Administration
<b>QAPP</b>	Quality Assurance Project Plan
<b>RITF</b>	Range Improvement Task Force
<b>RFP</b>	Request for Proposal
<b>RMP</b>	Resource Management Plan
<b>ROW</b>	Right of way
<b>RPMC</b>	Rio Puerco Management Committee
<b>SARE</b>	Sustainable Agriculture Research and Education
<b>SIP</b>	New Mexico Forest Stewardship Incentives Program
<b>SLO</b>	New Mexico State Land Office
<b>SOP</b>	Standard Operating Procedures
<b>SWCD</b>	Soil and Water Conservation District
<b>SWQB</b>	Surface Water Quality Bureau
<b>T &amp; E</b>	Threatened and Endangered
<b>TEA-21</b>	Transportation Equity Act for the 21 <sup>st</sup> Century

<b>TMDL</b>	Total Maximum Daily Load
<b>U.S.</b>	United States
<b>USDA</b>	United States Department of Agriculture
<b>USDI</b>	United States Department of the Interior
<b>USFWS</b>	United States Fish and Wildlife Service
<b>USFS</b>	United States Forest Service
<b>USGA</b>	United States Golfer's Association
<b>USGS</b>	United States Geological Survey
<b>UST</b>	Underground Storage Tank
<b>USTR</b>	Underground Storage Tank Regulations
<b>UWA</b>	Unified Watershed Assessment
<b>WERC</b>	Waste Management Education & Research Consortium
<b>WHIP</b>	Wildlife Habitat Incentives Program
<b>WQA</b>	Water Quality Act
<b>WRAS</b>	Watershed Restoration Action Strategy
<b>WRP</b>	Wetlands Reserve Program
<b>WWW</b>	World Wide Web

## ACKNOWLEDGEMENTS

We would like to express our sincere appreciation to the following NPS Task Force/ UWA Work Group Members and others for their contributions to this document.

C.S. Ranch  
Conservation Fund  
Forest Guardians  
New Mexico Cattle Growers' Association  
New Mexico Department of Agriculture  
New Mexico Mining Association, Environmental Committee  
New Mexico Municipal Environmental Quality Association, Municipal League  
New Mexico Riparian Council  
New Mexico Soil and Water Conservation Commission  
New Mexico State Land Office  
New Mexico Watershed Coalition  
NMSU Cooperative Extension Service  
NMSU New Mexico Water Resources Research Institute  
Phelps Dodge Tyrone, Inc.  
Socorro Soil and Water Conservation District  
State of New Mexico Department of Game and Fish  
Tierra y Montes Soil and Water Conservation District  
Town of Bernalillo, Wastewater Superintendent  
US Dept. of Army, Corps of Engineers  
US Environmental Protection Agency, Region 6  
US Geological Survey, Water Resources Division  
USDA Farm Service Agency  
USDA Forest Service, Southwestern Region  
USDA Natural Resources Conservation Service  
USDI Fish and Wildlife Service  
USDI Bureau of Land Management

## EXECUTIVE SUMMARY

The 1999 New Mexico Nonpoint Source (NPS) Management Program describes dynamic programs and progressive actions necessary to reduce pollutants from nonpoint sources entering surface water and ground water. Implementation of this program will help New Mexico succeed in:

1. Attainment of surface water quality that will fully protect designated uses (described in the State's water quality standards) and meeting the goals of the Federal Water Pollution Control Act (commonly referred to as the [Clean Water Act](#) (CWA)), and
2. Ensuring adequate ground water quality for municipal, domestic, and agricultural uses.

As a result of implementing this program, New Mexico will achieve measurable results such as reduced NPS pollution loadings, fully implemented resource management plans, and successfully implemented [Total Maximum Daily Loads](#) (TMDLs) to reduce the number of impaired and threatened water bodies throughout the State.

This program manages and institutionalizes NPS pollution reduction efforts within the State and emphasizes implementation of NPS pollution abatement practices on a watershed basis. The 1999 New Mexico NPS Management Program is a revision and expansion of the previous program, building on its strengths and successes, and adding innovative strategies that focus on water quality improvement. We have retained all elements of previous programs that contribute to the success of our efforts to address NPS pollution in New Mexico.

The NPS Management Program is coordinated by the [Surface Water Quality Bureau](#) (SWQB) of the [New Mexico Environment Department](#) (NMED). SWQB was assisted in preparation of this management program by the [NPS Task Force/ Unified Watershed Assessment \(UWA\\*\) Work Group](#), representing federal, State, Tribal, and local entities, citizen's, environmental, and commodity groups. The task force assessed information on surface water and ground water for NPS water quality concerns and helped prioritize watersheds for restoration through the Clean Water Action Plan/Unified Watershed Assessment (CWAP/UWA\*) ([NMED, 1998a](#)). The task force also provided information on existing programs of federal, State and local governments having long-standing involvement with NPS issues, and critically reviewed this document.

The NPS Management Program provides an organized process by which we have identified programs and activities that will facilitate the achievement of water quality standards. The Program focuses on the [Watershed Restoration Action Strategy](#) (WRAS) process for coordinating watershed restoration efforts, fostering watershed associations, partnering with agencies, entities, and the public, and implementing TMDLs for watersheds where priorities have been established. The program also relies on the established resource protection and nonpoint source pollution prevention programs and activities of other land management and resource protection agencies.

The NPS Management Program uses a voluntary approach to achieve water quality improvements. Incentives to implement voluntary compliance and restoration efforts include

competitive grant funding through §319 (h) of the federal CWA, and technical support and guidance through the SWQB.

Also included in this document are Nine Key Elements ([Chapter XV](#)), developed by EPA, that facilitate achievement of program goals. These nine key elements are included as fundamental guiding principals of New Mexico's NPS Management Program. A summary of New Mexico's approaches to the Nine Key Elements is given in [Chapter II](#).

New Mexico has created a new vision for the next millennium. Our vision is ***to implement progressive watershed-based restoration and protection programs with active assistance of all stakeholders, for all watersheds in New Mexico, and to meet water quality standards and designated uses of surface water and ground water resources.*** We will create teams to approach communities and stakeholders in high priority UWA\* Category I watersheds to promote formation and organization of their own watershed associations. The purpose of these groups will be to develop a watershed action plan, defined as a process that identifies problems, establishes priorities, and coordinates activities within a watershed. Our teams will provide incentives and training for volunteer monitoring programs, aid in the acquisition of §319(h) grants and other funding for Best Management Practice (BMP) implementation, and provide information on water quality issues and the TMDL process.

Using a multi-year approach, New Mexico has set priorities and is directing efforts and resources to maximize environmental benefits by addressing the most serious water quality problems and the most valuable and threatened resources first. Presently, we have identified 21 of New Mexico's 83 watersheds as UWA\* Category I watersheds (Watersheds in Need of Restoration) and will focus on those watersheds as our highest priority. New Mexico has developed a five-year program to implement WRAS that will address causes of non-support (water quality impairments) in targeted UWA\* Category I watersheds. Within each watershed, §319(h)-funded projects and projects funded by other sources, will be integrated into a watershed-based plan to implement on-the-ground, environmentally sound, and cost-effective projects. The program will apply BMPs to achieve maximum improvement to water quality and to attain water quality standards. The program will also include a monitoring component to ensure maintenance and progress toward attainment of designated uses of water resources. Ultimately, all presently identified UWA\* Category I watersheds will have received intensive focus by 2005. This strategy will ensure that §319(h) funds are directed toward stream reaches with identified TMDLs, and other areas of greatest concern, and will allow the NPS Pollution Section to measure directly the success of outreach efforts.

In addition, New Mexico will continue to build on the strong foundation of the statewide NPS Task Force/UWA\* Work Group. The CWAP/UWA\* ([NMED, 1998a](#)) is a "work in progress" that benefits by strong involvement of stakeholders statewide. Progress of the CWAP/UWA\* process will be demonstrated by fine-tuning of watershed categorization to reflect the TMDL development schedule, completing data acquisition for individual watersheds, implementation of restoration activities and TMDLs, improvement of watershed conditions and, ultimately, attainment of water quality standards. All water quality benefits and improvements that contribute to de-listing §303(d) stream reaches will be recognized and reported to EPA annually.

Like the [CWAP/UWA\\*](#), this management program is flexible and responsive to changing conditions and situations. We will continue to provide direction and oversight to existing NPS-oriented agency programs, and we will create new programs, partnerships, and agreements involving agencies, entities, educational institutions, commodity groups, and environmental organizations. We are following development of the Unified Federal Policy to collaborate and incorporate new strategies into our program.

The SWQB continues to demonstrate robust leadership by implementation of a quality NPS Management Program in New Mexico. In the past, our track record has been successfully established, showing that we can effectively solve NPS problems in the State. Our expanded and updated program establishes an invigorated approach to achieving the goals of reducing NPS pollution to impaired waters. We have developed a means for monitoring and tracking the progress of our program and intend to carry out the initiatives outlined in the Nine Key Elements to achieve New Mexico's water quality objectives.

**\* Disclaimer:** This document includes reference to current programs such as the federal [Clean Water Action Plan \(CWAP\)](#) and [Unified Watershed Assessment \(UWA\)](#). Inclusion of these references does not constitute an endorsement of the legality of such programs by the [New Mexico Water Quality Control Commission \(NMWCQC\)](#) or any constituent of the Commission. The NMWCQC does not endorse nor hold an opinion as to the legality of the CWAP or UWA but has simply used, when appropriate, these documents as reference. Should the legality of a currently existing program be successfully challenged in the future, this document, due to its nature as a dynamic "living" instrument can be modified accordingly after public review and participation. In all aspects of the development of this Program, the concerns of the citizens and the resources of the [State of New Mexico](#) have been of paramount concern regardless of current federal directions or initiatives.

## I. PREFACE

During February of 1987 Congress passed the Water Quality Act of 1987, which amended the Federal Water Pollution Control Act, commonly referred to as the Clean Water Act (CWA). Section 319 of the amended CWA required states to assess the nature and extent of water quality impairment resulting from nonpoint sources of pollution and develop management programs to control the sources identified.

New Mexico's initial NPS Assessment Report and Management Program documents were prepared and approved in accordance with the requirements of the CWA. The New Mexico NPS Assessment Report was initially adopted by the New Mexico Water Quality Control Commission (NMWQCC) on 13 September 1988, revised on 11 April 1989, and approved by the U.S. Environmental Protection Agency (EPA) on 31 July 1989. Since that time, waterbody tables that outline known impairments, resulting from NPS causes and sources, have been updated on a biannual basis as a part of the New Mexico Water Quality Report to Congress, as prepared and submitted in accordance with §305(b) of the CWA.

Following preparation and submittal of the assessment report, New Mexico developed the NPS Management Program that was approved by the NMWQCC on 12 September 1989. EPA approval was granted on 26 September 1989.

In 1994, New Mexico updated the 1989 NPS Management Program. The update was designed to provide future direction and goals for the State's program and contained the following elements as required by §319(b)(2) of the CWA:

- (A) BMPs that will be used to reduce pollutant loading by category and subcategory of pollutant source.
- (B) Identification of programs to achieve implementation of BMPs by category and subcategory.
- (C) A schedule of milestones for implementation of BMPs.
- (D) Certification by the Attorney General that the laws of the State of New Mexico provide adequate authority to implement the NPS Management Program.
- (E) Sources of Federal funding and other assistance and funding that will be available and utilized for implementation of the NPS Management Program.
- (F) Identification of federal programs and federal financial assistance that will be reviewed for consistency with the NPS Management Program.

In May, 1996, EPA released the NPS Program and Grants Guidance for Fiscal Year 1997 and Future Years, a result of collaboration among federal, State, Tribal, and local entities, the purpose of which was to present a streamlined framework for the implementation of State NPS

programs. In the document, EPA introduced a plan to grant Enhanced Benefits Status to qualifying states. States that qualify for enhanced benefits are to be afforded substantially reduced oversight and maximum flexibility to implement their State programs and to achieve water quality objectives. Central to Enhanced Benefits Status qualification criteria is that the State is carrying out the theme established in Nine Key Elements that facilitate achievement of program goals and a proven track record.

This document incorporates the program planning guidance provided by the Nine Key Elements as a principal part of New Mexico's NPS Management Program, while retaining all previous program components that contribute to success of our efforts to address NPS pollution in New Mexico.

The SWQB has reviewed, upgraded, and will continue to implement all §319 (b) management program components. These components include 1) [identification of BMPs](#) appropriate to nonpoint source pollution problems in New Mexico, and the appropriate application and implementation of these BMPs, 2) [a schedule of milestones](#) that provides focus, trackable events, and deadlines for program implementation, 3) attorney general certification, 4) [identification of funding sources](#) and [potential partnerships](#) based on available funding programs, and 5) [identification of federal financial assistance programs](#) and [development projects](#). SWQB establishes flexible, targeted, and iterative approaches to achieve its NPS goals. The State program includes water quality-based programs to achieve its NPS goals, regulatory and non-regulatory programs, and financial and technical assistance to achieve and maintain beneficial uses of water in an expeditious fashion.

## II. NINE KEY ELEMENTS SUMMARY

Included in this document are Nine Key Elements ([Chapter XV](#)), developed by EPA, that facilitate achievement of program goals. Jurisdiction for the implementation of the Program lies solely with the State of New Mexico. The EPA has, however, based on national experience, derived these Nine Key Elements to help formulate a successful Program. These Nine Key Elements are included as essential guiding principals of New Mexico's NPS Management Program. New Mexico's NPS Management Program upgrade and revision is summarized below. Supporting information is found in the remainder of this document and in appendices.

Critical to carrying out the process envisioned for New Mexico are our long-term goals and short-term objectives, the focus of [Key Element 1](#). We plan to focus on three specific strategies:

1. To improve our [CWAP/UWA\\*](#) by employing it as a flexible and dynamic process,
2. To provide education and outreach activities that promote effective watershed-based NPS restoration and protection programs, and
3. To develop additional formal agreements with agencies and entities as a means of institutionalizing and tracking NPS protection.

These strategies are further developed in twelve long-range goals and in explicit objectives described in [Chapter III](#). Activities to facilitate implementation of goals and objectives are listed in [Chapter XI](#) (Management Program Milestones). Specific tasks to be conducted by SWQB's NPS Pollution Section are included in our Annual Core Workplan ([Appendix A](#)).

Another critical element of our strategy ([Key Element 2](#)) is the formation of partnerships on several levels. New Mexico has formed, and continues to build, partnerships with agencies and stakeholders throughout the State. As part of our Annual Core Workplan ([Appendix A](#)), we have devised a plan of action to increase stakeholder involvement at the local level. We will create teams to approach communities and stakeholders in high priority UWA\* Category I watersheds to promote formation and organization of their own watershed associations. The purpose of these groups will be to develop a watershed action plan, defined as a process that identifies problems, establishes priorities, and coordinates activities within a watershed. Our teams will provide incentives and training for volunteer monitoring programs, aid in the acquisition of §319(h) grants and other funding for [Best Management Practice](#) (BMP) implementation, and provide information on water quality issues and the [Total Maximum Daily Load](#) (TMDL) process.

In addition, New Mexico will continue to build on the strong foundation of the statewide [NPS Task Force/UWA\\* Work Group](#). The CWAP/UWA\* ([NMED, 1998a](#)) is a "work in progress" that benefits by strong involvement of stakeholders statewide.

New Mexico is poised to measure the effectiveness of its strategy and to document progress. Progress of the CWAP/UWA\* process will be demonstrated by fine-tuning of watershed categorization, completing data acquisition for individual watersheds, implementation of restoration activities, improvement of watershed conditions and, ultimately, attainment of water

quality standards. New Mexico's water quality monitoring program will audit effects of restoration efforts and will continue to establish baselines for future comparisons. All water quality benefits and improvements that contribute to de-listing §303(d) stream reaches will be recognized and reported annually.

In addition to activities aimed at specific priority watersheds, our NPS Management Program contains statewide activities (**Key Element 3**). We will continue to coordinate with Designated Management Agencies and involve these and other federal, State, and Tribal agencies and local entities in the NPS Task Force/UWA\* Work Group. We will continue to provide direction and oversight to existing NPS-oriented agency programs, and we will create new programs involving agencies, entities, educational institutions, commodity groups, and environmental organizations. **Chapter X** (Programs for NPS Control) includes details of federal, State and local agencies' roles and responsibilities in NPS pollution prevention and abatement.

In New Mexico, eight categories of land management and/or activities have been identified as potential threats to water quality resulting from nonpoint sources (**Key Element 4**). These NPS pollution categories are identified in **Chapter VIII**, listed under each management agency in **Chapter X**, and targeted for abatement strategies and solutions in **Chapter XI**.

Each of New Mexico's 83 8-digit hydrologic unit code watersheds falls into one of four categories based on TMDL status, presence of surface water-dependent drinking water supply systems, land use status, and information contained in the **305(b) report** and **303(d) list**. Through the CWAP/UWA\* process, we continue to categorize waters and their watersheds that are impaired, threatened, or at risk (**Key Element 5**). We have identified 21 (listed in **Appendix A**) of New Mexico's 83 watersheds as UWA\* Category I (Watersheds in Need of Restoration) and will focus on those watersheds as our highest priority (**Figure 1**).

New Mexico's five-year program to implement Watershed Restoration Action Strategies (WRASs) addresses causes of non-support in targeted UWA\* Category I watersheds. Within each watershed, §319(h)-funded projects and projects funded by other sources, will be integrated into a watershed-based plan to implement on-the-ground, environmentally sound, and cost-effective projects. The program will apply BMPs to achieve maximum improvement to water quality and to attain water quality standards. The program will also include a monitoring component to ensure maintenance and progress toward the attainment of designated uses of water resources. Ultimately, all presently identified UWA\* Category I watersheds will have received intensive focus by 2005. This strategy will ensure that §319(h) funds are directed toward stream reaches with identified TMDLs, and other areas of greatest concern, and will allow the **NPS Pollution Section** to measure directly the success of outreach efforts. Using a multi-year approach, New Mexico has set priorities and is directing efforts and resources to maximize environmental benefits by addressing the most serious water quality problems and the most valuable and threatened resources first.

The **Surveillance and Standards Section** of SWQB continues to perform intensive water quality stream surveys to identify exceedences of State Water Quality Standards. Water quality monitoring of projects under our NPS Management Program also contributes data that enables us to recognize trends in water quality. The **TMDL Development Section** conducts water quality

surveys and reviews other data to establish TMDLs. We also continue to collect data from other agencies through the [CWAP/UWA\\*](#). We are following development of the Unified Federal Policy to collaborate and incorporate new strategies into our program.

New Mexico continuously reviews, upgrades, and implements all program components required by §319(b) ([Key Element 6](#)). Details of these program components are found throughout the document. Program components include progressive non-regulatory, regulatory, financial, and technical assistance programs, all based on achieving and maintaining beneficial uses of water. The [NPS Pollution Section](#) coordinates not only with federal, State and local agencies, but also with Tribes and with other NMED programs, to ensure that surface water and ground water NPS concerns are considered.

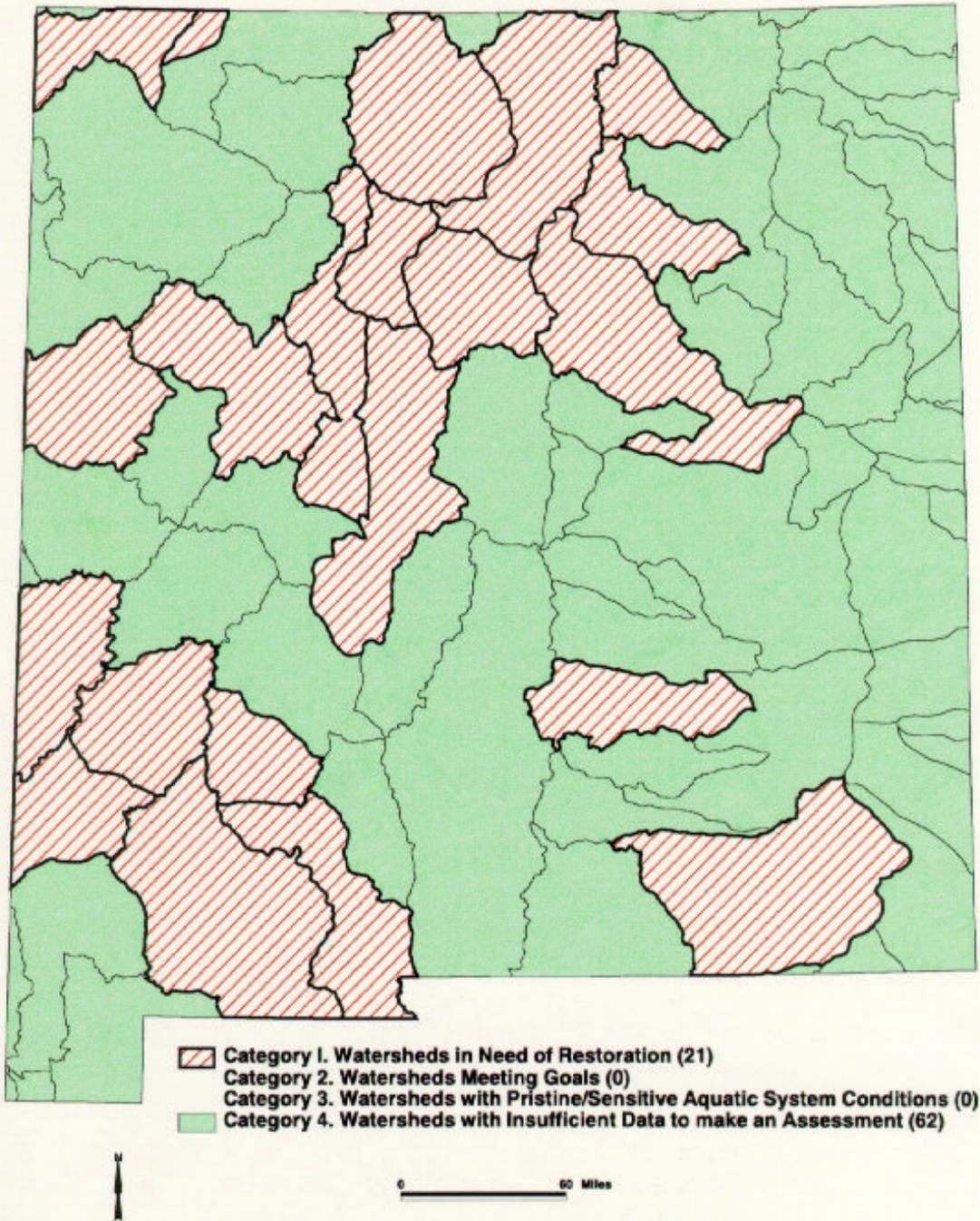
New Mexico pays particular attention to federal programs, projects, and activities for their effects on water quality and for consistency with our NPS Management Program ([Key Element 7](#)). SWQB maintains communication with all appropriate federal agencies and is apprised of any management plans or decisions that may impact water resources. SWQB makes comments and recommendations on agency activities to ensure compliance with NPS program objectives. Finally, federal consistency provisions of the Clean Water Act (§§313, 319(k)) are rigorously implemented (Chapter XIV, Consistency Reviews).

The [NPS Pollution Section](#) is increasing efficiency and effectiveness of its program by inventorying and thoroughly scrutinizing use of program resources, including financial resources ([Key Element 8](#)). We are extending our influence through partnerships, and we are focusing our energy in directions that emphasizes stewardship of our natural resources by all stakeholders through the watershed approach. Our WRAS assures that critical water quality problems within targeted watersheds are addressed in restoration projects. With assistance from the [NPS Task Force/ UWA Work Group](#), the [NPS Pollution Section](#) impartially reviews §319(h) project proposals and makes recommendations for funding. The [NPS Pollution Section](#) oversees implementation of these projects, reviews reimbursement requests, and scrutinizes results of project implementation, to ensure effectiveness and compliance with program goals. Financial staff and project managers work together to verify compliance, both technically and financially, with §319(h) project workplans.

Like the [CWAP/UWA\\*](#), this management program is flexible and responsive to changing conditions and situations. Based on monitoring and assessment data, the [NPS Task Force/ UWA Work Group](#) will continue to update the status of watersheds ([Key Element 9](#)). SWQB's annual report will indicate progress in meeting a wide variety of milestones, implementing BMPs on agency, statewide, and watershed levels, and will provide information for updating program goals and identifying future needs. Additionally, semi-annual reports to EPA will include information and progress on specific ongoing projects.

# Watershed Assessment Categories for New Mexico

Unified Watershed Assessment



**Figure 1.** New Mexico has been divided into 83 watersheds (represented by 8-digit hydrologic unit codes.) Presently, twenty-one of these have been identified as Category I - watersheds in need of restoration. A schedule identifying these watersheds and the five-year plan to implement [Watershed Restoration Action Strategies \(WRAS\)](#) are found in [Appendix A](#).

### III. PROGRAM OVERVIEW

Nonpoint sources of water pollution are now recognized as contributors to water pollution in New Mexico, as well as the nation. Principal sources of surface water NPS pollution in New Mexico include erosion from rangelands, agricultural activities, construction, silviculture, resource extraction, land disposal, unsurfaced roads, and recreation. Hydromodification may affect attainment of designated uses by diverting water out of stream channels, by impounding waters, and through channelizing and dredge-and-fill activities. Principal known sources of NPS ground water pollution in rural and suburban areas include household septic tanks, cesspools, and agricultural activities.

The purpose of the 1999 New Mexico Nonpoint Source (NPS) Management Program is to describe dynamic programs and progressive actions necessary to reduce pollutants from nonpoint sources entering surface water and ground water. Implementation of this program will help New Mexico succeed in:

1. Attainment of surface water quality that will fully protect designated uses as described in the State's water quality standards, and meet the goals of the Federal Water Pollution Control Act, and
2. Ensuring ground water quality for municipal, domestic, and agricultural uses.

This program manages and institutionalizes NPS pollution reduction efforts within the State and illustrates implementation of NPS controls on a demonstration and/or watershed basis.

The State NPS program is coordinated by SWQB. SWQB was assisted in preparation of the initial management program by an interagency task force. The task force provided information on surface water and ground water with known NPS water quality concerns, established NPS control techniques, and critically reviewed the document.

As part of the evolution of the program and the preparation of this revision, the task force has an expanded role in prioritization and coordination of NPS management through the [CWAP/UWA\\*](#) process. Task force membership has been expanded and is now known as the NPS Task Force/ UWA Work Group. Results of SWQB NPS monitoring projects, agency management activities, and new NPS concerns will be reported to and discussed with the NPS Task Force/ UWA Work Group. When appropriate, results of these discussions will be referred to the NMWQCC for its review and action. When necessary to provide consistency and to improve the NPS program, the NPS Task Force/ UWA Work Group will help SWQB develop and propose updates to the State's NPS Management Program.

#### 1. NPS TASK FORCE/UWA\* WORK GROUP PARTICIPANTS

##### **Federal**

[U.S. Department of Agriculture \(USDA\)](#)  
[United States Forest Service \(USFS\)](#)

Natural Resources Conservation Service (NRCS)  
Farm Service Agency (FSA)

U.S. Department of the Interior (USDI)  
Bureau of Indian Affairs (BIA)  
Bureau of Land Management (BLM)  
National Park Service  
Bureau of Reclamation (BOR)  
Geological Survey (USGS)  
Office of Surface Mining  
Fish and Wildlife Service (USFWS)  
Office of Construction Management

U.S. Department of the Army  
Army Corps of Engineers (ACOE)

U.S. Environmental Protection Agency (EPA)

### **State**

New Mexico Environment Department  
Surface Water Quality Bureau (SWQB)  
Ground Water Quality Bureau (GWQB)

New Mexico Energy, Minerals, and Natural Resources Department  
Forestry Division  
Oil Conservation Division  
Mining and Minerals Division

New Mexico Department of Game and Fish (NMDGF)  
New Mexico Soil and Water Conservation Commission  
New Mexico State Highway and Transportation Department (NMSHTD)  
State Engineer Office and Interstate Stream Commission  
New Mexico State University  
Cooperative Extension Service  
Range Improvement Task Force  
Water Resources Research Institute (WRRI)

New Mexico Department of Agriculture  
Soil and Water Conservation Districts:  
Edgewood Soil and Water Conservation District  
San Francisco Soil and Water Conservation District  
Socorro Soil and Water Conservation District  
Tierra y Montes Soil and Water Conservation District

New Mexico Department of Economic Development  
New Mexico State Land Office (SLO)

University of New Mexico  
New Mexico Engineering Research Institute (NMERI)

**Other**

All Indian Pueblo Council  
Arch Hurley Conservancy District  
[Bernalillo County Environmental Health Department](#)  
Carlsbad Irrigation District  
Earth Works Institute  
Eastern Plains Council of Governments  
Eight Northern Indian Pueblos Council  
Elephant Butte Irrigation District  
[Forest Guardians](#)  
Fort Sumner Irrigation District  
Galisteo Watershed Association  
[Gila Monster Watershed Association](#)  
[Jicarilla Apache Tribe](#)  
La Plata Conservancy District  
[League of Women Voters](#)  
Middle Río Grande Conservancy District  
Middle Río Grande Council of Governments  
[Navajo Nation](#)  
[New Mexico Association of Conservation Districts](#)  
[New Mexico Association of Counties](#)  
New Mexico Cattle Growers Association  
New Mexico Citizens for Clean Air and Water  
[New Mexico Farm and Livestock Bureau](#)  
[New Mexico Mining Association](#)  
[New Mexico Municipal League](#)  
New Mexico Oil and Gas Association  
New Mexico Resource Conservation and Development Council  
[New Mexico Riparian Council](#)  
New Mexico Watershed Coalition  
North Central New Mexico Economic Development District  
Northwest New Mexico Council of Governments  
[Phelps Dodge Mining Company](#)  
Pojoaque Valley Irrigation District  
[Pueblo of Cochiti](#)  
[Pueblo of Isleta](#)  
[Pueblo of Sandia](#)  
[Pueblo of San Ildefonso](#)  
[Pueblo of Jemez](#)  
[Pueblo of Laguna](#)  
[Pueblo of Zuni](#)

Santa Clara Pueblo

Sierra Club

South Central New Mexico Council of Governments

Southeast New Mexico Council of Governments

Southwest New Mexico Council of Governments

The Nature Conservancy

## 2. PARTICIPATORY APPROACH

To establish the NPS Task Force/UWA\* Work Group, SWQB sent invitations to approximately 200 potentially interested parties, of which about 50 participated in the initial meeting. The effort to include more participants is ongoing, as invitations are periodically sent to more potentially interested parties as they are identified. Additionally, information on the NPS program is posted on the SWQB web site (<http://www.nmenv.state.nm.us>) and notifications of NPS Task Force/UWA\* Work Group meetings are published in local newspapers.

The above list is not intended to be exclusionary. It is in the best interest of the process to have a balance of interest groups represented - a goal that we strive to achieve. Any individual, government agency, citizen's organization, or economic interest that may be interested in, or affected by, this program is welcome and encouraged to participate.

The NPS Task Force/ UWA Work Group will assist SWQB by providing program recommendations through:

- Prioritizing watersheds for implementation of NPS controls within identified basins
- Reviewing project proposals and associated watershed plans in conjunction with the evaluation of §319(h) funding proposals
- Providing guidance to SWQB and the NMWQCC regarding program goals and objectives
- Assisting in identification and acquisition of funds for program implementation
- Assisting in implementation and management of NPS pollution reduction projects
- Assisting in dissemination of information to landowners and citizens
- Providing for exchange of information to prevent duplication of NPS activities

The NPS Management Program described in this document covers the period from 1999 through 2004, or until a new statutory mandate is established. For the sake of convenience, programs and nonpoint source pollution categories to be addressed, are described by agency. Milestones are presented by NPS category. For the most part, this management program uses existing programs of federal, State and local governments. Many agencies directly involved in this program have long-standing involvement with NPS issues in the State and have been designated by the NMWQCC as Designated Management Agencies. Such entities, at the time of designation, had

to have legal authority and capability to regulate actions affecting water quality, and be willing to accept designation and assume responsibility for water quality in those areas under their control.

### **3. LEGAL AUTHORITY**

Legal authority to implement this updated program will be confirmed by the Attorney General of New Mexico, however SWQB has no legal authority to enforce NPS pollution reduction under New Mexico law (Environmental Law Institute, 1998). Various inter-agency agreements (e.g., MOUs, MAAs) formalizing institutional relationships have been signed and many more are being developed (see [Chapter XI](#) and Appendix D).

No additional legislative or regulatory authorities for implementation of this program are required. Existing statutes, regulations, and water quality criteria provide New Mexico with adequate authority necessary for implementation of this program.

This document does not purport to supercede any statutory exemption of the CWA or the New Mexico Water Quality Act.

## IV. PROGRAM STRATEGY, GOALS, AND OBJECTIVES

### 1. LONG TERM GOALS, OBJECTIVES, AND STRATEGIES TO PROTECT SURFACE WATER AND GROUND WATER.

The primary goal of the 1999 New Mexico NPS Management Program is to expand and implement a dynamic and aggressive program to reduce human-induced pollutants from nonpoint sources entering surface water and ground water. We've created a new vision for the next millennium with loftier goals. Our vision – *to implement progressive watershed-based restoration and protection programs with the active assistance of all stakeholders, for all watersheds within New Mexico, and to meet water quality standards and beneficial uses of surface water and ground water resources* – will be realized by focusing our efforts on:

- achieving milestones directed toward short-term and long-term goals,
- creating and using new strategies,
- forming new partnerships and strengthening old ones,
- giving recognition to progress and successes of the program in achieving the State's vision and goals.

Critical to carrying out the process envisioned for New Mexico are our long-term goals and short-term objectives, the focus of [Key Element 1](#). We plan to focus on three specific strategies:

1. To improve our CWAP/UWA\* by employing it as a flexible and dynamic process,
2. To provide education and outreach activities that promote effective watershed-based NPS restoration and protection programs, and
3. To develop additional formal agreements with agencies and entities as a means of institutionalizing and tracking NPS protection.

These strategies are further developed in twelve broad goals and in explicit objectives described below. Activities to facilitate implementation of goals and objectives are listed in [Chapter XI](#) (Management Program Milestones). Specific tasks to be conducted by SWQB's NPS Pollution Section are included in our Annual Core Workplan ([Appendix A](#)).

#### A. Long Term Goals

Our long-term goals (by 2015) are directed to the accomplishment of our vision.

1. Complete the CWAP/UWA\* process by:
  - ensuring that the TMDL schedule and process is reflected in the watershed prioritization process,
  - continuing to organize and integrate relevant watershed information by CWAP/UWA\*-based priority,
  - increasing collaborative participation of stakeholders, such as land owners and management agencies, in gathering and assessing data,

- completing the categorization and prioritization of all New Mexico watersheds by 2004, and
  - developing coordinated restoration efforts on a watershed-wide basis in all watersheds by 2015.
2. Through the use of the UWA Geographic Information System (GIS), compile sources of all available and emerging natural resources and water quality data throughout the State into a single database with graphic display and analysis capability by 2002. Additionally, to define sub-watersheds for targeting restoration activities through the use of 11-digit HUC Code units by 2003.
  3. Continue to develop a comprehensive watershed assessment for New Mexico by completing data acquisition for the UWA\* Category IV watersheds (watersheds with insufficient data to make an assessment) by 2005; and to locate priority stream reaches within those watersheds where TMDLs have been developed, for focusing watershed restoration efforts through 2010.
  4. Expand the monitoring network to include monitoring programs staffed by volunteers with emphasis on stream reaches with established TMDLs and in Category I watersheds (watersheds in need of restoration) by 2010.
  5. Implement effective watershed-based NPS restoration and protection programs, using multiple funding sources, in all identified UWA\* Category I watersheds at an average of four or five new watersheds per year until all Category I watersheds are included by the year 2015; and within ten to twenty years from the initial watershed target year, to restore each watershed to designated uses.
  6. Encourage the formation of watershed management associations and similar partnerships, or to increase membership within existing groups, in each of the State's 83 watersheds by 2010 (approximately 8 each year), with particular emphasis on the 21 watersheds currently designated as UWA\* Category I by 2005.
  7. Provide effective education and outreach programs that identify problems and explain critical water quality issues to stakeholders, and above all, increase general public awareness of NPS impacts on water quality using all educational resources available throughout the state by 2010 (see Chapter VI).
  8. Focus on restoration, recovery and protection of riparian areas, particularly in Category I watersheds and throughout the State to achieve 75% recovery of riparian areas by 2010.
  9. Update and improve cooperative efforts outlined in existing Memoranda of Understanding (MOUs), Management Agency Agreements (MAAs) and other interagency agreements by 2003, and to develop additional interagency agreements as a means of institutionalizing and tracking NPS protection by 2010.
  10. Provide information and assistance to county and municipal governments, and other local governmental entities (e.g. Soil and Water Conservation Districts [SWCD]), that encourages

their participation in NPS pollution management and prevention, ultimately leading to formalized partnerships. Category I watersheds will be targeted first and completed by 2005.

11. Encourage and help facilitate all tribes in New Mexico, to create NPS management programs of their own by 2010.
12. Target commodity groups (e.g., New Mexico Cattle Growers' Association, New Mexico Mining Association (NMMA)) and environmental groups at a rate of two per year, to incorporate strategies that specifically address NPS pollution and to encourage their members to undertake measures to improve ground water and surface water quality, as well as protecting other natural resources.
13. Increase the use of the Clean Water State Revolving Fund (CW-SRF) as a source of funding for 10% of new NPS projects by 2001, 50% by 2010, to address NPS pollution in New Mexico.

## **B. Specific Short-Term Objectives**

Our specific short-term objectives (1 to 5 years) define the steps taken to meet our goals.

1. The CWAP/UWA\* (NMED, 1998a) is a "work in progress." New Mexico's NPS Task Force/UWA\* Work Group will meet annually to reevaluate the current UWA process and to analyze all applicable data, including additional TMDLs, and other new data on water quality and watershed assessments for New Mexico. They will review and revise assignment of the 83 watersheds into four broad assessment categories, and update priorities for watershed outreach activities and restoration efforts. NPS Task Force/ UWA Work Group members will be encouraged to continue to remain active and attend the annual meeting. We will continue to invite additional agency, commodity, environmental, and other group representatives to participate on the NPS Task Force/UWA\* Work Group to achieve a balance of interests for solving NPS problems.
2. SWQB is developing a strategy to facilitate the formation of groups focused on water quality problems and habitat degradation within a watershed. The purpose of these watershed groups is to develop a watershed action plan, defined as a process that identifies problems, establishes priorities, and coordinates activities within a watershed. The watershed group will solicit the involvement of as many stakeholders in the watershed as possible. This year, SWQB staff are participating in training sessions and developing outreach tools and resources. We will be composing teams, including members of the NPS Task Force/UWA\* Work Group, whose mission will be to create awareness, provide information and encourage action within four or more targeted watersheds each year.
3. We have also developed activities and specific short-term objectives linked to our goals through New Mexico's Watershed Restoration Action Strategy (WRAS) commitment for FY-99 through FY-10. For the next five years, approximately four UWA\* Category I watersheds will be targeted for intensive outreach each year. Section 319(h) proposals will be solicited followed by development, implementation and monitoring of inclusive watershed-

based restoration programs (Appendix A). Beginning year six, the development, implementation and monitoring cycle for the targeted watersheds will be repeated until these watersheds demonstrate recovery, and protection from future impairments is ensured.

4. The SWQB will actively seek information from agencies and the public through the media, through the NPS Task Force/UWA\* Work Group network, and through our other working partnerships — especially in data-poor watersheds — to improve the database available on water quality and watershed conditions. (Also see Chapter VI, Section 4.)
5. New Mexico will also strive to achieve better accuracy and resolution of their GIS database systems as more GIS data sets are received. New data will be incorporated into SWQB GIS database systems, and will be available for UWA planning. SWQB will use ARCINFO, and encourage the use of ARCINFO as a comprehensive database available to all stakeholders.
6. The SWQB World Wide Web (WWW) site will include information about NPS pollution and the State's NPS Management Program, and a request to the public for information about their local NPS problems by 2000. The request will include how and where NPS problems can be reported. Information about §401 Certification and an application form will also be available through the WWW. The WWW site will be updated as the NPS Program evolves.
7. SWQB/NPS Pollution Section's Annual Core Workplan (Appendix A) outlines specific tasks and commitments for its staff to provide technical support, guidance and educational opportunities that promote holistic approaches to watershed restoration management. These tasks and commitments will be reevaluated annually for effectiveness and for promoting progress toward meeting water quality standards and beneficial uses of surface water and ground water resources.
8. New Mexico will review and update its existing interagency MOUs and MAAs by 2003. Review criteria will include the effectiveness of our collaborative efforts, support of water quality standards, and timely implementation of BMPs on land under the cooperating agency's jurisdiction.
9. The SWQB NPS Pollution Section will strive to create new interagency agreements for those agencies where none presently exist. (Agencies that will be targeted first are described in Chapter XI. Management Program Milestones.) These agencies will include federal, State, local and Tribal entities. Our short-term goal is to increase interagency collaboration to strengthen our statewide NPS pollution reduction efforts by developing at least two new formal agency agreements every year.
10. The NPS Pollution Section will by 2001, coordinate with county and municipal governments, Soil and Water Conservation Districts (SWCD), and other local governmental entities, particularly in all UWA\* Category I Watersheds to create an interest in using the CW- SRF as a source of funding for NPS pollution management. CW-SRF will be marketed to develop local projects and programs and to implement BMPs.

11. The NPS Pollution Section will continue to encourage tribes to participate as stakeholders, committee members and partners in statewide and watershed-wide NPS pollution prevention programs. The NPS Pollution Section will provide education, technical assistance, technology transfer, and outreach to at least two tribes per year. Tribal lands located in UWA\* Category I watersheds will be targeted first.
12. The NPS Pollution Section will contact representatives of commodity groups and environmental organizations through our NPS Task Force/UWA\* Work Group membership, and by making presentations to the group's organization meetings. By understanding their issues and priorities, we will try to create win-win situations that benefit their interests and still protect and improve water quality. We will contact and develop partnerships with approximately two groups each year.

## **2. SCHEDULE FOR TRACKING PROGRAMS AND MEASURABLE GOALS**

New Mexico has developed a schedule of general and continuing programs and specific milestones for tracking all of its interests and programs. This schedule includes:

- Targeting of all UWA\* Category I watersheds by the year 2005 ([Appendix A](#)).
- Ongoing activities, as well as milestones and target dates, for general/institutional tasks ([Chapter XI](#)).
- Specific annual milestones for implementing BMPs developed by NPS category (Chapter XI).
- Specific tasks outlined in MOUs, MAAs and other agreements with agencies having direct involvement with NPS issues (Appendix D).

The CWAP/UWA\* and the WRAS processes will function as feedback loops for New Mexico to periodically review and assess the goals and objectives of the NPS Management Program, and revise the program, as appropriate, in light of its review. SWQB, in conjunction with the NPS Task Force/UWA\* Work Group, cyclically evaluates and refines the program to maintain efficiency and effectiveness. Additionally, work is being conducted to develop improved assessment protocols and predictive capabilities relating to NPS pollution, that will further enhance our ability to fine-tune the program (see CWAP/UWA\*, Future Directions, pp. 21-23). Using environmental and functional measures of success, the progress towards water quality improvements in Category I watersheds where the WRAS process has been implemented will be revisited to evaluate NPS assessment and the effectiveness of this management program at least every five years.

The NPS Management Program annual report indicates progress, or lack thereof, in meeting a wide variety of milestones, implementing BMPs on agency, statewide, and watershed levels, achieving program goals and identifying future needs (Chapter XII, Section 1). Case studies are sometimes included. Additionally, semi-annual reports include information on specific ongoing projects. In the future, reports will also contain information on conducting outreach, monitoring, and generating proposals for funding of projects. The annual report is a useful resource for

agencies, watershed associations, citizen's groups, legislators, and others to stay informed of the progress and direction of the State NPS program.

Based on monitoring and other evaluative information, the NPS Section revises its activities and tailors its annual workplans, as appropriate, to increase the effectiveness of the program in meeting its goals and objectives.

### **3. MEASURES OF SUCCESS**

New Mexico has established a monitoring program that is poised to measure the effectiveness of its programs, to oversee government, private, and watershed-wide activities and to continue to establish baselines for future comparisons. Using the following variety of processes, both improvements in water quality and identification of new impairments or threats, and the effectiveness of implemented programs throughout the State are periodically assessed.

1. SWQB TMDL section develops TMDLs and TMDL management plans for water bodies determined to be water quality limited. A TMDL documents the amount of a pollutant a water body can assimilate without violating a state's water quality standards. It also allocates that load capacity to known point sources and nonpoint sources. A general implementation plan for activities to be established in a watershed is included in the TMDL document. During implementation, additional water quality data will be generated. As a result, targets will be re-examined and potentially revised. In the event that new data indicate that targets used in this analysis are not appropriate or if new standards are adopted, the load capacity will be adjusted accordingly. When water quality standards have been achieved, the reach will be removed from the TMDL list.
2. SWQB, through its NPS and Surveillance & Standards sections and citizen volunteer monitoring programs, continually monitors and assesses water quality in watersheds throughout the State with the goal of sampling all river reaches every five years (see CWAP/UWA\*, Future Directions, p. 21-23). The purpose of these efforts include re-categorizing UWA\* Category IV watersheds (those with too little data to be assessed) into one of three other categories (Chapter V, Section 1) and assessing water quality improvements (Chapter X, Section 1). Assessments are performed according to SWQB's Assessment Protocol (NMED, 1998b).
3. Based on monitoring and assessment data, the NPS Task Force/UWA\* Work Group reviews the status of watersheds throughout the State and targets several UWA\* Category I watersheds to receive intensive focus within a five-year cycle. The cycle is then repeated until all watersheds demonstrate recovery and no longer exceed water quality standards (See p. 19).
4. The CWAP/UWA\* includes documentation providing a complete record of development and realization of the process used in New Mexico. These records provide a measure of the effectiveness of the program. This assessment also places emphasis on mapping of surface water quality conditions through the use of the GIS database. As the UWA process continues, results will be evaluated by the refinement of categorizing watersheds, the completeness of

the data available, the development and implementation of restoration activities, and the improvement of watershed conditions.

5. New Mexico's WRAS iterative approach has evaluation activities built into it. Responses to the request for proposals (RFPs) in targeted watersheds will directly evaluate our education and outreach efforts. Timely development and implementation of §319(h) projects will measure our ability to facilitate and administer individual projects. We will look at our strengths, weaknesses, and areas of concern and develop new strategies to resolve current and potential shortcomings.
6. SWQB reports on progress in achieving milestones and targeted goals in the State of New Mexico NPS Management Program Annual Report. Through formal interagency agreements and informal agency relationships, the NPS Pollution Section tracks task completion, schedules of actions and plans that affect water quality management on cooperating agencies' lands. Agency updates are also reported in the New Mexico NPS Management Program Annual Report.
7. SWQB's monitoring program is designed to audit the effects of restoration efforts and to continue to establish baselines for future comparisons. Monitoring results will be compared to New Mexico water quality standards (20 NMAC 6.1) and EPA aquatic life and human health criteria (40 CFR 131.36). Monitoring programs provide data for independent evaluations of TMDLs, and control actions that are based on the TMDL, to determine whether they protect or improve the environment and are sufficient to meet changing waterbody protection requirements, such as revised water quality standards or changing pollution sources (U.S. EPA, 1991).
8. The SWQB has prepared, and submitted to EPA for approval in February 1999, the Final Draft Manual of Standard Operating Procedures (SOP) (NMED, 1999a). These operating procedures establish a monitoring protocol that will be used in conjunction with integrated watershed-scale management strategies implemented through WRAS. These operating procedures will be incorporated into all workplans and used throughout the entire monitoring process from initial project identification and planning through data usage. Use of these operating procedures will ensure that all environmental data generated will be scientifically valid, of known precision and accuracy, of acceptable completeness and comparability, and when appropriate, legally defensible.
9. SWQB's NPS program contributes to, and is consistent with, the Government Performance and Results Act (GPRA). The State will quantify over time, and report to EPA, the number of stream segments showing water quality benefits as the result of program implementation, including benefits resulting from the CW-SRF. All water quality benefits and improvements that contribute to de-listing §303(d) stream reaches resulting from the implementation of NPS restoration efforts will be recognized and reported annually.
10. Federal Consistency Review – SWQB reviews and submits comments on Environmental Impact Statements (EISs) and Environmental Assessments (EAs) from the U.S. Forest Service (USFS), U.S. Fish and Wildlife Service (USFWS), Bureau of Land Management

(BLM), Federal Highway Administration, U.S. Bureau of Reclamation (BOR), Federal Energy Regulatory Commission (FERC), U.S. Army Corps of Engineers (ACOE), and other agencies (See Chapter XIV). These documents are reviewed by SWQB with watershed-wide issues and problems in mind, especially with respect to the UWA\* Category I watersheds and TMDL priority stream segments.

## **V. WATERSHED RESTORATION ACTION STRATEGY (WRAS) IMPLEMENTATION STEPS**

### **1. CWAP/UWA\* CATEGORIZATION PROCESS**

The New Mexico NPS Management Program identifies waters and their watersheds impaired by NPS pollution, and identifies important unimpaired waters that are threatened or otherwise at risk through the CWAP/UWA\* categorization process. SWQB, in conjunction with the NPS Task Force/UWA\* Work Group, uses a four-category system to identify NPS-impaired or threatened watersheds. Categorization of watersheds is updated periodically as data become available. Restoration strategies and tactics are tied to identification and assessment of priority watersheds.

The NPS Task Force/UWA\* Work Group is in the process of placing each of 83 watersheds in New Mexico into one of the following four categories.

**UWA\* Category I:** Watersheds in need of restoration

**UWA\* Category II:** Watersheds meeting goals, including those needing action to sustain water quality

**UWA\* Category III:** Watersheds with sensitive aquatic system conditions on lands administered by federal, State, or Tribal governments

**UWA\* Category IV:** Watersheds with insufficient data to make an assessment

New Mexico's 83 watersheds are defined by large-scale hydrologic units and are represented by 8-digit hydrologic unit codes (HUC Codes). In order to pinpoint areas for restoration activities within a watershed, sub-watersheds will be delineated and identified by using 11-digit HUC Codes. As TMDL budgets become established and water impairments identified through the collection and evaluation of sufficient data, sub-watersheds with TMDL segments or other urgent water quality needs, will be targeted first for the implementation of restoration activities. The 83 watersheds will be further broken down into sub-watersheds identified by 11-digit HUC Codes by 2003.

The New Mexico Water Quality Control Commission (NMWQCC) produces a §305(b) report and SWQB produces a §303(d) list, both biannually. In conjunction with the NPS Task Force/UWA\* Work Group, SWQB prioritizes each of 83 watersheds into one of four categories based on TMDL status, presence of surface water-dependent drinking water supply systems, land use status, and information contained in the §305(b) report and §303(d) list.

As of FY99, 21 watersheds have been placed in UWA\* Category I, with the remainder in UWA\* Category IV. Of the UWA\* Category I watersheds, four have been chosen for intensive outreach for FY99. This further prioritization is based on the presence of surface water-dependent drinking water supply systems and TMDL development schedule dates (as required in the EPA-Forest Guardians consent decree), linking efforts of NMED's Drinking Water Bureau, NPS Pollution Section, and Surveillance & Standards Section. Each year, four or five more UWA\* Category I watersheds will be chosen for intensive outreach, so that after a five year rotation has been completed, all 21 UWA\* Category I watersheds will have received intensive focus. Other

watersheds will be added to UWA\* Category I as appropriate, so the five-year cycle may be expanded. The cycle will be repeated until these systems demonstrate recovery and no longer exceed water quality standards. In each fiscal year, proposals for UWA\* Category I watersheds will be given preferential consideration for funding.

## **2. FOCUS ON CATEGORY I WATERSHEDS**

Category I watersheds, or watersheds identified as in need of restoration, have become the focus of implementation of the WRAS process. The CWAP/UWA\* Framework (USDA/USEPA Joint Memorandum, June, 1998) defines Category I watersheds as “those watersheds that do not now meet, or face imminent threat of not meeting, clean water or other natural resource goals.”

Selection factors include:

- exceedences of state or tribal water quality standards,
- impaired drinking water sources,
- degraded aquatic system conditions, and
- decline in the condition of living and natural resources that are part of the aquatic system in the watershed.

The WRAS process assures that critical resources within targeted areas are addressed in restoration projects. A WRAS contains the following five elements:

- Public outreach
- Monitoring/evaluation activities
- Clearly defined water quality problems
- Specified action plan and water quality goals
- Implementation schedule

## **3. WRAS IMPLEMENTATION**

The 1997 Clean Water Action Plan initiative to protect water quality appeals to states and tribes to develop watershed restoration action strategies for those watersheds in most need of restoration. New Mexico has established a process to progressively address Category I watersheds by developing watershed restoration implementation plans, and then by implementing the plans. The five-year program to implement WRAS addresses the appropriate causes of non-support in targeted priority watersheds (Appendix A). Within each watershed, §319(h)-funded projects and projects funded by other sources, will be integrated into a watershed-based plan to implement on the ground environmentally sound and cost-effective projects. The program will apply BMPs to achieve maximum improvement to water quality, and to ultimately achieve our water quality goals. The program will also include a monitoring component to ensure the maintenance and progress toward attainment of designated uses of water resources. Ultimately, all presently identified UWA\* Category I watersheds will have received intensive focus by the year 2005. This strategy will ensure that §319(h) monies are directed toward areas of most concern and allow the NPS Pollution Section to directly measure the success of outreach efforts. Using a multi-year approach New Mexico has set priorities and is directing efforts and resources to maximize environmental benefits by addressing the most

serious water quality problems and the most valuable and threatened resources first. In addition, by identifying efforts with reasonable chances for success, less serious problems may be prevented from becoming more serious due to lack of attention.

The five-year schedule to address priority watersheds includes objectives, tasks, and outputs (see Appendix A, FY99 Core Work Plan). The schedule will be expanded as work on the initial priority watersheds is completed and as data become available to classify more watersheds as top priority.

Additionally, SWQB is continuing to develop TMDLs according to the EPA-Forest Guardians consent decree. As additional data are collected and TMDLs are established, the identification of impaired waters will be revised and the WRAS process for progressively addressing problems periodically (e.g., once every 5 years) will be revisited. The NPS Task Force/UWA\* Work Group will review new data relating to watershed prioritization at least bi-annually. The WRAS for addressing problems is reviewed at least every five years in conjunction with development of the five-year Management Program.

#### **4. FUNDING WRAS**

Funding activities are focused on remediating identified impairments and threats, and on protecting the identified at-risk waters. Section 319(h) funding is directed primarily towards project proposals in UWA\* Category I watersheds. Funding criteria also include anticipated reduction of pollutant loading for the impaired surface water body. By directing WRAS program implementation plans and activities towards progressively addressing the worst waters first, a more efficient allocation of resources is accomplished.

The schedule for funding WRAS must include federal assistance, state funds, and other resources available to support the implementation and maintenance of restoration measures. The main end in this regard is stabilized funding levels. Effective non-point source pollution control efforts must acknowledge that improvements to water quality will require long term commitments of budget and personnel resources. Stable funding is a prerequisite for the necessary long term planning currently being required.

Additional funding for addressing water quality impairments and for the protection of associated natural resources is also accomplished by partnering with other funding sources including private funding sources (for instance , see Appendix E) and with agency and inter-agency programs. The WRAS process uses an integrated approach for assessment, protection and remediation that is linked with other water or natural resource programs.

The integration of the NPS Program with other NMED water and natural resource programs is summarized in the §305(b) report (NMWQCC, 1998). The State's water quality management framework includes surface water and ground water quality standards, regulations and programs that focus on ecological, hydrologic, and public health effects.

## **VI. WORKING PARTNERSHIPS WITH FEDERAL, STATE, TRIBAL, REGIONAL AND LOCAL ENTITIES, PRIVATE SECTOR GROUPS, AND CITIZENS GROUPS.**

An important part of New Mexico's program is fostering and strengthening its working partnerships and linkages with appropriate State, Tribal, regional, and local entities (including conservation districts), private sector groups, citizens groups, and federal agencies. New Mexico uses statewide collaborative teams, advisory groups, and other appropriate groups, to provide input and recommendations from representatives of these groups regarding nonpoint source program direction, watershed restoration action plans, § 319 (h) project selection, and other similar aspects of program administration. New Mexico has formed and continues to build partnerships on several levels. Examples of these are described below.

Well established in New Mexico is the State's NPS Task Force composed of stakeholders representing federal and State agencies, local governments, tribes and pueblos, SWCDs, environmental organizations such as Amigos Bravos and others, industry representatives, and the public. This group meets on a quarterly basis to provide input on the §319 program process, to disseminate information to other stakeholders and the public regarding NPS issues, to identify complementary programs and sources of funding, and to help review and rank §319(h) proposals. In 1998, meetings of this group have been combined with other statewide committees (the Natural Resources Conservation Service [NRCS] Food and Agricultural Council, Water Quality Subcommittee and the NRCS State Technical Committee) and its role is now continued by the NPS Task Force /UWA Work Group.

The NPS Task Force /UWA Work Group is New Mexico's statewide focus group representing the groups mentioned above. This group has collectively contributed to the CWAP/UWA\* (NMED, 1998*a*). This assessment identifies and prioritizes watersheds with water quality issues in New Mexico. From the results of this assessment, New Mexico's WRAS were developed. This group will continue meeting quarterly and will reevaluate the CWAP/UWA\* annually.

Watershed management associations have been established and formalized in New Mexico (see SWQB's web site: <[http://www.nmenv.state.nm.us/swqb/wow\\_grp.html](http://www.nmenv.state.nm.us/swqb/wow_grp.html)>). These committees are involved in problem identification, prioritization, proposal ranking, distribution of grant funds, education, planning, and implementation. One of the goals of WRAS is to form, or increase membership in, watershed management associations and similar partnerships (e.g., Upper Gila Watershed Alliance, Rio Puerco Management Committee [RPMC]) in each of the UWA\* Category I watersheds.

Local groups composed of local residents, entities, and land management agencies (see SWQB's web site: <[http://www.nmenv.state.nm.us/swqb/wow\\_grp.html](http://www.nmenv.state.nm.us/swqb/wow_grp.html)>) are assembled, either formally or informally, through education and outreach (e.g., Ruidoso River Association, Inc., Tularosa Watershed Coalition). They adopt water pollution prevention schemes and water resources restoration programs to improve water quality in local watersheds, sub-watersheds, and impaired stream reaches.

## 1. COLLABORATIVE AND INCLUSIVE DECISION-MAKING GROUPS

New Mexico uses statewide collaborative teams, including the NPS Task Force/UWA\* Work Group, and other advisory groups or appropriate processes to promote collaborative and inclusive decision making. In most cases these teams meet on a regular basis and help promote and ensure program implementation. Through the WRAS process, the NPS Section will continue to actively engage stakeholders in collaborative decision-making by promoting the formation of additional similar groups on both a watershed and Statewide basis. Examples of these teams and their decision-making roles are described below.

NPS Task Force /UWA Work Group, New Mexico's statewide focus group, meets quarterly and participates in watershed prioritization, and implementation and management of NPS projects. This group also fulfills other functions including delivery of information to landowners and citizens, exchange of information to prevent duplication of NPS activities, and providing guidance regarding New Mexico's NPS Management Program goals.

The "Gila Monster" Watershed Group (Upper Gila Watershed Alliance) was established jointly by the Arizona Department of Environmental Quality and the SWQB for the interstate Gila Watershed. Included in the membership are more than 40 partnering agencies and entities. Four sub-watershed advisory committees have formed and hold independent meetings to identify specific NPS problems in their particular geographic regions before presenting these findings to the assembled "Gila Monster" group. Division into smaller, more manageable sub-watershed groups ensures that all local interests and individuals not able to attend "Gila Monster" meetings continue to be represented.

The Rio Puerco Watershed Management Committee (RPMC) is an example of a partnership consensus group established to promote broad-based watershed-wide stewardship. This Committee meets bimonthly and has developed consensus-based goals to address watershed-wide restoration efforts for the Rio Puerco watershed. The Committee obtains funds and approves on-the-ground and research projects directed toward NPS pollution reduction, riparian enhancement, preservation of biologic diversity, environmental education and rural economic development. This group has been formalized by the federal Rio Puerco Watershed Act of 1996.

The Ruidoso River Association is an example of a grass-roots community group successfully managing and restoring the health of their local watershed. The Ruidoso River Association is composed of approximately 700 members devoted to the restoration of the Rio Ruidoso - a high quality cold water fishery. The Association participates in annual river clean-up days, volunteer water quality monitoring programs, recognizing supporting members and businesses, and fund raising. They have engaged local authorities and agencies to change practices that were having detrimental effects on the Rio Ruidoso. *Notes From The Noisy Water*, the monthly publication of the Association, is used to disseminate information and to keep citizens and visitors aware of restoration activities. They have been very successful in changing behavior and attitudes of local citizenry and governmental bodies to becoming truly concerned about the health of their watershed.

## **2. AGENCY PARTNERSHIPS AND PARTICIPATION**

Approximately one-third of land area in New Mexico is federally managed and 44% more is privately owned. The NPS Management Program is focused on federal land management agencies, and on federal, State and local programs that can influence and support beneficial land management by private landowners. Ongoing agency NPS management agreements (MOUs, JPAs, MAAs, for example) provide accountable bases for linking federal, State and Tribal programs with common water quality and watershed objectives. SWQB NPS Pollution Section has representatives participating on agency committees described below. SWQB will increase collaborative participation and form additional agency partnerships, including those connected with the development of new management agency agreements (See General/Institutional Milestones #4 in Chapter XI).

1. NMED/SWQB participates on the NRCS FAC Water Quality Subcommittee and the NRCS State Technical Committee. Both the NRCS FAC Water Quality Subcommittee and the NRCS State Technical Committee meet quarterly to discuss broad environmental issues and funding sources that are available from all the diverse entities that attend. Many programs available integrate conservation and protection of natural resources including water resources. They are using the watershed approach as mandated by the CWAP\*.
2. The NMED has developed a task force with NMSHTD through their MOU. This Task Force is composed of representatives of many bureaus within NMED, representing air quality, ground water, solid waste, underground storage tanks (USTs), hazardous waste, etc. The NMSHTD members represent engineering and environmental sections that deal with projects and activities that can potentially affect the environment. This Task Force provides a forum for integrating all environmental issues in solving problems that involve the two agencies.
3. The USFS maintains a NMED liaison at the Santa Fe SWQB office. Additionally, the two agencies meet annually to discuss NPS issues and consistency with the provisions of the MAA. The meeting includes a broad range of environmental topics. The USFS uses the Integrated Resource Management (IRM) process in their forest management plans, to meet the environmental requirements of the National Environmental Policy Act (NEPA) and the National Forest Management Act (NFMA).

## **3. ENGAGING A VARIETY OF ORGANIZATIONS AND INTERESTS**

New Mexico enlists several strategies to incorporate organizations and diverse interests into implementation of nonpoint source activities and projects.

1. Using the WRAS approach intrinsically does this. One of the ways that outreach efforts will be evaluated is through involvement of new organizations and creation of new watershed associations. The outreach program will actively seek out all stakeholders within UWA\* Category I priority watersheds, provide educational opportunities, help them develop projects, and encourage them to demonstrate ways they can participate in NPS activities.

2. Proposals for §319(h) funding must have an educational component to demonstrate successful projects to the public and other land managers. In this way, the project proponents share and educate local stakeholders and interested parties about implementation of NPS projects.
3. Stakeholders must submit proposals and also provide a 40% match, which can include in-kind contributions, to §319(h)-funded projects. In this way, a variety of stakeholders can contribute their monetary funds, expertise, labor, and other resources directly to the implementation of a NPS project.
4. The Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21) will provide new opportunities for water quality improvements associated with transportation projects. SWQB proposes to coordinate with Regional and Metropolitan Transportation Planning Organizations to add proposed water quality-related projects, especially in UWA\* Category I watersheds, to the Statewide Transportation Improvement Program. SWQB also proposes to integrate agency missions by staffing each New Mexico State Highway and Transportation Department (NMSHTD) District, via TEA-21 funding, with a qualified environmental specialist to provide guidance and oversight to reduce NPS pollution and other environmental problems.
5. Participation on committees, such as the NRCS State Technical Committee, the NRCS FAC Water Quality Subcommittee, and the NPS Task Force /UWA Work Group, provides a forum for integrating other agency cost-share and owner-assistance programs, such as EQIP, Wetlands Reserve Program (WRP-NRCS), Wildlife Habitat Incentives Program (WHIP-NRCS), and New Mexico Forest Stewardship Incentives Program (SIP- USFS & NMEMNRD), with SWQB NPS programs.
6. The New Mexico Dairy Technical Working Group, an *ad hoc* organization, was formed to address issues and concerns associated with dairies in New Mexico. This group meets several times during the year to discuss technical and regulatory issues, and to address long-term surface water and ground water protection strategies. Representatives from Dairy Producers of New Mexico, NM Department of Agriculture, New Mexico State University (NMSU), NM Office of the State Engineer, NMSU Agricultural Extension Service, NM Farm Bureau, NRCS, SWQB, NMED Ground Water Quality Bureau (GWQB), NMSU-Waste Management Education & Research Consortium (WERC), and individual CAFO/AFO operators attend meetings of this group.
7. SWQB is in the process of forming a collaboration with the NMMA that will formalize the mining industry's involvement with NPS initiatives. Meetings with the NMMA to start this process will begin in 1999.
8. SWQB will initiate a collaboration with the New Mexico Cattle Growers' Association to discuss the formation of a partnership and to coordinate efforts for the prevention and remediation of water quality impairments.

#### 4. PERIODIC INPUT INTO THE PROGRAM

In order to reach as many stakeholders as possible, including the general public, New Mexico's NPS Management Program specifies procedures to provide periodic input into the program.

1. Dispensing of information and providing for public involvement and feedback is achieved principally through the NPS Task Force /UWA Work Group network. Active members of this group are notified of tasks in which they are involved through E-mail communications and group mailings. Feedback and discussion of issues and new information is shared at quarterly meetings.
2. Public meetings for collection of input and comments on the CWAP/UWA\* and for other important program issues are held at strategic locations throughout the State. Public meetings are advertised through radio announcements, news releases and public mailings.
3. Significant program changes and other issues are made available to the public for review and comment through several media including the WWW, E-mail, news releases, and the SWQB quarterly newsletter, *Clearing The Waters*.
4. Staff are also participants of other agency committees. These include the NRCS State Technical Committee and the NRCS FAC Water Quality Subcommittee. These committees meet quarterly and have representation from agencies and entities throughout the State, including Tribes. These committees provide a forum for reporting, sharing and disseminating relevant agency program information. This information is made available for discussion and comment. Discussions include such subjects as coordinating the Environmental Quality Incentives Program (EQIP) with §319(h)-funded projects, particularly in UWA\* Category I watersheds.
5. The public will be requested to submit information on local NPS problems through the WWW. SWQB has a Web site dedicated to NPS information and issues. Information about watershed groups working in New Mexico has already been requested from the public. A "hot link" to the SWQB Web site can be provided to groups with their own WWW home page. Volunteer monitoring programs, monitoring technical information and updates, and data exchange will be coordinated via the WWW.
6. SWQB NPS staff engage in public education activities to promote public awareness of the NPS program, and NPS pollution and its solutions. SWQB will continue to provide educational opportunities for the public and private sector by coordinating with local schools and youth programs, hosting information sessions, and conducting public site tours of demonstration projects and BMP implementation sites.

## VII. BALANCED APPROACH

### 1. EMPHASIS ON BOTH STATEWIDE NPS PROGRAMS AND ON-THE-GROUND MANAGEMENT OF INDIVIDUAL WATERSHEDS

The New Mexico NPS Management Program – our five-year program – provides direction and contains activities aimed both at specific priority watersheds and statewide initiatives. The New Mexico NPS Management Program is coordinating with existing programs of federal and State agencies, and local governments statewide. It incorporates existing NPS-directed programs (such as IRM, TEA-21, EQIP and SIP) of federal, State and local governments by identifying the major categories of NPS pollution addressed by the programs. SWQB involvement is through promotion and implementation of BMPs, by coordination of projects on a priority watershed basis, by providing guidance and oversight, inspection and enforcement, and education and outreach activities.

Statewide activities address issues that are prevalent throughout the State and promote broad participation. Activities of a statewide nature that affect priority watersheds are:

- Continued coordination with Designated Management Agencies, such as BLM and USFS, involving actions that regulate and affect water quality.
- Involving these agencies and other federal, State, Tribal agencies and local entities in the NPS Task Force/UWA\* Work Group, for their input into actions affecting priority watersheds.
- Ensuring that other NPS-oriented federal programs and federal financial assistance are consistent with goals and objectives of the NPS program.
- Coordinating §319(h)-funded projects with other agency programs to obtain the best use of funding on a statewide and watershed-wide scale.
- Participating in education activities on a statewide basis to generate greater awareness of NPS pollution problems and solutions, to promote participation in volunteer monitoring efforts, and to provide guidance for restoration of impaired surface water and ground water resources.

Other activities identified as major staffing objectives in our Annual Core Workplans, and which are directed to integrate specific priority watershed actions with statewide initiatives include:

- **OUTREACH** – To host information sessions that provide prospective §319(h) applicants, stakeholders and the public with a better understanding of the NPS Management Program milestones.
- **EDUCATION** – To incorporate NPS-oriented watershed curricula into elementary, high school and college programs, and to promote volunteer water quality monitoring as a regular activity of watershed groups.
- **MONITORING/EVALUATION** – To oversee federal, State, and private activities to ensure consistency with our water quality goals, standards, and/or NPS Management Program milestones.

- **FACILITATION** – To help stakeholders develop and implement NPS §319(h) grant restoration activities and other NPS-directed projects on their lands using the watershed approach.

## **2. TRACKING**

The 1998 “305(b) report” (NMWQCC, 1998), a biennial report to the EPA, tracks all surface water and ground water activities throughout the State. This report provides a comprehensive, statewide description of water quality, gives information about water quality and water pollution control programs, describes pollution problem areas and remediation efforts basin by basin, and details the work of State agencies entrusted with protecting New Mexico’s water resources. It also includes narratives of several federal and local agencies whose legislative obligations require them to manage portions of New Mexico’s waters.

This NPS Management Program describes existing programs of federal, State and local governments that implement NPS activities and watershed projects statewide (Chapter X). Federal agencies, such as USFS and BLM, with long-standing NPS issues have been designated by the NMWQCC as Designated Management Agencies. Their programs, responsibilities and regulatory authority for water quality on lands under their control are also described in the NPS Management Program.

New Mexico’s NPS Management Program Annual Report (NMED, 1997) summarizes progress on NPS management projects and accomplishments each year, including activities and watershed projects implemented by other agencies. This report includes updates on cooperating agency programs and activities, and progress reports on achieving NPS Management Program milestones.

New Mexico’s NPS Management Program Semi-Annual Report (NMED, 1999*b*) contains progress reports on individual projects managed by SWQB NPS Pollution Section staff. These projects include those funded by §319(h) that address priority watershed problems.

The NPS Pollution Section features outstanding projects, accomplishments and successes in the NPS newsletter, *Clearing the Waters*, and posts these and other program information on the SWQB WWW site.

## **3. INSTITUTIONALIZATION OF THE NPS MANAGEMENT PROGRAM**

The New Mexico NPS Management Program contains permanent program tasks and features beyond the annual implementation of §319(h)-funded projects. These are described in Chapter XI and include the following continuing programs and tasks:

- participation in various watershed groups to provide direction and target water quality problems.
- annual input from cooperating agencies to update programs and tasks.
- consistency reviews of federal, State and local projects.
- regulation and enforcement of CWA §401 actions.

sector.

- cooperation with management agencies through agreements outlined in MOUs and MAAs.
- quarterly publication of the NPS newsletter, *Clearing the Waters*.
- implementation of New Mexico's Liquid Waste Program.
- implementation and enforcement of WQA and NMWQCC regulations to prevent and abate ground and surface water pollution.
- coordination and review of operations and activities under the New Mexico Mining Act.

The integration of the NPS Program with other NMED water and natural resource programs is summarized in the §305(b) report (NMWQCC, 1998). The State's water quality management framework includes surface water and ground water quality standards, regulations and programs that focus on ecological, hydrologic, and public health effects.

New Mexico regulates and protects water quality through enforcement of §401 provisions of the CWA (see also Chapter X Section 1). Although regulations are enforced on a case-by-case basis, a watershed-wide assessment, as well as site-specific focus is used to determine effects of regulated activities and to develop mitigation measures. Regulation and enforcement of §401 are only effective through the legislation and authority of §404 of the CWA. Additional federal and State statutes to regulate NPS pollution would be useful to expedite the recovery of impaired surface water and ground water and to institutionalize protection measures for New Mexico's water resources.

## **VIII. IMPAIRED WATERS IDENTIFICATION AND ABATEMENT STRATEGY**

### **1. CHARACTERIZATION OF WATER QUALITY IMPAIRMENTS AND THREATS THAT ARE SIGNIFICANTLY CONTRIBUTED TO OR CAUSED BY NONPOINT SOURCES.**

#### **A. Surface Water**

NMED, acting under authority delegated by NMWQCC, implements water quality standards for interstate and intrastate streams by establishing and maintaining controls on the discharge of pollutants to surface waters. The purpose of the standards is to designate uses for which surface waters shall be protected and sustained.

Water quality standards consist of a triad of elements that work in concert to provide water quality protection. These elements are designated use, numerical and narrative criteria, and an anti-degradation policy (NMWQCC, 1995). The SWQB conducts evaluations of water quality data for water quality standards attainment. Two levels of assessments are used for determining standards attainment for beneficial uses of the State's perennial waters – monitored (quantitative) assessments and evaluated (qualitative) assessments. When exceedences of standards are identified for a particular stream reach, waterbody, or basin, it is included in the §303 (d) list and in the §305(b) report (NMWQCC, 1998). The §303(d) list includes the name of the impaired stream segment, waterbody or basin, support for designated uses status, the probable causes of non-support or threat status and other pertinent data. The probable causes of non-support or threat status includes nonpoint sources of pollution.

In the RFPs for §319(h) grant funds, proponents are required to address streams reaches and sources of impairment identified in the §303(d) list. The Surveillance and Standards Section of the SWQB continues to perform intensive water quality stream surveys to identify exceedences of the States water quality standards.

#### **B. Ground Water**

Approximately 90% of the total population of the State depend on ground water for drinking water. Approximately 150,000 people or 10% of the State population depends on private wells for drinking water. The primary contaminants in public water supply systems are nitrates, most often originating from septic tanks. Additionally, household septic tanks and cesspools constitute the single largest known source of ground water contamination in the State.

NMED's Liquid Waste Program is directed at preventing and abating environmental and public health effects from individual liquid waste systems receiving, treating, and disposing of up to 2,000 gallons of domestic waste water per day. Additional information about the Liquid Waste Program and Liquid Waste Disposal Regulations is contained in the §305(b) report (NMWQCC, 1998). Milestones directed toward the implementation of activities to prevent and abate liquid waste nonpoint source problems are contained in Chapter XI, Section K.

## 2. CHARACTERIZATION OF POTENTIAL FUTURE WATER QUALITY IMPAIRMENTS AND THREATS

New Mexico has used special designations that define a waterbody that currently meets all applicable water quality standards, numerical and narrative, but is reasonably expected to exceed criteria before the next §305(b) reporting period (NMED, 1998*b*). The **Full Support-Threatened** designation was assigned with the support of monitored data projected to predict 0exceedances of the criteria before the next §305(b) reporting period. However, because the timeframe for reassessing waters is on the order of once every five years, data is insufficient to show trends identifying future exceedances and this designation will no longer be used.

The designation, **Full Support-Impacts Observed**, will be used to assign priorities to potentially impaired water bodies for future assessments, regulatory compliance, and/or monitoring data reviews. This designation will be used when there is a preponderance of evidence that standards may be exceeded by the next §305(b) reporting period.

The best defense against future water quality impairments is through involvement in the following activities:

- **PLANNING** – The SWQB remains involved in planning efforts for water resource management concerning land management agencies, municipalities, industry and agriculture. Involvement in water planning efforts is especially critical for municipalities where rapid growth is anticipated, or water uses and water demands are changing, and could effect ground water and surface water quality. Our involvement in planning efforts is identified in the New Mexico NPS Management Program sections on federal, State and local government programs (Chapter X).
- **EVALUATION** – Future water quality impairments and threats are prevented through the analysis and interpretation of sampling and monitoring data, in combination with the identification of potential pollution sources. Our ultimate goal is to establish a comprehensive database that will help us evaluate the present and future condition of our water resources. Our most recent data evaluation has been carried out through the CWAP/UWA\* (NMED, 1998*a*).
- **EDUCATION** – The SWQB NPS Pollution Section provides public education in a variety of ways to promote pollution prevention. Our education efforts are outlined in Chapter XI and Appendix A.

## 3. NONPOINT SOURCE POLLUTION CATEGORIES

In New Mexico, eight categories of land management and/or activities have been identified as potential threats to water quality resulting from nonpoint sources:

Silviculture  
Rangeland and Grazing/Wildlife Management

Construction  
Agriculture  
Hydromodification  
Resource Extraction  
Land Disposal  
Recreation

The NPS program addresses all significant nonpoint source categories and subcategories. NPS categories and subcategories are addressed in a variety of ways:

1. NPS categories, with an explanation of the problem in New Mexico, are described in the New Mexico Statewide Water Quality Management Plan.
2. NPS categories to be addressed by Federal, State, and local programs are identified by agency in Programs For Nonpoint Source Control (Chapter X).
3. Annual milestones are presented by NPS category and are directed towards management agencies with authority and expertise, in Management Program Milestones (Chapter XI).
4. The New Mexico NPS Management Program provides examples of BMPs for control of major NPS pollution categories and subcategories (Appendix B).

## **4. ABATEMENT STRATEGIES**

### **A. Milestones**

These categories of NPS pollution are targeted for abatement strategies and solutions through development of milestones. Milestones advocate the use of BMPs to reduce impairments to water quality. Some milestones focus on agencies with responsibility to control, abate, and prevent NPS pollution on land under their jurisdiction. Milestones also direct abatement strategies toward watershed-wide and basin-wide implementation or at identified UWA\* Category I watersheds.

### **B. Programs**

SWQB communicates with local, State, and federal agencies and other entities about programs relevant to the NPS Management Program. They have identified specific programs to abate pollution from categories of nonpoint sources that cause or substantially contribute to the impairments identified in its assessments. These programs also prevent future water quality impairments and threats that are likely to be caused by nonpoint source pollution. In New Mexico's 1998 §305(b) report (NMWQCC, 1998), agency programs that contribute to the abatement of pollution from nonpoint sources are described.

Surface water and ground water quality of New Mexico's basins, their physical descriptions, current contamination problems and ongoing remediation efforts are also described in the §305(b) report (NMWQCC, 1998). This report includes descriptions of nonpoint sources of

contamination of surface water and ground water, and documents their occurrence by basin and locality.

Agency programs for NPS Pollution control are also described in Chapter X. SWQB coordinates and tracks agency efforts annually. SWQB hopes to improve coordination and cooperation through review and updating of interagency MOUs, and through development and implementation of MOUs with agencies listed in Management Program Milestones, Section B. General/Institutional Milestones.

### **C. Agency NPS Requirements**

The NPS Management Program incorporates existing baseline requirements established by other applicable federal or State laws to the extent that they are relevant. Examples include but are not limited to:

1. State Forest Management Practices Acts.
2. Federal and State construction, erosion, or nutrient management requirements.
3. Federal and State transportation requirements that govern construction site and road maintenance runoff.

SWQB, in conjunction with the New Mexico Energy, Minerals, and Natural Resources Department (NMEMNRD), Forestry Resources and Conservation Division, incorporates requirements of voluntary programs and activities such as the Cooperative Forestry Assistance Program, Forest Incentives Program (FIP), and Stewardship Incentives Program (SIP), and various local conservation programs. Regulatory programs, such as timber harvest plans, include NPS pollution assessments to determine the types of BMPs to be applied. See also Chapter X.

SWQB, in conjunction with SWCDs, incorporates requirements of conservation provisions of federal farm programs such as the Food Security Act of 1985. SWCDs also review subdivision plans submitted by developers for adequacy of erosion control. SWQB, through formal (e.g., MOU) and informal agreements with NMSHTD, State Land Office (SLO), and Department of Game and Fish, ensures that BMPs are utilized to prevent NPS impairments associated with road construction and maintenance.

## **IX. BEST MANAGEMENT PRACTICES**

NPS controls are typically established through implementation of management practices that are structural or nonstructural in nature. Structural practices include diversions, temporary sediment basins, animal waste lagoons, fencing, terraces, rock check dams, and other constructed means of reducing impairments to surface water and ground water. Nonstructural practices relate to resource management techniques, such as timing and rate of fertilizer or pesticide application, conservation tillage methods, livestock grazing rotation, riparian planting, upland revegetation, and other techniques.

BMPs should realistically represent the best combination of structural and/or nonstructural management practices used to reduce or prevent impairments to water quality (Appendix B). These BMPs should be developed based on site-specific conditions where the practices are to be constructed, maintained, and/or implemented, and should be selected based on economic restraints and goals associated with the specific problem to be addressed. As BMPs are selected for specific applications and incorporated into a land use plan, many sources of technical information are available to assist in selection, design, and implementation (Appendix C).

Under ideal conditions, BMPs provide for protection of water quality. As with any pollution control measure, benefits gained are directly associated with degree of thought, analysis, and care given to selection, design, implementation, maintenance, and management. Further, as human influences to aquatic and terrestrial systems change, the response of those systems to runoff changes. Therefore, management practices must remain flexible and responsive to changing conditions, both spatially and temporally. By convention, this document refers to all practices as BMPs, recognizing that any one practice may not be the "best" choice in all situations.

The New Mexico NPS Management Program recognizes numerous BMPs that are considered appropriate for inclusion in the program. It also recognizes that knowledge of NPS management through use of BMPs is expanding rapidly, and that all potential BMPs cannot be included in this summary. Accordingly, selected representative BMPs are listed in Appendix B.

BMPs should be considered not only for categories of nonpoint sources in which they may be utilized, but also in terms of the purpose and effect of the BMP. For example, a broad-based dip is a BMP that is typically used in maintenance of silvicultural roads. Since this BMP is useful in controlling delivery of sediment from unsurfaced roads, it is probably also appropriate for recreation, construction, or any other category where sediment delivery from unsurfaced roads is a concern.

SWQB maintains a library of documents and video tapes (Appendix C) containing information on appropriate uses of BMPs in various applications. Members of the public can obtain pamphlets, publications, and other informational materials from the SWQB NPS Section.

## 1. FOCUS ON RIPARIAN AREAS

Although riparian areas may occupy a small fraction of a watershed, they represent an extremely important landscape component for the protection of water quality. Riparian ecosystems reduce flood peaks, control water temperature, increase ground water recharge, and play a critical role in the lifecycles of aquatic organisms and other wildlife. Streamside plant communities can contribute organic material and nutritional resources to stream ecosystems. Conversely, nutrient uptake by soil and vegetation in riparian ecosystems can prevent nutrients from adjacent agricultural areas from reaching stream channels. Riparian areas also act as sediment filters.

Riparian areas are declining in New Mexico. The reduction in riparian areas and their associated vegetation, and stream bank modification are contributors to nonpoint source pollution (See §305(b) report (NMWQCC, 1998). Causes of this decline include agriculture, groundwater pumping, flood control, introduced exotic species, livestock overgrazing, fire management, development, fuel wood harvesting, and vegetation removal.

NMED/SWQB will focus on the restoration of this resource through the implementation of activities to recover and maintain healthy riparian areas. Through education and outreach efforts, and through the WRAS process, awareness of the riparian issues will be promoted, including:

1. role of riparian ecosystems in maintaining water quality
2. benefits of productive riparian ecosystems
3. benefits to fish, other aquatic organisms and wildlife
4. effects of traditional grazing practices, recreation, development, and agriculture on riparian ecosystems
5. effects of flood control and channel control on adjacent riparian ecosystems.

NMED/SWQB will also provide educational opportunities by coordinating with local schools and youth programs to develop and participate in restoration projects. Successful projects will be promoted and displayed through articles appearing in SWQB quarterly newsletter, *Clearing the Waters*, and on the SWQB Web page.

Inter-agency participation is an important component of the restoration process. NRCS will continue to update and develop policies and procedures for assisting landowners through their local SWCDs that are consistent with NPS management objectives for riparian areas. BLM has committed to maintain or restore at least 75% of riparian areas on BLM managed lands to Proper Functioning Condition (See Chapter XI, Section D). NMED/SWQB will coordinate with other agencies such as USFWS and NMEMNRD that have incentives programs for riparian restoration and enhancement (see Chapter X).

Technical assistance and information, and recommendations for appropriate BMPs will be provided for riparian restoration and enhancement projects. Riparian recovery efforts will also be supported with §319 (h) project funds. Information can also be obtained from the NMED/SWQB BMP library.

## **2. URBAN AREA WATER QUALITY PLANNING**

New Mexico's growing urban areas present a threat to surface water and ground water quality. As urban areas grow, streams and aquatic systems, and ground water resources can be adversely affected. Urban development can increase the quantity of impervious surfaces (i.e. roads, parking lots) which prevents storm water from infiltrating the soil. Runoff draining from developed areas may also carry pollutants from impervious surfaces into storm drain systems and nearby streams. In New Mexico, approximately 6,000 new liquid waste disposal systems (i.e. septic systems) are installed each year. The large majority of such systems ultimately discharge to ground water and can result in bacteriological, viral, and chemical ground water pollution.

Zoning and subdivision ordinances, erosion and sediment control codes, and design standards documents can provide regulations and guidance to prevent patterns of development that cause nonpoint source pollution.

The NMED/SWQB BMP library contains documents and video tapes (Appendix C) that provide information on appropriate urban BMPs and land development provisions to protect water quality. The NMED/SWQB will also provide information and assistance to county and municipal governments, and other local government entities to encourage their participation in NPS pollution management and prevention. Additional action items are presented in Chapter XI (Section K. Land Disposal). Through the WRAS process, municipalities will be encouraged to participate in watershed planning, public meetings, and round table discussions with other stakeholders in the watershed. New working relationships will be formed and agreements created for county and municipal governments, and other local governmental entities, that encourages NPS pollution management and prevention through long-term planning, subdivision regulations, zoning ordinances, and staff training. Municipalities in Category I watersheds will be targeted first.

## **X. PROGRAMS FOR NONPOINT SOURCE CONTROL**

This section identifies specific agencies and their programs implemented statewide to address water quality issues including nonpoint sources of pollution.

In New Mexico, 34.2 % of lands are publicly owned and managed by the federal government. Federal land management is of great concern to the State because of the proportion of the State's waters located within federal lands. As one example, SWQB has estimated that 1,800 of 6,000 miles of the State's rivers and streams are located on USFS lands, which constitute approximately 11 % of the State's area. Privately owned lands constitute about 44 % of the State. Recognizing that over three-fourths of the State is federally or privately managed, the NPS Management Program is focused on both federal land management agencies and federal, State, and local programs that can influence and support beneficial land management by private individuals. Land management practices, including water quality BMPs, are implemented by land owners/operators and management agencies. Although §319 of the CWA does not specifically require a description of ongoing federal and other agency NPS management activities, New Mexico has elected to include this information.

The Water Quality Assessment Program carried out by SWQB, with the assistance of other agencies and bureaus, is especially important in evaluating the success of the NPS Management Program. In particular, NMED will assess effectiveness of programs conducted by management agencies in surface water and ground water. These assessments are mandated by §106 of the CWA.

In preparing this document, the State found that agency budgets and individual landowner's expenditures cannot be readily analyzed to isolate specific costs for NPS management. In many cases, federal and State agencies, as well as private landowners, conduct NPS management activities as such a routine matter that costs involved are part of normal operating budgets. Therefore, specific cost estimates for implementation of this program have not been included in this document. Limiting the discussion to sources of funding is consistent with requirements of §319(b)(2)(E) of the CWA.

### **1. LEAD AGENCY FOR THE STATE – New Mexico Environment Department**

NMED has been designated by the Governor as the lead agency for developing, implementing, and coordinating the New Mexico NPS Management Program. As lead agency for the New Mexico NPS Management Program, NMED has primary responsibility for assessment of water quality and NPS impacts on both surface water and ground water, and for enforcement of specific regulations, adopted by the NMWQCC, for protection of water quality, as established through the WQA.

Within NMED, the SWQB/NPS Pollution Section coordinates NPS programs, including §319(h) funding. Staff members of the Liquid Waste Section, Underground Storage Tank Bureau, Solid Waste Bureau, and Superfund Section are also involved in management and control of surface

water and ground water NPS concerns (see Appendix G). Intra-agency meetings, as well as informal discussions, are held on a continuous basis to provide educational opportunities, ensure coordination, and to transfer information.

## **A. Surface Water Quality Bureau**

SWQB coordinates with all other NMED programs to ensure that surface water and ground water NPS concerns are considered in all Department activities. Intra-agency coordination includes information transfers, specific requests for reporting of staff observations of potential water quality concerns, intra-agency meetings, and informal discussions. Program managers of the various sections within the SWQB meet on a weekly basis. Bureau chiefs within NMED meet as needed on a case-by-case basis. The NPS Pollution Section also coordinates among other cooperating agencies within the Department. This allows for reporting water quality concerns resulting from inappropriate management practices, identifying new NPS concerns, and documenting the level of effectiveness of BMPs. NPS Task Force/UWA\* Work Group meetings are conducted quarterly. Project reviews with federal, State, and local agencies are conducted to provide additional opportunities for communication and coordination of efforts as needed.

SWQB conducts public education and outreach activities to educate citizens and stakeholders regarding water quality issues and NPS impacts on water quality. The SWQB education program will be significantly broadened to promote effective NPS management (See Program Management Milestones Chapter XI). SWQB staff are participating in training sessions and developing new outreach tools and resources. In addition, SWQB is developing a new strategy to facilitate the formation of more watershed associations and to create awareness, provide information, and encourage action within UWA\* Category I watersheds. A new outreach effort to local schools and youth programs and the development of closer ties with agencies conducting other environmental outreach programs will be included in this program.

### NPS Section

The NPS Pollution Section is responsible for maintaining coordination among the various cooperating agencies participating in the program. Coordination allows for reporting of water quality concerns resulting from inappropriate management practices, identifying new NPS concerns, and documenting the success/failure of chosen BMPs. Formal interagency task force meetings and program reviews with State, federal, and local agencies are conducted to provide additional opportunities for communication and coordination of efforts to address NPS issues.

SWQB/NPS Section is responsible for reporting to the State NPS Task Force/UWA\* Work Group on progress made and difficulties encountered during implementation of this program. With help from the Task Force, this management program is routinely evaluated and "midcourse corrections" are suggested to the NMWQCC. SWQB also provides summary information (annual and semiannual reports) to the EPA for their mandated reports to the U.S. Congress.

SWQB/NPS Section is responsible for coordinating efforts funded under §319 grants obtained through Region VI, EPA. Future coordination through the NPS Task Force /UWA Work Group

will be directed toward providing input for grant applications, project design, and implementation efforts.

### § 401 Certification

SWQB reviews dredge-and-fill applications required under §404 of the CWA. This review process is strictly limited to determining if a proposed project will comply with applicable sections of the CWA and attain State water quality standards and other provisions of State statutes. This review process may result in an unconditional certification, conditional certification, or denial of certification under §401 of the federal Act. The NPS Pollution Section has adopted primary responsibility of this review process as one element of this program.

Although regulations are enforced on a case-by-case basis, a watershed-wide assessment, as well as site-specific focus is used to determine effects of regulated activities and to develop mitigation measures. Regulation and enforcement of §401 are only effective through the legislation and authority of §404 of the CWA.

### Surveillance and Standards Section

SWQB's NPS and Surveillance & Standards Sections monitoring efforts include, but are not limited to, water chemical and physical attributes (e.g., nutrients, temperature), fish populations, benthic macroinvertebrates, and fluvial geomorphologic indicators. Monitoring occurs before and after implementation of BMPs. Monitoring sites typically bracket BMP implementation sites to allow for comparison of treated and untreated stream reaches. Data are entered into appropriate databases and reports to EPA are scheduled to be semi-annual. Monitoring data obtained by other agencies or partners are shared with SWQB, as stipulated in MOUs. These data may include upland and riparian vegetation sampling, photographic comparisons, and other environmental indicators. See also Key Element 6 (1H).

### TMDL Development Section

The Total Maximum Daily Load (TMDL) process involves determining and planning a watershed or basin-wide budget for pollutant influx to a watercourse. This process necessarily involves state and federal agencies, local water users and other concerned citizens. The TMDL Program determines the adequacy and significance of water quality and other supporting data, reviews the effectiveness of existing water quality protection and pollution control measures, evaluates existing management strategies and develops potential new water quality management implementation strategies. The TMDL Program utilizes and integrates the full resources of the Surface Water Quality Bureau's (SWQB) multiple Sections as well as its Geographic Information System (GIS) to develop and coordinate materials that support the CWA § 303(d) List for the State of New Mexico.

## **B. Ground Water Quality Bureau**

The NPS pollution problem of greatest known concern affecting ground water results from proliferation of on-site liquid waste disposal systems, mainly septic tanks and leach fields. In

general, ground water contamination most frequently occurs in vulnerable aquifer areas where the water table is shallow although other factors, including precipitation, soil type and preferential flow pathways also affect vulnerability.

Pesticides such as insecticides, herbicides and fungicides have been used in New Mexico. Detection in shallow agricultural and urban use aquifers have been well below established health advisory levels. NMED, in cooperation with the New Mexico Department of Agriculture, has been collecting reconnaissance samples for pesticides in ground water. Further information is found in §305(b) report (NMWQCC, 1998).

The State cooperates with the federal government in various ground water pollution control programs derived from federal mandates. Counties and municipalities also have broad authorities relevant to ground water pollution control.

### **C. Field Operations Division – Liquid Waste Section**

NMED's Liquid Waste Program is directed at the prevention of ground water pollution resulting from individual liquid waste disposal systems (such as septic tanks). An ambitious, ongoing monitoring program, undertaken by NMED, has documented serious ground water pollution from these sources in many parts of the State. NMED has found present management of these sources inadequate. The Liquid Waste Program is described in the State's NPS Assessment and the New Mexico Ground Water Strategy.

Other ongoing programs for ground water pollution control, including New Mexico Water Quality Act (WQA), Oil and Gas Act, Hazardous Waste Act (HWA), Ground Water Protection Act, Solid Waste Act, Emergency Management Act, and Environmental Improvement Act, are described in the §305(b) report (NMWQCC, 1998) and are implemented by NMED.

### **D. Construction Programs Bureau - State Revolving Fund**

NMED administers the CW-SRF program. This program is managed by the State and utilizes State and federal funding. Under the program, the EPA provides grants to capitalize state loan funds. The states in turn, make zero-percent interest loans to communities, individuals, and others for high-priority water-quality activities. As money is paid back to the revolving fund, new loans are made to other recipients. NPS control programs are specifically identified as eligible for loans from the program. The revolving loan program is a source of funding available to counties, municipalities, SWCDs, sanitation districts, non-profit organizations and other groups or individuals for any activity that a state has identified in its NPS Management Program. See <<http://www.epa.gov/owmitnet/cwsrf.htm>> for more information.

Additionally, NMED, through the Construction Programs Bureau, SWQB, and GWQB, has developed a priority rating system for ranking NPS and brownfields redevelopment projects through funding under the CW-SRF.

NPS program changes and other issues are made available to the public for review and comment through several media including the WWW (see <<http://www.nmenv.state.nm.us>>), E-mail, news releases, and the SWQB quarterly newsletter, *Clearing The Waters*.

## **E. State Regulations**

State regulations applicable to surface water protection under the NPS Management Program include §1-203, relating to reporting and clean-up of spills, and §2-201, prohibiting placement of refuse in a watercourse. Environmental Improvement Board regulations applicable to this NPS Management Program are those governing individual on-site liquid waste disposal systems (septic tanks, etc). NMED has enforcement responsibilities for numerous other regulatory programs that also protect surface water and ground water quality. These include ground water discharge plans and certain underground injection control regulations under the WQA, UST regulations under the State HWA, and hazardous waste management regulations under the State HWA. These regulations have proven effective in preventing pollution or mitigating its effects from sources to which they apply. Moreover, more stringent solid waste management regulations were adopted in December 1991 under the State Solid Waste Act. Enforcement of these regulations is not specifically addressed in this management program because they are mainly applicable to point sources. NMED, however, routinely uses these regulations, as needed, to protect both surface water and ground water quality. Normal ongoing, internal processes ensure that these regulatory programs are, and will be, coordinated with this NPS Management Program.

## **2. FEDERAL PROGRAMS**

### **A. USDA Forest Service**

**NPS categories to be addressed: Rangeland and Grazing/Wildlife Management, Silviculture, Recreation, Construction, Resource Extraction.**

USFS manages approximately 8.5 million acres in New Mexico. These lands include approximately 1,700 miles of the State's 2,000 miles of high quality mountain streams. USFS is a designated management agency for NPS control in New Mexico. Their responsibilities include control, abatement, and prevention of NPS pollution resulting from all activities conducted in National Forests. Water quality concerns identified in National Forests include sediment and nutrient inputs from grazing and foraging activities, road construction and maintenance, timber harvest, and mining. Recreation impacts, largely related to sediment and litter impacts, occur in virtually all easily accessible lakes and along many accessible streams.

All land management activities on USFS lands are to be conducted in accordance with Forest Land Management Plans (FLMPs), developed by the USFS for each National Forest, following public review and comment. Use of water quality and other resource protection BMPs in National Forests is required by NFMA and prescribed in the Forest Plans. Consequently, all land management activities, such as grazing, silviculture, and road construction, must be implemented using BMPs for control of NPS water pollution.

USFS maintains a NMED liaison in the SWQB Santa Fe office to ensure and facilitate coordination between the two agencies. The liaison's duties include:

- development of BMPs
- assisting in coordination of §319(h) programs
- coordination and review of annual NPS monitoring reports from National Forest in New Mexico
- organization of annual USFS/SWQB meeting
- assisting with assessment monitoring of BMP implementation
- technical support to USFS for CWA permits
- assisting in preparation of NEPA documents

The process used by the USFS in the Southwestern Region to identify appropriate BMPs is termed Integrated Resource Management (IRM). The IRM process incorporates 11 steps designed to meet requirements of both the NEPA and the NFMA. The process is fully described in the USFS publication Integrated Resource Management: The Road to Ecosystem Management, Fourth Edition.

## **B. USDA Farm Service Agency**

### **NPS categories to be addressed: Agriculture**

FSA is responsible for administering the federal Conservation Reserve Program (CRP) and Conservation Reserve Enhancement Program (CREP).

CRP encourages farmers to protect their most fragile farmland and marginal pastureland by conserving and improving soil, water, and wildlife resources. Farmers and ranchers are eligible for cost-share assistance for conservation on agricultural land to convert highly erodible and other environmentally sensitive acreage devoted to production of agricultural commodities to long term approved cover. Producers enrolled in CRP are also offered annual rental payments and incentives for providing these conservation measures. Practices eligible for cost-share are those selected by farmer-elected County Committee members from a list approved by State FSA Committees and the Secretary of Agriculture.

Converting highly erodible and/or environmentally sensitive cropland to permanent vegetative cover under the CRP has created significant improvements in water quality across the nation. According to the NRCS, each acre under CRP contract reduces erosion by an average of 19 tons of topsoil a year. This improves the quality of water in streams, lakes, and other bodies of water not only by reducing sediment, but also by reducing the amount of nutrients and pesticides swept into bodies of water along with topsoil. Producers who enroll acreage in CRP greatly reduce their application of pesticides and nutrients on these acres, thereby reducing runoff containing excess agricultural pesticides and nutrients.

FSA administers the CRP Program while the NRCS, USFS, NMSU Agricultural Extension Service, and other agencies provide technical and educational assistance.

CREP provides a flexible cost-effective means to address agricultural resource problems by targeting federal and State resources to specific geographic regions of particular environmental sensitivity over a 10- to 15-year period. The primary goals of CREP are to:

- Create an opportunity where the resources of a State government and Commodity Credit Corporation can be targeted in a coordinated manner to address specific conservation and environmental objectives of that State and the nation.
- Improve water quality, erosion control, and wildlife habitat in specific geographic areas that have been adversely impacted by agricultural activities, with emphasis on addressing NPS water pollution and wildlife habitat restoration in a cost-effective manner.

USDA provides financial, educational, and technical assistance under CREP to help producers voluntarily implement conservation practices that will enhance the environment in an economically efficient manner. Producers are eligible for cost-share assistance and annual rental payments under this program. Federal cost-share assistance for conservation practices cannot exceed 50 percent, while States and other entities may provide additional cost-share assistance or in-kind services.

FSA also has primary responsibility for making producer eligibility determinations regarding compliance with the Food Security Act of 1985. This act requires farmers to reduce erosion on their highly erodible land that must have had a conservation plan by 1990, and was to be fully implemented by 1995 if the producer is to continue receiving USDA program benefits.

FSA shares administration of EQIP with NRCS. EQIP provides educational, technical, and financial assistance to eligible farmers and ranchers to address soil, water, and related natural resource concerns on their lands in an environmentally beneficial and cost-effective manner. FSA is responsible for implementing administrative processes and procedures relating to contracting, financial performance reporting, and financial matters including allocation and program accounting. FSA also determines producer eligibility, approves contracts and contract modifications, approves contract payments and disbursement of funds, assists NRCS with a statewide outreach program, and provides NRCS advice on:

- priorities
- Priority areas and significant statewide natural resource concerns
- Eligible practices
- State program management policies, procedures, and performance indicators.

### **C. USDA Natural Resources Conservation Service**

#### **NPS categories to be addressed: Agriculture, Rangeland and Grazing/Wildlife Management, Recreation, Resource Extraction**

NRCS, through programs such as EQIP, Conservation Technical Assistance (CTA) and others, provides technical, educational, and financial assistance to landowners and operators to assist them in implementing practices for sound natural resource use and management. Assistance is

provided for all types of land uses, which NRCS categorizes as follows: commercial/industrial; community services; cropland; farmstead or headquarters; hayland; native pasture; natural areas; pastureland; rangeland; recreation land; residential land; mined land; transportation services land; wildlife land; forest land; and other. Technical assistance, provided through local SWCDs, includes helping land owners develop conservation plans for implementation by the land owner/operator that include protection and enhancement of water quality through NPS control. The focus of NRCS activities is on voluntary action by land owners and managers to effect wise land use. Cost-share funds are often available for implementation of conservation practices through both NRCS and FSA.

NRCS places an emphasis on surface water and ground water quality protection in all ongoing programs. To ensure that water quality improvement objectives are incorporated into NRCS staff work, the NRCS Field Office Technical Guide (FOTG) includes water quality management information. Presently, there is not an integration of EQIP and §319(h) funding programs but watersheds receiving §319(h) funds may also receive EQIP funds. The EQIP program priority ranking criteria addresses environmental benefits comprising soil, water, air, plant, and animal resources, social and economic benefits and partnerships. Ranking criteria are specified for needs such as identified stream segment for TMDLs, needs identified in the 305(b) report, and Category I watersheds.

The FOTG also is the primary technical reference for the development of Comprehensive Nutrient Management Plans for Animal Feeding Operations. Other programs administered by NRCS that provide educational and technical assistance are discussed below.

The CRP, authorized with the Food Security Act of 1985, was designed to convert cropland into perennial protective vegetative cover for a minimum of 10 years. Farmers apply for CRP through the FSA. Once accepted, NRCS personnel help plan and implement a conservation plan. Participants with eligible cropland may receive rental payment and cost share assistance for establishing vegetative cover practices.

The Small Watershed Program works through local government sponsors and helps participants solve natural resource and economic problems on a watershed basis. Projects include watershed protection, flood prevention, erosion and sediment control, water quality, wetlands creation, and restoration in watersheds of 250,000 or fewer acres. Both technical and financial assistance are available.

The River Basin Program (PL-566) provides broad authority for USDA agencies and other federal and State agencies to cooperate in river basin and area-wide planning surveys and investigations. River basin studies and investigations are conducted at the request of cooperating federal, State, and local agencies. The studies:

1. Identify water and land resource problems.
2. With sponsors, determine alternative solutions to identified problems.
3. Evaluate alternatives with regard to economic, social, and environmental concerns.

NRCS operates 24 Plant Materials Centers around the country. The Los Lunas Plant Materials Center is located in Los Lunas, New Mexico. NRCS field personnel and cooperating agencies identify conservation needs and priorities, and scientists at the centers seek out native plants that show promise for solving problems. Examples of current conservation priorities relating to water quality that have been addressed at the Los Lunas Plant Materials Center are testing and developing plants and planting techniques for riparian restoration, upland revegetation, wetland creation, and mine reclamation.

#### **D. USDI Bureau of Land Management**

##### **NPS categories to be addressed: Rangeland and Grazing/Wildlife Management, Resource Extraction, Recreation, Construction.**

The BLM is a designated management agency for NPS control in New Mexico. Their responsibility includes control, abatement, and prevention of NPS pollution resulting from activities conducted on over 13 million acres of lands managed by BLM in New Mexico. Although the amount of the State's water resources that are located on BLM lands is unknown, water quality concerns on BLM properties include impairments resulting from rangelands, mining operations, oil and gas development, and road construction and maintenance.

Activities on BLM-administered lands are to be conducted in accordance with Resource Management Plans (RMPs) developed by the agency in coordination with other federal, State, and local agencies, and the public. Many existing RMPs in New Mexico contain water quality and erosion control objectives that are directly related to NPS water quality concerns. Implementation of RMP objectives is accomplished through individual activity plans that address a specific land area and utilize an interdisciplinary approach in their development.

Of particular State concern, regarding NPS control on BLM lands, are development and implementation of BMPs for rangelands and riparian areas. Development of grazing BMPs on BLM land is accomplished through activity plans and site-specific NEPA analysis documents, such as EAs, on proposed actions that establish site-specific objectives and mitigation within the general objectives of a particular RMP. The riparian area management program is being developed and stresses improvement of water quality as a prime objective of the program. BLM is cooperating with other federal and State agencies and private groups to identify, restore, and manage important riparian areas on BLM lands in New Mexico.

#### **E. USDI Fish and Wildlife Service**

##### **NPS categories to be addressed: Agriculture, Rangeland and Grazing/Wildlife Management, Recreation, Construction.**

USFWS is the primary agency responsible for administering the federal Endangered Species Act (ESA), Migratory Bird Treaty Act, and Fish and Wildlife Coordination Act, some provisions of which relate to pollution-induced habitat degradation. USFWS's Environmental Contaminants Program works in partnership with other agencies and organizations to identify sources of

pollution, investigate pollution effects on fish and wildlife habitat, restore pollution-degraded habitats, provide advice to minimize pesticide use, and provide technical expertise to federal and State agencies and private entities.

As a participant in the NPS Task Force/UWA\* Work Group, USFWS has the opportunity to review §319(h) project proposals for consistency with the ESA and for other habitat issues. NMED and USFWS are in the process of developing an MOU. This document will clarify the roles each agency will play with regard to the other. For example, mechanisms to ensure that NPS BMPs are used in all endangered species recovery or habitat improvement projects will be stipulated. Also, mechanisms to ensure that §319(h) projects do not adversely impact wildlife habitat, particularly for Threatened and Endangered (T & E) species, will be included.

#### **F. U.S. Department of the Army, Corps of Engineers**

##### **NPS categories to be addressed: Recreation, Hydromodification**

ACOE is responsible for issuing permits required by §404 of the CWA and for its enforcement in New Mexico. Section 404 is intended to control discharge of dredge-and-fill materials into waters of the United States, including wetlands and ephemeral waters.

Under this program, individuals must apply for a dredge-and-fill permit for most types of work performed below the high water mark in rivers, lakes, and wetlands. ACOE coordinates with SWQB through the §404/401 certification process to ensure that water quality standards are not violated by permitted work.

#### **G. Federal Energy Regulatory Commission**

##### **NPS categories to be addressed: Hydromodification**

FERC regulates modification of dams and waterways when modification is for hydroelectric generation. FERC permits for hydroelectric power generation include required use of BMPs during construction and operation of facilities. FERC consults with the State in development of permits and permit conditions.

#### **H. U.S. Geological Survey**

##### Water Resources Division

SWQB has a contract with USGS, Water Resources Division, to collect data at numerous selected sites throughout the State. These data have been collected at the same sites, in some cases for decades, providing valuable baseline information on water quality and quantity. The data are uploaded into the STORET database, and also published regularly by USGS. SWQB uses these data in conjunction with its TMDL development program, as well as for NPS pollution management.

USGS also acquires baseline data and conducts research on various water quality-related topics. USGS is involved in the National Water Quality Assessment (NAWQA) Program, which became fully implemented in 1991. The NAWQA Program builds upon an existing base of water quality studies of the USGS, and other federal, State and local agencies. The objectives of the NAWQA Program are to:

- Describe current water quality conditions for a large part of the Nation's freshwater streams, rivers and aquifers.
- Describe how water quality is changing over time.
- Improve understanding of the primary natural and human factors that affect water quality conditions.

Topics addressed by this program include pesticides, volatile organic compounds, nutrients, and aquatic biota. This information will help support the development and evaluation of management, regulatory, and monitoring decisions to protect, use and enhance water resources.

The USGS Water Resources Division is also in the process of developing a hydrologic model for the Middle Rio Grande and the underlying Santa Fe Group Aquifer System. Because the Santa Fe Group Aquifer System is hydraulically connected to the Rio Grande, understanding relations between the surface-water system and the aquifer system are essential for protection of both surface water and ground water in the region.

USGS also continues to publish Water-Resources Investigations for studies undertaken throughout the State. SWQB proposes to enter into a cooperative agreement with USGS to share data resources.

### **3. OTHER STATE PROGRAMS**

#### **A. New Mexico Energy, Minerals, and Natural Resources Department**

##### NMEMNRD Mining and Minerals Division

#### **NPS categories to be addressed: Resource Extraction.**

The Mining and Minerals Division of NMEMNRD administers the New Mexico Surface Coal Mining Program. This program satisfies the requirements of the federal Surface Mining Control Act of 1977. The State has primary enforcement authority pursuant to this Act. The Mining and Minerals Division issues permits to coal mines that include standards for control of NPS pollution in runoff from coal mines.

## NMEMNRD New Mexico Forestry Division

### **NPS categories to be addressed: Silviculture, Rangeland and Grazing/Wildlife Management, Road Construction.**

The New Mexico Forestry Division's forest resource management programs involve the application of both regulatory and voluntary silvicultural BMPs on State and private forest lands in New Mexico.

#### Voluntary Programs and Activities:

Through the federally supported Cooperative Forestry Assistance Program, the New Mexico Forestry Division provides technical forest resource management assistance to landowners and recommends application of NPS pollution BMPs in all silvicultural activities. Types of technical assistance range from reforestation to harvesting of mature timber. This assistance is designed to meet a wide range of landowner management objectives. In conjunction with these programs, the New Mexico Forestry Division has technical responsibility for application of forestry practices in federally funded landowner cost share programs that include FIP and SIP. SIP provides for the widest range of practices, such as wetlands protection, disturbed site rehabilitation, and protection or re-establishment of riparian vegetation.

Distribution of information and education to private forest landowners and other cooperators is a major effort of the New Mexico Forestry Division. Information is provided in the following manner:

- Through three publications that prescribe, define, and illustrate BMPs for treatment of roads, skid trails, landings, etc., related to silviculture and other resource management operations. These publications are titled Water Quality Protection Guidelines for Forestry Operations in New Mexico (Forestry Division, 1994), Reducing Erosion from Unpaved Rural Roads in New Mexico (Soil and Water Conservation Division, 1983), and New Mexico Forest Practices Guidelines (Forestry and Resources Conservation Division, 1990).
- Training is provided to landowners and other interested individuals, individually or in group presentations. The New Mexico Forestry Division is the lead agency for the national Project Learning Tree Program, which is designed for educators of students from kindergarten through grade 12. It is a source of interdisciplinary instructional activities and provides workshops and in-service programs for teachers, foresters, park and nature center staff, and youth group leaders.
- The New Mexico Forestry Division co-sponsors a Forestry Camp for interested youth. The camp's programs educate campers on complexity of forest ecosystems and importance of a healthy system for providing quality water and other benefits.

Under the auspices of the Conservation Planting Revolving Fund, the New Mexico Forestry Division provides, at cost, seedling trees to landowners for conservation plantings that provide

soil stabilization, reforestation, and afforestation. Seedlings planted for the above purposes help control erosion and improve water quality.

### Regulatory Programs:

The New Mexico Forestry Division has regulatory authority over all harvesting of commercial forest products where more than 25 acres are harvested from an individual private ownership in a single year. Harvesting is conducted under a permit issued by the New Mexico Forestry Division. As a requirement of the permit application, a harvest plan defining what will be reserved after harvest and how steep slopes will be treated to minimize soil erosion, must be prepared. In addition, regulations require that all roads, skid trails, and landings be water barred and reseeded. Following completion of harvesting activities, New Mexico Forestry Division personnel complete a silvicultural water pollution-NPS assessment to determine the types of BMPs applied.

## **B. New Mexico State Highway and Transportation Department**

### **NPS categories to be addressed: Road Construction.**

NMSHTD is responsible for the planning, designing, construction and maintenance of New Mexico's federal and State roads and highways. Use of BMPs to control erosion from disturbed areas and road embankments, for chemical de-icers, for herbicides used for weed control, and for other sources of NPS pollution are required for all road construction and maintenance work performed or contracted by NMSHTD.

BMPs are routinely included in operational plans for construction and maintenance projects. Design and implementation of BMPs is overseen by the NMSHTD's Engineering/Design Division. Additional controls are established under the National Pollutant Discharge Elimination System Stormwater Pollution Prevention Program (§402(p) of the CWA) for pollution prevention plans on all projects that incorporate a disturbance of five acres or more.

In November 1994, a MOU was approved between NMED and NMSHTD to respond to:

- water quality objectives defined by Congress in the CWA, as amended
- goals and policies of the State of New Mexico as defined in the New Mexico NPS Management Program developed pursuant to §319 of the CWA
- responsibilities and activities to be performed by each agency to carry out the State Water Quality Management Plan developed pursuant to §208 of the CWA as related to activities on lands administered by NMSHTD.

Under this MOU, NMED and NMSHTD have established a task force that meets quarterly to identify areas of specific concern, and to develop policy and procedures for solving problems related to the environment including water quality issues. Appended to this MOU is a list of actions to ensure compliance with applicable environmental laws including the CWA, the WQA, and NMWQCC regulations.

TEA-21 will provide new opportunities for water quality improvements associated with transportation projects. SWQB proposes to coordinate with Regional and Metropolitan Transportation Planning Organizations to add proposed water quality-related projects, especially in UWA\* Category I watersheds, to the Statewide Transportation Improvement Program. SWQB also proposes to integrate agency missions by staffing each NMSHTD District, via TEA-21 funding, with a qualified environmental specialist to provide guidance and oversight to reduce NPS pollution and other environmental problems.

In conjunction with revising our MOU with NMSHTD, we will establish procedures for incorporating the watershed approach into environmental planning for road construction. NMSHTD will be responsible for ensuring that drainage modifications made in conjunction with highway construction and maintenance projects cause the least disturbance to the natural hydrology and to the local watershed. We will encourage representatives of NMSHTD to participate in watershed management associations.

### **C. State Land Office**

#### **NPS categories to be addressed: Agriculture, Rangeland and Wildlife/Grazing Management, Road Construction, Resource Extraction, Silviculture.**

The SLO administers approximately nine million surface acres and 13 million acres of mineral estate that are held in trust for the common schools, State universities, and other beneficiary institutions. The SLO is required to manage the trust's assets in a manner that maximizes income to beneficiaries. At the same time, assets (renewable and non-renewable) must be protected from waste and dissipation to ensure sustainability. The SLO is not legally authorized to expend trust funds for improvement of trust land. However, FSA funds may be expended on trust lands.

The SLO uses a cooperative approach in dealing with conservation of natural resources in relation to grazing and agricultural practices on trust land. Lessees are encouraged to enter into EQIP contracts or develop ranch and farm plans with SWCDs, and NRCS. Communications frequently occur with the approximately 4,000 grazing lessees regarding evolving range conservation practices.

The SLO has promulgated rules that stipulate BMPs designed to control sediment and other pollutants originating from construction and operation of roads. Similarly, the agency has rules establishing reclamation standards for oil and gas development on trust lands. Lessees of State lands are required to develop and implement management plans and reclamation plans as a condition of the lease. The SLO has the authority to cancel any lease that does not meet these conditions. SLO staff conduct on-site inspections to ensure that lease conditions are met.

Other activities on trust lands typically use BMPs developed by other expert agencies. For example, forest management practices are conducted using guidance developed by the New Mexico Forestry Division.

The SLO has developed and promotes the Environmental Education Easement Program. This program provides small tracts of trust land to New Mexico's public school students and teachers

for use as an outdoor classroom. Teachers and students are encouraged to conduct hands-on projects focusing on land restoration, wildlife preservation, nature observation, range management, biological diversity, soil analysis, and reforestation.

#### **D. New Mexico Department of Agriculture**

##### **NPS categories to be addressed: Agriculture.**

NMDA administers regulations concerning distribution and use of agricultural pesticides in New Mexico. At present, the extent of water quality impairment due to NPS pesticide contamination is largely unknown.

On July 1, 1997, responsibilities for New Mexico's Soil and Water Conservation Plan were transferred to the NMDA. The Agricultural Programs and Resources Division provides administrative support, program direction, planning assistance and some financial help to 47 SWCDs in New Mexico. Conservation districts are local units of government operated by a board of locally elected and appointed supervisors who are familiar with soil and water conservation problems in their area. Responsibilities include review of subdivision plans submitted by developers for adequacy of erosion control plans, providing technical assistance to individual landowners and operators to protect their natural resources, and helping landowners with conservation provisions of federal farm programs, such as the Food Security Act of 1985. Various districts are also conducting special projects to control NPS pollution by installing structures to control head cuts and establishing vegetative cover on exposed areas. The NRCS and FSA work closely with SWCDs in developing and implementing local conservation programs.

#### **E. New Mexico State University**

##### **NPS categories to be addressed: Agriculture.**

##### New Mexico Cooperative Extension Service (NMCES)

The New Mexico Cooperative Extension Service (NMCES) administers several water quality programs for NPS pollution control that are objective-based with measurable accomplishments. The Improved Program Support for Water Quality supports counties through educational and technical information, as well as special studies on an as-needed basis. The Doña Ana-Sierra Hydrologic Unit Project focuses on implementation of water quality BMPs for the farming valleys of Hatch and Mesilla on the lower Río Grande. Other external grants support updating and delivery of New Mexico Farm\*A\*Syst, a voluntary groundwater protection program for New Mexico farms, ranches, and rural homeowners for which NMCES is the lead agency. A dedicated web site for Farm\*A\*Syst (<http://www.cahe.nmsu.edu/farmasyst>) contains the program's materials in an interactive format, including information about Integrated Pest Management (IPM), Nutrient Management, Pesticide Management, Animal Waste Management, and more.

## New Mexico Water Resources Research Institute (WRRI)

The New Mexico Water Resources Research Institute (WRRI) administers funds from State, federal, and other sources to support a statewide program that promotes research, training, information dissemination, and other activities to meet the needs of the state and nation. Basic and applied research is conducted by scientists of state academic institutions, with research priorities established by the state Program Development and Review Board. Water quality, including nonpoint source impacts, is one of the key research priorities of the WRRI.

State appropriations support a substantial part of the program. Federal appropriations are provided through the Water Resources Research Act (42 USC 109 et seq.), which authorizes a program of water-related research and training through establishment of water research institutes at land grant colleges in each state, and authorizes awarding of grant funds for research projects.

The program addresses water resource management problems, such as abundance and quality of our water supplies, sources of water contaminants and methods of remediation, and training of research scientists, engineers, and technicians. Other important topics, such as water conservation, planning, and management, and atmosphere-surface-ground water relationships are represented in the program.

WRRI reports annually to SWQB and the NPS Task Force/UWA\* Work Group on research related to NPS activities. In addition, NMED is represented on the Program Development and Review Board. (Dr. James Davis (SWQB Bureau Chief) is the current NMED designate).

## **F. New Mexico Department of Game and Fish**

### **NPS categories to be addressed: Agriculture, Road Construction, Recreation.**

#### Conservation Services Division (CSD)

The Conservation Services Division (CSD) of the NMDGF administers approximately 250,000 acres of real property, owned or leased by the State Game Commission, for the following purposes: game refuges, fish hatcheries, wildlife habitat, public recreational sites, administrative sites, etc. Administration and proper development of these properties contribute to ensuring viability of all wildlife species in New Mexico and providing for the present generation's enjoyment, appreciation, and recreational use of the State's wildlife and its habitat. CSD is also responsible for providing feed, through crop production on several thousand acres, for wintering populations of Central Flyway ducks, geese, and sandhill cranes in the Middle Río Grande and Lower Pecos valleys.

BMPs are included in operational plans for irrigated crop production, road maintenance on wildlife areas, and recreational sites (see Appendix B). The Habitat Management Section of CSD oversees use of BMPs to control erosion from road banks, herbicides used in weed control, and sewage disposal from recreational sites.

CSD also administers NMDGF's wildlife education programs, Project WILD and Aquatic WILD. Objectives of wildlife education programs include:

1. To provide citizens of New Mexico with accurate fish, wildlife, and ecology information;
2. To encourage students of all ages to develop awareness, gain knowledge, use skills, and take responsible actions for fish and wildlife and the environment;
3. To inspire all New Mexicans to respect, utilize, understand, and enjoy the State's diverse fish and wildlife resources;
4. To provide innovative educational strategies for educators that draw on students' natural interest in fish and wildlife and the outdoors, and;
5. To become a positive connection between NMDGF and all publics.

There have been 12,100 Project WILD and Aquatic WILD workshop participants since 1983. Sixty-three percent of the 17,000 elementary and secondary teachers in New Mexico have been certified in Project WILD and Aquatic WILD.

Funding applied to NPS efforts in NMDGF comes from the Game Protection Fund (hunting and fishing license sales) and Federal Aid in Wildlife Restoration.

#### **G. Office of the State Engineer (OSE) Interstate Stream Commission (ISC)**

##### **NPS categories to be addressed: Agriculture, Hydromodification, Silviculture, Land Disposal.**

The OSE and ISC are responsible for the administration, investigation, planning, development, conservation, and protection of New Mexico's water resources.

##### Office of the State Engineer (OSE)

In addition to water-rights and water adjudication responsibilities, the OSE maintains a Water Conservation Program that provides information on water conservation to the general public, technical assistance to water users on water conservation, and develops the water conservation policies implemented in the administration of water rights.

The OSE collects and interprets hydrologic and other water resources data, for the purpose of ground water basin, water use and water rights administration. Published data are available to the public through the OSE library.

Issues of concern regarding the State's water supply and water resources management include but are not limited to, the effects of salinity, total dissolved solids and heavy metals on surface water supplies. OSE plans to investigate at the policy level, strategies to control and prevent pollution of surface water supplies, recharge areas, and ground water supplies by septic tanks, larger scale liquid waste disposal, or industrial uses.

#### Interstate Stream Commission (ISC)

In 1987, the legislature created a regional water planning program to inventory New Mexico's water supplies to assure adequate water is available for the State's future growth and development. The regional water planning program requires technical investigations into water supply and future demand, and extensive public involvement to determine recommended alternatives for balancing a region's water supply with future demand. Sixteen (16) water planning regions have been established under the program.

Water supply investigations are required to assess water quality, identify sources and types of contamination, and provide water quality management plans relating to land use practices, water use practices, and waste water treatment

## **4. LOCAL GOVERNMENT PROGRAMS**

County and municipal governments have authority over land use within their jurisdiction. Through subdivision regulations and zoning ordinances regarding land use, local governments could play a significant role in NPS management and prevention. At present, program implementation varies widely. A goal of the State NPS Management Program will be to provide information and assistance necessary to enhance county and municipal governments' ability to act as a partner with the State in NPS management.

### **A. Councils of Government**

#### **NPS categories to be addressed: Construction, Land Disposal**

Councils of Government are voluntary associations of local governments within regions of the State. There are seven planning districts designated by State statute. These organizations are governed by Boards of Directors that are appointed by member jurisdictions. Typically, throughout the State, their mission is to provide ongoing and long term inter-jurisdictional planning. Many of the Councils also provide technical services and direct program delivery. Information and training delivery is also a major part of the mission for all Councils.

Through this structure, emphasis can be placed on improving local practices that impact watershed quality. As intergovernmental coordinating entities, they are able to help establish development and delivery of information, training, and projects that benefit from the use of multi-agency resources. These activities will provide benefits in the quality of regional ground water and surface water resources by cooperatively identifying NPS projects between local, State, and federal entities. An example of how a Council of Governments may affect NPS management is the North Central New Mexico Economic Development District's efforts to

secure funding for development of water and waste water treatment facilities for communities in their region. For more information on Councils of Governments, see their web site (<http://www.lgd-newmarc.net>).

## **B. Soil and Water Conservation Districts**

### **NPS categories to be addressed: Agriculture.**

SWCDs in New Mexico are political subdivision of the State and are responsible under State law for directing soil and water conservation programs. Each of the 47 SWCDs in New Mexico are operated by a board of five locally-elected District Supervisors who are familiar with local soil and water conservation problems. SWCDs can provide assistance at the local level to establish watershed management associations, develop watershed action plans, provide technical expertise on water quality and NPS pollution issues, promote the use of the CW-SRF, assist local governments with NPS pollution management and prevention, and provide water stewardship education to private landowners. (See also Section C. 4, p. 52.)

## XI. MANAGEMENT PROGRAM MILESTONES

NPS Management Program milestones have been developed to focus our direction, and implement our strategy for approaching and resolving NPS pollution problems throughout the State. New milestones and category-specific milestones are separated from established ongoing programs, and are grouped into the topics described in the following paragraph. Milestones and continuing programs progress is reported in annual and semi-annual reports.

Continuing Programs lists institutionalized activities that are fundamental to the Management Program. General/Institutional refers to newly created tasks and milestones developed to further institutionalize water-resources protection from nonpoint sources of pollution. As these tasks and milestones are accomplished they will be added to the Continuing Programs of the NPS Pollution Section. Education/Outreach lists a variety of avenues for raising the awareness of the public, and engaging all stakeholders in the protection of water resources and prevention of water quality impacts. The next eight sections address categories of land management or activities impacted from nonpoint sources. These categories are Rangeland Restoration and Grazing/Wildlife Management, Construction, Silviculture, Agriculture, Hydromodification, Recreation, Resource Extraction, and Land Disposal. Milestones for these categories include both short-term and long-term time frames for implementation. The final section on Assessment/Monitoring includes the revised procedures and strategy for data collection.

### A. CONTINUING PROGRAMS

1. The NPS Task Force has combined with other statewide committees (the NRCS FAC Water Quality Subcommittee and the NRCS State Technical Committee) and its role will now be continued by the NPS Task Force /UWA Work Group. This group will continue to meet quarterly. The role of this group is to:

- identify and prioritize watersheds with water quality issues in New Mexico,
- meet goals of CWA through UWA,
- provide input on the §319 Program process,
- disseminate information to other stakeholders and the public regarding NPS issues,
- identify complimentary programs and sources of funding,
- help review and rank §319(h) proposals, and
- help SWQB develop and propose updates to New Mexico NPS Management Program.

2. The NPS newsletter, *Clearing the Waters*, will continue to be published quarterly.

3. NMED will continue implementation of New Mexico's Liquid Waste Program.

4. NMED will continue implementation and enforcement of WQA and NMWQCC regulations to prevent and abate water pollution.

5. Annual input from cooperating agencies will continue to be sought to update programs and tasks. This information will be reported in the NPS Management Program Annual Report and incorporated into the NPS Management Program.

6. SWQB will continue to request and collect water resources information. Through the use of the UWA GIS all available natural resources and water quality data throughout the state, will be compiled into a single database with graphic display and analysis capability.
7. SWQB NPS Pollution Section will continue to update collection of BMPs videos, manuals, publications and other pertinent information. These resources are available to the public.
8. SWQB will continue to provide a summary report of EA/EIS reviews to the EPA on a semiannual basis.
9. SWQB will continue to coordinate consistency reviews of federal, State and local projects, and will provide a summary report to the EPA semiannually.
10. SWQB NPS Pollution Section will continue to report §401 actions to the EPA semiannually.
11. The NPS Management Program Annual Report will report progress in meeting milestones and target dates.

## **B. GENERAL/INSTITUTIONAL MILESTONES**

1. The public will be requested to submit information on local NPS problems on a regular basis through the WWW. This program will be incorporated by year 2000.
2. The Manual of Standard Operating Procedures (SOP) (NMED, 1999) (final draft submitted to EPA for approval February, 1999) will be incorporated into all workplans and used throughout the entire monitoring process from initial project identification and planning through data usage by year 2000.
3. By 2001, the format and content of the NPS Program Annual Report will be reviewed and revised to improve our ability to describe the State's progress addressing impacts to water quality.
4. New interagency agreements will be created for those agencies where none presently exists. These agencies will be made aware of our UWA\* Category I watershed priorities, and impaired stream reaches and their probable NPS causes of non-support. SWQB NPS Pollution Section will complete these agreements at a rate of two or three each year. These agencies include:
  - **NM Department of Agriculture (NMDA)** – The SWQB will develop a MOU with NMDA to address NPS pollution issues, such as distribution and use of agricultural pesticides, and other water quality issues associated with agricultural activities.
  - **NM Cooperative Extension Service (NMCES)** – The SWQB will develop a MOU with NMCES to address NPS pollution issues associated with handling, distribution, and use of agricultural pesticides, animal wastes, and fertilizers; to provide information on nutrient

sources, livestock grazing, and agricultural runoff ; to promote educational activities directed toward urban agricultural practices; and to address other water quality issues associated with agricultural activities.

- **New Mexico Department of Game and Fish (NMDGF)** – The SWQB will develop a MOU with NMDGF to address NPS issues on land under their jurisdiction including agricultural lands, protection of wildlife habitat and fisheries, education/outreach programs, technical assistance programs, funding programs, and other water quality-related issues.
- **New Mexico Energy, Minerals, and Natural Resources (NMEMNRD) – Forestry and Resources Conservation Division** – The SWQB will develop a MOU with NMEMNRD – Forestry and Resources Conservation Division, to address NPS issues for silviculture, grazing/rangeland management, and road construction categories; technical assistance and funding programs (including SIP); and other water quality issues.
- **New Mexico Energy, Minerals, and Natural Resources (NMEMNRD) – Mining and Minerals Division** – The SWQB will develop a MOU with NMEMNRD – Mining and Minerals Division, to control NPS pollution in runoff from mining activities.
- **New Mexico Soil and Water Conservation Districts (SWCD)** – The SWQB will develop agreements with each of the 47 SWCD’s throughout the State, starting with those in UWA\* Category I watersheds. SWCDs can help establish watershed management associations, develop watershed action plans, provide technical expertise on water quality and NPS pollution issues, promote and implement the use of the CW-SRF, assist local governments with NPS pollution management and prevention, and provide water stewardship education to private landowners.
- **New Mexico State Land Office (SLO)** – The SWQB will develop a MOU with SLO to address NPS issues and other water quality issues for agriculture, recreation, grazing/rangeland management, and construction/development categories, planning, and riparian restoration on State Trust Lands.
- **USDA Natural Resources Conservation Service (NRCS)** – The SWQB will develop a MOU with NRCS to address NPS issues for grazing/rangeland management and agriculture categories, technical assistance programs, funding programs and water quality issues.
- **U.S. Department of the Army, Corps of Engineers (ACOE)** – The SWQB will develop a MOU with ACOE regarding regulatory activities for work performed within waters of the United States. The MOU will also address NPS pollution prevention and remediation on recreation areas administered by ACOE.
- **U.S. Department of Defense (DOD)** –The NPS Pollution Section will enter into a partnering agreement with DOD to address NPS issues on land under their jurisdiction. MOU development will be initiated which will include agreements with other bureaus and sections of NMED.

- **U.S. Department of Energy (DOE)** – The NPS Pollution Section will enter into a partnering agreement with DOE for activities that may affect water quality. MOU development will be initiated which will include agreements with other bureaus and sections of NMED.
  - **U.S. Fish and Wildlife Service (USFWS)** – The SWQB will develop a cooperative agreement with USFWS with respect to water quality issues and the ESA. SWQB will give USFWS notification of §319(h)-funded projects and other actions for their effects on protected plant and animal species. USFWS will coordinate with SWQB about programs with potential water quality issues, including Partners for Wildlife, activities authorized under the Fish and Wildlife Coordination Act, and Environmental Contaminants Program.
  - **U.S. Geological Survey (USGS)** – The SWQB will develop a MOU with USGS for water resources technical data acquisition and exchange.
5. The SWQB will implement the LOU with Office of the State Engineer/Interstate Stream Commission (OSE/ISC) for the protection of water quality associated with the activities of OSE and ISC. Activities shall include the development of an interagency task force, notification for permitting actions, ongoing cooperation and communication, and development of guidelines regarding water quality for Regional Water Plans. Water quality BMPs will also be developed for the operation of water control facilities.
  6. As agreed upon in the LOU (Appendix D), SWQB and OSE will work cooperatively to provide each agency timely notification regarding water rights applications or transfers which pose major public welfare issues in terms of adversely impacting water quality by nonpoint sources of pollution.
  7. New working relationships will be formed and agreements created for county and municipal governments, and other local governmental entities, that encourages NPS pollution management and prevention through long-term planning, subdivision regulations, zoning ordinances, and staff training.

## **C. EDUCATION/OUTREACH**

1. Each year, approximately eight UWA\* Category I watersheds will be targeted for intensive outreach and education.
  2. SWQB staff will assist in the creation and organization of watershed associations and citizens monitoring groups with emphasis on UWA\* Category I watersheds and the schedule for implementation of WRAS.
1. SWQB will provide assistance to incorporate the new Manual of Standard Operating Procedures into all workplans.
  2. SWQB staff will attend training sessions for facilitation, team building, organizing watershed groups and developing watershed plans. They will in turn help with the formation

cooperation-based locally-led watershed groups and with the development of watershed action plans. SWQB will continue to coordinate with volunteer monitoring efforts by providing training and technical assistance.

5. SWQB will continue to provide educational opportunities for the public and private sector by coordinating with local schools and youth programs, hosting information sessions, and conducting public site tours of demonstration projects and BMP implementation sites. SWQB will encourage these activities as components of §319(h) projects.
6. SWQB NPS Pollution Section will continue to provide technical support and guidance to state, federal, and private stakeholders and will report annually.
7. SWQB NPS Pollution Section will continue to provide information and assistance to county and municipal governments, and other governmental entities, that encourages their participation in NPS pollution management and prevention.
8. SWQB will continue to update and distribute educational information in the quarterly newsletter, *Clearing the Waters*, and on the SWQB Web page.
9. Joint §404/401 training seminars will continue to be conducted quarterly by the NPS Pollution Section and ACOE, for agencies and the public, and by request for watershed associations and other groups.
10. ACOE, in cooperation with USFWS, NRCS and SWQB, will continue to conduct wetland education presentations to agencies and the public.
11. SWQB will work with SWCDs to provide water quality education and incentives to local land owners.

## **D. RANGELAND AND GRAZING/WILDLIFE MANAGEMENT**

1. SWQB will continue to cooperate with the USFS through agreements outlined in MAA. The year's achievements relating to rangeland activities will be reported annually.
2. SWQB will continue to cooperate with the BLM through agreements outlined in MOU. The year's achievements relating to rangeland activities will be reported annually.
3. SWQB will continue to promote and implement the management of rangelands within a watershed context.
4. SWQB will continue to update and distribute state-of-the-art materials on proper grazing management.
5. In cooperation with other agencies, SWQB will report on and distribute materials that showcase the rangeland management successes of private landowners and/or permittees that affect water quality.

6. Through the §319 grant program, SWQB will continue to execute rangeland projects demonstrating sound ecological principals and highlighting improvement and protection of water resources on federal, State and private lands.
7. SWQB will continue to develop and provide new incentives for private landowners to restore rangeland and protect surface water and ground water resources.
8. SWQB will initiate a collaboration with the New Mexico Cattle Growers' Association to discuss the formation of a partnership and to coordinate efforts regarding grazing practices and rangeland improvements for the prevention and remediation of water quality impairments.
9. NPS management implemented through Healthy Rangelands initiative will continue on BLM managed lands with an objective of improving the ecological status of public rangelands and in accordance with the BLM New Mexico Strategic Plan.
10. BLM will maintain or restore at least 75% of riparian areas on BLM managed lands to Proper Functioning Condition.
11. NRCS will continue to update and develop policies and procedures for assisting landowners in cooperation with local SWCDs that are consistent with NPS management objectives for rangeland and riparian areas.
12. A MOU will be developed between the NRCS and the NMED regarding rangeland/grazing programs affecting water quality, and prevention and abatement of NPS pollution.
13. An MOU will be developed with the SLO regarding rangeland/grazing activities that affect water quality on State Trust lands.
14. New working relationships will be formed and agreements created with SWCDs that encourages NPS pollution management and prevention through rangeland management education efforts and long-term rangeland management planning. Districts in UWA\* Category I watersheds will be targeted first.

## **E. CONSTRUCTION**

1. SWQB will continue to cooperate with NMSHTD through agreements outlined in MOU. The MOU developed between NMSHTD and NMED will be reviewed and updated. Review criteria for NPS-related activities will include effectiveness of our collaborative efforts, support of water quality standards, and timely implementation of BMPs on land under NMSHTD jurisdiction.
2. NMSHTD will continue construction of road salt containment structures at patrol yards throughout the State.

3. The NPS Pollution Section will open a dialogue with NMSHTD and USFS to encourage the use of alternative de-icers other than salt on high mountain roads.
4. In cooperation with NMSHTD, SWQB will continue to conduct BMP design and implementation seminars for each NMSHTD district and for county road personnel.
5. SWQB will coordinate with the Federal Highway Administration and NMSHTD to develop and fund erosion control projects with TEA-21 funding.
6. SWQB will create a BMP visitor information sheet for contractors, and for road and highway construction and maintenance personnel.
7. In cooperation with municipalities, SWQB will encourage the use of BMPs by developers, contractors, and in urban settings, through outreach efforts and through the media, including the *Clearing the Waters* newsletter and on the WWW.
8. SWQB will encourage municipalities and local entities to participate in watershed associations, and will promote planning to manage urban runoff.
9. BLM will apply comprehensive transportation planning to approving or retiring road networks in accordance with the BLM New Mexico Strategic Plan.
10. A MOU will be created between NMED and the SLO regarding the prevention of NPS pollution, and other water quality issues associated with development and construction on State Trust lands.
11. The year's NPS pollution reduction achievements relating to construction activities will be reported annually.

## **F. SILVICULTURE**

1. SWQB will continue to implement the MAA with the USFS. SWQB will schedule a workshop to review and update the present agreement. The workshop will address silviculture activities and their effect on water quality standards, timely implementation of BMPs on land under USFS jurisdiction, the schedule for inter-agency meetings, and the other inter-agency issues.
2. SWQB will develop a MOU with NMEMNRD – Forestry and Resources Conservation Division to assure the protection of water quality associated with silviculture practices. This MOU will encompass some of the following silviculture tasks.
3. NMEMNRD – Forestry and Resources Conservation Division, will continue to require all timber harvesting activities on State and private land to comply with State regulations, which includes the use of erosion control and revegetation BMPs.

4. NMEMNRD – Forestry and Resources Conservation Division, will review existing regulations to determine whether they provide adequate environmental and water quality protection.
5. NMEMNRD – Forestry and Resources Conservation Division, will continue to monitor the application of BMPs during the harvesting of forest products on State and private land and to perform a final assessment at the completion of the sale.
6. NMEMNRD – Forestry and Resources Conservation Division, will continue to present appropriate BMPs to all forest contractors and landowners, at all State and private pre-sale conferences.
7. NMEMNRD – Forestry and Resources Conservation Division, will continue to report annually to SWQB on silvicultural activities and accomplishments related to NPS pollution (i.e., number of landowners provided technical assistance, workshops held, timber sales inspected, and legal actions taken against violators).

## **G. AGRICULTURE**

1. SWQB and NRCS will develop a MOU to ensure that BMPs are applied, to ensure water quality improvement objectives are incorporated into NRCS staff work, and to provide technical assistance and educational materials to land owners so that the protection of water quality associated with agricultural practices is ensured.
2. SWQB will develop agreements with the State’s SWCDs to ensure the protection of water quality associated with agricultural practices.
3. NMCES will continue to execute programs that protect water resources from NPS pollution and other water quality impairments. These programs include:
  - Farm\*A\*Syst Assessment Program
  - Integrated Pest Management
  - Nutrient Management
  - Pesticide Management
  - Animal Waste Management
4. SQWB will coordinate with the NMCES-RITF for the initiation and establishment of a rangeland/watershed water quality program.
5. NMCES will continue their progress in educating the public to reduce NPS pollution from urban agricultural practices.
6. NMCES will continue to report annually to SWQB on agricultural activities and program accomplishments related to NPS pollution.

7. SWQB in cooperation with watershed associations, agencies, permittees and private landowners will implement appropriate erosion control practices and management systems on agricultural lands, farmyards, irrigation systems and associated infrastructure.
8. Interagency programs will continued to be implemented to reduce and prevent water quality degradation from agricultural fertilizers.
9. Interagency programs will continued to be implemented to reduce and prevent water quality degradation from pesticides.
10. Interagency programs will continued to be implemented to reduce and prevent water quality degradation from animal wastes.
11. NRCS will implement BMPs, education/outreach, and demonstrations that address agricultural NPS pollution concerns as determined in the Dona Ana/Sierra USDA Hydrologic Unit Area (HUA) Project.
12. SWQB will continue to support the multi-agency coordinated effort to carry out effective watershed management in the Rio Puerco watershed, including the provision of funding opportunities and technical assistance.

## **H. HYDROMODIFICATION**

1. SWQB will develop a MOU with ACOE regarding regulatory activities for work performed within waters of the United States.
2. By the year 2000, SWQB will include a copy of the joint §404/401 application and other pertinent information for performing work within the waters of the United States on its Web site.
3. SWQB will continue to evaluate and process applications for §401 Water Quality Certification. SWQB will report on this program semi-annually.
4. SWQB will review FERC permitting process for hydroelectric power generation to ensure that required use of BMPs during construction and operation of facilities are up to date and effective at preventing NPS pollution. FERC will continue to consult with the State when developing permits and permit conditions.
5. SWQB will develop a MOU with BOR to ensure that the activities of this agency have included appropriate BMPs to protect water quality.

## **I. RECREATION**

1. SWQB will include in a MOU with ACOE, provisions for the protection of water quality from NPS pollution on recreational areas administered by ACOE.

2. SWQB will include in a MOU with BOR, provisions for the protection of water quality from NPS pollution on recreational areas administered by BOR.
3. SWQB will include in a MOU with SLO, provisions for the protection of water quality from NPS pollution on areas administered by SLO, that are used for recreation activities such as hunting, hiking, and fishing.
4. SWQB will include in a MOU with USFWS, provisions for the protection of water quality from NPS pollution on National Refuges administered by USFWS.
5. SWQB will coordinate with New Mexico State Parks to ensure that proper BMPs are being implemented to prevent NPS pollution problems resulting from erosion, modification or loss of riparian vegetation, streambank or shoreline destabilization, runoff from roads, parking lots and trails, and on-site waste disposal.
6. During the review of the MAA with USFS, NPS pollution BMPs for recreation areas will be reevaluated and updated.
7. During the review of the MOU with BLM, NPS pollution BMPs for recreation areas will be reevaluated and updated.
8. Agencies will be encouraged to provide to the public and visitors, education programs that address the prevention of NPS pollution resulting from recreational activities. SWQB will cooperate with agencies to develop these programs.

## **J. RESOURCE EXTRACTION**

1. The SWQB will meet with representatives of the NMMA to discuss the potential for the mining industry's involvement with NPS initiatives. NMMA members are active participants in several watershed groups across the state. The NMMA is also an active member of the NPS Task Force. Topics of discussion in the meeting will include: introduction to the Management Plan, implementation of NPS programs in watersheds associated with mine sites, NPS data and its use, UWA and partnering with non-government stakeholders. The first meeting will be held in the third quarter of 1999 and others will be scheduled thereafter as appropriate.
2. SWQB will continue to conduct water quality and watershed condition assessments for active and proposed mining sites. Staff will review proposed mine permit applications, conduct visual inspections of mine sites, and ensure that mining activities will not cause exceedences of the State's Water Quality Standards.
3. BLM will continue to provide NPS management of mining activities on BLM lands through coordination with appropriate agencies for new mine permits and for inventory and reclamation of abandoned mines.

4. BLM will continue to implement standards related to federal oil and gas development through efforts such as pit closure guidance, Orphan Well Plugging Program, bradenhead flow control, and leasing and permitting oversight.
5. Development of a permit for placer mining activities, regulated by SWQB, ACOE, and USFS, and that combines the general mining permit and §404/401 permit, will be completed by year 2000.
6. SWQB will include in a MOU with SLO, provisions for the protection of water quality from NPS pollution on areas administered by SLO, that are used for mining activities such as oil and gas development, sand and gravel operations, borrow pits, and mineral pits.
7. SWQB will continue to develop education and outreach materials for mining activities. SWQB will cooperate with agencies to develop these materials.

## **K. LAND DISPOSAL**

1. SWQB will propose statutory authority where adequate permitting authority is not established to require that all utility companies require proof of adequate sewage treatment and disposal prior to connecting any structure having a sewage discharge.
2. SWQB will continue to assist local governments in land use planning, ordinance development and subdivision regulation related to liquid waste regulations.
3. SWQB will continue to provide training on liquid waste regulations to the regulated community including land developers, realtors, contractors, engineers, land use administrators, and local governments.
4. SWQB will continue training of staff in soils, sewage treatment, and disposal alternative system technology.
5. SWQB will continue auditing field offices and local governments having liquid waste programs, biannually. These measures will ensure that the Liquid Waste Program is uniformly administered throughout the State.
6. SWQB will update the film on maintaining onsite septic systems and include other materials for education and outreach.
7. Bernalillo County will continue to incorporate NPS management criteria into their local planning activities and will report to SWQB annually.
8. Bernalillo County will continue to promote the use of gray water, and implement gray water-use actions into their local planning process.
9. OSE will investigate at the policy level, strategies to control and prevent pollution of surface water and ground water supplies by septic tanks.

## **L. ASSESSMENT/MONITORING**

1. NPS Pollution Section will develop an all-inclusive Quality Assurance Project Plan (QAPP) to cover all types of monitoring for projects conducted through the NPS Pollution Section.
2. NPS Pollution Section will incorporate SOPs for monitoring into all new §319 workplans by 2001. They will be used through out the entire monitoring process from initial project identification and planning through data usage.
3. SWQB will develop a Bank Erodibility Hazard Index (BEHI) statewide by 2001. BEHI approach measures the quantity of material that will erode from a given streambank. This enables us to predict sediment input from bank erosion in a specified stream reach.
4. SWQB will expand the monitoring network to include systematic monitoring programs staffed by volunteers by 2004. Potential volunteer programs may include Esperanza Grazing Association, San Juan Pueblo, City of Santa Fe, Ruidoso River Association, etc.

## **XII. EFFICIENT PROGRAM MANAGEMENT, PERIODIC REVIEW, EVALUATION, AND REVISION**

### **1. ANNUAL AND SEMI-ANNUAL REPORTS**

The NPS Management Program annual and semi-annual reports successfully portrays progress, or lack thereof, in meeting milestones, implementing BMPs on agency, statewide, and watershed levels, achieving program goals and identifying future needs. The Annual Report reports on all NPS efforts and activities that have been implemented over the course of the year to address the commitments of the NPS Management Program. Included in the annual report are updates on agency activities provided by the agency, status reports on achieving program milestones, and a reevaluation of program needs and future direction. Case studies are sometimes included.

Semi-annual reports include information on specific ongoing projects. In the future, reports will also contain information on conducting outreach, monitoring, and generating proposals for funding of projects. The annual report is a useful resource for agencies, watershed associations, citizen's groups, legislators, and others to stay informed of the progress and direction of the State NPS program.

### **2. FINANCIAL MANAGEMENT**

NMED manages and implements its NPS program efficiently and effectively, including necessary financial management. The SWQB has a full time financial manager and four full time employees who form a financial management team. The team assists, monitors, and ensures that financial reporting and recording requirements are being met. The team will develop and implement policies and procedures for tracking all federal grants within the Bureau. The team will ensure that all matching requirements are being met, keep an accurate and updated master list of current grants, work plans, contracts, and Joint Powers Agreements (JPAs), and regularly update the Grants Tracking and Reporting System. Financial staff and project managers will work together to verify that the Bureau is both financially and technically in compliance with the §319(h) grant agreements. The SWQB will ensure that a final Financial Status Report and all other financial reports are filed when a grant is closed and will coordinate with Financial Services Bureau (FSB) to implement a financial tracking system that ensures that matching and other requirements are being met.

SWQB has developed and uses a fiscal accounting system capable of tracking expenditures of both §319 funds and non-federal match. SWQB requires documentation of matching funds when requests for reimbursements are submitted by project contractors. Funds will not be released without confirmation of matching funds.

The NPS Pollution Section oversees implementation of projects, including reimbursement requests, to ensure efficiency, effectiveness, and compliance with program goals. The NPS Pollution Section, with assistance from the NPS Task Force/UWA\* Work Group, develops a RFP that is distributed through the SWQB web site, local newspaper advertisements, and the NPS Task Force/UWA\* Work Group mailing list. Once received, the proposals are reviewed and clarifications or modifications may be requested. Proposals are then approved (or disapproved)

for funding. If total funding of approved proposals does not exhaust available funds, a second RFP is distributed in approximately six months. This system allows all interested parties a voice in the NPS program, including input into technical and financial aspects.

### **XIII. FUNDING SOURCES**

Funding for implementation of the NPS Management Program is obtained from a combination of federal, State, local, and private sources (see Appendix E). Federal sources include, but are not limited to, federal appropriations under §319 of the CWA, the CW-SRF, operating funds for federal agencies, existing cost-share assistance programs, special appropriations for watershed efforts, where available, and various programs administered by federal agencies (see Chapter X). State funds include portions of the operating budget for NMED as well as other designated management agencies, available State cost-share funds, the portion of CW-SRF assistance provided from non-federal sources, and any special appropriations made available to the program or cooperating agencies. Local funds may include dollars spent by landowners on the implementation of practices and other in-kind services, such as participation in volunteer monitoring programs. County or municipal funds are also used in the program, and numerous private sources of funding (e.g., foundations, corporations) also exist (Appendix E). Specific sources and dollar amounts cannot be outlined with great detail due to the uncertainty of funding from various sources, however, workplan budgets and annual reports prepared as a part of the program will attempt to outline the source and amount of funding in the future.

## **XIV. CONSISTENCY REVIEWS**

SWQB maintains constant communication with all federal land management and other appropriate agencies (e.g., USFWS) and is apprised of any management plans or decisions that may impact water resources. SWQB makes comments and recommendations on agency plans and activities to help ensure compliance with NPS program objectives. SWQB is also included in the scoping process for federal projects to resolve inconsistencies while still in the planning stages. Additionally, various intergovernmental agreements (e.g., MOUs) are in place to clarify roles of and relationships between State and federal entities that help avoid potential inconsistencies. Federal consistency provisions of the CWA (§313, §319(k)) are rigorously implemented. SWQB maintains a good working relationship with EPA Region VI, and in the event that federal consistency issues cannot be resolved satisfactorily, SWQB will request assistance.

Federal consistency reviews required under §319(b)(2)(F) will be performed by SWQB. At a minimum, SWQB will review EAs, EISs, and other land management plans by the several federal land management agencies administering lands in New Mexico for consistency with State law, regulations, and water quality standards attainment and protection. For example, SWQB reviews and submits comments on EISs and EAs from the USFS, USFWS, BLM, and other agencies when they implement the NEPA process in conjunction with their various activities. Additionally, the civil projects of the Federal Highway Administration, BOR, FERC, and ACOE will be reviewed for such impacts. These documents will be reviewed with watershed-wide issues and problems in mind, especially with respect to the UWA\* Category I watersheds and TMDL priority stream segments.

These reviews will generally be conducted through the State Clearing House review process established under Executive Order 12372. Federal agencies have been notified by SWQB that their projects will be reviewed for consistency with the State NPS Management Program. The primary criteria for review will be State water quality standards, as well as BMP design and implementation. Review will consider whether proposed actions could cause water quality standards violations directly, indirectly, or cumulatively, and whether BMP plans are sufficient to protect those standards. Consistency reviews will be focused upon, but not limited to, those watersheds that are targeted for intensive outreach in a given year.

## **XV. NINE KEY ELEMENTS**

New Mexico's NPS Management Program upgrade is outlined in the following nine key elements. Supporting information is found in the remainder of this document and in attached appendices.

### **1. New Mexico's state program contains explicit short and long term goals, objectives and strategies to protect surface water and ground water.**

#### **1A. State program includes a vision statement.**

The primary goal of the 1999 New Mexico NPS Management Program is to expand and implement a dynamic and aggressive program to reduce human-induced pollutants from nonpoint sources entering surface water and ground water. We've created a new vision for the next millennium with loftier goals. Our vision – *to implement progressive watershed-based restoration and protection programs with the active assistance of all stakeholders, for all watersheds within New Mexico, and to meet water quality standards and beneficial uses of surface water and ground water resources* – will be realized by focusing our efforts on:

- achieving milestones directed toward short-term and long-term goals,
- creating and using new strategies,
- forming new partnerships and strengthening old ones,
- giving recognition to progress and successes of the program in achieving the State's vision and goals.

#### **1B. State has specific long-term goals that are linked to its vision and are directed toward the expeditious achievement and maintenance of beneficial uses of water.**

Our long-term goals (by 2015) are directed to the accomplishment of our vision.

1. Complete the CWAP/UWA\* process by:
  - ensuring that the TMDL schedule and process is reflected in the watershed prioritization process,
  - continuing to organize and integrate relevant watershed information by CWAP/UWA\*-based priority,
  - increasing collaborative participation of stakeholders, such as land owners and management agencies, in gathering and assessing data,
  - completing the categorization and prioritization of all New Mexico watersheds by 2004, and
  - developing coordinated restoration efforts on a watershed-wide basis in all watersheds by 2015.
2. Through the use of the UWA Geographic Information System (GIS), compile sources of all available and emerging natural resources and water quality data throughout the State into a single database with graphic display and analysis capability by 2002. Additionally, to define

sub-watersheds for targeting restoration activities through the use of 11-digit HUC Code units by 2003.

3. Continue to develop a comprehensive watershed assessment for New Mexico by completing data acquisition for the UWA\* Category IV watersheds (watersheds with insufficient data to make an assessment) by 2005; and to locate priority stream reaches within those watersheds where TMDLs have been developed, for focusing watershed restoration efforts through 2010.
4. Expand the monitoring network to include monitoring programs staffed by volunteers with emphasis on stream reaches with established TMDLs and in Category I watersheds (watersheds in need of restoration) by 2010.
5. Implement effective watershed-based NPS restoration and protection programs, using multiple funding sources, in all identified UWA\* Category I watersheds at an average of four or five new watersheds per year until all Category I watersheds are included by the year 2015; and within ten to twenty years from the initial watershed target year, to restore each watershed to designated uses.
6. Encourage the formation of watershed management associations and similar partnerships, or to increase membership within existing groups, in each of the State's 83 watersheds by 2010 (approximately 8 each year), with particular emphasis on the 21 watersheds currently designated as UWA\* Category I by 2005.
7. Provide effective education and outreach programs that identify problems and explain critical water quality issues to stakeholders, and above all, increase general public awareness of NPS impacts on water quality using all educational resources available throughout the state by 2010 (see Chapter VI).
8. Focus on restoration, recovery and protection of riparian areas, particularly in Category I watersheds and throughout the State to achieve 75% recovery of riparian areas by 2010.
9. Update and improve cooperative efforts outlined in existing Memoranda of Understanding (MOUs), Management Agency Agreements (MAAs) and other interagency agreements by 2003, and to develop additional interagency agreements as a means of institutionalizing and tracking NPS protection by 2010.
10. Provide information and assistance to county and municipal governments, and other local governmental entities (e.g. Soil and Water Conservation Districts [SWCD]), that encourages their participation in NPS pollution management and prevention, ultimately leading to formalized partnerships. Category I watersheds will be targeted first and completed by 2005.
11. Encourage and help facilitate all tribes in New Mexico, to create NPS management programs of their own by 2010.
12. Target commodity groups (e.g., New Mexico Cattle Growers' Association, New Mexico Mining Association (NMMA)) and environmental groups at a rate of two per year, to

incorporate strategies that specifically address NPS pollution and to encourage their members to undertake measures to improve ground water and surface water quality, as well as protecting other natural resources.

13. Increase the use of the Clean Water State Revolving Fund (CW-SRF) as a source of funding for 10% of new NPS projects by 2001, 50% by 2010, to address NPS pollution in New Mexico.

**1C. State has specific short-term (e.g. 1-5 year) objectives, expressed as activities, that are linked to its goals.**

Our specific short-term objectives (1 to 5 years) define the steps taken to meet our goals.

1. The CWAP/UWA\* (NMED, 1998a) is a “work in progress.” New Mexico’s NPS Task Force/UWA\* Work Group will meet annually to reevaluate the current UWA process and to analyze all applicable data, including additional TMDLs, and other new data on water quality and watershed assessments for New Mexico. They will review and revise assignment of the 83 watersheds into four broad assessment categories, and update priorities for watershed outreach activities and restoration efforts. NPS Task Force/ UWA Work Group members will be encouraged to continue to remain active and attend the annual meeting. We will continue to invite additional agency, commodity, environmental, and other group representatives to participate on the NPS Task Force/UWA\* Work Group to achieve a balance of interests for solving NPS problems.
2. SWQB is developing a strategy to facilitate the formation of groups focused on water quality problems and habitat degradation within a watershed. The purpose of these watershed groups is to develop a watershed action plan, defined as a process that identifies problems, establishes priorities, and coordinates activities within a watershed. The watershed group will solicit the involvement of as many stakeholders in the watershed as possible. This year, SWQB staff are participating in training sessions and developing outreach tools and resources. We will be composing teams, including members of the NPS Task Force/UWA\* Work Group, whose mission will be to create awareness, provide information and encourage action within four or more targeted watersheds each year.
3. We have also developed activities and specific short-term objectives linked to our goals through New Mexico’s Watershed Restoration Action Strategy (WRAS) commitment for FY-99 through FY-10. For the next five years, approximately four UWA\* Category I watersheds will be targeted for intensive outreach each year. Section 319(h) proposals will be solicited followed by development, implementation and monitoring of inclusive watershed-based restoration programs (Appendix A). Beginning year six, the development, implementation and monitoring cycle for the targeted watersheds will be repeated until these watersheds demonstrate recovery, and protection from future impairments is ensured.
4. The SWQB will actively seek information from agencies and the public through the media, through the NPS Task Force/UWA\* Work Group network, and through our other working

partnerships — especially in data-poor watersheds — to improve the database available on water quality and watershed conditions. (Also see Chapter VI, Section 4.)

5. New Mexico will also strive to achieve better accuracy and resolution of their GIS database systems as more GIS data sets are received. New data will be incorporated into SWQB GIS database systems, and will be available for UWA planning. SWQB will use ARCINFO, and encourage the use of ARCINFO as a comprehensive database available to all stakeholders.
6. The SWQB World Wide Web (WWW) site will include information about NPS pollution and the State's NPS Management Program, and a request to the public for information about their local NPS problems by 2000. The request will include how and where NPS problems can be reported. Information about §401 Certification and an application form will also be available through the WWW. The WWW site will be updated as the NPS Program evolves.
7. SWQB/NPS Pollution Section's Annual Core Workplan (Appendix A) outlines specific tasks and commitments for its staff to provide technical support, guidance and educational opportunities that promote holistic approaches to watershed restoration management. These tasks and commitments will be reevaluated annually for effectiveness and for promoting progress toward meeting water quality standards and beneficial uses of surface water and ground water resources.
8. New Mexico will review and update its existing interagency MOUs and MAAs by 2003. Review criteria will include the effectiveness of our collaborative efforts, support of water quality standards, and timely implementation of BMPs on land under the cooperating agency's jurisdiction.
9. The SWQB NPS Pollution Section will strive to create new interagency agreements for those agencies where none presently exist. (Agencies that will be targeted first are described in Chapter XI. Management Program Milestones.) These agencies will include federal, State, local and Tribal entities. Our short-term goal is to increase interagency collaboration to strengthen our statewide NPS pollution reduction efforts by developing at least two new formal agency agreements every year.
10. The NPS Pollution Section will by 2001, coordinate with county and municipal governments, Soil and Water Conservation Districts (SWCD), and other local governmental entities, particularly in all UWA\* Category I Watersheds to create an interest in using the CW- SRF as a source of funding for NPS pollution management. CW-SRF will be marketed to develop local projects and programs and to implement BMPs.
11. The NPS Pollution Section will continue to encourage tribes to participate as stakeholders, committee members and partners in statewide and watershed-wide NPS pollution prevention programs. The NPS Pollution Section will provide education, technical assistance, technology transfer, and outreach to at least two tribes per year. Tribal lands located in UWA\* Category I watersheds will be targeted first.

12. The NPS Pollution Section will contact representatives of commodity groups and environmental organizations through our NPS Task Force/UWA\* Work Group membership, and by making presentations to the group's organization meetings. By understanding their issues and priorities, we will try to create win-win situations that benefit their interests and still protect and improve water quality. We will contact and develop partnerships with approximately two groups each year.

**1D. State has identified measures and indicators that will be used to assess the State's success in achieving its goals and objectives.**

New Mexico has established a monitoring program that is poised to measure the effectiveness of its programs, to oversee government, private, and watershed-wide activities and to continue to establish baselines for future comparisons.

1. The CWAP/UWA\* includes documentation providing a complete record of development and realization of the process used in New Mexico. These records provide a measure of the effectiveness of the program. This assessment also places emphasis on mapping of surface water quality conditions through the use of the GIS database. As the UWA process continues, results will be evaluated by the refinement of categorizing watersheds, the completeness of the data available, the development and implementation of restoration activities, and the improvement of watershed conditions.
2. New Mexico's WRAS iterative approach has evaluation activities built into it. Responses to the request for proposals (RFPs) in targeted watersheds will directly evaluate our education and outreach efforts. Timely development and implementation of §319(h) projects will measure our ability to facilitate and administer individual projects. We will look at our strengths, weaknesses, and areas of concern and develop new strategies to resolve current and potential shortcomings.
3. SWQB reports on progress in achieving milestones and targeted goals in the State of New Mexico NPS Management Program Annual Report. Through formal interagency agreements and informal agency relationships, the NPS Pollution Section tracks task completion, schedules of actions and plans that affect water quality management on cooperating agencies' lands. Agency updates are also reported in the New Mexico NPS Management Program Annual Report.
4. SWQB's monitoring program is designed to audit the effects of restoration efforts and to continue to establish baselines for future comparisons. Monitoring results will be compared to New Mexico water quality standards (20 NMAC 6.1) and EPA aquatic life and human health criteria (40 CFR 131.36). Monitoring programs provide data for independent evaluations of TMDLs, and control actions that are based on the TMDL, to determine whether they protect or improve the environment and are sufficient to meet changing waterbody protection requirements, such as revised water quality standards or changing pollution sources (U.S. EPA, 1991).

5. The SWQB has prepared, and submitted to EPA for approval in February 1999, the Final Draft Manual of Standard Operating Procedures (SOP) (NMED, 1999a). These operating procedures establish a monitoring protocol that will be used in conjunction with integrated watershed-scale management strategies implemented through WRAS. These operating procedures will be incorporated into all workplans and used throughout the entire monitoring process from initial project identification and planning through data usage. Use of these operating procedures will ensure that all environmental data generated will be scientifically valid, of known precision and accuracy, of acceptable completeness and comparability, and when appropriate, legally defensible.
6. SWQB's NPS program contributes to, and is consistent with, the Government Performance and Results Act (GPRA). The State will quantify over time, and report to EPA, the number of stream segments showing water quality benefits as the result of program implementation, including benefits resulting from the CW-SRF. All water quality benefits and improvements that contribute to de-listing §303(d) stream reaches resulting from the implementation of NPS restoration efforts will be recognized and reported annually.
7. Federal Consistency Review – SWQB reviews and submits comments on Environmental Impact Statements (EISs) and Environmental Assessments (EAs) from the U.S. Forest Service (USFS), U.S. Fish and Wildlife Service (USFWS), Bureau of Land Management (BLM), Federal Highway Administration, U.S. Bureau of Reclamation (BOR), Federal Energy Regulatory Commission (FERC), U.S. Army Corps of Engineers (ACOE), and other agencies. These documents will be reviewed with watershed-wide issues and problems in mind, especially with respect to the UWA\* Category I watersheds and TMDL priority stream segments.

**1E. State has identified specific, expeditious milestones for its activities.**

New Mexico has developed a schedule of general and continuing programs and specific milestones for tracking all of its interests and programs. This schedule includes:

- Targeting of all UWA\* Category I watersheds by the year 2005.
- Ongoing activities, as well as milestones and target dates, for general/institutional tasks (See Chapter VI).
- Specific annual milestones for implementing BMPs developed by NPS category (See Chapter VI).
- Specific tasks outlined in MOUs, MAAs and other agreements with agencies having direct involvement with NPS issues.

**1F. State has identified implementation steps and the expected effects of those steps on its water resources.**

The five-year program to implement WRAS addresses the appropriate causes of non-support in targeted priority watersheds. Within each watershed, §319(h)-funded projects will be integrated into a watershed-based plan to implement on the ground environmentally sound and cost-effective projects. The program will apply BMPs to achieve maximum improvement to water

quality, and to ultimately achieve our water quality goals. The program will also include a monitoring component to ensure the maintenance and progress toward attainment of designated uses of water resources. Ultimately, all presently identified UWA\* Category I watersheds will have received intensive focus by the year 2005. This strategy will ensure that §319(h) monies are directed toward areas of most concern and allow the NPS Pollution Section to directly measure the success of outreach efforts. Using a multi-year approach New Mexico has set priorities and is directing efforts and resources to maximize environmental benefits. Maximum environmental benefits will be accomplished by addressing the most serious water quality problems and the most valuable and threatened resources first, and by identifying efforts with reasonable chances for success to prevent less serious problems from becoming more serious due to lack of attention..

### **1G. Additional Program information.**

Other ongoing programs for surface water pollution control, including §401 Certification, and TMDL Development are described in State Programs.

Other ongoing programs for ground water pollution control, including New Mexico Water Quality Act (WQA), Oil and Gas Act, Hazardous Waste Act (HWA), Ground Water Protection Act, Solid Waste Act, Emergency Management Act, and Environmental Improvement Act, are described in the §305(b) report (NMWQCC, 1998) and are implemented by other Bureaus of NMED.

## **2. The State strengthens its working partnerships and linkages with appropriate State, Tribal, regional, and local entities (including conservation districts), private sector groups, citizens groups, and federal agencies.**

### **2A. The State uses a statewide collaborative team, nonpoint source task force, or advisory group, or other appropriate process, to provide for input and recommendations from representatives of federal, State, Tribal, and local agencies, private sector groups and citizens groups, regarding nonpoint source program direction, project selection, and other similar aspects of program administration.**

New Mexico has formed and continues to build partnerships on several levels. Well established in New Mexico is the State's NPS Task Force composed of stakeholders representing federal and State agencies, local governments, tribes and pueblos, SWCDs, environmental organizations such as Amigos Bravos and others, industry representatives, and the public. This group meets on a quarterly basis to provide input on the §319 program process, to disseminate information to other stakeholders and the public regarding NPS issues, to identify complementary programs and sources of funding, and to help review and rank §319(h) proposals. In 1998, meetings of this group have been combined with other statewide committees (the Natural Resources Conservation Service [NRCS] Food and Agricultural Council, Water Quality Subcommittee and the NRCS State Technical Committee) and its role is now continued by the NPS Task Force /UWA Work Group.

The NPS Task Force /UWA Work Group is New Mexico's statewide focus group representing the groups mentioned above. This group has collectively contributed to the CWAP/UWA\* (NMED, 1998a). This assessment identifies and prioritizes watersheds with water quality issues in New Mexico. From the results of this assessment, New Mexico's WRAS were developed. This group will continue meeting quarterly and will reevaluate the CWAP/UWA\* annually.

Watershed management associations have been established and formalized in New Mexico (see SWQB's web site: <[http://www.nmenv.state.nm.us/swqb/wow\\_grp.html](http://www.nmenv.state.nm.us/swqb/wow_grp.html)>). These committees are involved in problem identification, prioritization, proposal ranking, distribution of grant funds, education, planning, and implementation. One of the goals of WRAS is to form, or increase membership in, watershed management associations and similar partnerships (e.g., Upper Gila Watershed Alliance, Rio Puerco Management Committee [RPMC]) in each of the UWA\* Category I watersheds.

Local groups composed of local residents, entities, and land management agencies (see SWQB's web site: <[http://www.nmenv.state.nm.us/swqb/wow\\_grp.html](http://www.nmenv.state.nm.us/swqb/wow_grp.html)>) are assembled, either formally or informally, through education and outreach (e.g., Ruidoso River Association, Inc., Tularosa Basin Water Resources Committee). They adopt water pollution prevention schemes and water resources restoration programs to improve water quality in local watersheds, sub-watersheds, and impaired stream reaches.

Other ongoing federal NPS management agreements (See Key Element 6)(MOUs, JPAs, MAAs) provide accountable bases for linking federal, State and Tribal programs with common water quality and watershed objectives.

**2B. The team/task force advisory group meets regularly and promotes collaborative and inclusive decision making.**

NPS Task Force /UWA Work Group, New Mexico's statewide focus group, meets quarterly and participates in watershed prioritization, and implementation and management of NPS projects. This group also fulfills other functions including delivery of information to landowners and citizens, exchange of information to prevent duplication of NPS activities, and providing guidance regarding New Mexico's NPS Management Program goals.

The "Gila Monster" Watershed Group (Upper Gila Watershed Alliance) was established jointly by the Arizona Department of Environmental Quality and the SWQB for the interstate Gila Watershed. Included in the membership are more than 40 partnering agencies and entities. Four sub-watershed advisory committees have formed and hold independent meetings to identify specific NPS problems in their particular geographic regions before presenting these findings to the assembled "Gila Monster" group. Division into smaller, more manageable sub-watershed groups ensures that all local interests and individuals not able to attend "Gila Monster" meetings continue to be represented.

The Rio Puerco Watershed Management Committee (RPMC) is an example of partnership consensus group established to promote broad-based watershed-wide stewardship. This Committee meets bimonthly and has developed consensus-based goals to address watershed-

wide restoration efforts for the Rio Puerco watershed. The Committee obtains funds and approves on-the-ground and research projects directed toward NPS pollution reduction, riparian enhancement, preservation of biologic diversity, environmental education and rural economic development. This group has been formalized by the federal Rio Puerco Watershed Act of 1996.

The Ruidoso River Association is an example of a grass-roots community group successfully managing and restoring the health of their local watershed. The Ruidoso River Association is composed of approximately 700 members devoted to the restoration of the Rio Ruidoso - a high quality cold water fishery. The Association participates in annual river clean-up days, volunteer water quality monitoring programs, recognizing supporting members and businesses, and fund raising. They have engaged local authorities and agencies to change practices that were having detrimental effects on the Rio Ruidoso. *Notes From The Noisy Water*, the monthly publication of the Association, is used to disseminate information and to keep citizens and visitors aware of restoration activities. They have been very successful in changing behavior and attitudes of local citizenry and governmental bodies to becoming truly concerned about the health of their watershed.

**2C. The State Program specifies procedures to provide for periodic input into the program.**

1. Dispensing of information and providing for public involvement and feedback is achieved principally through the NPS Task Force /UWA Work Group network. Active members of this group are notified of tasks in which they are involved through E-mail communications and group mailings. Feedback and discussion of issues and new information is shared at quarterly meetings.
2. Public meetings for collection of input and comments on the CWAP/UWA\* and for other important program issues are held at strategic locations throughout the State. Public meetings are advertised through radio announcements, news releases and public mailings.
3. Significant program changes and other issues are made available to the public for review and comment through several media including the WWW, E-mail, news releases, and the SWQB quarterly newsletter, *Clearing The Waters*.
4. Staff are also participants of other agency committees. These include the NRCS State Technical Committee and the NRCS FAC Water Quality Subcommittee. These committees meet quarterly and have representation from agencies and entities throughout the State, including Tribes. These committees provide a forum for reporting, sharing and disseminating relevant agency program information. This information is made available for discussion and comment. Discussions include such subjects as coordinating the Environmental Quality Incentives Program (EQIP) with §319(h)-funded projects, particularly in UWA\* Category I watersheds.
5. The public will be requested to submit information on local NPS problems through the WWW. SWQB has a Web site dedicated to NPS information and issues. Information about watershed groups working in New Mexico has already been requested from the public. A

“hot link” to the SWQB Web site can be provided to groups with their own WWW home page. Volunteer monitoring programs, monitoring technical information and updates, and data exchange will be coordinated via the WWW.

6. SWQB NPS staff engage in public education activities to promote public awareness of the NPS program, and NPS pollution and its solutions. SWQB will continue to provide educational opportunities for the public and private sector by coordinating with local schools and youth programs, hosting information sessions, and conducting public site tours of demonstration projects and BMP implementation sites.

**2D. The State effectively incorporates a variety of organizations and interests into implementation of nonpoint source activities and projects.**

1. Using the WRAS approach intrinsically does this. One of the ways in which outreach efforts will be evaluated is through involvement of new organizations and creation of new watershed associations. The outreach program will actively seek out all stakeholders within UWA\* Category I priority watersheds, provide educational opportunities, help them develop projects, and encourage them to demonstrate ways they can participate in NPS activities.
2. Proposals for §319(h) funding must have an educational component to demonstrate successful projects to the public and other land managers. In this way, the project proponents share and educate local stakeholders and interested parties about implementation of NPS projects.
3. Stakeholders must submit proposals and also provide a 40% match, which can include in-kind contributions, to §319(h)-funded projects. In this way, a variety of stakeholders can contribute their monetary funds, expertise, labor, and other resources directly to the implementation of a NPS project.
4. The Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21) will provide new opportunities for water quality improvements associated with transportation projects. SWQB proposes to coordinate with Regional and Metropolitan Transportation Planning Organizations to add proposed water quality-related projects, especially in UWA\* Category I watersheds, to the Statewide Transportation Improvement Program. SWQB also proposes to integrate agency missions by staffing each New Mexico State Highway and Transportation Department (NMSHTD) District, via TEA-21 funding, with a qualified environmental specialist to provide guidance and oversight to reduce NPS pollution and other environmental problems.
5. Participation on committees, such as the NRCS State Technical Committee, the NRCS FAC Water Quality Subcommittee, and the NPS Task Force /UWA Work Group, provides a forum for integrating other agency cost-share and owner-assistance programs, such as EQIP, Wetlands Reserve Program (WRP-NRCS), Wildlife Habitat Incentives Program (WHIP-NRCS), and New Mexico Forest Stewardship Incentives Program (SIP- USFS & NMEMNRD), with SWQB NPS programs.

6. The New Mexico Dairy Technical Working Group, an ad hoc organization, was formed to address issues and concerns associated with dairies in New Mexico. This group meets several times during the year to discuss technical and regulatory issues, and to address long-term surface water and ground water protection strategies. Representatives from Dairy Producers of New Mexico, NM Department of Agriculture, New Mexico State University (NMSU), NM Office of the State Engineer, NMSU Agricultural Extension Service, NM Farm Bureau, NRCS, SWQB, NMED Ground Water Quality Bureau (GWQB), NMSU-Waste Management Education & Research Consortium (WERC), and individual CAFO/AFO operators attend meetings of this group.
7. SWQB is in the process of forming a collaboration with the NMMA that will formalize the mining industry's involvement with NPS initiatives. Meetings with the NMMA to start this process will begin in 1999.
8. SWQB will initiate a collaboration with the New Mexico Cattle Growers' Association to discuss the formation of a partnership and to coordinate efforts for the prevention and remediation of water quality impairments.

**2E. The State uses its partnerships effectively to avoid the transfer of problems among the environmental media.**

NMED ensures that actions to restore or improve water quality will not have adverse effects on other environmental conditions. By communicating with agencies that have jurisdiction and technical expertise, and others that are responsible for protecting natural conditions of the environment, and by integrating programs, we can prevent potential and unforeseen adverse effects on the environment

SWQB NPS Pollution Section has representatives participating on other agency committees providing a forum for communication with regard to protection of the environment.

1. Both the NRCS FAC Water Quality Subcommittee and the NRCS State Technical Committee meet quarterly to discuss broad environmental issues and funding sources that are available from all the diverse entities that attend. Many programs available integrate conservation and protection of natural resources including water resources. They are using the watershed approach as mandated by the CWAP\*.
2. The NMED has developed a task force with NMSHTD through their MOU. This Task Force is composed of representatives of many bureaus within NMED, representing air quality, ground water, solid waste, underground storage tanks (USTs), hazardous waste, etc. The NMSHTD members represent engineering and environmental sections that deal with projects and activities that can potentially affect the environment. This Task Force provides a forum for integrating all environmental issues in solving problems that involve the two agencies.
3. The USFS maintains a NMED liaison at the Santa Fe SWQB office. Additionally, the two agencies meet annually to discuss NPS issues. The meeting includes a broad range of environmental topics. The USFS uses the Integrated Resource Management (IRM) process in

their forest management plans, to meet the environmental requirements of the National Environmental Policy Act (NEPA) and the National Forest Management Act (NFMA).

## **2F. Additional information.**

Over three-fourths of land in New Mexico is federally or privately managed. The NPS Management Program is focused on federal land management agencies, and on federal, State and local programs that can influence and support beneficial land management by private individuals.

### **3. The State uses a balanced approach that emphasizes both statewide nonpoint source programs and on-the-ground management of individual watersheds where waters are impaired or threatened.**

#### **3A. Annual or multi-year workplans contain nonpoint source implementation actions directed at both specific priority watersheds and activities of a statewide nature.**

The New Mexico NPS Management Program – our five-year program – provides direction and contains activities aimed both at specific priority watersheds and statewide initiatives. The New Mexico NPS Management Program is coordinating with existing programs of federal and State agencies, and local governments statewide. It incorporates existing NPS-directed programs (such as IRM, TEA-21, EQIP and SIP) of federal, State and local governments by identifying the major categories of NPS pollution addressed by the programs. SWQB involvement is through promotion and implementation of BMPs, by coordination of projects on a priority watershed basis, by providing guidance and oversight, inspection and enforcement, and education and outreach activities.

Activities of a statewide nature that affect priority watersheds are:

- Continued coordination with Designated Management Agencies, such as BLM and USFS, involving actions that regulate and affect water quality.
- Involving these agencies and other federal, State, Tribal agencies and local entities in the NPS Task Force/UWA\* Work Group, for their input into actions affecting priority watersheds.
- Ensuring that other NPS-oriented federal programs and federal financial assistance are consistent with goals and objectives of the NPS program.
- Coordinating §319(h)-funded projects with other agency programs to obtain the best use of funding on a watershed-wide scale.
- Participating in education activities on a statewide basis to generate greater awareness of NPS pollution problems and solutions, to promote participation in volunteer monitoring efforts, and to provide guidance for restoration of impaired surface water and ground water resources.

Other activities identified as major staffing objectives in our Annual Core Workplans, and which are directed to integrate specific priority watershed actions with statewide initiatives include:

- **OUTREACH** – To host information sessions that provide prospective §319(h) applicants, stakeholders and the public with a better understanding of the NPS Management Program milestones.
- **EDUCATION** – To incorporate NPS-oriented watershed curricula into elementary, high school and college programs, and to promote volunteer water quality monitoring as a regular activity of watershed groups.
- **MONITORING/EVALUATION** – To oversee federal, State, and private activities to ensure consistency with our water quality goals, standards, and/or NPS Management Program milestones.
- **FACILITATION** – To help stakeholders develop and implement NPS §319(h) grant restoration activities and other NPS-directed projects on their lands using the watershed approach.

### **3B. State tracks both statewide activities and watershed projects.**

The 1998 “305(b) report” (NMWQCC, 1998), a biennial report to the EPA, tracks all surface water and ground water activities throughout the State. This report provides a comprehensive, statewide description of water quality, gives information about water quality and water pollution control programs, describes pollution problem areas and remediation efforts basin by basin, and details the work of State agencies entrusted with protecting New Mexico’s water resources. It also includes narratives of several federal and local agencies whose legislative obligations require them to manage portions of New Mexico’s waters.

The NPS Management Program describes existing programs of federal, State and local governments that implement NPS activities and watershed projects statewide. Federal agencies, such as USFS and BLM, with long-standing NPS issues have been designated by the NMWQCC as Designated Management Agencies, and their programs, responsibilities and regulatory authority for water quality on lands under their control are also described in the NPS Management Program.

New Mexico’s NPS Management Program Annual Report (NMED, 1997) summarizes progress on NPS management projects and accomplishments each year, including activities and watershed projects implemented by other agencies. This report includes updates on cooperating agency programs and activities, and progress reports on achieving NPS Management Program milestones.

New Mexico’s NPS Management Program Semi-Annual Report (NMED, 1999*b*) contains progress reports on individual projects managed by SWQB NPS Pollution Section staff. These projects include those funded by §319(h) that address priority watershed problems.

The NPS Pollution Section features outstanding projects, accomplishments and successes in the NPS newsletter, *Clearing the Waters*, and posts these and other program information on the SWQB WWW site.

### **3C. State has institutionalized its program beyond the annual implementation of §319(h)-funded projects.**

The New Mexico NPS Management Program contains permanent program tasks and features beyond the annual implementation of §319(h)-funded projects. These are described in Chapter VI and include the following continuing programs and tasks:

- participation in various watershed groups to provide direction and target water quality problems.
- annual input from cooperating agencies to update programs and tasks.
- consistency reviews of federal, State and local projects.
- regulation and enforcement of CWA §401 actions.
- training and technical assistance, and educational opportunities for the public and private sector.
- cooperation with management agencies through agreements outlined in MOUs and MAAs.
- quarterly publication of the NPS newsletter, *Clearing the Waters*.
- implementation of New Mexico's Liquid Waste Program.
- implementation and enforcement of WQA and NMWQCC regulations to prevent and abate ground and surface water pollution.
- coordination and review of operations and activities under the New Mexico Mining Act.

### **3D. State uses an integrated watershed approach for assessment, protection and remediation that is well integrated with other water or natural resource programs.**

The integration of the NPS Program with other NMED water and natural resource programs is summarized in the §305(b) report (NMWQCC, 1998). The State's water quality management framework includes surface water and ground water quality standards, regulations and programs that focus on ecological, hydrologic, and public health effects.

### **3E. Additional data**

New Mexico regulates and protects water quality through enforcement of §401 provisions of the CWA. Although regulations are enforced on a case-by-case basis, a watershed-wide assessment, as well as site-specific focus is used to determine effects of regulated activities and to develop mitigation measures. Regulation and enforcement of §401 are only effective through the legislation and authority of §404 of the CWA. Additional federal and State statutes to regulate NPS pollution would be useful to expedite the recovery of impaired surface water and ground water and to institutionalize protection measures for New Mexico's water resources.

### **4. The State program (a) abates known water quality impairments from nonpoint source pollution and (b) prevents significant threats to water quality from present and future activities.**

Surface water and ground water quality of New Mexico's basins, their physical descriptions, current contamination problems and ongoing remediation efforts are described in the §305(b)

report (NMWQCC, 1998). This report includes descriptions of nonpoint sources of contamination of surface water and ground water in New Mexico, and documents their occurrence by basin and locality.

In New Mexico, eight categories of land management and/or activities have been identified as potential threats to water quality resulting from nonpoint sources:

- Silviculture
- Rangeland and Grazing/Wildlife Management
- Construction
- Agriculture
- Hydromodification
- Resource Extraction
- Land Disposal
- Recreation

NPS pollution from these categories is targeted for abatement strategies and solutions through development of milestones. Milestones advocate the use of BMPs to reduce impairments to water quality. Some milestones focus on agencies with responsibility to control, abate, and prevent NPS pollution on land under their jurisdiction. Milestones are also directed toward watershed-wide and basin-wide implementation or at identified UWA\* Category I watersheds.

**4A. The State has comprehensively characterized water quality impairments and threats throughout the State which are caused or significantly contributed to by nonpoint sources.**

Water quality standards consist of a triad of elements that work in concert to provide water quality protection. These elements are designated use, numerical and narrative criteria, and an anti-degradation policy (NMWQCC, 1995). The SWQB conducts evaluations of water quality data for water quality standards attainment. Two levels of assessments are used for determining standards attainment for beneficial uses of the State's perennial waters – monitored (quantitative) assessments and evaluated (qualitative) assessments. When exceedences of standards are identified for a particular stream reach, waterbody, or basin, it is included in the §303 (d) list and in the §305(b) report (NMWQCC, 1998). The §303(d) list includes the name of the impaired stream segment, waterbody or basin, support for designated uses status, the probable causes of non-support or threat status and other pertinent data. The probable causes of non-support or threat status includes nonpoint sources of pollution.

In the RFPs for §319(h) grant funds, proponents are required to address streams reaches and sources of impairment identified in the §303(d) list. The Surveillance and Standards Section of the SWQB continues to perform intensive water quality stream surveys to identify exceedences of the States water quality standards.

**4B. The State has comprehensively characterized reasonably foreseeable water quality impairments and threats that are likely to be caused by nonpoint source pollution in the future.**

New Mexico has used special designations that define a waterbody that currently meets all applicable water quality standards, numerical and narrative, but is reasonably expected to exceed criteria before the next §305(b) reporting period (NMED, 1998*b*). The **Full Support-Threatened** designation was assigned with the support of monitored data projected to predict exceedances of the criteria before the next §305(b) reporting period. However, because the timeframe for reassessing waters is on the order of once every five years, data is insufficient to show trends identifying future exceedances and this designation will no longer be used.

The designation, **Full Support-Impacts Observed**, will be used to assign priorities to potentially impaired water bodies for future assessments, regulatory compliance, and/or monitoring data reviews. This designation will be used when there is a preponderance of evidence that standards may be exceeded by the next §305(b) reporting period.

**4C. State program addresses all significant nonpoint source categories and subcategories.**

NPS categories and subcategories are addressed in a variety of ways:

1. The CWA defines six types of nonpoint sources. These categories, with an explanation of the problem in New Mexico, are described in the New Mexico Statewide Water Quality Management Plan.
2. The New Mexico NPS Management Program provides examples of BMPs for control of major NPS pollution categories and subcategories (Appendix B).
3. Annual milestones are presented by NPS category and are directed towards management agencies with authority and expertise, in the NPS Management Program (Chapter XI).

**4D. State program has identified specific programs to abate pollution from categories of nonpoint sources which cause or substantially contribute to the impairments identified in its assessments.**

In New Mexico's 1998 §305(b) report (NMWQCC, 1998) and in this State Management Program, agency programs that contribute to the abatement of pollution from nonpoint sources are described. SWQB coordinates and tracks agency efforts and reports annually to EPA. (See Annual and Semi-annual Reports, Chapter XII, Section 1.) SWQB hopes to improve coordination and cooperation through the development and implementation of MOUs with these agencies.

**4E. State has identified specific programs to prevent future water quality impairments and threats that are likely to be caused by nonpoint source pollution.**

The best defense against future water quality impairments is through involvement in the following activities:

- **PLANNING** – The SWQB remains involved in planning efforts for water resource management concerning land management agencies, municipalities, industry and agriculture. Involvement in water planning efforts is especially critical for municipalities where rapid growth is anticipated, or water uses and water demands are changing, and could effect ground water and surface water quality. Our involvement in planning efforts is identified in the New Mexico NPS Management Program sections on federal, State and local government programs (Chapter X).
- **EVALUATION** – Future water quality impairments and threats are prevented through the analysis and interpretation of sampling and monitoring data, in combination with the identification of potential pollution sources. Our ultimate goal is to establish a comprehensive database that will help us evaluate the present and future condition of our water resources. Our most recent data evaluation has been carried out through the CWAP/UWA\* (NMED, 1998a).
- **EDUCATION** – The SWQB NPS Pollution Section provides public education in a variety of ways to promote pollution prevention. Our education efforts are outlined in Chapter XI and Appendix A.

**5. The State program identifies waters and their watersheds impaired by NPS pollution and identifies important unimpaired waters that are threatened or otherwise at risk. Further, the State establishes a process to progressively address these identified waters by conducting more detailed watershed assessments and developing watershed implementation plans, and then by implementing the plans.**

SWQB, in conjunction with the NPS Task Force/UWA\* Work Group, uses a four-category system to identify NPS-impaired or threatened watersheds. Categorization of watersheds is updated periodically as data become available. Restoration strategies and tactics are tied to identification and assessment of priority watersheds.

The NPS Task Force/UWA\* Work Group is in the process of placing each of 83 watersheds in New Mexico into one of four categories. The four categories are:

**UWA\* Category I:** Watersheds in need of restoration

**UWA\* Category II:** Watersheds meeting goals, including those needing action to sustain water quality

**UWA\* Category III:** Watersheds with sensitive aquatic system conditions on lands administered by federal, State, or Tribal governments

**UWA\* Category IV:** Watersheds with insufficient data to make an assessment

New Mexico's 83 watersheds are defined by large-scale hydrologic units and are represented by 8-digit hydrologic unit codes (HUC Codes). In order to pinpoint areas for restoration activities within a watershed, sub-watersheds will be delineated and identified by using 11-digit HUC Codes. As TMDL budgets become established and water impairments identified through the collection and evaluation of sufficient data, sub-watersheds with TMDL segments or other urgent water quality needs, will be targeted first for the implementation of restoration activities.

**5A. State water quality assessments (including those performed under §§305(b), §319(a), 303(d), 314, and others), along with analysis of changing land uses within the State, form the basis for the identification of the State's planned NPS activities and projects.**

NMWQCC produces a §305(b) report and SWQB produces a §303(d) list, both biannually. In conjunction with the NPS Task Force/UWA\* Work Group, SWQB prioritizes each of 83 watersheds into one of four categories based on TMDL status, presence of surface water-dependent drinking water supply systems, land use status, and information contained in the §305(b) report and §303(d) list. Categorization is updated as data become available (NMED, 1998a).

**5B. State activities focus on remediating the identified impairments and threats, and on protecting the identified at-risk waters.**

Section 319 funding is directed primarily towards project proposals in UWA\* Category I watersheds. Funding criteria also include anticipated reduction of pollutant loading for the impaired surface waterbody. Additionally, SWQB is continuing to develop TMDLs according to the EPA-Forest Guardians consent decree.

**5C. State has provided for public participation in the overall identification of problems to be addressed in the State program, and in the establishment of a process to progressively address these problems.**

In establishing the NPS Task Force/UWA\* Work Group, SWQB sent invitations to approximately 200 potentially interested parties, of which about 50 participated in the initial meeting. The effort to include more participants is ongoing, as invitations are periodically sent to more potentially interested parties as they are identified. Additionally, information on the NPS program is posted on the SWQB web site (<http://www.nmenv.state.nm.us>) and notifications of NPS Task Force/UWA\* Work Group meetings are published in local newspapers.

**5D. State NPS priorities are communicated to, consistent with, and reflected in program planning and implementation activities by other water resource management agencies operating within the State.**

The NPS Task Force/UWA\* Work Group is composed of many water resource management agencies (as well as other groups/individuals) throughout the State. Thus, maintaining clear communication relating to program goals and activities to these various agencies is inherent in the process of developing watershed restoration strategies. In addition, NMED maintains MOUs

with various agencies including the USFS, BLM, and NMSHTD. NMED plans to develop MOUs with more agencies (see Milestones.)

**5E. State revises its identification of waters and revisits its process for progressively addressing these problems periodically (e.g., once every 5 years).**

The NPS Task Force/UWA\* Work Group reviews new data relating to watershed prioritization at least annually. Several watersheds are chosen from UWA\* Category I watersheds for intensive outreach each year. The goal is for each UWA\* Category I watershed to receive intensive focus within a five-year cycle. The process for addressing problems is reviewed at least every five years in conjunction with development of the five-year Management Program.

**6. The State reviews, upgrades, and implements all program components required by §319(b) of the CWA, and establishes flexible, targeted, and iterative approaches to achieve and maintain beneficial uses of water as expeditiously as practicable. The State programs include:**

**(a) A mix of water quality-based and/or technology-based programs designed to achieve and maintain beneficial uses of water, and;**

**(b) A mix of regulatory, non-regulatory, financial, and technical assistance as needed to achieve and maintain beneficial uses of water as expeditiously as practicable.**

SWQB reviews, upgrades, and implements §319 (b) program components including identification and implementation of BMPs, a schedule of milestones, attorney general certification, identification of funding sources, and identification of federal financial assistance programs and development projects. SWQB establishes flexible, targeted, and iterative approaches to achieve its NPS goals, as discussed below. The State program includes water quality-based programs to achieve its NPS goals and regulatory, non-regulatory, financial, and technical assistance to achieve and maintain beneficial uses of water in an expeditious fashion.

**6(1). The State includes in its program and implements the following eight items:**

**6(1A). Identification of the measures to be used to control nonpoint sources of pollution, focusing on those measures which will be most effective to address the specific types of NPS pollution prevalent within the State. These measures may be individually identified or presented in manuals or compendia, provided that they are specific and are related to the category or subcategory of nonpoint sources. They may also be identified as part of a watershed approach towards achieving water quality standards, whether locally, within a watershed, or State-wide.**

NPS controls are typically established through implementation of management practices that are structural or nonstructural in nature. Structural practices include diversions, sediment basins, animal waste lagoons, fencing, terraces, rock check dams, and other constructed means of reducing impairments to surface water and ground water. Nonstructural practices relate to resource management techniques, such as timing and rate of fertilizer or pesticide application,

conservation tillage methods, livestock rotation, riparian planting, upland revegetation, and other techniques. SWQB maintains a library of documents and video tapes (Appendix C) containing information on appropriate uses of BMPs in various applications. Appendix B lists examples of BMPs for control of major NPS pollution categories identified in the New Mexico NPS Pollution Water Quality Assessment. Also, the New Mexico Water Resources Research Institute (WRI) reports annually to SWQB and the NPS Task Force/UWA\* Work Group on research related to NPS activities. In addition to providing annual reports on research related to NPS activities, the WRI utilizes a "Program Development and Review Board" to establish research priorities and to review research proposals for funding. The NMED is represented on this Board. (Dr. Davis is current NMED designate).

**6(1B). Identification of programs to achieve implementation of the measures.**

SWQB communicates with local, State, and federal agencies and other entities to identify programs relevant to the NPS Management Program. Refer to Chapter V for a listing of programs that various agencies administer.

**6(1C). Processes used to coordinate and, where appropriate, integrate various programs used to implement NPS controls in the State.**

SWQB coordinates with all other NMED programs to ensure that surface water and ground water NPS concerns are considered in all Department activities. Intra-agency coordination includes information transfers, specific requests for reporting of staff observations of potential water quality concerns, intra-agency meetings, and informal discussions. Program managers of the various sections within the SWQB meet on a weekly basis. Bureau chiefs within NMED meet as needed on a case-by-case basis. The NPS Pollution Section also coordinates among other cooperating agencies within the Department. This allows for reporting water quality concerns resulting from inappropriate management practices, identifying new NPS concerns, and documenting the level of effectiveness of BMPs. NPS Task Force meetings are conducted quarterly. Project reviews with federal, State, and local agencies are conducted to provide additional opportunities for communication and coordination of efforts as needed.

**6(1D). A schedule with goals, objectives, and annual milestones for program implementation; legal authorities to implement the program; available resources; and institutional relationships.**

**6(1E). Attorney General certification (if program is changed substantially).**

SWQB has developed a five-year schedule to address priority watersheds that includes objectives, tasks, and outputs (see FY99 Core Workplan). The schedule will be expanded as work on the initial priority watersheds is completed and as data become available to classify more watersheds as top priority. Additionally, a list of milestones (see Key Element 1(E)) has been developed to facilitate program implementation. Legal authority to implement the program will be confirmed by the Attorney General of New Mexico, however, SWQB has no legal authority to enforce NPS pollution reduction under New Mexico law (Environmental Law Institute, 1998). Various inter-agency agreements (e.g., MOUs, MAAs) formalizing institutional

relationships have been signed and many more are being developed (see Chapter XI and Appendix D). Available resources are discussed below (see Key Element 6(1F)).

**6(1F). Sources of funding from federal (other than §319), State, local, and private sources.**

Funding for implementation of the NPS Management Program is obtained through a combination of federal, State, and local sources. Federal and State sources include agency operating funds, the State revolving loan fund, existing cost-share assistance programs, and special appropriations for watershed projects. Local sources include county and municipal funds, as well as volunteer monitoring programs, money spent by landowners in the implementation of BMPs, and other in-kind services. Federal, State, and local agencies and their respective programs are outlined in Key Element 6 (1B). Numerous private sources of funding (e.g., foundations, corporations) also exist. Appendix E lists various federal, State, and private funding sources.

**6(1G). Identification of federal programs and projects that the State will review for their effects on water quality and their consistency with the State program.**

SWQB is included in the scoping process for all federal projects that may impact NPS pollution (as agreed upon, for example, in MOUs between NMED and the USFS and BLM). For example, SWQB reviews and submits comments on EISs and EAs from the USFS, USFWS, BLM, and other agencies when they implement the NEPA process in conjunction with their various activities. Civil projects of the Federal Highway Administration, BOR, FERC, and ACOE are also reviewed for their potential impacts.

**6(1H). Monitoring and other evaluation programs to help determine short- and long-term program effectiveness.**

SWQB has a Surveillance & Standards Section that works closely with the NPS Pollution Section to monitor and evaluate short- and long-term effectiveness of both in-house and pass-through projects. When monitoring is conducted by other agencies, SWQB obtains the data for evaluation (see Appendix D). All data are entered into appropriate databases (e.g., STORET) and reports to EPA are made semi-annually.

**6(2). The State program also incorporates or cross-references existing baseline requirements established by other applicable federal or State laws to the extent that they are relevant. Examples include but are not limited to:**

**6(2A). Approved State coastal NPS pollution programs require by §6217 of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA).**

N/A

**6(2B). State Forest Management Practices Acts.**

SWQB, in conjunction with the New Mexico Energy, Minerals, and Natural Resources Department (NMEMNRD), Forestry Resources and Conservation Division, incorporates requirements of voluntary programs and activities such as the Cooperative Forestry Assistance Program, Forest Incentives Program (FIP), and Stewardship Incentives Program (SIP), and various local conservation programs. Regulatory programs, such as timber harvest plans, include NPS pollution assessments to determine the types of BMPs to be applied. See also Chapter XI.

**6(2C). State construction, erosion, or nutrient management laws.**

**6(2D). Federal or State transportation laws that govern construction site or maintenance runoff.**

SWQB, in conjunction with SWCDs, incorporates requirements of conservation provisions of federal farm programs such as the Food Security Act of 1985. SWCDs also review subdivision plans submitted by developers for adequacy of erosion control. SWQB, through formal (e.g., MOU) and informal agreements with NMSHTD, State Land Office (SLO), and Department of Game and Fish, ensures that BMPs are utilized to prevent NPS impairments associated with road construction and maintenance.

**7. The State identifies federal lands and activities which are not managed consistently with State NPS program objectives. Where appropriate, the State seeks EPA assistance to help resolve issues.**

SWQB maintains constant communication with all federal land management and other appropriate agencies (e.g., USFWS) and is apprised of any management plans or decisions that may impact water resources (See Key Element 6 (1G)). SWQB makes comments and recommendations on agency plans and activities to help ensure compliance with NPS program objectives. Additionally, various intergovernmental agreements (e.g., MOUs) are in place to clarify roles of and relationships between State and federal entities. Finally, federal consistency provisions of the CWA (§313, §319(k)) are rigorously implemented. If any unresolvable issues were to arise, SWQB maintains a good working relationship with EPA and would request assistance.

**7A. The State reviews federal financial assistance programs, development projects, and other activities that may result in NPS pollution for consistency with the State program.**

See Key Element 6 (1G)

**7B. The State works with federal agencies to resolve potential inconsistencies between federal programs and activities and the State programs.**

NMED maintains MOUs with various federal agencies (e.g., USFS, BLM) that help to avoid potential inconsistencies. SWQB is also included in the scoping process for federal projects (see Key Element 6 (1G)) to resolve inconsistencies while still in the planning stages.

**7C. Where the State cannot resolve federal consistency issues to its satisfaction, it requests EPA assistance to help resolve the issues.**

SWQB maintains a good working relationship with EPA, Region VI, and in the event that federal consistency issues cannot be resolved satisfactorily, SWQB will request assistance.

**7D. The State coordinates with federal agencies to promote consistent activities and programs, and to develop and implement joint or complementary activities and programs.**

See Key Element 6 (1G)

**8. The State manages and implements its NPS program efficiently and effectively, including necessary financial management.**

SWQB, with assistance from the NPS Task Force/UWA\* Work Group, develops a RFP that is distributed through the SWQB web site, local newspaper advertisements, and the NPS Task Force/UWA\* Work Group mailing list. Once received, the proposals are reviewed and clarifications or modifications may be requested. Proposals are then approved (or disapproved) for funding. If total funding of approved proposals does not exhaust available funds, a second RFP is distributed. The NPS Pollution Section oversees implementation of projects, including reimbursement requests, to ensure efficiency, effectiveness, and compliance with program goals. This system allows all interested parties a voice in the NPS program, including input into technical and financial aspects. Effectiveness is also evaluated through monitoring (see Key Element 6 (1H)). Additionally, the SWQB is in the process of hiring one full time employee to act as financial manager.

**8A. The State's plans for watershed projects and State-wide activities are well-designed, with sufficient detail to assure effective implementation.**

SWQB plans projects in sufficient detail to assure effective implementation. For an example, see FY99 Core Workplan, Centerfire Creek Recovery Project case study.

SWQB plans State-wide activities with the cooperation of the NPS Task Force/UWA\* Work Group, whose input is solicited in development of the Management Program, categorization of watersheds, approval/disapproval of watershed projects, and evaluation of project effectiveness.

**8B. The State's watershed projects focus on the critical areas, and critical sources within those areas, that are contributing to NPS problems.**

As of FY99, 21 watersheds have been placed in UWA\* Category I, with the remainder in UWA\* Category IV. Of the UWA\* Category I watersheds, four have been chosen for intensive outreach for FY99. This further prioritization is based on the presence of surface water-dependent drinking water supply systems and TMDL development schedule dates (as required in the EPA-Forest Guardians consent decree), linking efforts of NMED's Drinking Water Bureau, NPS Pollution Section, and Surveillance & Standards Section. For a more detailed discussion of

prioritization, see the CWAP/UWA\*, Watershed Restoration Priorities (pp. 13-19). Each year, four or five more UWA\* Category I watersheds will be chosen for intensive outreach, so that after a five year rotation has been completed, all 21 UWA\* Category I watersheds will have received intensive focus (see NM NPS Management Program, §319 FY99 Base Funding Proposal, five-year schedule, pp. 2-3). Other watersheds will be added to UWA\* Category I as appropriate, so the five-year cycle may need to be extended. The cycle will be repeated until these systems demonstrate recovery and no longer exceed water quality standards. In each fiscal year proposals for UWA\* Category I watersheds will be targeted and given preferential consideration for funding.

The WRAS process assures that critical sources within targeted areas are addressed in restoration projects. A WRAS contains the following five elements:

- Public outreach
- Monitoring/evaluation activities
- Clearly defined water quality problems
- Specified action plan and water quality goals
- Implementation schedule

For a detailed discussion of each WRAS element, see Appendix F.

**8C. State implements its activities and projects, including all tasks and outputs, in a timely manner.**

See Core Workplan (Appendix A), Staffing Objectives 1-4 (including Tasks and Outputs)

Tasks and their associated outputs, each of which is categorized under one of four staffing objectives, are given target time frames for completion within a project. For example, organizing stakeholders (output = quarterly meetings) is scheduled for one month past the project approval date. See FY99 Core Workplan, Staffing Objectives 1-4 (pp. 3-8). SWQB staff oversees each project to ensure that schedules are met, reports are submitted, funds are spent according to plan, and all other contract provisions are adhered to.

**8D. State has established systems to assure the State meets its reporting obligations.**

SWQB reports to EPA annually on Management Program issues (e.g., milestones, outreach programs) and semi-annually on workplans (e.g., tasks, outputs) and 401 actions.

**8E. State utilizes the Grants Tracking and Reporting System effectively.**

The Grants Tracking and Reporting System has been problematic for SWQB in the past. This was the result of computer/technical difficulties arising from software changes. We are working to rectify the problem and anticipate resolving software incompatibilities in the near future.

**8F. State has developed and uses a fiscal accounting system capable of tracking expenditures of both §319 funds and non-federal match.**

The SWQB has four full time employees who form a financial management team. The team assists, monitors, and ensures that financial reporting and recording requirements are being met. The team will develop and implement policies and procedures for tracking all federal grants within the Bureau. The team will ensure that all matching requirements are being met, keep an accurate and updated master list of current grants, workplans, contracts, and Joint Powers Agreements (JPAs), and regularly update the Grants Tracking and Reporting System. Financial staff and project managers will work together to verify that the Bureau is both financially and technically in compliance with the §319(h) grant agreements. The SWQB will ensure that a final Financial Status Report and all other financial reports are filed when a grant is closed and will coordinate with Financial Services Bureau (FSB) to implement a financial tracking system that ensures that matching and other requirements are being met.

Additionally, SWQB requires documentation of matching funds when requests for reimbursements are submitted by project contractors. Funds will not be released without confirmation of matching funds.

**8G. Nonpoint source projects include appropriate monitoring and/or environmental indicators to gauge effectiveness.**

SWQB's NPS and Surveillance & Standards Sections monitoring efforts include, but are not limited to, water chemical and physical attributes (e.g., nutrients, temperature), fish populations, benthic macroinvertebrates, and fluvial geomorphologic indicators. Monitoring occurs before and after implementation of BMPs. Monitoring sites typically bracket BMP implementation sites to allow for comparison of treated and untreated stream reaches. Data are entered into appropriate databases and reports to EPA are scheduled to be semi-annual. Monitoring data obtained by other agencies or partners are shared with SWQB, as stipulated in MOUs. These data may include upland and riparian vegetation sampling, photographic comparisons, and other environmental indicators. See also Key Element 6 (1H).

**9. The State periodically reviews and evaluates its NPS Management Program using environmental and functional measures of success, and revises its NPS assessment and its management program at least every five years.**

SWQB, in conjunction with the NPS Task Force/UWA\* Work Group, cyclically evaluates and refines the program to maintain efficiency and effectiveness.

**9A. The State has and uses a process to periodically assess both improvements in water quality and new impairments or threats.**

SWQB, through its NPS and Surveillance & Standards sections and citizen volunteer monitoring programs, continually monitors and assesses water quality in watersheds throughout the State with the goal of sampling all river reaches every five years (see CWAP/UWA\*, Future Directions, p. 21-23). The purpose of these efforts include re-categorizing UWA\* Category IV

watersheds (those with too little data to be assessed) into one of three other categories (see Key Element 8B) and assessing water quality improvements (see Key Element 6(1H)). Assessments are performed according to SWQB's Assessment Protocol (NMED, 1998b).

**9B. The State uses a feedback loop, based on monitoring and other evaluative information, to assess the effectiveness of the program in meeting its goals and objectives, and revises its activities and tailors its annual workplans, as appropriate, in light of its review.**

**9C. Using its feedback loop, the State periodically reviews and assesses the goals and objectives of the NPS Management Program, and revises the program, as appropriate, in light of its review.**

Based on monitoring and assessment data, the NPS Task Force/UWA\* Work Group reviews the status of watersheds throughout the State and targets several UWA\* Category I watersheds to receive intensive focus within a five-year cycle. The cycle is then repeated until all watersheds demonstrate recovery and no longer exceed water quality standards (see Key Element 8B). Additionally, work is being conducted to develop improved assessment protocols and predictive capabilities relating to NPS pollution, that will further enhance our ability to fine-tune the program (see CWAP/UWA\*, Future Directions, pp. 21-23).

**9D. The State's annual report successfully portrays the State's progress in meeting milestones, implementing BMPs, and achieving water quality goals.**

SWQB's annual report indicates progress, or lack thereof, in meeting a wide variety of milestones, implementing BMPs on agency, statewide, and watershed levels, and program goals and future needs. Case studies are sometimes included. Additionally, semi-annual reports include information on specific ongoing projects. In the future, reports will also contain information on conducting outreach, monitoring, and generating proposals for funding of projects.

The annual report is a useful resource for agencies, watershed associations, citizen's groups, legislators, and others to stay informed of the progress and direction of the State NPS program.

## XVI. REFERENCES

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# **APPENDIX A**

## **ANNUAL NPS CORE WORKPLAN**

## **NEW MEXICO NPS MANAGEMENT PROGRAM SECTION 319 FY99 BASE FUNDING PROPOSAL**

### **Introduction**

The majority of water quality impairment identified in New Mexico's streams is due to nonpoint sources of water pollution. As the designated lead agency for management of nonpoint source pollution (NPS), the New Mexico Environment Department (NMED) coordinates activities within the State through the Surface Water Quality Bureau (SWQB) to develop and sustain a balanced program of assessment and implementation. The New Mexico NPS Management Plan (Management Plan) contains a series of implementation milestones that establish targets while providing a method to measure progress and success of the program. The primary goal of the Management Plan is to develop and implement a program that will reduce, to the extent feasible, human-induced pollutants from nonpoint sources entering surface water and ground water of the State. Achievement of this goal is defined as attainment of surface water quality that fully protects designated uses described in the State's water quality standards and meets the goals of the Federal Water Pollution Control Act, and to protect ground water quality for municipal, domestic and agricultural use.

This proposal identifies staffing and program support needs required to support all or a portion of 14 full-time employees within the NMED's Surface Water Quality Bureau, NPS Pollution Section for the purpose of achieving goals established in the State's NPS Management Plan. The primary functions of the program are to manage and institutionalize NPS abatement activities within the State and to illustrate the implementation of NPS controls on a demonstration and/or watershed basis. Implementation activities carried out by SWQB staff routinely include coordination of effort among NPS management agencies, promotion and implementation of BMPs, coordination/implementation of watershed and demonstration projects, inspection and enforcement activities, federal consistency reviews, project administration activities, and education/outreach activities.

### **NPS Management Plan-Consistency with Program Goals**

The New Mexico NPS Management Plan outlines a five year plan to address NPS concerns within the twenty-one priority (UWA\* Category I) watersheds identified in the CWAP/UWA\* (Sept. 1998). Each year, approximately four UWA\* Category I watersheds will be targeted for intensive education and outreach. The following year, the §319(h) Request for Proposal (RFP) will be designed to specifically target those UWA\* Category I watersheds that have previously received intensive education/outreach. Award preference will be given to those projects that address appropriate causes of non-support in targeted UWA\* Category I watersheds. This strategy will ensure that §319(h) monies are directed toward those NPS areas of most concern and will also allow the NPS Pollution Section to directly measure the success of outreach efforts. Our ultimate goal is to focus up to 100% of §319(h) monies in scheduled UWA\* Category I watersheds.

Each year, approximately four more UWA\* Category I watersheds will be targeted for intensive outreach so that after a five-year rotation has been completed, all UWA\* Category I watersheds

will have received intensive focus. This cycle will then be repeated until these systems demonstrate recovery and no longer exceed water quality standards.

The following schedule outlines our five-year strategy to address UWA\* Category I watersheds.

Priority-One Watershed 8-Digit Hydrologic Code	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004
Jemez 13020202	Intensive Outreach, Monitoring & RFP Target	BMP Implementation & Monitoring	BMP Implementation & Monitoring	Monitoring	Monitoring
Rio Chama 13020102	Intensive Outreach, Monitoring & RFP Target	BMP Implementation & Monitoring	BMP Implementation & Monitoring	Monitoring	Monitoring
Cimarron 11080002	Intensive Outreach, Monitoring & RFP Target	BMP Implementation & Monitoring	BMP Implementation & Monitoring	Monitoring	Monitoring
Rio Grande/Santa Fe 13020201	Intensive Outreach, Monitoring & RFP Target	BMP Implementation & Monitoring	BMP Implementation & Monitoring	Monitoring	Monitoring
San Francisco 15040004	Intensive Outreach, Monitoring & RFP Target	BMP Implementation & Monitoring	BMP Implementation & Monitoring	Monitoring	Monitoring
Upper Gila 15040001		Intensive Outreach, Monitoring & RFP Target	BMP Implementation & Monitoring	BMP Implementation & Monitoring	Monitoring
Upper Gila-Mangus 15040002		Intensive Outreach, Monitoring & RFP Target	BMP Implementation & Monitoring	BMP Implementation & Monitoring	Monitoring
Rio San Jose 13020207		Intensive Outreach, Monitoring & RFP Target	BMP Implementation & Monitoring	BMP Implementation & Monitoring	Monitoring
Rio Puerco 13020204		Intensive Outreach, Monitoring & RFP Target	BMP Implementation & Monitoring	BMP Implementation & Monitoring	Monitoring
Animas 14080104			Intensive Outreach, Monitoring & RFP Target	BMP Implementation & Monitoring	BMP Implementation & Monitoring
Middle San Juan 14080105			Intensive Outreach, Monitoring & RFP Target	BMP Implementation & Monitoring	BMP Implementation & Monitoring
Pecos Headwaters 13010001			Intensive Outreach, Monitoring & RFP Target	BMP Implementation & Monitoring	BMP Implementation & Monitoring
Rio Hondo 13060008			Intensive Outreach, Monitoring & RFP Target	BMP Implementation & Monitoring	BMP Implementation & Monitoring
Rio Grande/El Paso-Las Cruces 13030102			Intensive Outreach, Monitoring & RFP Target	BMP Implementation & Monitoring	BMP Implementation & Monitoring
Rio Grande/Caballo 13030101				Intensive Outreach, Monitoring & RFP Target	BMP Implementation & Monitoring
Rio Grande-Albuquerque 13020203				Intensive Outreach, Monitoring & RFP Target	BMP Implementation & Monitoring
Upper Rio Grande 13020101				Intensive Outreach, Monitoring & RFP Target	BMP Implementation & Monitoring
Upper Pecos/Black 13060011				Intensive Outreach, Monitoring & RFP Target	BMP Implementation & Monitoring
Mimbres 13030202					Intensive Outreach, Monitoring & RFP Target
Mora 11080004					Intensive Outreach, Monitoring & RFP Target
Zuni 15020004					Intensive Outreach, Monitoring & RFP Target

As the previous chart illustrates, by the end of the fifth year (2004), each of the twenty-one UWA\* Category I watersheds will have been targeted for intensive outreach and monitoring. By the end of the sixth year (2005), each UWA\* Category I watershed will have been targeted by the §319(h) RFP.

### **Major Staffing Objectives**

Each of the 14 NPS technical staff persons will be responsible for organizing all §319(h) related activities in one or more of the twenty-one UWA\* Category I watersheds. For the purposes of this workplan, specific Tasks have been placed into one of four major staffing objectives:

1. *Outreach*; 2. *Facilitation*; 3. *Administrative*, and; 4. *Oversight/Enforcement*.

### **Workplan Tasks and Deliverables July 1, 1999 through June 30, 2000**

This workplan outlines the various workplan task objectives, where each will occur, appropriate outputs/deliverables, cost estimates, and the time frame in which it is to be completed for state funding cycle FY 00 (7/1/99 - 6/30/00).

The following Objectives and Tasks will focus upon watersheds prioritized for the current fiscal year (FY 1999-2000: specifically the Jemez River, Rio Chama, Cimarron River, and Rio Grande/Santa Fe, hereinafter referred to as the *FY 99 Priority Watersheds*). SWQB anticipates the possible need to respond to situations and opportunities that may arise within other watersheds within the state, subject to staff time and funding availability.

#### **OBJECTIVE 1. Outreach (Define the problem/project)**

Provide technical support, guidance, and educational opportunities that promote holistic approaches to watershed restoration/management. Activities could include hosting information sessions that provide prospective §319(h) applicants with better understanding of the State's NPS Management Plan Milestones and/or providing applicants with assistance in writing project workplans. The primary goal of outreach activities is to ensure that §319(h) proposals address identified causes of non-support, especially in UWA\* Category I watersheds identified in the CWAP/UWA\*. We also view outreach as our opportunity to begin educating the next generation of land stewards.

**Task 1.** Provide technical support and guidance to state, federal, and private stakeholders.

**Output:** NPS staff hold quarterly meetings with appropriate stakeholder agencies.

**Schedule:** 1<sup>st</sup> Quarter (by September 30, 1999)  
2<sup>nd</sup> Quarter (by December 31, 1999)  
3<sup>rd</sup> Quarter (by March 31, 2000)  
4<sup>th</sup> Quarter (by June 30, 2000)

**Task 2.** Publish the quarterly NPS newsletter, *Clearing the Waters*.

**Output:** Four issues of *Clearing the Waters* published and distributed annually.

**Schedule:** 1<sup>st</sup> Quarter (by September 30, 1999)  
2<sup>nd</sup> Quarter (by December 31, 1999)

**3<sup>rd</sup> Quarter (by March 31, 2000)**  
**4<sup>th</sup> Quarter (by June 30, 2000)**

**Task 3.** Assist in creation and organization of watershed associations and citizens monitoring groups located in the *FY 99 Priority Watersheds*.

**Output:** One new watershed association and/or citizens monitoring group to be formed each year and/or a significant membership increase within existing groups. Meeting minutes will be provided to EPA.

**Schedule:**     **September 30, 1999**

**Task 4.** Coordinate with volunteer monitoring efforts in *FY 99 Priority Watersheds*.

**Output:** Attend all scheduled meetings, provide technical assistance, disseminate information, etc. Report activities to EPA in semi-annual reports.

**Schedule:**     **September 30, 1999**

**Task 5.** Showcase the effective use of BMPs.

**Output:** BMP articles to be published in *Clearing the Waters*, quarterly site tours of BMP implementation sites, federal consistency review activities, etc.

**Schedule:**     **1<sup>st</sup> Quarter (by September 30, 1999)**  
                  **2<sup>nd</sup> Quarter (by December 31, 1999)**  
                  **3<sup>rd</sup> Quarter (by March 31, 2000)**  
                  **4<sup>th</sup> Quarter (by June 30, 2000)**

**Task 6.** Provide educational opportunities for the public and private sector.

**Output:** Coordinate with local schools, host information sessions, conduct public site tours of BMP implementation sites, etc. in *FY 99 Priority Watersheds*. Report activities to EPA in semi-annual reports.

**Schedule:**     **December 31, 1999**

**Task 7.** Update the NPS Pollution Section on the SWQB Web page.

**Output:** Update web page semi-annually with current information. Examples are RFP, *Clearing the Waters*, project status etc. Report update activities and web site counter totals to EPA in semi-annual reports.

**Schedule:**     **2<sup>nd</sup> Quarter (by December 31, 1999)**  
                  **4<sup>th</sup> Quarter (by June 30, 2000)**

## **OBJECTIVE 2.     Facilitation (Making it Happen)**

Following the 1-2 year period of intensive outreach/monitoring, whereby watershed stakeholders are familiarized with NPS program goals, each UWA\* Category I watershed will be targeted by the §319(h) RFP. At this point, NPS staff will be charged with facilitating coordination and partnering among stakeholders in development and implementation of inclusive watershed-based restoration activities.

**Task 1.** Coordinate NPS Task Force activities.

**Output:** NPS Task Force to meet quarterly (at a minimum). Include meeting minutes to EPA in semi-annual reports.

**Schedule:** 1<sup>st</sup> Quarter (by September 30, 1999)  
2<sup>nd</sup> Quarter (by December 31, 1999)  
3<sup>rd</sup> Quarter (by March 31, 2000)  
4<sup>th</sup> Quarter (by June 30, 2000)

**Task 2.** Organize stakeholders.

**Output:** Quarterly meetings held with appropriate stakeholders in *FY 99 Priority Watersheds* to discuss NPS priorities, implementation locations, and monitoring strategies, and to recommend appropriate BMPs, give technical assistance, ensure 40% match, etc.

**Schedule:** 1<sup>st</sup> Quarter (by September 30, 1999)  
2<sup>nd</sup> Quarter (by December 31, 1999)  
3<sup>rd</sup> Quarter (by March 31, 2000)  
4<sup>th</sup> Quarter (by June 30, 2000)

**Task 3.** Develop MOUs.

**Output:** MOUs will be updated or developed with appropriate state and federal agencies (e.g., SLO, BLM, USFS, NRCS, etc.).

**Schedule:** 1<sup>st</sup> Quarter (by September 30, 1999)  
2<sup>nd</sup> Quarter (by December 31, 1999)  
3<sup>rd</sup> Quarter (by March 31, 2000)  
4<sup>th</sup> Quarter (by June 30, 2000)

**Task 4.** Facilitate development of §319(h) proposals, project workplans, reports etc.

**Output:** NPS Staff assist in the development of 33% of all §319(h) proposals, workplans, reports, etc., with prospective cooperators in *FY 99 Priority Watersheds*.

**Schedule:** October 1, 1999 through March 31, 2000

**Task 5.** Conduct base-line water quality monitoring.

**Output:** Base line data collected in *FY 99 Priority Watersheds* and entered quarterly into the appropriate data base (i.e. STORET).

**Schedule:** July 1, 1999 through June 30, 2000 (Quarterly depending on site access).

**Task 6.** Coordinate with Federal agencies and Tribes to implement NPS projects on their lands (technology transfer).

**Output:** 25% of all §319(h) projects implemented on public/tribal lands within *FY 99 Priority Watersheds* (dependent upon land use status). Report activities to EPA in semi-annual reports.

**Schedule:** July 1, 1999 through June 30, 2000

**Task 7.** Develop NPS TMDLs

**Output:** Two NPS TMDLs will be developed and EPA approval given in *FY 99 Priority Watersheds*.

**Schedule:** June 30, 2000

**Task 8.** Organize and/or participate in information sharing activities among stakeholders.  
**Output:** A minimum of four activities conducted each year in *FY 99 Priority Watersheds*.

**Schedule:** 1<sup>st</sup> Quarter (by September 30, 1999)  
2<sup>nd</sup> Quarter (by December 31, 1999)  
3<sup>rd</sup> Quarter (by March 31, 2000)  
4<sup>th</sup> Quarter (by June 30, 2000)

**OBJECTIVE 3. Administration (Implementation)**

Administer Grants received from EPA. This includes the day-to-day activities associated with project management.

**Task 1.** Update NPS Management Program.  
**Output:** Draft update submitted to EPA for review.  
**Schedule:** December 31, 1999

**Task 2.** Review §319(h) proposals and make award recommendations.  
**Output:** All §319(h) proposals reviewed and award recommendations made to NPS Task Force for FY 00.  
**Schedule:** October 1, 1999 through March 31, 2000

**Task 3.** Prepare and/or assist in the preparation of specific data quality objectives for QAPPs.  
**Output:** QAPPs submitted to EPA for review and/or approval.  
**Schedule:** Prior to Monitoring

**Task 4.** Prepare required reports.  
**Output:** Reports submitted to EPA for review and/or approval (semi-annual progress reports (2), overall NPS annual report for 1999, any draft final and final reports for past projects in-house). Approximately 23 final reports.  
**Schedule:** July 1, 1999 through June 30, 2000

**Task 5.** Develop JPAs.  
**Output:** JPAs written for all projects not otherwise covered by the RFP and/or contracts. Estimate how many this will be based on base projects.  
**Schedule:** September 30, 1999

**Task 6.** Write and administer contracts.  
**Output:** Approximately 5 contracts written for all projects not otherwise covered by the RFP and/or JPAs.  
**Schedule:** September 30, 1999

**Task 7.** Manage and enter data into appropriate data base (including GRTS and STORET).  
**Output:** Data entered quarterly (at a minimum).

**Schedule:** 1<sup>st</sup> Quarter (by September 30, 1999)  
2<sup>nd</sup> Quarter (by December 31, 1999)  
3<sup>rd</sup> Quarter (by March 31, 2000)  
4<sup>th</sup> Quarter (by June 30, 2000)

**Task 8.** Maintain project files/archives.

**Output:** Complete project files compiled and available for review.

**Schedule:** July 1, 1999 through June 30, 2000

**Task 9.** Develop the new §319(h) RFP for FY 00 Funding.

**Output:** RFP developed and presented to the NPS Task Force.

**Schedule:** 1<sup>st</sup> Quarter (by September 30, 1999)

**Task 10.** Revise/update §319(h) proposal ranking criteria.

**Output:** New criteria submitted to NPS Task Force and used to rank FY 00 proposals.

**Schedule:** 1<sup>st</sup> Quarter (by September 30, 1999)

**Task 11.** Administer staff budgets and annual workplan.

**Output:** §319(h) Core Program Workplan written and submitted to EPA for FY 00.

**Schedule:** March 31, 2000

**Task 12.** Supervise projects and program staff.

**Output:** Ensure all deliverables are submitted and on time.

**Schedule:** July 1, 1999 through June 30, 2000

**Task 13.** Develop a general NPS QAPP.

**Output:** A single NPS QAPP for the NPS Pollution Section will be submitted to EPA for review and approval. It will include general Data Quality Objectives to cover baseline and BMP effectiveness monitoring, as well as protocols for Global Positioning System (GPS), fluvial geomorphology studies, etc.

**Schedule:** No later than September 30, 1999

#### **OBJECTIVE 4. Oversight (Is it Working?)**

Oversee State, Federal, and private activities to ensure consistency with water quality goals, standards, and/or NPS Management Plan Milestones. This objective is designed to audit the effectiveness of efforts conducted under the previous three objectives (Outreach, Facilitation, and Administration) and to establish baselines for future comparisons. Monitoring may be conducted before, during, and/or after any of the above objective phases.

**Task 1.** Conduct Federal consistency reviews and Water Quality Certification (CWA 401 permits).

**Output:** All applicable Federal actions reviewed, including EAs and EISs. Report semi-annually to EPA.

**Schedule:** July 1, 1999 through June 30, 2000

**Task 2.** Implementation and effectiveness monitoring.

**Output:** Data entered into appropriate database, report semi-annually to EPA. This will be conducted in pre-FY 99 projects and *FY 99 Priority Watersheds*.

**Schedule:** July 1, 1999 through June 30, 2000

**Task 3.** Oversee implementation of pass-through projects for project year FY 99.

**Output:** Report semi-annually to EPA.

**Schedule:** July 1, 1999 through June 30, 2000

**Task 4.** Review and provide comment on all documentation associated with pass-through projects (including project workplans, QAPPs, reports, etc.) prior to submittal to EPA for project year FY 99.

**Output:** Report semi-annually to EPA.

**Schedule:** July 1, 1999 through June 30, 2000

**Task 5.** Review reimbursement requests and recommend for payment for project year FY 99.

**Output:** All reimbursement requests reviewed.

**Schedule:** July 1, 1999 through June 30, 2000

**Task 6.** Track achievement of NPS Management Plan Milestones for project year FY 99.

**Output:** Report annually to EPA.

**Schedule:** January 31, 2000

## **Staffing Roles and Responsibilities**

### **Team Approach**

The Surface Water Quality Bureau's NPS Pollution Section currently includes staff with expertise in water chemistry, aquatic biology, hydrology, geology, engineering, fluvial geomorphology, fire ecology, environmental sciences, range sciences, timber management, and forest ecology. In order to effectively utilize this broad range of technical expertise, the NPS Pollution Section will employ a team approach to meeting three of the above mentioned objectives (*Outreach, Facilitation, Oversight*).

As indicated above, one NPS staff officer will be assigned one of the priority watersheds. It will be that staff officer's responsibility to assemble an interdisciplinary team and orchestrate intensive outreach/education efforts. During the initial phases of project development, expertise, experience, and skills from various NPS staff persons will be pooled. The resulting interdisciplinary "facilitation team" will be responsible for conducting most of the tasks leading up to the implementation phase of a project (Objectives 1 & 2). The make up of each team will vary from project to project depending on complexity of watershed issues, stakeholder dynamics, technical areas to be addressed, and areas of expertise held by individual staff persons. Typical duties may include providing guidance for prospective §319(h) applicants, organizing stakeholders, resolving conflicts, conducting site tours of potential BMP implementation sites, assisting in development of project workplans, assisting in selection of site-specific BMPs etc.

We are confident this team approach best utilizes the strengths of each staff member and will result in a general improvement in the quality of §319(h) proposals submitted for review.

Following development of a project, the facilitation team will then transfer the day-to-day project administration duties to a single staff person. This “Project Officer” will be responsible for completing most of those tasks associated with Objective 3, project administration and management.

Finally, in order to advance the credibility of this program, an NPS monitoring committee will be formed. This committee will be charged with evaluating project monitoring plans and/or helping project officers develop project-specific monitoring strategies. In addition, the committee will be responsible for assembling specialized monitoring teams that will assist the project staff officer in actual monitoring efforts. Personnel assigned to each monitoring team will vary from project to project depending upon areas of expertise. The monitoring committee will include at least four NPS staff members and will also include representatives from other SWQB sections, such as our Surveillance and Standards Section and/or TMDL Development Section.

The following case study is a demonstration of how the SWQB team approach can realistically be implemented.

## **CENTERFIRE CREEK RECOVERY PROJECT (CCRP)**

### **STAFFING OBJECTIVE 1. Outreach**

NPS staff hold their quarterly meeting with representatives from the Quemado Ranger District on the Gila National Forest.

At that meeting, NPS staff provide the District with a copy of the §319(h) RFP, an overview of how the application process may have changed from the previous year, changes in §319(h) guidance, eligibility requirements, priority watersheds, etc. Having presented this overview, the District indicates they are interested in doing a riparian enhancement project on Centerfire Creek (a 303 d listed stream) and would like us to meet with the grazing permittee (also a private landowner) who has expressed interest in partnering.

A site tour is scheduled. During this tour, it is determined that the project to improve riparian conditions along a 5-mile segment of Centerfire Creek is viable. Participants attending this tour include two NPS staff, one with expertise in range management, the other with experience in riparian habitat evaluation and fluvial geomorphology, the Gila National Forest Hydrologist, the Watershed staff officer from the Quemado Ranger District, and the Forest Service grazing allotment permittee/private land owner.

## **STAFFING OBJECTIVE 2. Facilitation**

During the course of the tour, those present brainstorm and discuss ways to make the project happen. Facilitation has already begun. In this particular case, the two SWQB staff persons present on site determine they will not require additional expertise/assistance from other technical staff. Therefore, the resulting interdisciplinary/interagency team, which includes the affected land owner, the two NPS staff persons, and the two Forest Service representatives, has already been established.

Before the end of the day, various topics and action items are discussed. Topics include recruiting other possible stakeholders, potential sources of matching funds, NEPA requirements, and monitoring.

By day's end, the following action items and agreements result:

- The Forest Service agrees to act as the pass-through entity, meet the NEPA obligation, and apply for matching monies from the Rocky Mountain Elk Foundation and the State's Sikes Act Habitat Improvement Fund.
- The land owner/permittee agrees to commit \$25,000 to the project over the next three years. He also will contact Ducks Unlimited and his local SWCD to inquire about other potential matching funds.
- SWQB agrees to meet with the local SWCD and try to engage them in the process, assist in the writing of the proposal and project workplan, complete a JPA that will allow the state to pass money to the Forest Service, and conduct all BMP implementation and effectiveness monitoring (with assistance from the private land owner and USFS). SWQB also agrees to contact the San Francisco Advisory Committee (Gila Monster Interstate Watershed Group) and the Catron County Citizens Group to inform them of the project and discuss ways they can participate.
- NPS staff agree to consult with the monitoring committee and develop a project specific monitoring plan.

After several weeks, numerous telephone calls, e-mails, meetings, and additional site tours with stakeholders, a proposal is submitted to SWQB and the NPS Task Force.

The proposal receives a high ranking from the NPS Task Force and is recommended for funding.

## **STAFFING OBJECTIVE 3. Administration**

SWQB assigns one person as the project leader for the Centerfire Creek Recovery Project (CCRP). This person will most likely be one of the two members from the original interdisciplinary/interagency facilitation team.

The project leader assists in writing the project workplan, QAPP (if applicable), development of a monitoring plan, JPAs, reviews/writes status reports, etc. Duties include all those associated with day-to-day project administration/management.

#### **STAFFING OBJECTIVE 4. Oversight**

During initial administrative phases, while the project workplan is being written and after BMPs have been chosen and finalized, the project leader consults with the NPS monitoring committee. A monitoring strategy is developed and a project-specific monitoring team is formed. Team members are chosen based on their relative areas of expertise and what the project leader foresees as the basic monitoring needs for the project. The project leader may or may not be a member the monitoring team, depending upon his/her own monitoring expertise, the complexity of the monitoring effort, and the potential need for an independent evaluation of BMP effectiveness. In the case of the CCRP, it is determined that a three person team composed of the project officer and two additional NPS staff members will be adequate and no independent evaluation of BMPs is needed. The Forest Service also agrees to supplement SWQB's physical and biological riparian evaluations with some upland monitoring.

In the best case scenario, this project would result in the formation of a watershed association and/or citizens monitoring group, implementation of an NPS-based TMDL, and measurable progress toward the recovery of these water resources.

## **APPENDIX B**

# **EXAMPLES OF BEST MANAGEMENT PRACTICES**

# Examples of Best Management Practices (BMPs) for Control of Major NPS Pollution Categories and Subcategories Identified in the New Mexico NPS Pollution Water Quality Assessment.

## Agriculture

### Non-irrigated crop production

Crop and residue management practices to maintain soil cover:

- contour stripcropping
- stubble mulching
- conservation tillage

Practices to reduce runoff:

- terracing
- diversions
- contour farming
- grassed waterways
- vegetative filter strips

Practices to limit nutrient movement:

- nutrient management
- split fertilizer applications
- nutrient balancing using expected crop needs and soil sampling results
- rotate to deep rooted crops to deplete carryover nutrients
- limit pre-plant applications
- use of slow-release fertilizers when applicable

Practices to minimize pesticide impacts on surface and ground water:

- use least toxic compound which is effective on target species
- pesticide application strictly according to label directions and applicable legal requirements
- use certified applicators when possible
- use biological control mechanisms when possible
- clean and dispose of pesticide containers according to federal, State, and local laws
- do not apply when pesticide could drift off application site during spray application
- follow recommended IPM practices when possible
- calibrate spray equipment regularly
- know surface area of fields to be sprayed
- maintain adequate storage/mixing/loading facilities
- store or land apply tank rinsate at legal application rate
- use a nurse tank, back-flow prevention devices, siphon break or air gap when filling sprayer tanks
- retrofit sprayers with injection devices when upgrading equipment
- leave buffer zones adjacent to waterways, wells and wetlands when possible

- avoid applications when rainfall is imminent
- be prepared for spills and leaks at all stages of pesticide management
- utilize New Mexico Farm\*A\*Syst, Farmstead Assessment, section 2

### Irrigated crop production

Management practices used to maintain crop and residue cover:

- no-till/conservation tillage
- utilize cover and green manure crops
- soil moisture monitoring devices
- irrigation scheduling when possible
- split fertilizer applications

Irrigation water delivery and drainage systems:

- irrigation water management
- irrigation water measurement
- irrigation pipeline
- tailwater recovery systems
- vegetation control
- concrete or synthetic ditch lining
- laser level fields
- low output sprinkler systems

Practices to reduce adverse pesticide effects:

- IPM when possible
- same practices as non-irrigated cropland (see above)

Animal waste management:

- maintain adequate solid and liquid management facilities
- utilize manure and effluent for crop fertilization; apply at agronomic rates
- compost solid wastes where applicable

Urban agriculture (landscaping, gardening, turf management):

- utilize urban IPM techniques
- reduce levels of pesticide usage
- use soil test results for turf, lawn and garden fertilization

## Range Land

### Grazing/wildlife management:

- determine grazing capability of lands
- monitor grazing/wildlife use
- planned grazing systems such as rest/rotation, seasonal or pasture rotation
- control livestock/wildlife use in sensitive areas including riparian/wetland areas
- livestock/wildlife water development to better distribute use
- relocate livestock trails to better distribute livestock use
- riding or herding to shift livestock locations
- using salt or supplemental feed as tools to gain proper distribution of livestock

### Gully erosion control:

- grade stabilization structure
- rock and brush dam
- debris basin
- diversion around eroding areas
- reestablishment of vegetation in riparian areas
- maintenance of erosion control structures

### Critical area treatment to restore vegetative cover:

- grazing land mechanical treatment
- critical area planting
- mulching

### Vegetative management practices to improve cover:

- brush management
- range seeding
- prescribed burning

## **Silviculture**

### Harvesting, reforestation, and residue management

- establish streamside management zones on all intermittent, interrupted or perennial watercourses for all activities
- design timber harvest units to minimize water quality impacts
- timber harvest limitations to protect steep slopes (>30%) or unstable areas
- clear delineation of protected areas in timber sale maps and special marking on the ground
- limiting the operating period of timber sale activities
- harvest when soils are frozen
- elimination of unstable stands from harvest units
- prescribing size, location and shape of clear cuts
- determining tractor loggable ground

- proper tractor skidding location and design
- suspended log yarding on sensitive areas (e.g., streamside management zones and steep slopes)
- proper log landing location
- special erosion prevention measures on disturbed lands
- site preparation for reforestation
- revegetation of areas disturbed by harvest activities
- log landing erosion prevention and control
- erosion control on skid trails
- meadow protection during timber harvesting
- proper location and method of stream crossings
- equipment kept out of streams
- erosion control structures and energy dissipaters
- maintenance of erosion control structures
- review and approval of timber sale erosion control measures before sale closure
- slash treatment in sensitive areas
- reforestation
- soil moisture and wetland limitations for equipment and vehicle use
- use of sale area maps for designating water protection needs
- directional felling of trees near streamside management zones
- modify timber sale contract if necessary as soon as water quality concerns are identified
- end-line logs out of streamside management zones

#### Fire suppression and fuels management

- fire and fuel management activities to reduce frequency, intensity and destructiveness of wildfires
- consideration of water quality in formulating fire prescriptions
- protection of water quality from prescribed burning effects
- minimizing watershed damage from fire suppression efforts
- repair or stabilization of fire suppression activities related to watershed damage
- emergency rehabilitation of watershed following fires

### **Road Construction and Maintenance**

#### Road construction

- develop and implement erosion control plans
- timing of construction activities to avoid wet periods
- dispersion of subsurface drainage from cut and fill slopes
- provide for adequate road drainage
- timely erosion control on eroding cut-and-fill slopes
- properly orient, design and maintain stream crossings

- construction of stable embankments
- control of sidecast materials
- proper servicing and refueling of equipment to prevent surface or ground water pollution
- minimize in-channel excavation
- divert flows around construction sites
- spill prevention plans should be mandatory part of all construction projects
- proper bridge and culvert installation
- proper stream crossings on temporary roads
- regulation of streamside gravel borrow areas
- proper disposal of right-of-way and roadside debris
- specifying riprap composition
- water source development consistent with water quality protection
- timely erosion control measures on incomplete roads and stream crossing projects

### Road maintenance

- regular maintenance and inspection
- road surface treatment to prevent erosion
- traffic control during wet periods
- snow removal controls to avoid resource damage
- obliteration of temporary roads
- restoration of borrow pits and quarries
- prevent side casting materials into streams or wetlands
- reduce use of salt for deicing roads in sensitive areas

### Recreation

- surface erosion control of facility sites and recreation sites
- provide and maintain sanitation facilities
- control of refuse disposal
- sanitation at hydrants and water faucets within developed recreation sites
- proper location of pack and riding stock facilities
- management of off-road vehicle (ORV) use
- heavy use area protection
- public information on water quality protection at recreation areas
- recreation area closure or relocation

## **Resource Extraction/Exploration/Development**

### Surface mining

- erosion control
- mined land reclamation including revegetation

- control of runoff into or through mine
- treatment of acid mine drainage

#### Mill Tailings and Mine Tailings

- tailings stabilization
- tailings relocation
- channeling runoff around tailings
- reclamation including revegetation

#### Oil and Gas Exploration and Production

- pit closures
- plug orphan wells
- provide secondary containment for above ground storage tanks where appropriate
- implement spill prevention control and countermeasure plans where appropriate

### **Land Disposal**

#### On-site Wastewater Systems

- inspection of construction
- maintenance of septic systems
- proper siting
- proper design
- proper disposal of septage
- land use management and zoning feasibility to protect ground water resources, floodplains and wetlands

### **Hydrologic Habitat Modification**

#### Flow regulation/modification

- flow management
- encourage floodplain protection

#### Streambank modification/stabilization

- stream channel stabilization
- streambank protection
- revegetation

#### Dam Construction

- erosion control

- coffer dams
- selection of proper materials for dam construction
- revegetation of construction areas

### Urban Runoff

- use of stormwater pollution prevention plans as required
- settling ponds
- runoff collection and treatment
- land use planning

### **Other**

#### Watershed Management

- watershed restoration to reduce potential for NPS pollution
- tree density reduction combined with increase in native herbaceous ground cover
- protection of wetlands and riparian areas
- control of activities under special use permit on USFS lands
- soil moisture and wetland limitations for equipment operation and vehicle use
- revegetation of surface disturbed areas
- contour disking, contour furrowing, contour terracing, harrowing, and ripping to minimize erosion
- evaluation of cumulative watershed condition effects on USFS lands

#### Wildlife and Fisheries Management

- control of channel disturbance from fish habitat improvement structures
- control of sedimentation from wildlife habitat improvements

# **APPENDIX C**

## **BIBLIOGRAPHY OF BEST MANAGEMENT PRACTICES**

## Bibliography of Materials Describing BMPs (Best Management Practices) for the Prevention of NPS Pollution

NPS Pollution Section  
Surface Water Quality Bureau  
NM Environment Department  
1190 St. Francis Drive  
Santa Fe, NM 87502  
505-827-0584

### Notes:

1. (DT) indicates the material is available for borrowing from Delbert Trujillo at the above address. Delbert's phone number is 505-827-2867.
2. An asterisk (\*) indicates that copies are available for the user to keep.
3. Use of trade names or commercial products does not constitute endorsement or recommendation for use.

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# **APPENDIX D**

## **MEMORANDA OF UNDERSTANDING**

# **APPENDIX E**

## **FUNDING SOURCES**

- The list of funding sources contained in this appendix is not exclusive. Many other sources may be available to those who seek them out.
- Some particularly useful web sites are:

### **U.S. Environmental Protection Agency**

<http://www.epa.gov/region09/funding/index.html>

<http://www.epa.gov/ogd>

<http://www.epa.gov/OWM/finan.htm>

### **Environmental Grantmakers Association**

<http://www.ega.org>

- Some useful publications:

The Environmental Grantmakers Association directory (includes profiles of EGA members) is available from:

Resources For Global Sustainability

P.O. Box 22779

Rochester, NY 14692-2770

Tel: 800-724-1857

Fax: 716-473-0968

Email: [rgs@eznet.net](mailto:rgs@eznet.net)

*Catalog of Federal Funding Sources for Watershed Protection* (EPA841-B-97-008) is available free of charge from the U.S. Environmental Protection Agency at 1-800-490-9198.

# **APPENDIX F**

## **WATERSHED RESTORATION ACTION STRATEGY (WRAS) ELEMENTS**

The following six elements are specified as integral to WRAS development, and are taken from the New Mexico Non-Point Source Pollution Section Core Workplan.

### **1. Public Outreach**

Public outreach has and will continue to be conducted as part of the implementation of the Base Funding Proposal (Core Workplan) and the NPS Task Force/Unified Watershed Assessment Workgroup. The Core Workplan identifies outreach as one of four major NPS staffing objectives. As written in the Draft Core Workplan, outreach is intended to *“provide technical support, guidance, and educational opportunities that promote holistic approaches to watershed restoration/management. Activities could include hosting information sessions that provide the prospective §319(h) applicant with a better understanding of the state’s NPS Management Plan Milestones and/or providing applicants with assistance responding to a request for proposal. The primary goal of outreach activities is to ensure that §319(h) proposals address identified causes of non-support in UWA\* Category I watersheds identified in the Clean Water Action Plan’s Unified Watershed Assessment. We also view outreach as our opportunity to begin educating the next generation of land stewards.*

### **2. Monitoring/Evaluation Activities.**

Monitoring (oversight) is also identified as a major NPS staffing objective in the Core Workplan. The objective is to *“oversee state, federal, and private activities to ensure consistency with water quality goals, standards, and/or NPS Management Plan Milestones. Monitoring is designed to audit the effectiveness of efforts conducted under the previous three staffing objectives (Outreach, Facilitation, & Administration) and to establish baselines for future comparisons. Monitoring may be conducted before, during, and/or after any of the above objective phases”.*

### **3. Clearly Defined Water Quality Problems.**

Water quality problems are clearly defined in the following four documents:

- a). §303 (d) list and §305 (b) report;
- b). State of New Mexico Procedures for Assessing Standards Attainment for §303 (d) list and §305 (b) report, Assessment Protocol, Revised 6/10/98;
- c). Clean Water Action Plan/Unified Watershed Assessment;
- d). Base Funding Proposal (Non-Point Section Core Workplan).

Additionally, §303(d) listed surface waters have been incorporated in the SWQB GIS database. Visual representation and database tracking of water quality limited surface waters are valuable planning and accomplishment measurement tools. Attached is a state map showing all 83 eight

digit hydrologic unit watersheds in New Mexico with the four highlighted high priority UWA\* Category I watersheds identified for project work during federal FY99. Four additional land use/cover maps showing these same four high priority UWA\* Category I watersheds with TMDL segments highlighted are also included. The statewide database necessary to analyze and produce these maps will be updated throughout the watershed project implementation schedule listed below, and used in future planning and evaluation processes.

#### 4. Specified Action Plan and Water Quality Goals.

New Mexico’s strategy for addressing UWA\* Category I watersheds is outlined in the NPS core workplan, which states, *“The New Mexico Nonpoint Source Management Plan outlines a five year plan to address nonpoint source concerns within the twenty-one Category I watersheds identified in the Clean Water Action Plan Unified Watershed Assessment (Sept. 1998). Each year approximately four Category I watersheds will be targeted for intensive education and outreach. The following year, the §319(h) Request For Proposal (RFP) will be designed to specifically target those Category I watersheds that have previously received intensive education/outreach. Award preference will be given to those projects that address the appropriate causes of non-support in targeted Category I watersheds. This strategy will ensure that §319 monies are directed toward those NPS areas of most concern and will also allow the NPS section to directly measure the success of outreach efforts. Our ultimate goal is to focus 100% of §319(h) monies in scheduled Category I watersheds.*

*Each year, approximately four more Category I watersheds will be targeted for intensive outreach so that after a five-year rotation has been completed, all of the Category I watersheds will have received intensive focus. This cycle will then be repeated until these systems demonstrate recovery and no longer exceed water quality standards”.*

#### 5. Implementation Schedule

The following implementation schedule is taken from the Non-Point Source Core Workplan. The schedule outlines our five-year strategy to address UWA\* Category I watersheds.

Category I Watershed 8-Digit Hydrologic Code	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005
Jemez 13020202	Intensive Outreach & Monitoring	RFP Target	BMP Imp. & Monitoring	BMP Imp. & Monitoring	BMP Imp. & Monitoring
Rio Chama 13020102	Intensive Outreach & Monitoring	RFP Target	BMP Imp. & Monitoring	BMP Imp. & Monitoring	BMP Imp. & Monitoring
Cimarron 11080002	Intensive Outreach & Monitoring	RFP Target	BMP Imp. & Monitoring	BMP Imp. & Monitoring	BMP Imp. & Monitoring
Rio Grande/Santa Fe 13020201	Intensive Outreach & Monitoring	RFP Target	BMP Imp. & Monitoring	BMP Imp. & Monitoring	BMP Imp. & Monitoring

San Francisco 15040004	Intensive Outreach & Monitoring	RFP Target	BMP Imp. & Monitoring	BMP Imp. & Monitoring	BMP Imp. & Monitoring
Upper Gila 15040001		Intensive Outreach & Monitoring	RFP Target	BMP Imp. & Monitoring	BMP Imp. & Monitoring
Upper Gila-Mangus 15040002		Intensive Outreach & Monitoring	RFP Target	BMP Imp. & Monitoring	BMP Imp. & Monitoring
Rio San Jose 13020207		Intensive Outreach & Monitoring	RFP Target	BMP Imp. & Monitoring	BMP Imp. & Monitoring
Rio Puerco 13020204		Intensive Outreach & Monitoring	RFP Target	BMP Imp. & Monitoring	BMP Imp. & Monitoring
Animas 14080104			Intensive Outreach & Monitoring	RFP Target	BMP Imp. & Monitoring
Middle San Juan 14080105			Intensive Outreach & Monitoring	RFP Target	BMP Imp. & Monitoring
Pecos Headwaters 13010001			Intensive Outreach & Monitoring	RFP Target	BMP Imp. & Monitoring
Rio Hondo 13060008			Intensive Outreach & Monitoring	RFP Target	BMP Imp. & Monitoring
Rio Grande/El Paso-Las Cruces 13030102			Intensive Outreach & Monitoring	RFP Target	BMP Imp. & Monitoring
Rio Grande/Caballo 13030101				Intensive Outreach & Monitoring	RFP Target
Rio Grande-Albuquerque 13020203				Intensive Outreach & Monitoring	RFP Target
Upper Rio Grande 13020101				Intensive Outreach & Monitoring	RFP Target
Upper Pecos/Black 13060011				Intensive Outreach & Monitoring	RFP Target
Mimbres 13030202					Intensive Outreach & Monitoring
Mora 11080004					Intensive Outreach & Monitoring
Zuni 15020004					Intensive Outreach & Monitoring

As the above chart illustrates, by the end of the fifth year (2005), each of the twenty-one UWA\* Category I watersheds will have been targeted for intensive outreach and monitoring. By the end of the sixth year (2006), each UWA\* Category I watershed will have been targeted by the §319(h) RFP.

## **6. Funding Needs**

This schedule must include federal assistance, state funds, and other resources available to support the implementation and maintenance of restoration measures. The main end in this regard is stabilized funding levels. Effective non-point source pollution control efforts must acknowledge that improvements to water quality will require long term commitments of budget and personnel resources. Stable funding is a prerequisite for the necessary long term planning currently being required.

# **APPENDIX G**

## **NEW MEXICO ENVIRONMENT DEPARTMENT ABRIDGED ORGANIZATIONAL CHART**

**NEW MEXICO ENVIRONMENT DEPARTMENT**  
**Abridged Organizational Chart**

