NEW MEXICO
NONPOINT SOURCE MANAGEMENT PLAN
~ 2019 ~







New Mexico Environment Department
Water Protection Division
Surface Water Quality Bureau
Watershed Protection Section

www.env.nm.gov/surface-water-quality

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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF APPENDICES

ACRONYMS

APRM	Advance Permittee-Responsible Mitigation Program
AU	Assessment Unit
BAER	Burned Area Emergency Response
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
BMP	Best Management Practice
CAFO	Concentrated Animal Feeding Operation
COA	Conservation Opportunity Area
CRP	Conservation Reserve Program
CTA	Conservation Technical Assistance
CWA	Clean Water Act
DDT	Dichlorodiphenyltrichloroethane
DOE	United States Department of Energy
EMNRD	New Mexico Energy Minerals and Natural Resources Department
EPA	United States Environmental Protection Agency
EQIP	Environmental Quality Incentives Program
FERC	Federal Energy Regulatory Commission
FOTG	NRCS Field Office Technical Guide
FSA	Farm Service Agency
FSR	Financial Status Report
FWHO	Forest and Watershed Health Office
GIS	Geographical Information System
GRTS	Grant Reporting and Tracking System
GWQB	Ground Water Quality Bureau
HWA	State Hazardous Waste Act
IPM	Integrated Pest Management
ISC	Interstate Stream Commission
LANL	Los Alamos National Laboratory
LEP	Limited English Proficiency
MARP	Mining Act Reclamation Program
MASS	Monitoring, Assessment, and Standards Section
MECS	Mining Environmental Compliance Section
MOU	Memorandum of Understanding
MS4	Municipal Separate Storm Sewer System
NAWQA	National Water Quality Assessment Program
NEPA	National Environmental Policy Act
NFMA	National Forest Management Act
NMAC	New Mexico Administrative Code
NMCES	New Mexico Cooperative Extension Service
NMDA	New Mexico Department of Agriculture
NMDGF	New Mexico Department of Game & Fish
NMDOT	New Mexico Department of Transportation
NMED	New Mexico Environment Department

NMFWRI	New Mexico Forest and Watershed Restoration Institute
NPDES	National Pollutant Discharge Elimination System
NPS	Nonpoint source
NRCS	Natural Resources Conservation Service
NWPG	EPA National Water Program Guidance
NWQI	National Water Quality Initiative
ONRW	Outstanding National Resource Water
OSE	Office of State Engineer
PIP	Public Involvement Plan
PCB's	Polychlorobiphenyls
PPS	Pollution Prevention Section
PSRS	Point Source Regulation Section
PSTB	Petroleum Storage Tank Bureau
QAPP	Quality Assurance Project Plan
RLF	Revolving loan fund
RMP	Resource Management Plan
RPS	Recovery Potential Screening
SFA	Solicitation for Application
SIP	Stewardship Incentives Program
SLO	State Land Office
SRF	Clean Water State Revolving Fund
SWAP	State Wildlife Action Plan
SWCD	Soil and Water Conservation District
SWQB	Surface Water Quality Bureau
TMDL	Total Maximum Daily Load
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFS	United States Forest Service
USGS	United States Geological Survey
USFWS	United States Fish and Wildlife Service
WAP	Wetlands Action Plan
WBP	Watershed-Based Plan
WCF	Watershed Condition Framework
WPS	Watershed Protection Section
WQA	Water Quality Act
WQCC	Water Quality Control Commission
WRAP	Watershed Restoration Action Plan
WRRI	New Mexico Water Resources Research Institute
WTAC	Wastewater Technical Advisory Committee

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1 Executive Summary

The majority of surface water quality problems identified in New Mexico are caused by nonpoint source (NPS) water pollution[1*]. NPS pollution is generally caused by rainfall or snowmelt moving over and through the ground. As the runoff moves, it picks up natural and human-caused pollutants, and deposits them into rivers, lakes, wetlands and ground water. Section 319 of the federal Clean Water Act (CWA), 33 U.S.C. § 1329 (hereafter "Section 319"), requires states to assess NPS pollution and develop management programs to control the sources identified. The New Mexico Nonpoint Source Management Program (NPS Management Program) is described in this 2019 NPS Management Plan.

The purpose of the NPS Management Program is to develop dynamic programs and progressive actions to prevent NPS pollutants from entering both surface water and ground water. This program will help New Mexico meet its surface water quality standards to protect designated uses and protect ground water quality for municipal, domestic, and agricultural uses. These goals are shared by the New Mexico Water Quality Management Program, which incorporates the NPS Management Program by reference.[2]

The NPS Management Program establishes a process to develop programs and activities within watersheds that will facilitate the achievement of surface water quality standards. The NPS Management Program supports local watershed-based implementation of Total Maximum Daily Loads (TMDLs), and coordinates with other agencies that have established resource protection programs and activities. To this end, the NPS Management Program emphasizes watershed-based planning as a means of coordinating watershed restoration efforts, fostering watershed associations, and encouraging partnership among agencies, nongovernmental organizations, and the public.

Section 2 of this document provides background information for the NPS Management Program, including a summary of the laws which established the program and a brief history of how it has been implemented. Section 2 also summarizes current guidance[3,4] from the U.S. Environmental Protection Agency (EPA) that affects the NPS Management Program. Current guidance includes nine elements of watershed-based plans (WBPs) and anticipates that states will put the primary focus of funding from 33 U.S.C. § 1329 (h) (hereafter "Section 319 funding"), on implementing WBPs to restore impaired waters. In addition, the *Nonpoint Source Program and Grants Guidelines for States and Territories* specify several conditions under which projects may implement other watershed plans.

Section 3 provides an overall goal for the program: "to meet and maintain water quality standards and designated uses of surface water, and to protect ground water resources" in New Mexico, following watershed approaches and with substantive involvement of stakeholders. Six objectives are described in the areas of watershed planning, improving water quality, protecting water quality, education and outreach, protecting ground water quality, and interagency cooperation. A set of

[*] Superscript numbers indicate references found in Section 8.

actions is identified for each objective, and criteria are provided by which EPA, the public, and other organizations may evaluate our progress toward these objectives.

Section 4 expands upon some of the information in Section 3 in a narrative form and describes how different Program components interact. It explains how the New Mexico Environment Department (NMED) Surface Water Quality Bureau (SWQB) engages in statewide activities related to water quality protection, education, and outreach, and supports planning and collaboration to implement water quality improvement projects.

In Section 5, the "problem identification process" carried out by the SWQB is described, along with priorities for planning, water quality improvement, and water quality protection. With respect to watershed-based planning, the NPS Program will focus on streams with total maximum daily loads (TMDLs) that describe water quality impairments, and on a smaller category of streams with recognized water quality problems but for which a TMDL is not required because the impairment is thought to be due to reduced flow (Category 4C streams). New Mexico has 148 stream reaches with TMDLs that describe impairments, and 19 Category 4C streams. Water quality improvement efforts funded with Section 319 funds will focus on watersheds with completed WBPs. Implementation will also be pursued in watersheds with Wetlands Action Plans (WAPs) or post-fire rehabilitation plans, two kinds of WBP alternative. Outstanding National Resource Waters (ONRWs) and their watersheds are the highest priority for water quality protection activities, but are sufficiently protected by existing management such that water quality protection activities are more often directed to other areas. The SWQB Watershed Protection Section (WPS) engages in additional programmatic activities that protect water quality, including federal consistency review, CWA Section 401 certification of Section 404 (33 U.S.C. § 1344) permits, and review of documents required under the New Mexico Mining Act (NMSA 1978, §§ 69-36-1 to -20).

Section 6 describes programs and agencies that may assist with implementing the NPS Program. The section is organized by agency, starting with NMED, followed by federal, other state, and then local government agencies and programs. This section conveys expectations about what may be done under programs for which other agencies are responsible.

Section 7 deals with the programmatic considerations related to quality control, administrative procedures, adaptive management, and reporting. The procedures described are intended to promote an effective program that can be implemented within a reasonable amount of time and a reasonable amount of administrative complexity in proportion to the size of the program and the problems it is intended to address.

The appendices to the document provide more detailed information about watershed planning, best management practices, sources of funding for implementation, and the process used to develop this plan.

The NPS Management Program is flexible and responsive to changing conditions and situations. Successful implementation of the program will lead to measurable improvements within five priority watersheds by 2023. Where existing water quality is good it will be maintained, ground water resources will be protected, and the general public and partner organizations will gain an increased understanding of water quality issues, goals, and responsibilities.

2 Introduction

2.1 The Problem of Nonpoint Source Pollution

The main source of information on the status of streams, lakes, and reservoirs in New Mexico with respect to attainment of New Mexico Water Quality Standards, including information on sources of pollutants, is the *State of New Mexico Clean Water Act §303(d)/§305(b) Integrated Report*. The report is revised every two years, with the most recent (as of early 2019) being designated the *2018-2020 Integrated Report*[1]. The majority of water quality problems identified in New Mexico's streams, rivers, and lakes are caused by NPS water pollution. NPS pollution is generally caused by rainfall or snowmelt moving over and through the ground. As the runoff moves, it picks up natural and human-caused pollutants, and deposits them into rivers, lakes, wetlands and ground water. From a regulatory standpoint, NPS pollution is pollution not regulated through the Clean Water Act, other than through Section 319.

NPS pollution is recognized as the main category of surface water pollution in New Mexico. Appendix A of the *2018-2020 Integrated Report* tabulates causes (i.e., water quality parameters) and sources of pollution, including NPS pollution. Of 7,821 assessed (mostly perennial) stream miles in New Mexico, 2,626 assessed miles, or 34%, have identified impairments where water quality does not support a designated use (included in this statistic are Category 4A, 4B, 4C, and 5A streams). 357.4 of these miles are impaired by municipal point sources, 166.9 miles are impaired by permitted construction activities, 67.4 miles are impaired by Municipal Separate Storm Sewer Systems (MS4s), and 25.2 miles are impaired by industrial point sources. Some of these stream miles are impaired by more than one regulated discharge. By comparison, hydrologic alteration is a probable source for 1,950 stream miles, rangeland grazing is listed as a probable source for over 1,900 stream miles, habitat alteration (other than hydrologic alteration) is listed as a probable source for over 800 miles, and on-site treatment systems (e.g. septic systems) are listed as a probable source on nearly 800 stream miles. An assessed stream may be impaired by multiple point and nonpoint sources, but impairment by NPS pollution is clearly significant in New Mexico.

The majority of NPS pollution in New Mexico's streams is preliminarily attributed to (in order of prevalence, based on the *2018-2020 Integrated Report*) unidentified sources, unmanaged or improperly managed rangeland grazing, on-site treatment systems (e.g., septic systems), drought-related impacts, wildlife other than waterfowl, and loss of riparian habitat. The *2018-2020 Integrated Report* provides probable source summary information only for waters with TMDLs. No lakes in New Mexico have approved TMDLs, so pollutant source summaries for lakes are not provided. For streams, the most common water quality parameters exceeding water quality standards (in order of prevalence) are temperature, nutrients, *E. coli*, suspended or settleable solids (including turbidity and stream bottom sediments), and aluminum. In lakes and reservoirs, the most common water quality parameters in excess of water quality standards are mercury in fish tissue, polychlorobiphenyls (PCB's) in fish tissue, temperature, eutrophication (nutrient impacts), and dichlorodiphenyl-trichloroethane (DDT) in fish tissue.

These pollutants prevent designated uses from being fully supported in many of New Mexico's waters. Designated uses not fully supported in New Mexico's assessed rivers and streams (with the percentage not supporting in parentheses) include aquatic life uses (57%), primary and

secondary contact (28%), wildlife habitat (4%), livestock watering (2%), irrigation (2%), and domestic water supply (1%). Most of these impairments are primarily or entirely caused by NPS pollution.

The statistics above are from the *2018-2020 Integrated Report.* The methods used to develop the report do not allow for in-depth analysis of each watershed. In the process of watershed-based planning described below, local stakeholders may identify different sources than identified in the *Integrated Report*, and they may prioritize addressing some pollutant sources over others.

2.2 The Clean Water Act

The leading causes of pollution in New Mexico and in the United States overall derive from nonpoint sources. This was officially recognized by the Federal Government in 1987, when Congress passed the *Water Quality Act of 1987*, amending the *Federal Water Pollution Control Act*, commonly referred to as the Clean Water Act (CWA). Section 319 of the amended CWA requires 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. NPS management programs for all states began with this amendment. The New Mexico Nonpoint Source Management Program is described in this 2019 NPS Management Plan, which is an update of the 2014 NPS Management Plan.

2.3 Legal Authority

The NMED Office of General Counsel has reviewed this document as required by 33 U.S.C. § 1329 and confirmed that the State of New Mexico has legal authority to implement the program. The New Mexico Water Quality Control Commission (WQCC or the "Commission"), a statutorily created independent body, is designated by the New Mexico Legislature as the "state water pollution control agency for this state for all purposes of the federal [Water Pollution Control] act" and has the duty to "adopt a comprehensive water quality management program and developing a continuing planning process." NMSA 1978, § 74-6-3.E. Pursuant to this authority, the Commission has adopted a *Statewide Water Quality Management Plan and Continuing Planning Process*[2] which includes an element focused on NPS management and control as required by 40 C.F.R. 130.6(c)(4). Further, the most recent version of this document, the *New Mexico Nonpoint Source Management Program*, approved by the Commission, is adopted by reference into the *Statewide Water Quality Management Plan and Continuing Planning Process*. Existing statutes, regulations, and water quality criteria provide New Mexico with adequate authority necessary to implement this program.

2.4 Background

Section 319(b)(1) of the CWA states, "[t]he Governor of each State, for that State or in combination with adjacent States, shall, after notice and opportunity for public comment, prepare and submit to the Administrator for approval a management program which such State proposes to implement in the first four fiscal years beginning after the date of submission of such management program for controlling pollution added from nonpoint sources to the navigable waters within the State and improving the quality of such waters." 33 U.S.C. § 1329 (b)(1). An initial management plan for abating NPS pollution in New Mexico was developed in 1988 as New

Mexico's NPS Assessment Report. This document was prepared and approved in accordance with the requirements of the CWA and adopted by the WQCC. The report was revised and along with a NPS Management Plan was approved by the EPA and the WQCC in 1989. Since that time, the NPS Management Plan has been updated, revised, and approved in 1994, 1999, 2009, and 2014. In November 2012, EPA released the *Key Components of an Effective State Nonpoint Source Management Program*[3] ("Key Components"). The guidance describes eight elements that EPA regions should consider when reviewing and approving state NPS management programs, and is the main EPA guidance document used to develop this 2019 NPS Management Plan. The Key Components document primarily interprets and elaborates on requirements stated in Section 319(b) of the Clean Water Act. In brief, the Key Components are: 1) a statement of short-term and long-term goals, objectives, and strategies; 2) partnerships; 3) identification of implementing programs; 4) allocation of resources between water quality improvement and water quality protection; 5) prioritization of waters and watersheds; 6) elements specifically identified in Section 319(b) of the CWA (most of which are included in other Key Components); 7) efficiency and effectiveness (including financial management); and 8) regular review, evaluation, and program revision.

Another program development prior to this revision was the April 2013 release by EPA of the *Nonpoint Source Program and Grants Guidelines for States and Territories*[4]. This document is referred to as the "2014 NPS Guidelines" because it applies to federal fiscal year 2014 and later. The 2014 NPS Guidelines are narrower than the *Key Components of an Effective State Nonpoint Source Management Program*, because they describe the requirements that EPA regions must follow in approving CWA Section 319 grant funding. The Key Components by contrast, describe program elements that could (and should) be funded by other programs in addition to Section 319.

Like the earlier 2004 NPS Guidelines, the 2014 NPS Guidelines include nine elements of watershed-based plans (WBPs) and require that implementation projects funded with Section 319 funds to improve water quality be outlined in WBPs. The 2014 NPS Guidelines also specify several conditions under which projects may implement acceptable alternative plans, for example with the purpose of protecting water quality. The 2014 NPS Guidelines outline separate requirements for "NPS program funds" and "watershed project funds," and establish that a minimum of fifty percent of awarded Section 319 funds must be used for watershed projects and closely related support activities. Under the 2014 NPS Guidelines, watershed-based planning must be funded with NPS program funds.

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3 Program Goal, Objectives, Activities, and Milestones

The overall, long-term goal of New Mexico's NPS Management Program is:

> ***To implement an adaptive watershed-based restoration and protection program with the active assistance of stakeholders, for all watersheds within New Mexico, to meet and maintain water quality standards and designated uses of surface water, and to protect ground water resources.***

Objectives are specific, verifiable targets or conditions selected to meet the goal of the program. The objectives explain the effect they will have on water resources in New Mexico, list activities necessary to achieve the objective, and state verification criteria (milestones) that will be used to evaluate whether objectives have been attained. The six program objectives, activities, and verification criteria are described below.

3.1 Objective 1 – Complete WBPs to Enable Effective Implementation

> ***To produce WBPs that meet all nine elements identified in the* Nonpoint Source Program and Grants Guidelines for States and Territories[4]*, and acceptable alternatives to WBPs, for an average of three priority watersheds per year.***

Stakeholder-driven planning processes will be used to reach this objective because stakeholders (resource management agencies, non-profit organizations, watershed residents, and other people interested in specific watersheds) have a critical role in implementing these plans, and their early and substantive involvement will increase the quality of these plans.

For the purposes of this plan, priority watersheds are sixth-level watersheds (those with 12-digit hydrologic unit codes[5]) which contain or drain directly to impaired waters, or waters in immediate danger of impact following wildfire. Waters in immediate danger of impact following wildfire are waters with a coldwater or cool water aquatic life designated use, in which a major wildfire with severity outside the natural range of variability for the affected forest types occurs.

On-the-ground projects supported with Section 319(h) watershed project funds will be conducted only in watersheds with nine-element WBPs or specific alternatives to WBPs. Priority watersheds, impaired waters, watershed-based planning, WBP alternatives, and the review process for watershed plans envisioned in this section are described in greater detail in Section 5.

3.1.1 Activities to Achieve Objective 1

WPS will carry out the following activities in support of Objective 1:

- Conduct a Solicitation for Applications (SFA) at least once every other year for comprehensive projects that will revise existing WBPs or develop new WBPs, to be funded with Section 319(h) program funds or state funds.

- Explore the use of Recovery Potential Screening (RPS)[†] to develop an index to use to evaluate applications for watershed-based planning projects.

- Provide technical support to stakeholder groups who have successfully applied for WBP funding, to assist them with preparing WBPs.

- Prepare WBPs in-house (i.e., with NMED leadership) with stakeholder participation.

- Complete an inventory of watersheds covered by WAPs and develop an associated Geographic Information Systems (GIS) coverage, to update the list of priority watersheds for implementation.

- Work with the SWQB Monitoring, Assessment, and Standards Section (MASS) and stakeholders to choose a pilot watershed and complete an in-house WBP (as an alternative to a TMDL) for that watershed.

- Conduct procurements as necessary for technical or outreach components of primarily in-house WBP efforts.

- Provide information to help the United States Forest Service (USFS) develop Burned Area Emergency Response (BAER) plans, or to help other agencies (e.g. Energy, Minerals, and Natural Resources Department (EMNRD) Forestry Division) develop similar post-fire plans, to be used as the basis for project work plans that WPS will develop and submit to EPA, and that qualify as WBP alternatives. More discussion of this activity is provided in Section 5.2.3 below.

- Encourage participation of all stakeholders in watershed planning efforts, including those in other states, Indian nations, pueblos, and tribes when watersheds cross jurisdictional boundaries, and incorporate TMDLs or water quality standards and assessments prepared by these jurisdictions into WBPs when appropriate.

3.1.2 Objective 1 Verification Milestones

- In 2019 through 2023, at least one WBP per year, covering at least one priority watershed each, will be supplemented, updated, or completed, and accepted by the EPA as meeting the nine elements of WBPs.

- Development of an index to use RPS to prioritize watershed-based planning projects will be reported in the NPS Annual Report for 2020.

- One or more streams are included within assessment category 5-alternative[6], as a result of cooperative WBP completion by WPS, MASS, and stakeholders, by 2022.

[†] Recovery Potential Screening is described in depth at https://www.epa.gov/rps

Figure 1: SWQB staff conducting long-term geomorphology monitoring on Comanche Creek, in support of a watershed-based planning project there. September 2017 photograph by Alan Klatt.

- An inventory of watersheds covered by WAPs and an associated GIS coverage (posted on the SWQB mapper web site at https://gis.web.env.nm.gov/oem/?map=swqb) is completed, to update the list of priority watersheds for implementation, in 2019.

- A post-fire response plan or project work plan that qualifies as a WBP alternative will be submitted to EPA within two years of any major wildfire occurring in the watershed of one or more streams with a coldwater or cool water aquatic life designated use and a fire severity that falls outside the natural range of variability for the affected forest types.

- Watershed plans include information from major land owners and land management agencies, and all states, Indian nations, pueblos, and tribes, within their planning areas.

3.2 Objective 2 – Improve Water Quality

Effective watershed-based NPS restoration programs are implemented, using multiple funding sources, in identified priority watersheds at an average of three new watersheds per year.

It is anticipated that, while individual projects may be implemented by specific agencies, organizations, and individuals, the projects will be developed and in some cases implemented with the aid of diverse, well integrated partnerships developed during the planning process described in Section 3.1.

3.2.1 Activities to Achieve Objective 2

WPS will facilitate or carry out the following activities in support of Objective 2:

- Conduct SFAs at least every other year for watershed implementation projects outlined in WBPs and WBP alternatives, to be funded with Section 319 watershed project funds.
- Explore the use of RPS to develop an index to use to evaluate applications for watershed implementation projects.
- Conduct smaller procurements for specific, targeted projects that will implement WBPs and WBP alternatives, to be funded with Section 319 watershed project funds.
- Develop, manage, and provide oversight of state-funded watershed and riparian restoration projects. Applicable programs are discussed in Section 6.1.2.
- Work with the NMED Construction Programs Bureau and local government entities to pursue the use of the Clean Water State Revolving Fund (SRF) to address water quality problems.
- Use scientific methods and weight-of-evidence reporting to measure and document effectiveness of efforts towards achieving water quality standards.

Figure 2: Bluewater Creek above Bluewater Lake, April 2009 (upper left) and April 2018 (lower right). Fencing on State Land to reduce impacts from livestock, wildlife, and off-road vehicles helped reduce temperatures in Bluewater Creek and is one of New Mexico's recognized NPS Success Stories. 2009 photograph by Dan Guevara, 2018 photograph by Abe Franklin.

3.2.2 Objective 2 Verification Milestones

- Water quality conditions are improved in one priority watershed annually in 2019 through 2023 because of projects or improvements in land management funded or encouraged by New Mexico's NPS Management Program[‡]. Some actions leading to this water quality improvement likely will have been initiated before 2019.

[‡] This verification item is intended to be consistent with an expected EPA Performance Measure WQ-34, which according to EPA's National Water Program Guidance (NWPG) for FY 2018 and 2019[7], will be defined in an FY

- Begin implementation of watershed restoration projects described in WBPs or WBP alternatives to reduce NPS pollutant loads within two priority watersheds per year in 2019-2023.

- Report on the use of RPS to prioritize watershed implementation projects in the NPS Annual Report for 2020.

- Water quality improvements are documented in each *NPS Management Program Annual Report*.

- The NMED Construction Programs Bureau provides a summary of activities related to use of the Clean Water SRF to protect or improve water quality for each *NPS Management Program Annual Report*.

3.3 Objective 3 – Protect Water Quality

The quality of surface water resources is maintained through coordinated activities, permitting programs, and technical assistance provided to assist cooperating agencies and landowners with efforts to understand water quality and protect surface waters from NPS pollution.

Protection of water quality is a critical component of the NPS Management Program that, if effective, will prevent new water quality problems from developing in New Mexico. WPS staff will assist other agencies and organizations, and the general public, with a variety of planning efforts where protection of water quality is an important consideration. WPS staff will also review the plans for several types of projects and proposed actions, and will participate in two permitting programs.

Starting in the period covered by this NPS Management Plan, WPS will direct a portion of watershed project funds to implement WAPs. More information on WAPs as WBP alternatives is provided in Section 5.2.3.

3.3.1 Activities to Achieve Objective 3

WPS will carry out or facilitate through appropriate consultation the following activities in support of Objective 3:

- Work with NMED's Office of General Counsel to document procedures to enforce regulations pertaining to ground and surface water protection at Section 20.6.2 of the New Mexico Administrative Code (NMAC), to prevent or abate disposal of refuse in watercourses.

2019 NWPG Addendum, and may be reported at https://www.epa.gov/nps/success-stories-about-restoring-water-bodies-impaired-nonpoint-source-pollution.

- Within two years of any major wildfire, with severity outside the natural range of variability for the affected forest types, occurring in the watershed of one or more streams with a high quality coldwater, coldwater, or cool water aquatic life designated use, a portion of Section 319 watershed project funds are used for implementing WBP alternatives that are post-fire response plans.

- Evaluate applications for permits to discharge fill, as required under Section 404 of the CWA. Conditionally certify these activities to protect water quality standards, as allowed under Section 401 and under state law (e.g., 20.6.2 NMAC).

- Conduct water quality reviews at active and proposed mining sites. Review Mining Act permit applications, inspect mine sites, and ensure that mining activities will not result in water quality standards exceedences.

- Assist designated management agencies with developing procedures to ensure that proposed actions will not result in degradation of water quality in ONRWs.

- Assist federal agencies with development and selection of alternatives for proposed projects by participating in the National Environmental Policy Act (NEPA) process. NEPA for permitted grazing in the watersheds of high quality coldwater, coldwater, and coolwater streams will be a priority for these federal consistency reviews.

- Participate in collaborative forest restoration efforts by providing information related to water quality and forest ecology, as a means of preventing impacts to water quality from unnaturally intense wildfire.

- Assist the SWQB MASS with planning and implementing water quality surveys, providing available information relevant to sources of NPS pollution, and with completion of water quality assessments and TMDLs.

- Direct a portion of Section 319 watershed project funds to implementation of WAPs, to protect and restore wetlands and to protect downstream water quality.

- Work with the NMED Construction Programs Bureau to pursue the use of Clean Water SRF to protect water quality.

Figure 3: These tire bales were part of a failed streambank stabilization attempt. The tire bales were carried downstream during a flood event, risking downstream culverts and property. The U.S. Army Corps of Engineers Albuquerque District prohibits the use of tires as fill in all waters of the United States and required these bales to be retrieved and removed. Photo by Alan Klatt, May 25, 2017.

3.3.2 Objective 3 Verification Milestones

- NMED will document procedures for SWQB to enforce regulations at 20.6.2 NMAC pertaining to refuse in a watercourse in 2019.

- The NPS Annual Report will include a summary of actions taken to prevent and abate disposal of refuse in watercourses.

- Within two years of any major wildfire occurring in the watershed of one or more streams with a coldwater or cool water aquatic life designated use, with severity outside the natural range of variability for the affected forest types, NMED will fund post-fire actions that reduce sedimentation and protect aquatic habitat, with support of Section 319 watershed project funds.

- A summary of CWA Section 401 certification activity will be reported annually in the *NPS Management Program Annual Report*.

- A summary of activities related to the New Mexico Mining Act will be reported annually in the *NPS Management Program Annual Report*.

- A summary of significant developments related to ONRWs will be provided in the *NPS Management Program Annual Report*.

- A summary of federal consistency review under NEPA will be reported annually in the *NPS Management Program Annual Report*.

- A summary of activities related to forest restoration will be reported annually in the *NPS Management Program Annual Report*.

- The biennial *State of New Mexico CWA §303(d)/§305(b) Integrated Report and List* will provide summaries of water quality survey activity, analysis, and conclusions in 2020 and 2022. The NPS Annual Report for these years will provide the percentage of assessed stream miles or watersheds designated as impaired, for comparison with previous years.

- A summary of activities and accomplishments under the Wetlands Program will be provided in each *NPS Management Program Annual Report*.

- At least one project outlined in a WAP supported with Section 319 watershed project funds will begin by 2021.

- The NMED Construction Programs Bureau will provide a summary of activities related to the use of the Clean Water SRF to protect or improve water quality for each *NPS Management Program Annual Report*.

3.4 Objective 4 – Share Information on Surface Water Quality

General public awareness of NPS pollution and water quality is increased and maintained through an effective education and outreach program using strategically selected educational resources available throughout the State.

Public education and outreach can assist governmental agencies, nongovernmental organizations, and the public in understanding NPS pollution, ways NPS pollution can be prevented, and how to get involved in restoring watersheds and water quality.

3.4.1 Activities to Achieve Objective 4

WPS will carry out or facilitate through appropriate consultation the following activities in support of Objective 4:

- Promote and develop volunteer monitoring and data sharing to support more frequent and detailed water quality assessment and awareness of local water quality.

- Participate as active members in watershed groups, providing critical information about water quality programs as new developments occur, and assisting with technical aspects of watershed planning and project design as needed.

- Publish *Clearing the Waters*, a quarterly newsletter detailing lessons learned of Section 319(h) projects and other NPS news. The SWQB newsletter currently informs approximately 1,600 readers of NPS related issues and activities in New Mexico.

- Directly fund small publication projects to produce brochures and booklets describing Best Management Practices (BMPs) for landowners and land management agencies.

- Support education and outreach components of WBPs and alternatives to WBPs, with Section 319 watershed project funding. The application process for on-the-ground projects that implement acceptable watershed plans will clearly specify that education and outreach components of the plans are eligible for funding.

- Provide educational opportunities for the public and private sector by coordinating with other state and federal agencies, soil and water conservation districts (SWCDs) and the New Mexico Association of Conservation Districts, local schools and youth programs, hosting information sessions, and conducting public site tours of demonstration projects and BMP implementation sites.

Figure 4: Quivira Coalition workshop participants learn how a log run-down was built to stop a head cut. This head cut had advanced to the lower end of a slope wetland on Springwagon Creek, and further cutting would have drained the wetland and delivered a large amount of sediment to Comanche Creek. (Photograph August 2017 by Abe Franklin).

3.4.2 Objective 4 Verification Milestones

- SWQB will organize a data sharing network to solicit external data, meeting data quality standards, that will be assessed in the *State of New Mexico CWA §303(d)/§305(b) Integrated Report and List* for 2022-2024. The data collected by non-NMED partners will be submitted in 2021.

- Watershed groups will address water quality problems as indicated by verification items listed above in Sections 3.1.2 and 3.2.2 above, accurately drawing on information resources for which the SWQB is responsible.

- The SWQB email list, used for various surface water quality informational purposes (including distribution of *Clearing the Waters*), is maintained above 2,000.

- *Clearing the Waters* will be published quarterly with an email circulation of at least 2,000.

- Educational opportunities provided for the public and private sector, and completed small publication projects, will be reported in the *NPS Management Program Annual Report*.

3.5 Objective 5 – Protect Ground Water Quality

The quality of ground water resources is maintained through the water fair and water-quality outreach program along with permitting and compliance assistance for large capacity septic tank leachfields with efforts to understand water quality and protect ground water from NPS pollution.

In order to identify possible NPS water quality problems in rural New Mexico communities, the Ground Water Quality Bureau (GWQB) will conduct free testing of domestic wells ("water fairs") throughout the State. Domestic well owners will be educated about water quality issues and how they can help preserve or improve water quality in their communities. This program has proven to be very popular with the general public and continues to provide NMED with valuable information on ground water quality in rural communities. NMED continues to receive numerous requests for water fairs from community organizations, NMED Field Offices, other State, County, and City agencies, and private citizens. The Water Fair and Water Quality Outreach Program will be an important tool for identifying possible NPS water quality problems. The program will also be a great outreach tool, providing a visible and much appreciated service to the community.

In addition, ground water quality will be protected from NPS pollution attributed to large capacity septic tank/leachfield systems (septic systems) with permitting and compliance assistance. Technical personnel of the GWQB will review Discharge Permit applications, develop Ground Water Discharge Permits, perform compliance assistance activities, and enforce Discharge Permit requirements for (primarily) large capacity septic tank/leachfield systems. It is critical to make sure that the systems are operating pursuant to their Discharge Permits so that ground water quality is monitored and, if contamination is detected, corrective action can be triggered.

3.5.1 Activities to Achieve Objective 5

The GWQB will carry out the following activities in support of Objective 5:

- The water fair and water-quality outreach program will consist of approximately 10 water fair events per State Fiscal Year (July 1 to June 30), conducted in rural communities throughout New Mexico. To the extent possible, the events will be evenly distributed among three NMED Districts. Each water fair event will include the following:
  - Free testing of water samples from private domestic wells for nitrate, iron, sulfate, fluoride, conductivity, and pH using portable analytical equipment; and
  - Educational outreach activities on water quality issues that will be carried out through informative brochures, displays and individual contact with NMED staff.

- The GWQB will devote portions of staff time to permitting and compliance assistance activities for large capacity septic systems. Activities include, but are not limited to, the list provided below.
  - Conducting compliance inspections and file reviews;
  - Holding compliance meetings and teleconferences;
  - Drafting and issuing enforcement letters such as Notices of Non-Compliance, Notices of Violation, Discharge Permit Required and Abatement Plan Required;
  - Issuing new and renewal Discharge Permits to facilities discharging without a Discharge Permit and facilities renewing their Discharge Permits;
  - Drafting and issuing Compliance Orders;
  - Testifying in administrative and judicial appeals;
  - Participating in settlement negotiations; and
  - Creating and distributing outreach materials to assist permit holders in understanding requirements.

3.5.2 Verification of Objective 5

- The GWQB will report to EPA-Region 6 in the Semi-Annual Report summarizing GWQB activities conducted under the CWA Section 319 grant for the New Mexico Water Fair and Water Quality Outreach Program and Permitting and Compliance for Large-capacity Septic Tank Leachfields.

3.6 Objective 6 – Cooperate with other Agencies on Water Quality Protection and Improvement

With assistance provided by the WPS and other SWQB programs, federal and State agencies in New Mexico actively manage a variety of natural resources to protect and restore water quality.

According to current standard GIS datasets, approximately 33.6% of lands in New Mexico are owned by the public and managed by the Federal Government. An additional 11.6% of lands are managed directly by State agencies. Of the remainder, 10.5% lies within the lands of Indian nations, pueblos, and tribes and 44.3% is owned or managed by local governments and private

landowners. With few exceptions, federal land management agencies are required under the Federal Land Policy and Management Act of 1976, 43 U.S.C. § 1701, *et. seq.*, to comply with federal and State water pollution control laws. Additionally, the 2014 Farm Bill includes significant provisions to protect and improve water quality. To strengthen working partnerships and linkages to appropriate entities which implement portions of the NPS Management Program, WPS, and other SWQB staff will conduct the following activities in the period covered by this plan.

3.6.1 Activities that Achieve Objective 6

- Develop a programmatic Memorandum of Agreement (MOA) between the USFS Southwestern Region and NMED to allow NMED to fund on-the-ground restoration projects to improve water quality in watersheds with accepted WBPs.

- Revisit, renew, or maintain existing agreements with the USFS Southwestern Region, Bureau of Land Management (BLM) New Mexico State Office, and United States Department of Energy (DOE).

- Coordinate two statewide New Mexico Wetlands Roundtables, for agencies and nongovernmental organizations. Each group (one in southern New Mexico, and one in northern New Mexico) will each meet at least once a year and work together to improve wetlands resources in New Mexico. Topics highlighted by the Roundtable seek to make wetlands regulations more effective, improve wetlands restoration and mitigation, and develop wetlands monitoring and assessment and an integrated statewide database.

- Participate in the State Technical Committee and any subcommittees or work groups of the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS). One major purpose of this participation is to collaborate with NRCS in selecting or updating criteria used to prioritize proposed projects funded under the Environmental Quality Incentives Program (EQIP), including the National Water Quality Initiative (NWQI), which address water quality problems.

- Work with the Farm Service Agency (FSA) to review the locations covered by the Conservation Reserve Program (CRP) riparian buffer sub-program and seek opportunities to work with FSA or their cooperating producers to coordinate on future water quality projects.

- Work with the SWCDs identified in Section 6.4 with the greatest number of assessed stream miles to develop their programs and projects to protect and improve water quality.

- Participate in statewide efforts related to water resources planning such as revision of the State Water Plan (coordinated by the Office of the State Engineer), and the Forest and Watershed Health Plan (Coordinated by the Forestry Division of EMNRD). The aim of this participation will be to communicate applicable regulations and information generated by SWQB programs, and to encourage related programs to protect and restore water quality.

- Publish the New Mexico *NPS Management Program Annual Report*. Annual input from cooperating agencies will be sought to update programs and tasks.

- Revise the NPS Management Program in coordination with implementing agencies and organizations.

3.6.2 Objective 6 Verification Milestones

- An MOA to allow NMED to fund on-the-ground restoration projects on USFS-managed land will be drafted and under review by NMED and USFS by December 2019. The MOA will be signed and effective by December 2020.

- The Memorandum of Understanding (MOU) between NMED and the Southwestern Region of the USFS, scheduled to expire in 2022, will be renewed.

- The MOU between NMED and the BLM New Mexico State Office, which does not have a termination date, will be reviewed and revised if appropriate, and implemented. The resulting activities will be reported in the *NPS Annual Report*.

- The grant from the DOE that currently supports the work of the DOE Oversight Bureau will be re-issued in 2023.

- The summary of activities and accomplishments under the Wetlands Program provided in each *NPS Management Program Annual Report* will include a description of the Wetlands Roundtable meetings.

- For each year starting in 2019 and through 2023, NRCS will report that agricultural BMPs funded under NWQI or other conservation programs have been implemented during the calendar year and will provide sufficient details to enable WPS staff to estimate pollutant load reductions for water quality impairments identified by the State.

- The NPS Annual Reports for 2019 through 2023 will include information about FSA's riparian buffer sub-program within CRP and report on any efforts to coordinate on future projects.

- SWQB attendance at SWCD meetings will increase, and each year starting in 2019 the NPS Annual Report will include at least one profile of a project intended to protect or improve water quality implemented by an SWCD or SWCD clients.

- By 2022, NMED will fund at least one competitively awarded water quality or aquatic habitat improvement project with an SWCD with which NMED has not had an agreement within the previous ten years.

- Statewide planning efforts related to water resources will give serious consideration to water quality protection and restoration, and convey accurate summaries of information generated by SWQB programs.

- The *NPS Management Program Annual Report* will be submitted to EPA by January 31 and will be made available to the public by early February, each year.

- A revised plan describing the New Mexico NPS Management Program will be submitted by the Governor of New Mexico, or by the Governor's designee, to the EPA Regional Administrator, in 2024. The plan will reflect input and review by implementing agencies and organizations.

3.7 Milestones

The majority of activities identified above are programmatic and do not occur on set schedules, but are ongoing. For example, an activity that supports Objective 3 (Protect Water Quality) is to "evaluate applications for permits to discharge fill, as required under Section 404 of the CWA," and "conditionally certify these activities to protect water quality standards, as allowed under Section 401…" There is no set schedule or quota for this activity, other than to report a summary of CWA Section 401 certification activity (annually) in the *NPS Management Program Annual Report*.

A few key activities are described above in terms of a schedule, and are listed in the table below for clarity. These activities and milestones are critical aspects of the NPS Management Program and are specifically required of state NPS management programs by CWA Section 319(b)(2) (State Management Programs – Specific Contents) and Section 319(h)(11) (Reporting and Other Requirements).

Table: NPS Management Program Milestones on a Schedule

Objective number	Objective Short Name	Milestone (abbreviated)	Schedule
1	Complete WBPs	A WBP, covering at least one priority watershed, will be supplemented, updated, or completed, and accepted by the EPA as a WBP.	Annually.
1	Complete WBPs	One or more streams are included within assessment category 5-alternative, as a result of cooperative WBP completion.	One assessment unit, by 2022
1	Complete WBPs	An inventory of watersheds covered by WAPs is added to https://gis.web.env.nm.gov/oem/?map=swqb	2019
2	Improve Water Quality	Improve water quality in priority watersheds, meeting EPA performance measures.	One watershed annually, 2019 through 2023.

Objective number	Objective Short Name	Milestone (abbreviated)	Schedule
2	Improve Water Quality	Watershed restoration projects described in WBPs or alternative plans are initiated in two priority watersheds per year.	2 watersheds per year, 2019 through 2023.
3	Protect Water Quality	NMED will document procedures to enforce regulations pertaining to refuse in a watercourse.	2019
3	Protect Water Quality	NMED will fund post-fire actions that reduce sedimentation and protect aquatic habitat.	Within two years of any major and unnaturally intense wildfire in the watershed of a cold or cool water stream.
3	Protect Water Quality	The *CWA §303(d)/§305(b) Integrated Report* does not indicate an increase in the percentage of assessed stream miles designated as impaired.	The Integrated Report is scheduled for completion in 2022 and 2024.
3	Protect Water Quality	A project outlined in a WAP supported with Section 319 watershed project funds will begin.	2021
4	Share Information on Surface Water Quality	Non-NMED organizations constituting a data sharing network provide data for assessment of water quality standards attainment.	2021
4	Share Information on Surface Water Quality	The SWQB email list is maintained above 2,000.	Each year, 2019 – 2023.
4	Share Information on Surface Water Quality	*Clearing the Waters* is published quarterly.	Quarterly
6	Cooperate with other Agencies	An MOA between NMED and USFS developed to allow NMED to fund WBP implementation on USFS-managed land.	2020
6	Cooperate with other Agencies	The MOU between NMED and USFS is renewed.	2022

Objective number	Objective Short Name	Milestone (abbreviated)	Schedule
6	Cooperate with other Agencies	The grant from DOE that supports the work of the DOE Oversight Bureau is re-issued.	2023
6	Cooperate with other Agencies	NRCS reports that agricultural BMPs funded under NWQI or other conservation programs have been implemented, with sufficient details to enable WPS to estimate pollutant load reductions.	Annually
6	Cooperate with other Agencies	The NPS Annual Report will include at least one profile of a project intended to protect or improve water quality implemented by an SWCD or SWCD clients.	Annually
6	Cooperate with other Agencies	NMED will fund at least one competitively awarded water quality or aquatic habitat improvement project with a new partner SWCD.	2022
6	Cooperate with other Agencies	The *NPS Management Program Annual Report* is submitted to EPA by January 31 and made available to the public in February.	Annually
6	Cooperate with other Agencies	A revised NPS Management Plan is submitted to the EPA Regional Administrator.	2024

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4 Balanced Approach to Nonpoint Source Pollution Control

The NPS Management Program's ultimate goal is to manage a balanced program that both addresses existing water quality problems and prevents future impairments. This plan provides direction and describes activities aimed at specific priority watersheds and statewide initiatives. The plan promotes water quality protection and improvement by outlining activities for SWQB staff and partner organizations that will accomplish watershed-based planning, implementation of WBPs and WBP alternatives under a variety of programs and funding sources, and through oversight, inspection, enforcement, and public education and outreach activities.

Activities of a state-wide nature include:

- Coordinating with Indian nations, pueblos, tribes, and federal land management agencies such as the BLM and the USFS, regarding actions that regulate and affect water quality;
- Assisting other water quality oriented federal, state, and tribal programs (including funding programs) with improving consistency with goals and objectives of the NPS Management Program;
- Coordinating Section 319(h) funded projects with other agency and Tribal programs, using watershed priority information outlined in Section 5, to steer project development and implementation, and seek the best use of funding on a watershed scale; and
- Participating in education activities on a statewide basis (including on the lands of Indian nations, pueblos, and tribes) to generate greater awareness of NPS pollution problems and solutions, and to provide guidance for restoration and protection of impaired surface water and ground water resources.

The NPS Management Program will continue to coordinate with designated management agencies to provide direction and oversight to existing water quality-oriented agency programs, and we will initiate new outreach efforts involving agencies, watershed groups, educational institutions, industry groups, and environmental organizations.

4.1 Beyond Implementation of Section 319(h) Funded Activities and Projects

The NPS Management Program contains permanent program tasks and features beyond the annual implementation of Section 319(h) funded projects. These activities are tracked and reported in the *NPS Management Program Annual Report*, and include the following continuing programs and tasks:

- Outreach to schools and groups;
- Development and implementation of the Wetlands Program;
- Development and implementation of state-funded watershed and riparian restoration projects;
- Participation in watershed groups to provide direction and target water quality problems;

- Consistency reviews of federal, State, and local projects;
- Oversight of CWA Section 404 permitted activities under the authority of Section 401;
- Training, technical assistance, and educational opportunities provided for the public and private sector;
- Cooperation with management agencies through agreements outlined in MOUs and other agreements;
- Quarterly publication of the newsletter, *Clearing the Waters*;
- Participation in NMED's Mining Team, including coordination and review of operations and activities that may affect surface water quality, under the New Mexico Mining Act;
- Assist with the development of NPS TMDLs;
- Watershed-based planning and implementation utilizing a variety of funding programs.

4.2 Well-Integrated Assessment, Protection, and Remediation with Other Water or Natural Resource Programs

Section 319(h) watershed project funds are directed primarily towards projects in priority watersheds where an anticipated reduction of pollutant loading is estimated prior to implementation. By directing these funds towards impaired waters with TMDLs (as described in Section 5.2), the NPS Management Program utilizes other portions of the CWA for problem characterization and goal-setting, and progress may be tracked in terms of water quality improvement and standards attainment.

Protection of water quality is another key aspect of the NPS Management Program. Planning efforts supported with Section 319 NPS program funds will often focus on TMDL implementation and meeting watershed-based planning elements in the 2014 NPS Guidelines to produce or update WBPs as described in Sections 5.2.1 and 5.2.2. Planning efforts may also identify appropriate actions to protect water quality where water quality standards are being met to produce WBP alternatives as described in Section 5.2.3. A portion of watershed project Section 319 funds will be used to support projects that protect water quality following unnaturally intense wildfire, if such fires occur during the period covered by the plan. These projects will be developed through rapid planning processes and will be conducted in watersheds with one or more streams with a coldwater or cool water aquatic life designated use, where a major wildfire has occurred with severity outside the natural range of variability for the affected forest types. Some watershed project Section 319 funds will also be used to implement WAPs, WBP alternatives that typically describe actions that may both protect and restore wetlands and downstream waters.

The watersheds with the highest priority for water quality protection are those containing ONRWs, which in New Mexico are under USFS management. These waters are generally well-protected by Wilderness Act designation, in the case of Wilderness Area ONRWs, or other legal protection, in the case of the Valle Vidal ONRWs. The SWQB and WQCC have ongoing responsibility for reviewing projects, management changes, and fire suppression activities in the watersheds of ONRWs. These responsibilities are outlined in the antidegradation provisions of the New Mexico

water quality standards (20.6.4 NMAC), and in a MOU between NMED and the Southwestern Region of the USFS.

The watershed planning process uses an integrated approach for assessment, protection and remediation that links natural resource programs. WBPs are generally developed with the participation of a variety of natural resource professionals (in addition to citizen and industry participants), who contribute their skills related to fisheries, range management, forest ecology, and aspects of water resources management related to water rights and operation of water infrastructure including dams, reservoirs, and municipal water supplies (see Sections 6.2 through 6.4). Aspects of these plans may be implemented under federal assistance programs, state programs, and other resources appropriate to support the implementation and maintenance of restoration measures. Effective NPS pollution control efforts must acknowledge that improvements to water quality require long-term commitments of budget and personnel resources.

In addition to providing information which is collected and summarized in a WBP, the watershed planning process also encourages partnerships. Participating organizations and stakeholders build the necessary knowledge and relationships to effectively utilize a variety of programs.

The contributions of other State and federal programs towards implementing the NPS Management Program are summarized in the *NPS Management Program Annual Report*.

5 Priorities for Nonpoint Source Pollution Control

5.1 Assessment Process Overview

New Mexico water quality standards development, water quality surveys, assessment, and TMDL development are led by MASS staff of the SWQB with significant assistance provided by other SWQB staff including WPS staff. Each of these components of the New Mexico Water Quality Management Program includes a public participation component, including public meetings or hearings (on water quality standards development, water quality surveys, and TMDLs) and formal public comment periods (on water quality standards development, assessment, and TMDLs).

Rotating, intensive watershed surveys are used to identify water quality standards exceedences and associated data needs. Under this type of survey, the state is divided into eight watersheds or groups of watersheds, and two areas are intensively monitored over a two year period, depending on staff and financial resources. This eight-year survey cycle identifies waterbodies where water quality problems exist, serves to prioritize and re-direct the water quality monitoring program, and informs WPS. As part of these surveys, monitoring is often conducted above and below point source discharges (e.g., wastewater treatment plants) to assess the impact of their discharges. The surveys planned in 2017 through 2024 are depicted in Figure 5.

Field sampling plans describing current surveys are available from the SWQB website at: www.env.nm.gov/surface-water-quality/water-quality-monitoring.
A report summarizing the data collected during each two-year rotational survey will be available from the same website in the spring following completion of the survey (spring 2019, 2021, etc.).

Additional short-term targeted monitoring designs are employed as the need arises to address special concerns such as citizen complaints, accidental spills, fish kills, or illegal dumping.

SWQB evaluates streams and lakes specifically defined as assessment units (AUs). For example, "Rio Ruidoso (Perennial portions from Rio Bonito to Eagle Creek)" is evaluated as an AU. All AUs are assigned assessment categories as described in the *Procedures for Assessing Water Quality Standards Attainment for the State of New Mexico CWA §303(d) /§305(b) Integrated Report: Comprehensive Assessment and Listing Methodology*[8]. AUs in assessment category 5A, 5B, or 5C comprise New Mexico's official CWA §303(d) List of Impaired Waters. Starting with the 2018-2020 *State of New Mexico CWA §303(d)/§305(b) Integrated Report and List*, each AU now contains assessment categories by parameter, that recognize (for example) that an AU may have one impairment parameter with a TMDL (Category 4A), and another impairment parameter that still needs a TMDL (Category 5A).

All collected data are assessed against the most current EPA-approved version of *the State of New Mexico Standards for Interstate and Intrastate Surface Waters* (20.6.4 NMAC). All available data that are of sufficient quality are assessed to determine designated use attainment status by using the assessment protocols described in the *Procedures for Assessing Water Quality Standards Attainment for the State of New Mexico CWA §303(d) /§305(b) Integrated Report: Comprehensive*

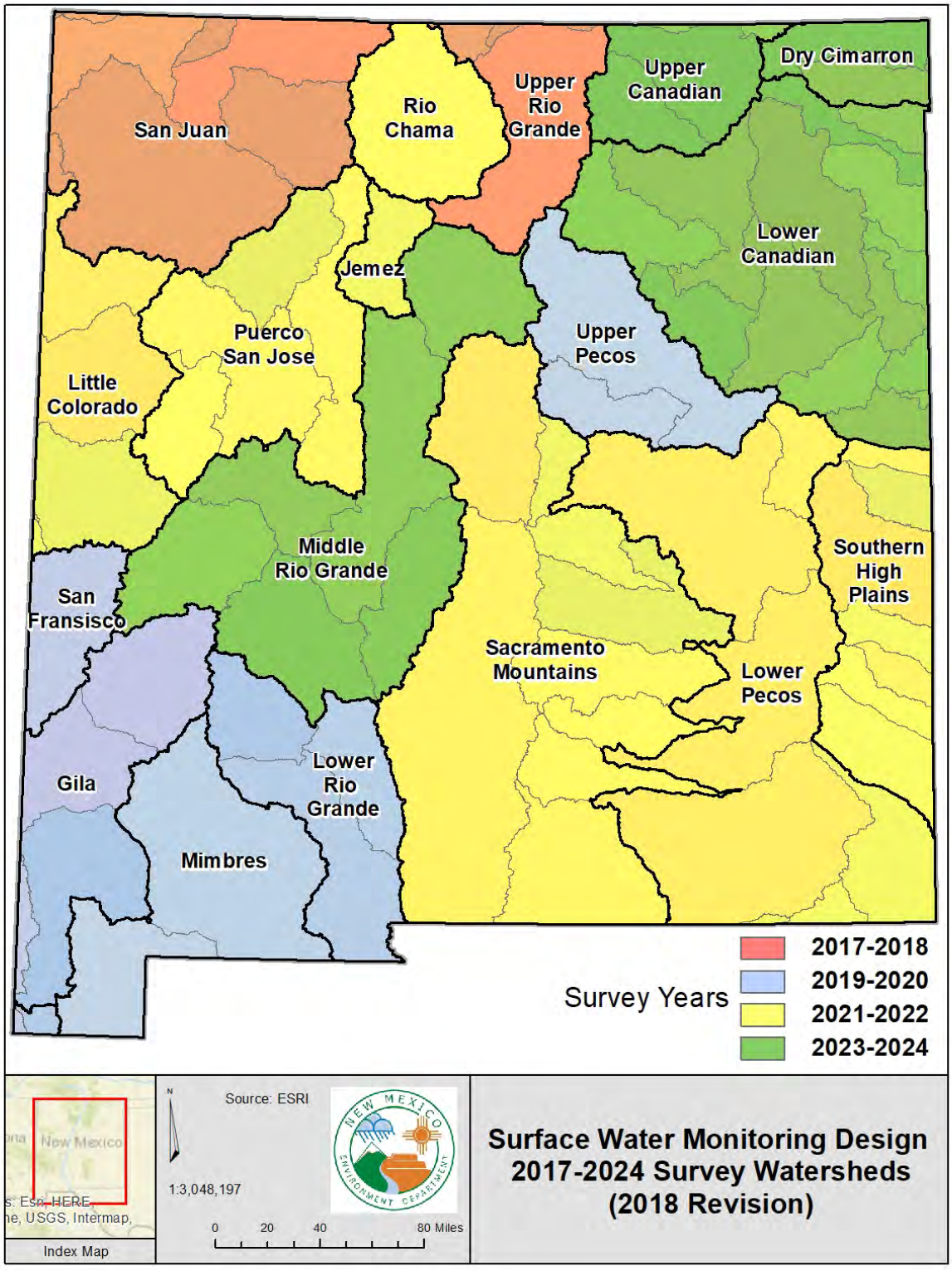

Figure 5: Surface Water Quality Bureau eight-year water quality survey plan.

Assessment and Listing Methodology[8]. All assessment units (*i.e.*, water bodies) in the *State of New Mexico CWA §303(d)/§305(b) Integrated Report and List* identified under reporting categories 4 or 5 are impaired for one or more parameters.

Impairments identified through this process may originate from a combination of point- and non-point sources. The NPS component is the largest or sole component in many New Mexico watersheds. The subsequently developed TMDLs determine the maximum amount of a pollutant that can enter a waterbody without causing impairment and estimate the amounts of loading (current and a desired maximum) contributed by point and nonpoint sources.

5.2 Priorities for Watershed-Based Planning

Introduction

Appendix A provides the nine elements of WBPs and information on acceptable alternative plans. These elements are intended for impaired waters (*i.e.*, where water quality standards are not met). Identification of priority watersheds for watershed-based planning is intended to serve as a guide for early planning activities, as encouragement for planners to direct attention to areas that increase the likelihood of producing measurable improvements in water quality, and as an aid to measuring progress.

Watersheds of Impaired Waters with TMDLs (Category 4A)

The primary basis for identifying priority watersheds for watershed-based planning in New Mexico is the TMDL program. TMDL writers look closely at existing data to confirm impairment, collect supplemental data as needed to characterize loading, and publish analyses using a public process. These final documents typically include estimates of load reductions required for a stream to meet the New Mexico water quality standards. TMDLs establish separate maximum acceptable loads for point and nonpoint sources. TMDLs do not establish separate load reduction goals for each individual point and nonpoint source, but most TMDLs establish an overall load reduction goal. All impaired waters with TMDLs in New Mexico have NPS load allocations as part of their TMDLs. Further, watershed-based planning, which builds on the basic analysis provided with TMDLs and provides implementation plans for TMDLs, can and should include accounting of both point and nonpoint sources. If an AU is clearly impacted disproportionately by point sources, regulatory mechanisms are likely to serve a greater role in addressing those water quality problems than the NPS Management Program. An impairment with an approved TMDL is identified as a Category 4A impairment on the Integrated List.

Watersheds of Waters Impaired by Flow Regime Modification (Category 4C)

From the standpoint of protecting designated uses, another limited category of streams recognized in the *State of New Mexico CWA §303(d)/§305(b) Integrated Report and List* are those streams where available information indicates that at least one designated use is not supported, but a TMDL is not required because the impairment is due to reduced flow rather than an excess of pollutants (Category 4C streams). Watersheds with Category 4C streams are retained as priority watersheds for watershed-based planning in the 2019 NPS Management Plan.

Watersheds of Impaired Waters with Sufficient Plans such that a TMDL is not required or is assigned a low priority (Category 4B and Category 5-alternative)

States propose assigning impaired waters to Category 4B where controls sufficient to achieve water quality standards in a reasonable period of time are available and in place. These proposals are part of the *State of New Mexico CWA §303(d)/§305(b) Integrated Report and List* process, and as such include public comment, and require both WQCC and EPA approval. A WBP accepted by EPA may qualify an impairment for placement in Category 4B, provided the plan addresses the six Category 4B elements outlined by EPA in a 2006 memorandum[9]. Per the SWQB's assessment and listing methodology[8], such designations may be proposed by stakeholders[§]. As with a WBP, a plan for a Category 4B impairment should be periodically updated. As such, watersheds of streams with Category 4B impairments, if any are designated, are among priority watersheds for watershed-based planning. Minor technical revisions and updates described in Section 5.2.2 below would be sufficient for maintaining WBPs for Category 4B streams. In the draft 2018-2020 *State of New Mexico CWA §303(d)/§305(b) Integrated Report and List,* New Mexico does not have any Category 4B impairments.

EPA also created an assessment Category 5-alternative, which is very similar to Category 4B. Distinctions are provided in a 2015 memorandum from EPA[6], suggesting that states use Category 5-alternative for impairment parameters that are "assigned a low priority for TMDL development because an alternative restoration approach is being pursued." A WBP may serve as a "TMDL alternative" for a stream in Category 5-alternative. TMDL development for a stream in Category 5-alternative may still be required if the alternative restoration approach is not implemented or does not result in water quality standards attainment within a reasonable amount of time. Category 5-alternative was created to encourage integration of CWA programs (e.g., NPS Management Programs and Assessment programs), to reduce the amount of time between water quality problem recognition and water quality problem solution, and to encourage more public involvement in local water quality planning. In the term of this NPS Management Program Plan, at least one pilot watershed will be selected for WBP development to explore this option. The candidate watershed will be selected based on the presence of interested stakeholders and impairment parameters for which TMDLs have not yet been prepared.

Summary

TMDLs are established for 231 impairment parameters in 148 stream segments, and an additional 19 Category 4C stream segments are recognized, in the draft *2018-2020 Integrated Report*. Approximately 446 12-digit watersheds (of 3,234 watersheds at least partly in New Mexico) contain or drain directly to these 167 stream segments, and are the priority watersheds for watershed-based planning. These streams and watersheds are depicted in Figure 6, and are further identified as "NPS Priority Watersheds – Planning" (under the tab "Nonpoint Source Program") in the on-line GIS tool at https://gis.web.env.nm.gov/oem/?map=swqb.

[§] Appendix I in the 2017 SWQB Comprehensive Assessment and Listing Methodology provides a procedure for third parties to propose Category 4B designation.

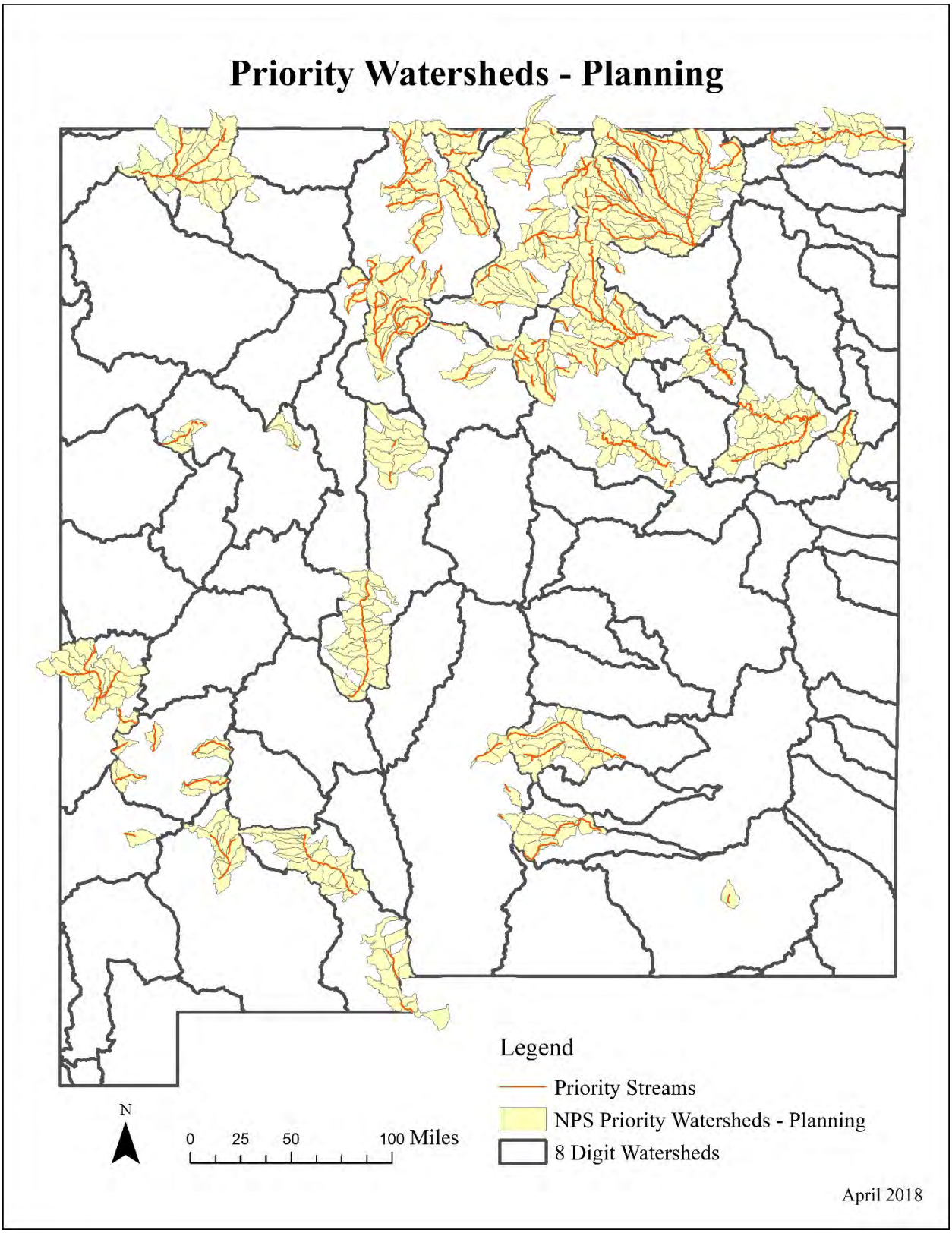

Figure 6: Priority streams and watersheds for watershed-based planning.

The list of priority watersheds and impaired waters is subject to change as the status of waters in the *State of New Mexico CWA §303(d)/§305(b) Integrated Report and List* are changed from impaired to unimpaired, and as new TMDLs are completed (or rarely, withdrawn) for impaired waters. The on-line GIS tool at https://gis.web.env.nm.gov/oem/?map=swqb will be periodically updated to reflect these changes. The priority watershed GIS coverages are also available from NMED upon request.

5.2.1 Comprehensive Watershed-Based Planning Projects

In 2020 and 2022, watersheds will be selected for development of comprehensive WBPs through an SFA, at a rate of approximately one to three projects every two years. An SFA is a competitive project selection process by which NMED will award sub-grants of Section 319 funding to sub-grant recipients, to implement watershed-based planning or implementation projects. These WBP projects may cover more than one priority watershed for planning.

An analysis of Section 319 planning and implementation projects revealed that 61% of projects initiated between 2012 and 2018 addressed streams in just three northern New Mexico counties – Rio Arriba, San Miguel, and Sandoval. Further, 82% (28/34) of projects occurred within a one-hundred-mile radius of Santa Fe. In order to better address NPS concerns statewide, the SFA may indicate that applications for projects in eligible watersheds in underrepresented areas will receive priority points. These projects will be funded with Section 319 NPS program funds or with state funds if state funds are made available for this purpose.

As noted in Section 3.1 above, Recovery Potential Screening (RPS) will be explored as a potential method to prioritize project applications in watersheds where water quality standards appear to be relatively attainable based on ecological, social, and stressor indicators. Recovery potential is the likelihood of an impaired water to re-attain water quality standards or other valued attributes, given its ecological capacity to regain lost functionality, its exposure to stressors, and the social context affecting efforts to improve its condition.[10] RPS is a systematic, comparative method for identifying differences among watersheds (or watershed-based, hydrologic units such as 12-digit HUCs) that may influence their relative likelihood to be successfully restored, protected or managed in other ways.[**] If an RPS index can be derived with promise to prioritize more effective projects, the index will be used to assign a portion of the points to applications, in the evaluation system used to choose applications to fund. The details of how these points will be applied will be provided in the application process.

Applications for projects in Conservation Opportunity Areas (COAs) identified in the State Wildlife Action Plan (SWAP) developed by the New Mexico Department of Game and Fish (NMDGF) will be used to prioritize watershed-based planning project applications. COAs are areas in the State considered to have superior potential for conserving Species of Greatest Conservation Need (SGCN).[11] Many SGCN are aquatic species or are riparian obligate species. Further, the majority of water quality problems identified in New Mexico effect aquatic life designated uses. Thus, water quality improvement projects within COAs have greater potential benefit than projects not in COAs. Applications for projects in COAs will be awarded points to

[**] This definition of RPS and many resources for RPS are available at https://www.epa.gov/rps.

favor them in the application evaluation process. The details of how these points will be applied will be provided in the application process.

During the period covered by this NPS Management Plan revision, SWQB will also develop at least one WBP as an in-house project with substantive stakeholder involvement, and propose that one or more impairments in the planning area be placed in Category 5-alternative. WPS staff may also pursue in-house WBP development, once again with substantive stakeholder involvement, for stream impairments that are described by TMDLs (i.e., Category 4A streams).

5.2.2 Strategic Revision of WBPs

Minor technical revisions and updates of existing WBPs that have been accepted by EPA will be included as components of implementation projects funded with Section 319 watershed project funds. EPA permits this limited use of Section 319 watershed project funds for planning, but in these instances, "watershed project funds may not be used to conduct other planning work related to the WBPs including more general updates to the plan, soliciting public comment, etc."[4] Addition of planning tasks to Section 319-funded implementation projects will be subject to review and approval by EPA.

Existing WBPs lacking specific elements that are currently required may be revised and updated in 2019-2023, through small procurements for technical services such as water quality modeling. The WPS staff will conduct some of these activities without the assistance of a contractor (e.g., in-house, and in cooperation with stakeholders). These small projects and staff activities will be funded primarily with Section 319 NPS program funds. Small watershed-based planning projects may also be funded with CWA Section 604(b) funds. The priorities for 604(b) funds are those activities that clearly address the State's water quality goals to preserve, protect and improve the water quality in New Mexico, with a focus on TMDLs, Use Attainability Analyses, or other water quality management planning activities that will directly address identified water quality impairments but do not overlap with development of WBPs that are eligible for funding with Section 319 funding.

5.2.3 WBP Alternatives

Introduction

EPA's *Nonpoint Source Program and Grants Guidelines for States and Territories*[4] recognize that WBPs are not always necessary to successfully improve or protect water quality. The *Guidelines* describe four circumstances under which EPA may approve expenditure of Section 319 watershed project funds without a WBP. In these circumstances, the project work must be described in an "acceptable alternative plan," and EPA reserves the right to review and approve such plans. The New Mexico NPS Management Program recognizes WAPs, post-fire plans such as BAER plans, and approved Category 4B Demonstrations as types of WBP alternatives, and will pursue implementation of these WBP alternatives under each of the four circumstances described below.

When the Impairment is not Specific to a Pollutant

When water quality impairment is not due to excessive pollutant loading, but is instead caused by reduced flow or hydrologic alteration, such impairment may be recognized by the state in the *State of New Mexico CWA §303(d)/§305(b) Integrated Report and List* (i.e., through placement of a stream in Category 4C).

Wetlands (including riverine wetlands, a term interchangeable with riparian areas) may be similarly impaired by altered hydrology or habitat degradation and typically are not assessed in the *State of New Mexico CWA §303(d)/§305(b) Integrated Report and List*. Wetlands are surface waters of the state (defined at 20.6.4 NMAC) and are often waters of the U.S. Water quality standards for wetlands are not well developed, and wetlands are not assessed against their water quality standards. The New Mexico Wetlands Program has a long-term goal to develop narrative standards for wetlands within the State. To date, no wetlands have been assessed for water quality. However, some wetlands have been assessed using Wetlands Rapid Assessment Methods (RAMs)[††]. An example degraded wetland is one already affected by a gully. The gully lowers the water table thus reducing the area that supports wetland vegetation and other wetland values. Plugging the gully and directing sheet flow over the wetland restores the wetland.

Wetland degradation is described in WAPs[‡‡], a WBP alternative that is developed under the New Mexico Wetlands Program. A WAP provides a framework for documenting the current location and condition of wetlands in the planning area. Recommendations are developed for future stewardship actions to protect and enhance wetlands and riparian areas, identify data gaps, and continue public education and engagement regarding watersheds in the planning area. They are often a collaborative effort between federal and state agencies, counties, cities, non-governmental organizations, local contractors, and the public. They include comprehensive watershed-based actions that can be implemented to protect, restore and enhance wetland ecosystem functions and services.

Comprehensive watershed-based planning projects described in Section 5.2.1 (above) may develop plans for Category 4C streams that EPA will accept as meeting the requirements for acceptable alternatives to WBPs. WAPs are developed through the New Mexico Wetlands Program (funded through CWA Section 104(b)(3) rather than Section 319). Implementation of either type of WBP alternative may be supported with Section 319 watershed project funds. Such implementation projects will be identified and developed through the SFA process described in Sections 5.3 and 5.4 below.

When Responding to a NPS Pollution Emergency or Urgent NPS Public Health Risk

EPA recognizes that the nine-element watershed-based planning approach is not applicable in emergency circumstances. After a major wildfire occurring in the watershed of one or more streams with a high-quality coldwater, coldwater, or coolwater aquatic life designated use, with

[††] RAMs developed through the New Mexico Wetlands Program are available at www.env.nm.gov/surface-water-quality/wetlands-rapid-assessment-methods.
[‡‡] WAPs developed through the New Mexico Wetlands Program are available at www.env.nm.gov/surface-water-quality/wbp.

severity outside the natural range of variability for the affected forest types, WPS staff will participate in post-fire response planning. The objective of this activity will be to provide information to other agencies (e.g. USFS or EMNRD Forestry Division) to help them develop post-fire plans (such as BAER plans) that qualify as WBP alternatives, to be used as the basis for project work plans that WPS will develop and submit to EPA. With EPA approval, implementation of these work plans will begin within two years of the fire, with support of Section 319 watershed project funds to reduce impacts of wildfire to surface water quality.

When Protecting Assessed Unimpaired or High Quality Waters

For the protection of assessed unimpaired or high quality waters a nine-element WBP is generally not warranted. Some streams in New Mexico are not listed as impaired, and protecting their associated wetlands also protects water quality in the stream. WAPs describe threats to wetlands. An example threat to a wetland is a gully system that is approaching or extends part way into a wetland. Preventing the gullies from migrating headward protects the wetland. A WAP can guide projects to protect wetlands, and protecting wetlands can also protect adjacent or downstream assessed waters.

In cases where a WBP was developed to address a water quality problem, and the stream is subsequently delisted for the impairment parameter, implementation of the existing WBP may protect water quality to maintain water quality standards. Because one management measure may mitigate multiple pollutants, implementation of the existing WBP may also help address remaining impairments.

Selection of projects to implement such WBPs or WAPs will be via the same competitive project selection process used to support implementation of more current WBPs, described in Sections 5.3 and 5.4 below. Such implementation projects may include planning components described in Section 5.2.2, to update a WBP.

When Addressing an Isolated, Small-Scale Water Quality Problem

EPA recognizes that some water quality problems result from one or a few sources of pollution and can be solved without a nine-element WBP. Although NPS pollution problems are sometimes quite obvious, this provision is not intended to permit states to use Section 319 funds to address obvious pollution sources. The *Nonpoint Source Program and Grants Guidelines for States and Territories* stipulate that, “the state must provide assurance that the proposed watershed project will fully address the water quality problem within one grant period.” As obvious as a pollution problem may be, it is unlikely to be the only pollution problem in the watershed. EPA encourages watershed-based planning, to increase the likelihood that projects are prioritized and selected based on watershed scale analysis, and to prevent smaller problems from being dealt with in a piecemeal fashion. If such problems are brought to the attention of WPS staff, development of conventional (but simple) nine-element WBPs will be pursued as described in the sections above.

State and EPA approved Integrated Reporting Category 4B assessment units, if they do not have nine-element WBPs, fall under this fourth circumstance. Category 4B demonstrations are typically designed to ensure that pollution control requirements and activities are on a trajectory to achieve

an applicable water quality standard for a particular pollutant in a stream rather than for a group of pollutants. Assessment units in Category 4B do not require TMDL development. The six Category 4B elements outlined in the 2006 integrated report guidance[9] and the nine elements of WBPs are similar. Although Category 4B demonstrations are typically stand-alone documents for a particular pollutant-assessment unit pair, the control strategies described and envisioned will usually result in improved water quality for other parameters that move similarly through the environment. For example, a Category 4B demonstration to address a storm-driven metal is likely to also help address storm-driven sediment.

5.2.4 Submittal and Review of WBPs and WBP Alternatives

Sections 5.2.1 through 5.2.3 above describe how WPS will support watershed-based planning, directly through staff activities, through small procurements for technical services, and through major procurements for comprehensive planning projects. WPS will submit draft WBPs and Category 4B Demonstrations to EPA for review. EPA review, and time for revision in response to EPA review, will be included in the work plans for watershed-based planning projects. WPS Wetlands Team staff review and approve WAPs. All WBPs and WAPs are available at www.env.nm.gov/surface-water-quality/wbp. The same page provides information on how stakeholders may begin watershed-based planning, and how they may submit draft WBPs to NMED for review and comment prior to submitting to EPA for review. Category 4B Demonstrations will be made available at www.env.nm.gov/surface-water-quality/tmdl.

5.3 Priorities for Improving Water Quality

Identification of priority watersheds for implementation is primarily intended as encouragement for implementers to select project areas that increase the likelihood of producing measurable improvements in water quality, and as an aid to measuring progress. Implementation projects funded with Section 319 watershed project funding will be limited to watersheds with WBPs or WBP alternatives described in Section 5.2.3 above. These watersheds are the priority watersheds for implementation. As of early 2018, New Mexico had ten WBPs describing water quality improvement approaches for 42 AUs in 146 12-digit watersheds. Generally, these plans focus on streams with TMDLs that describe water quality impairments (as recognized in the approved *2016-2018 State of New Mexico CWA §303(d)/§305(b) Integrated Report and List*). These watersheds are depicted in Figure 7, and are further identified as "NPS Priority Watersheds – Implementation" (under the tab "Nonpoint Source Program") in the on-line GIS tool at: https://gis.web.env.nm.gov/oem/?map=swqb.

The priority watershed GIS coverages are also available from NMED upon request.

Additional priority watersheds are covered by WAPs. Developing a list of these watersheds and a corresponding GIS coverage is an activity to be carried out during the term covered by this NPS Management Plan, identified under Section 3.1.1 above. The list of priority watersheds will grow as additional WBPs and WAPs are completed. Water quality improvement projects funded under other programs, including state-funded programs detailed in Section 6.1.2, will not be limited to these priority watersheds, but it is anticipated that watershed groups and other project proponents in those areas will utilize a variety of programs to implement their WBPs or WAPs, and proposals

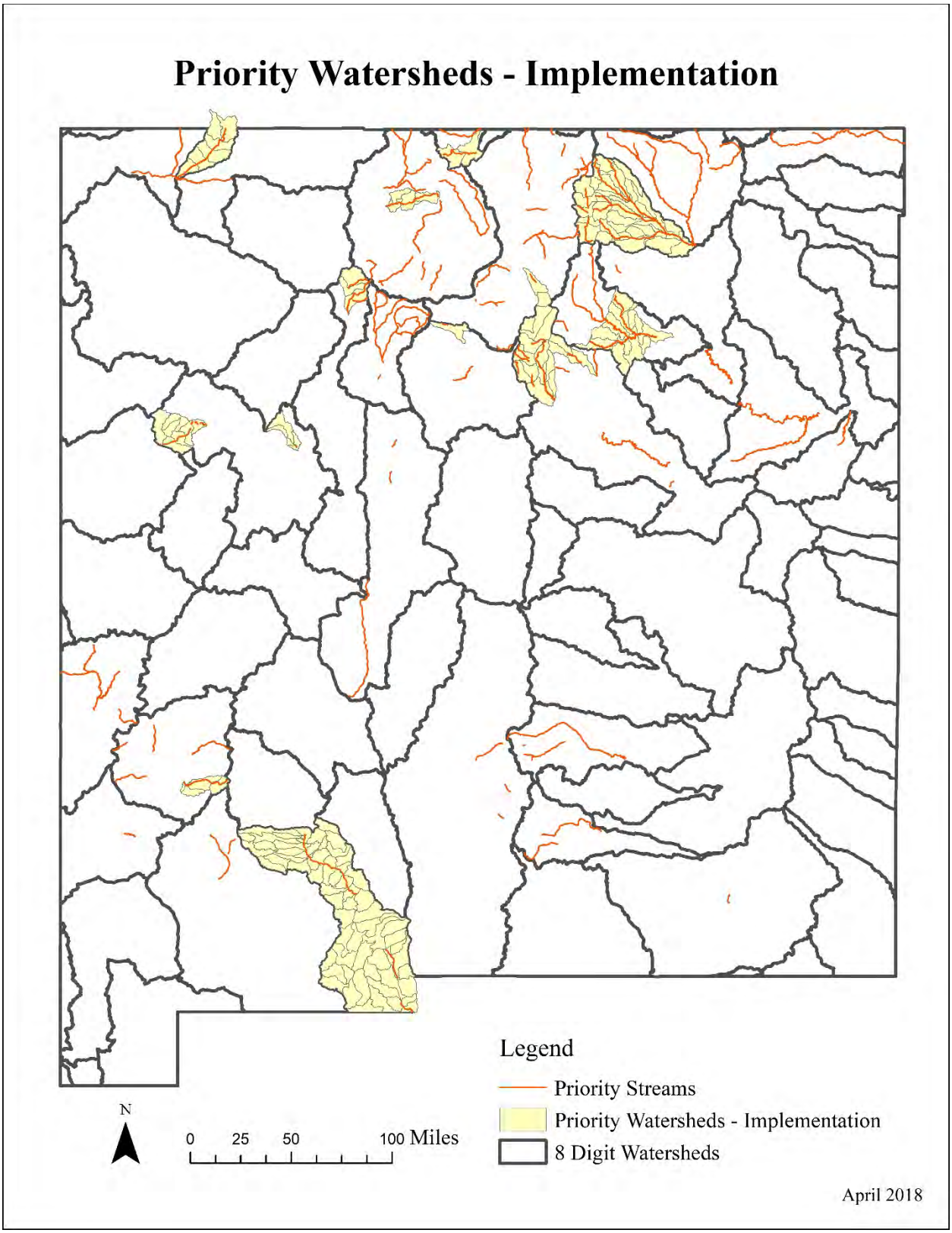

Figure 7: Watersheds with WBPs. These watersheds are priority watersheds for water quality improvement projects supported with Section 319 funds.

or sub-grant applications supported by WBPs or WAPs are expected to be stronger with a basis in planning.

The primary means of selecting projects for implementation with support of Section 319 watershed project funding will be through an SFA conducted every other year that will outline program priorities and eligible streams and watersheds, and request details from applicants on components of WBPs or WBP alternatives which they propose to implement. Potential applicants include the same organizations that prepared the plans, and other organizations or individuals interested in implementing the plans.

As noted above in the section on priorities for watershed-based planning, an analysis of Section 319 planning and implementation projects revealed that 61% of projects initiated between 2012 and 2018 addressed streams in just three northern New Mexico counties and 82% (28/34) of projects occurred within a one-hundred-mile radius of Santa Fe. To better address NPS concerns statewide and encourage implementation of WBPs with little or no implementation activity, the SFA may indicate that applications for some eligible watersheds will receive priority points. These efforts will be supplemented with smaller procurements for specific, targeted projects that will implement WBPs or WBP alternatives. These smaller projects will be developed in cooperation with watershed groups and other stakeholders, in situations where WPS staff can more efficiently manage the projects than would be possible through a contractor. This approach is likely to involve the use of state price agreements, such as established agreements for fencing.

As with watershed-based planning, RPS will be explored as a potential method to prioritize project applications for water quality improvement projects. If an RPS index can be derived that promises to favor more effective water quality improvement projects, the index will be used to assign a portion of the points to applications, in the evaluation system used to choose applications to fund. The details of how these points will be applied will be provided in the application process.

Applications for projects in COAs identified in the SWAP developed by NMDGF will be used to prioritize water quality improvement project applications as well. Applications for projects in COAs will be awarded points to favor them in the application evaluation process. The details of how these points will be applied will be provided in the application process.

When the WPS conducts SFAs or smaller procurements for projects to implement WBPs and WBP alternatives, the request will be for projects that address impaired waters or threats to water quality in specific waters. The locations and other basic details of proposed projects should be identified within WBPs or WBP alternatives.

5.4 Priorities for Water Quality Protection

5.4.1 Protection of Outstanding National Resource Waters

A significant tool for protecting water quality is the designation of ONRWs, a concept found in the EPA water quality standards regulations at 40 C.F.R. § 131.12. Designation as an ONRW is intended to ensure water quality is maintained or improved following designation. Waters eligible for ONRW designation include those within National or State Parks, wildlife refuges, wilderness

areas, Special Trout Waters, waters with exceptional recreational or ecological significance, and other high quality waters not significantly modified by human activity. ONRW designation does not limit existing uses as long as these uses do not degrade water quality from levels present at the time of designation. The antidegradation provisions for ONRWs are contained in the water quality standards at 20.6.4.8 NMAC, and allow beneficial watershed protection and restoration activities that might temporarily reduce water quality.

The streams, lakes, and wetlands designated as ONRWs are listed in the water quality standards at 20.6.4.9 NMAC. They are all within the Valle Vidal Unit of the Carson National Forest, and within National Forest designated wilderness areas, and may also be reviewed via the SWQB GIS mapping program at https://gis.web.env.nm.gov/oem/?map=swqb. Additions to the National Wilderness Preservation System such as the Columbine-Hondo Wilderness designated in 2014 contain streams which are not ONRWs, because the wilderness designation occurred after the ONRW petition was approved by WQCC. Only waters specifically identified at 20.6.4.9 NMAC are ONRWs.

The state's ONRWs and the 110 12-digit watersheds that contain or drain directly to them are indicated in Figure 8. These watersheds are the priority watersheds for water quality protection under the NPS Management Program, and are identified as "NPS Priority Watersheds – Protection" at https://gis.web.env.nm.gov/oem/?map=swqb (under the tab "Nonpoint Source Program"). Priority watershed GIS coverages are also available from NMED upon request. Additional priority watersheds will be recognized as described in Sections 5.4.2 and 5.4.3 below.

Because all of these ONRWs are located on USFS lands, coordination with USFS is essential for implementation of the antidegradation policy. USFS and NMED have developed procedures for USFS to notify NMED of anticipated emergency actions in ONRW watersheds that may affect water quality (generally, fire suppression activities), and then to summarize such actions after they have taken place, so that NMED and WQCC may monitor these potential impacts on ONRWs. NMED and USFS continue to discuss implementation of antidegradation provisions of the New Mexico Water Quality Standards, and are developing procedures to ensure that management changes, such as grazing management changes, trail realignments, or other changes in recreation management that may affect ONRWs do not lead to degradation in those waters.

5.4.2 Post-Fire Watershed Protection Activities

MASS typically does not alter the survey schedule in response to wildfires. Streams impacted by wildfire may not be monitored specifically for water quality standards assessment until several years after a fire. Assessment of water quality data, 303(d) listing, TMDL development, and watershed-based planning in sequence would require several more years after a fire occurs. Thus, several years may pass before the NPS Management Program can respond to wildfire impacts, through support of conventional 319-funded water quality improvement projects. For the NPS Management Program to be more responsive following wildfires, additional priority watersheds for water quality protection will be recognized. In any year in which a major wildfire occurs in the watershed of one or more streams with a high quality coldwater, coldwater, or cool water aquatic life designated use, with severity outside the natural range of variability for the affected forest

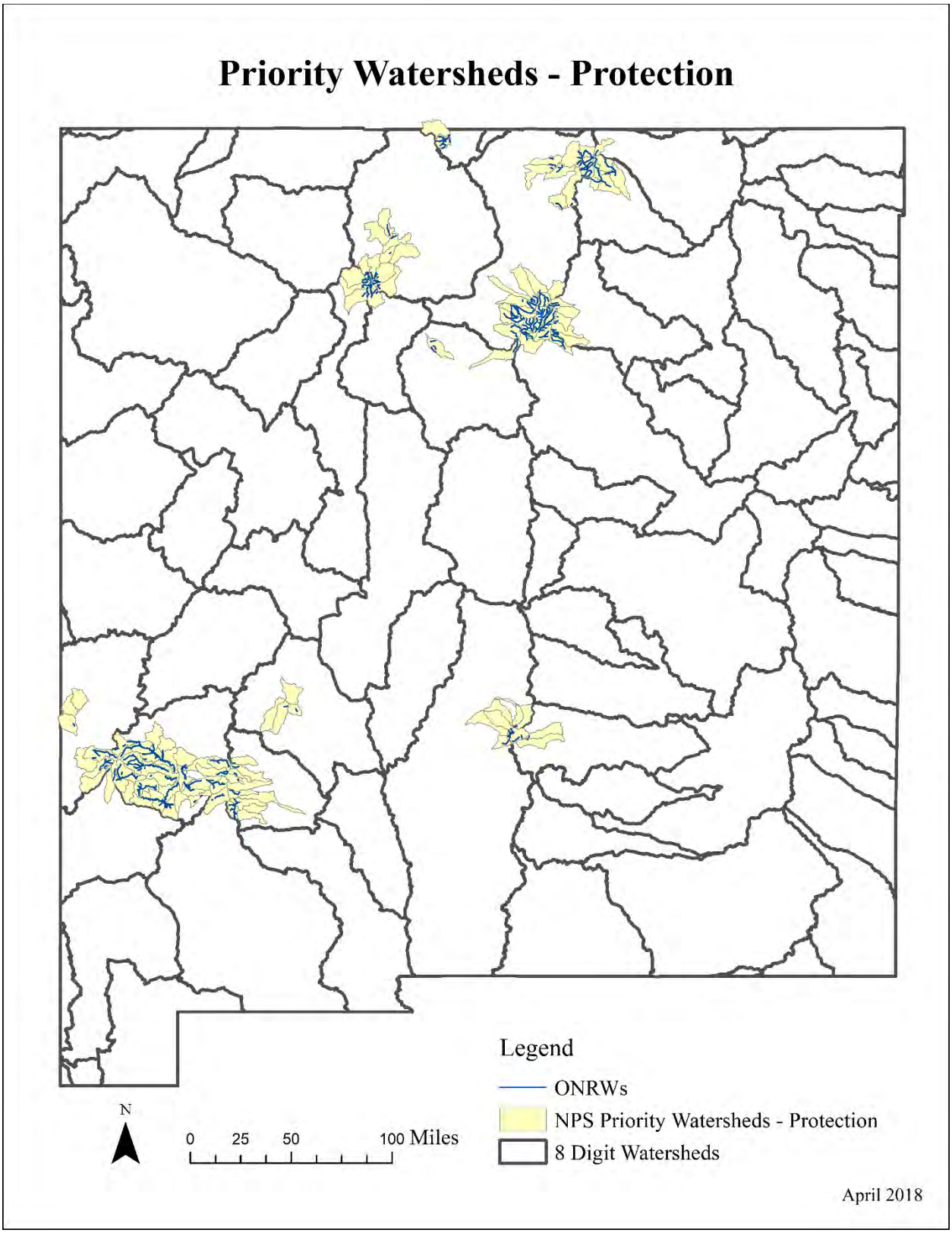

Figure 8: Priority watersheds for water quality protection. These are the 12-digit watersheds which contain or drain directly to ONRWs.

types, the affected 12-digit watersheds will be identified as priority watersheds. WPS will provide information to help USFS develop BAER plans, or to help other agencies (e.g., EMNRD Forestry Division) develop similar post-fire plans, to be used as the basis for project work plans that WPS will develop and submit to EPA, and that qualify as WBP alternatives.

Within two years of such a fire, a portion of Section 319 watershed project funds will be used to implement these plans, to reduce the impacts to water quality from specific categories of wildfire. As detailed in Section 6.2.1 below, the USFS budget for BAER implementation is typically much larger than New Mexico's annual Section 319 budget. The focus of Section 319 funds will be on non-federal lands, and on strategically reducing (rather than eliminating) the impacts of wildfire on water quality, and on follow-up actions after the BAER process is complete. Supported activities may include slope stabilization and other conventional rehabilitation approaches, but also are likely to include consultation and design to assist landowners with responding to flooding and erosion while minimizing further impacts to water quality. Projects funded in these new priority watersheds are likely to have terms of up to four years.

5.4.3 Implementation of WAPs

WAPs describe actions to restore and protect wetlands, including riverine wetlands (also known as riparian areas). Wetlands are waters of the state defined at 20.6.4 NMAC, and many are waters of the U.S. Some actions to protect wetlands also protect downstream water quality by preventing sediment loading and maintaining nutrient processing capacity, and may help unimpaired downstream waters continue to meet their water quality standards.

Implementation of WAPs will be pursued during the term of this NPS Management Plan, through the same competitive project selection process used to identify water quality improvement projects (i.e., projects that implement WBPs). The SFA will ask applicants to identify the problem they propose to solve, whether it be a protective measure (e.g., arrest gully progression to protect a slope wetland) or a water quality improvement measure (e.g., arrest gully progression to reduce sediment loading in a downstream water). Some actions (as in the previous example) may simultaneously protect and improve water quality. The SFA will also ask applicants to provide the basis in planning for the project by citing a WAP or WBP (or both).

5.4.4 Programmatic Activities

The activities listed in Section 3.3 are NPS program activities intended to protect surface water quality, implemented by NMED staff supported, partially or entirely, with Section 319 NPS program funds. Examples are: review of Section 404 permitted activities and Section 401 certification, as applicable; participation by SWQB staff in NMED's Mining Act team; environmental impact reviews, e.g., NEPA reviews; participation in statewide natural resources planning efforts that may affect water quality; and interagency cooperation on forest restoration planning.

SWQB staff occasionally receive complaints of disposal of refuse in watercourses, and have experienced some success with voluntary clean-ups through informing apparent violators (or property owners who allow disposal to occur) in writing of the Ground and Surface Water

Protection regulations at 20.6.2 NMAC[§§]. In a few cases, apparent violators are not cooperative, and procedures are needed to enforce the regulations. During the term covered by this NPS Management Plan revision, SWQB staff will work with NMED's Office of General Counsel to develop guidance or written procedures for conducting outreach, investigating complaints, notifying persons of regulations and findings of investigations, encouraging voluntary compliance (consistent with NMSA 1978, Section 74-6-9), and requiring the prevention and abatement of the disposal of refuse in natural watercourses.

Several other NPS Management Program objectives described in Section 3 are pursued through activities often intended to protect water quality. Examples include developing WAPs, education and outreach activities (listed in Section 3.4), ground water quality protection (described in Section 3.5), and several of the interagency cooperation activities listed in Section 3.6.

WPS staff will also implement the ongoing activities described in Section 4.1 and support the use of a variety of programs (identified in Sections 6.2 through 6.4) to materially participate in water quality protection activities.

5.5 Best Management Practices

"Identification of the best management practices and measures which will be undertaken" is a basic requirement of NPS Management Programs as stated in Section 319 of the CWA.

In general, the availability of information on BMPs for water quality protection and improvement is not a limiting factor for implementation. Numerous publications and web resources present information on the application and effectiveness of a multitude of BMPs. Appendix B provides a sample of publications and other resources that were reviewed and compiled for this NPS Management Plan. The NPS Management Program promotes the selection of BMPs appropriate for identified pollutant sources. Usually, BMPs which make use of natural processes are more economic, because they often cost less in the short run and require less maintenance in the long run than do "harder" engineering approaches. Examples of such BMPs include protection of vegetation on banks or in riparian buffers, reconnection of channels to floodplains, restoration of channel form to accommodate sediment inputs without generating significant new sediment loading through bank erosion, and promoting infiltration of runoff in upland and urban settings.

NPS pollution controls are typically established through implementation of BMPs. *Nonstructural efforts*, often referred to as *nonstructural BMPs* or *passive restoration*, include measures that remove or manage environmental stressors. In many instances a system can repair past degradation once stressors are removed. Example measures include riparian fencing, limiting vehicular access, and rest. Although removing stressors allows for recovery, the system may not achieve full site potential if chemical, physical, or biological integrity and their relationships remain fragmented.

Structural and mitigation measures attempt to mitigate the impact of underlying stressors and/or accelerate natural recovery processes. These practices often treat the symptoms of past and present management activities. They are typically applied on a limited scale and thus do not result in

[§§] These regulations are available for review at http://164.64.110.134/parts/title20/20.006.0002.html.

landscape-scale recovery. However, they are effective in treating localized problem areas at the reach scale. Structural and mitigation measures include sediment basins, animal waste lagoons, fencing, terraces, rock check dams and other constructed means of reducing pollutant loading to surface water and ground water.

BMPs are active management strategies that attempt to address the underlying problem that is causing impairment. Rest-rotation grazing strategies are a good example. The intent of BMPs is to avoid making the impact in the first place or adopting management strategies that allow natural healing to occur under management. BMPs are a preferred option because they tend to be applied on a landscape scale. However, they can be a challenge to implement because land managers and users are required to alter existing practices or adopt new ones. BMPs might also require structural or mitigation measures such as upland water developments or pasture fencing, in order to be fully implemented.

Restoration attempts to restore the integrity and relationships between all system components. Restoration is the gold standard because it focuses on ecological processes that maintain and restore watershed functions. A restored system is self-maintaining, resilient, and can achieve full site potential once ecological system/relationships are restored. Restoration may require a combination of other practices to succeed.

6 Programs that Protect and Improve Water Quality

While NMED is the lead agency for the NPS Management Program, several agencies are charged with managing natural resources for their sustainable use. Laws such as the Federal Land Policy and Management Act of 1976 require land management agencies to protect surface water quality, and thus some agencies are required to assist with implementing aspects of this plan. This section describes several State, federal, and local agencies with a role in implementing the NPS Management Program. Several of these agencies are responsible for financial assistance programs some of which include components for water quality improvement or protection. More detail on these funding sources, as well as funding through private sources, is provided in Appendix C

In New Mexico, approximately 34% of lands are owned by the public and managed by the Federal Government. Federal land management is of great concern to the State because of the large portion of the State's waters located within federal lands. An additional 12% of lands are managed directly by State agencies. 11% lies within the lands of Indian nations, pueblos, and tribes, and 44% is owned or managed by local governments and private landowners.

The NPS Management Program is focused on federal, State, and local programs that can influence and support beneficial land management by public agencies and private individuals. Land management practices, including water quality BMPs, are implemented by land owners, operators, and management agencies.

The SWQB hopes to improve coordination and cooperation by participating in the planning efforts of other agencies and through the review and updating of interagency MOUs. The SWQB also intends to make Section 319 funds available to other agencies through competitive project development processes to assist with implementing the program through their watershed-based efforts. Unless specifically indicated, the costs of programs described below will not be considered non-federal NPS Management Program costs for the purpose of matching CWA Section 319 grants. Nor will they be considered federal costs, unless specifically indicated, for the purpose of calculating non-federal match requirements.

6.1 Nonpoint Source Management Program Lead Agency - New Mexico Environment Department

With submittal of this NPS Management Program plan, the Governor of New Mexico designates NMED the lead agency for developing, implementing, and coordinating the NPS Management Program. As lead agency, NMED has primary responsibility for assessing NPS impacts on both surface water and ground water, and for enforcement of specific regulations as adopted by the WQCC. The Cabinet Secretary of the Department, or a designated staff member, serves on the WQCC pursuant to NMSA 1978, Section 74-6-3.A(1). The present organization of NMED is summarized in Figure 9. The SWQB is the main bureau which implements CWA programs, including much of the NPS Management Program. Staff members of the GWQB, Construction Programs Bureau, Department of Energy Oversight Bureau, Environmental Health Bureau, Drinking Water Bureau, and Solid Waste Bureau are also involved in management and control of surface water and ground water NPS concerns. Frequent intra-agency meetings, as well as informal

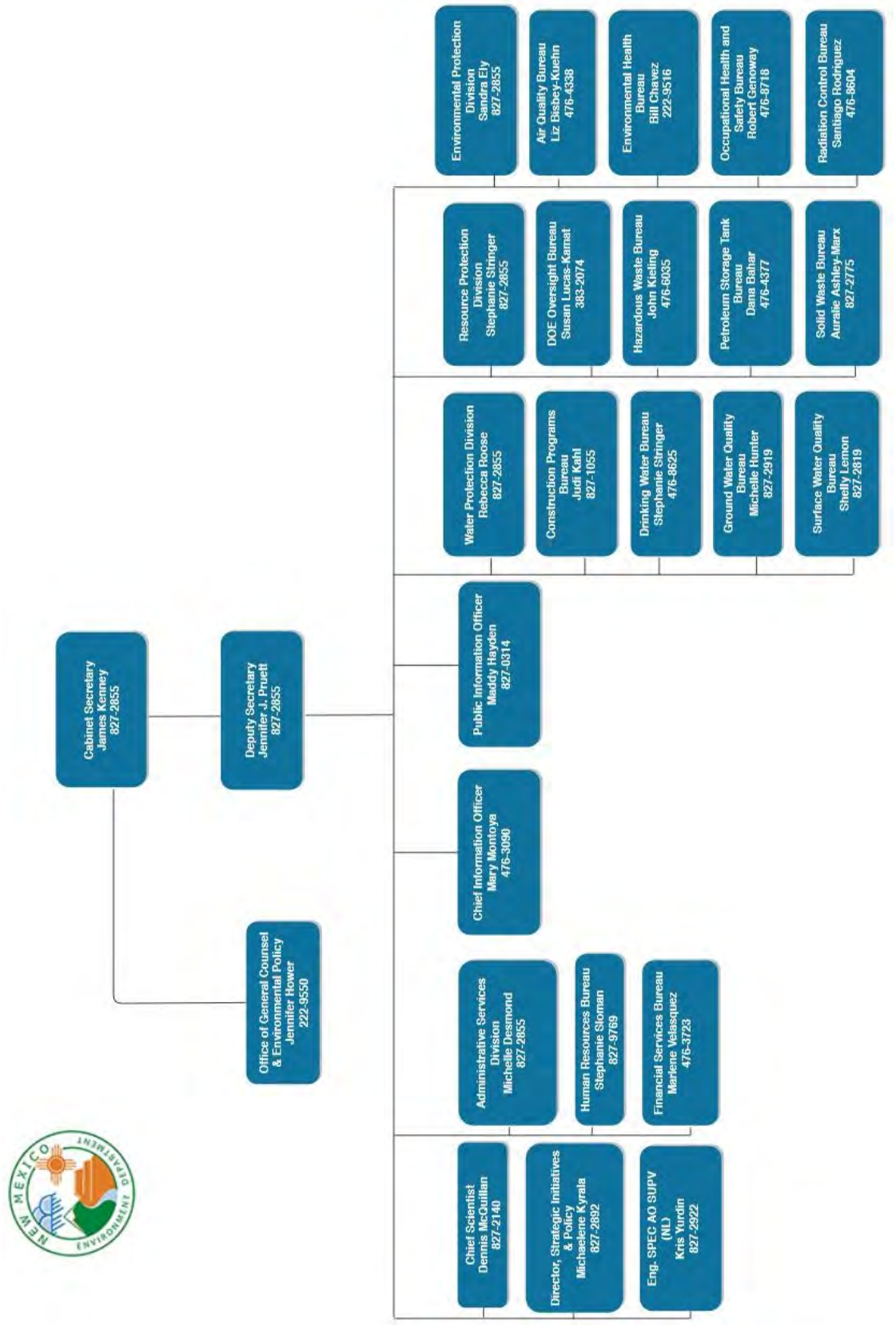

Figure 9: NMED Organizational Chart (March 6, 2019, available on line at https://www.env.nm.gov/about-us).

discussions, are held to provide educational opportunities, ensure coordination, and to transfer information.

6.1.1 State Regulations

State regulations applicable to surface water protection under the NPS Management Program include reporting and clean-up of spills (20.6.2.1203 NMAC), and prohibiting placement of refuse in a watercourse (20.6.2.2201 NMAC). Environmental Improvement Board regulations applicable to the NPS Management Program are those governing individual on-site liquid waste disposal systems (septic tanks). NMED has enforcement responsibilities for several 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 Water Quality Act (WQA), petroleum storage tank regulations under the New Mexico Hazardous Waste Act (HWA), and hazardous waste management regulations under the HWA. These regulations have proven effective in preventing pollution or mitigating its effects from sources to which they apply. Stringent solid waste management regulations have also been adopted under the New Mexico Solid Waste Act. Improvement of enforcement of regulations pertaining to disposal of refuse in a watercourse (20.6.2.2201 NMAC) through documentation of procedures and reporting is a goal of the NPS Management Program for the period outlined in this plan. Enforcement of other regulations is not specifically addressed in the NPS Management Program because they are mainly applicable to point sources. NMED routinely uses these regulations to protect both surface water and ground water quality. Normal ongoing internal processes ensure that these regulatory programs are, and will be, coordinated with the NPS Management Program.

6.1.2 Surface Water Quality Bureau

The SWQB coordinates with other NMED programs to ensure that surface water and ground water NPS concerns are considered in departmental 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. Bureau chiefs within NMED meet as needed on a case-by-case basis.

Some state funds used to support SWQB staff and water quality lab analyses are considered non-federal NPS Management Program costs (i.e., match to CWA Section 319 grants). These costs are described in Section 319 grant applications and work plans.

River Stewardship Program

The River Stewardship Program is a state-funded river restoration program managed within SWQB. The goal of the River Stewardship Program is to fund projects that enhance the health of rivers by addressing the root causes of poor water quality and stream habitat. The River Stewardship Program builds on the success of past efforts with Section 319 CWA funding and prior state funding for watersheds, rivers and wetlands.

The objectives of the River Stewardship Program include:

- Enhancing the economic benefits of healthy river systems, such as improved opportunities to hunt, fish, float and view wildlife;
- Restoring or maintaining the hydrology of streams and rivers to better handle overbank flows and reduce flooding downstream;
- Providing match required to leverage federal CWA grants, ensuring that New Mexico continues to receive these funds.

Projects are selected through a competitive selection process that complies with state procurement rules. Evaluation criteria ensure that projects are technically sound, community-based, and stakeholder driven. Evaluation criteria favor projects that improve water quality, enhance fish and wildlife habitat, support local economies, and reduce downstream flood hazard.

The New Mexico Legislature has appropriated a total of $5.3 million since 2015 to fund restoration projects through the River Stewardship Program. The table below provides a summary of funding by year. More information on the projects is available at: www.env.nm.gov/nmed_319_and_rsp_project_list.

State Fiscal Year	Amount (in millions)	Use of funds
2015	$2.3	12 restoration projects were funded. These projects were completed on or before June 30, 2018.
2016	$1.0	6 restoration projects were funded. These projects will be completed on or before June 30, 2019.
2017	$1.5	8 restoration projects were funded. These projects will be completed on or before June 30, 2020.
2018	$0	No funds were appropriated for the River Stewardship Program for FY 2018.
2019	$0.5	A Request for Proposals is in development to select projects to support with these funds. These projects will be completed on or before June 30, 2022.

Watershed Protection Section

Within the SWQB, WPS coordinates and implements major portions of the NPS Management Program. Coordination allows for reporting of water quality concerns resulting from inappropriate management practices, identifying new NPS concerns, and documenting the effectiveness of watershed-based efforts at addressing NPS pollution problems. The major responsibilities of WPS are planning and implementing effective use of Section 319 funds (described in greater detail in Sections 3,4, and 5 above), providing technical oversight of some state-funded river restoration projects, administering the New Mexico Wetlands Program, providing oversight to the United States Army Corps of Engineers (USACE) Section 404 permitting program through water quality certifications, and permit application reviews under the New Mexico Mining Act.

Wetlands are integral to preventing NPS pollution from impairing surface or ground water. WPS has established a Wetlands Program that encourages watershed groups to develop WAPs and to

identify, assess, protect, and restore wetland resources. The Wetlands Program is also integrated into other SWQB programs, including development of water quality standards for wetlands and development and implementation of appropriate monitoring methods to assess wetlands against their standards.

The State Water Quality Management Plan describes SWQB responsibilities to certify Section 404 permits. WPS staff reviews joint Section 401/404 applications to determine the effects of proposed activities and to develop mitigation measures. This review is limited to determining if a proposed project will comply with applicable sections of the CWA and New Mexico statutes. This review may result in an unconditional certification, conditional certification, or denial of certification under Section 401 of the CWA. The USACE enforces Section 404 regulations on a case-by-case basis, including enforcement of conditions associated with Section 401 certification. WPS staff routinely visit project sites and report any apparent permit violations to the USACE.

The WPS participates in the Mining Act Reclamation Program administered by the GWQB. Pursuant to Subpart 302.G of the New Mexico Mining Act Rules (19.10.3 NMAC), the SWQB is required to review permit applications and inspect the physical sites identified in the permit. Potential impacts to surface waters resulting from the actions proposed in the permit must be identified and BMPs to prevent or mitigate surface water impacts are recommended for inclusion in the permit conditions.

Point Source Regulation Section

The Point Source Regulation Section (PSRS) within the SWQB assists EPA in implementing its National Pollutant Discharge Elimination System (NPDES) permitting program. New Mexico is one of the few states that do not directly issue NPDES permits, but PSRS meaningfully assists EPA with NPDES by conducting and maintaining a comprehensive surface water quality monitoring program for New Mexico's regulated community of industrial and municipal effluent and stormwater dischargers. The PSRS also assures that point source discharges within the state comply, and are compatible, with applicable state law, water quality standards and the State Water Quality Management Plan. The PSRS conducts compliance inspections, provides information to the regulated community and the public, reviews federally issued NPDES permits for municipal wastewater treatment plants, electrical generating stations, fish hatcheries, mines, stormwater discharges, and other regulated entities, and provides oversight of discharging facilities.

Monitoring, Assessment, and Standards Section

MASS is composed of the Standards, Planning, and Reporting Team, the Monitoring Team, and the Assessment and TMDL Team. The Standards, Planning, and Reporting Team focusses on water quality standards development, interpretation of standards, quality assurance, and maintenance of the Water Quality Management Plan and Continuing Planning Process. Like many states, MASS uses a targeted, rotational watershed approach to ambient water quality monitoring. Beginning in 2015, the Monitoring Team began implementing two-year monitoring surveys. The multi-year approach allows for additional sampling events and long-term instrument data collection and provides an opportunity for a mid-survey assessment to tailor data collection in the second year of monitoring. In addition, the survey can more effectively capture seasonal and annual variability in water quality and mitigate the influence of extreme hydrologic events, such

as drought or flood, occurring in one year of the survey. The Assessment and TMDL Team is responsible for assessing waters against standards, producing the biennial *State of New Mexico Clean Water Act §303(d)/§305(b) Integrated Report*, developing TMDLs, and preparing TMDL alternatives in cooperation with WPS. As noted in Section 5.2, a WBP may serve as a TMDL alternative for a stream in Category 5-alternative. The water quality assessment program carried out by MASS, with the assistance of other agencies and bureaus, is a major component in evaluating the success of the NPS Management Program. These assessments are mandated by Section 106 of the CWA (33 U.S.C. § 1256). Under this revised NPS Management Plan, MASS will contribute water quality data, assessments, and technical analysis to assist with WBP development in at least one pilot watershed, to explore alternatives to TMDL development. More information on the assessment process and how MASS contributes to watershed-based planning is in Sections 5.1 and 5.2.1 above.

6.1.3 Ground Water Quality Bureau

Ground water is an important source of drinking water in New Mexico. The role of the GWQB is to protect the environmental quality of New Mexico's ground water resources as mandated by the WQA, the Ground and Surface Water Protection Regulations (20.6.2 NMAC), the Supplemental Permitting Requirements for Dairy Facilities (20.6.6 NMAC), the Supplemental Permitting Requirements for Copper Mine Facilities (20.6.7 NMAC), and to identify, investigate and clean-up contaminated sites that pose significant risks to human health and the environment. The GWQB issues ground water pollution prevention permits; implements the Department's responsibilities under the New Mexico Mining Act (NMSA 1978, §§ 69-36-1 to -20) to ensure that environmental issues are addressed and standards are met; oversees ground water investigation and remediation activities; and identifies, investigates and remediates inactive hazardous waste sites. The GWQB implements these programs through the federal Superfund program, agreements between the State and responsible parties, and the voluntary remediation regulations. This bureau also strives to increase industry and public understanding and awareness of the importance of safe ground water supplies in sustaining the quality of life in New Mexico for this and future generations, and the importance of protecting ground water quality through pollution prevention initiatives. Three programs within the GWQB regulate facilities that have the potential to contaminate ground water: the Pollution Prevention Section, the Agricultural Compliance Section, and the Mining Environmental Compliance Section.

Some state funds used to support GWQB staff and programs are considered non-federal NPS Management Program costs, *i.e.*, match to CWA Section 319 grants. These costs are described in Section 319 grant applications and work plans.

Pollution Prevention Section

The Pollution Prevention Section (PPS) reviews and approves ground water discharge plan applications and issues pollution prevention permits, known as "Discharge Permits," for discharges that have the potential to impact ground water quality pursuant to Subparts III and V of the WQCC regulations. Large septic systems that discharge more than 5,000 gallons of domestic wastewater per day are regulated under this program.

Ground water Discharge Permits address discharges including domestic septic systems. The PPS program also addresses unauthorized discharges such as spills and abatement of ground water contamination related to various permitted facilities. The discharge permitting process includes public notification, a public comment period and a public hearing in situations where there is substantial public interest. Permits are issued for five-year terms and must be renewed to provide continuous coverage. PPS manages approximately 406 permits for large capacity domestic waste disposal systems (67 for septic tank leachfields, and 339 for advanced treatment systems).

Agricultural Compliance Section

The Agricultural Compliance Section (ACS) also reviews and approves ground water discharge plan applications and issues Discharge Permits, for discharges that have the potential to impact ground water quality pursuant to Subparts III and V of the WQCC regulations. Large septic systems (discharging more than 5,000 gallons per day of wastewater) used by agricultural facilities, and Concentrated Animal Feeding Operations (CAFOs) that discharge agricultural wastewater land-applied to crops, are regulated under this program.

The program also addresses unauthorized discharges such as spills and abatement of ground water contamination related to various permitted facilities. The discharge permitting process includes public notification, a public comment period and a public hearing in situations where there is substantial public interest. Permits are issued for a five-year term and must be renewed to provide continuous coverage. ACS manages approximately 189 permits for CAFOs and 50 permits for septic tank leachfields or advanced treatment systems.

Mining Environmental Compliance Section

The GWQB Mining Environmental Compliance Section (MECS) conducts permitting, spill response, abatement and public participation activities listed above for mining facilities in New Mexico. The Mining Team consists of staff from other bureaus including the SWQB, who support these regulatory activities on an as-needed basis. The hardrock mines in New Mexico are responsible for significant NPS contamination of ground water and surface water from acid rock drainage. In addition, the MECS participates in the implementation of the New Mexico Mining Act by reviewing and commenting on mine permits and closeout plans, coordinating environmental protection requirements at mine sites with the Mining and Minerals Division of EMNRD, and providing determinations that environmental standards will be met after closure of New Mexico mining operations. MECS manages approximately 40 active mining permits.

6.1.4 Environmental Health Bureau – Liquid Waste Program

NMED's Liquid Waste Program, within the Environmental Health Bureau, is directed at the prevention of surface and ground water contamination from on-site liquid waste disposal practices (including septic tanks). An ambitious, ongoing monitoring program, undertaken by the Liquid Waste Program, has documented serious ground water pollution from these sources in many parts of the state. The Liquid Waste Program addresses these problems through a permitting program for individual liquid waste systems discharging 5,000 gallons per day or less.

The Liquid Waste Program maintains lists of approved products for the installation of septic tanks, advanced treatment systems, and proprietary drainfield products. Each tank or product must be reviewed and approved by NMED before installation. Proprietary drainfield products must be reviewed by the Wastewater Technical Advisory Committee (WTAC).

6.1.5 Construction Programs Bureau

The Construction Programs Bureau of NMED administers the Clean Water SRF program. This program is managed by the state and utilizes state and federal funding. Under the program, EPA provides grants to capitalize state loan funds. The states, in turn, provide zero percent or low interest loans to communities, individuals, and others for high-priority water-quality activities. As money is paid back to the SRF, new loans are made to other recipients. NPS control programs are specifically identified as eligible for loans from the program. The SRF program is a source of funding available to counties, municipalities, SWCDs, sanitation districts, other local agencies, and non-profit organizations for any activity that a state has identified in its NPS Management Program.

The Construction Programs Bureau also has responsibility for projects funded by the State Water Project Fund, created by the Water Project Finance Act (NMSA 1978, §§ 72-4A-1 to -11). Priorities for the Water Project Fund are set by the Water Trust Board, a 16-member body that includes the Secretary of Environment and other natural resource executives that recommends projects to the Legislature to be funded through the State Water Project Fund. The Water Trust Board recommends funding to the Legislature for four categories of water-related projects. One of these categories is watershed restoration and management. The project management policies of the Water Trust Board identify water quality improvement, water quality protection, and implementation of WBPs among the purposes of watershed restoration and management projects and dedicate 10-20% of funds to this category.[12]

The Construction Programs Bureau requests technical support including review of completed work from the SWQB on an as-needed basis. The costs of project oversight, and the costs of individual watershed restoration and management projects, may be considered NPS Management Program costs in the future, and pending EPA review and approval may constitute a match for Section 319 funding.

6.1.6 Department of Energy Oversight Bureau

The mission of the Department of Energy Oversight Bureau is to ensure that activities at DOE facilities in New Mexico are managed and controlled in a manner that is protective of public health, safety and the environment. The mission is achieved through four primary objectives:

- Assessing DOE management of its New Mexico facilities to ensure attainment of public health and environmental standards;
- Providing inputs to DOE for prioritization of its cleanup and compliance activities;
- Developing and implementing an independent monitoring and oversight program; and
- Increasing public knowledge and awareness of environmental matters at DOE facilities in New Mexico.

In order to meet these objectives, the DOE Oversight Bureau continues to develop and implement vigorous monitoring and assessment programs at Los Alamos National Laboratory (LANL), Sandia National Laboratories, the Waste Isolation Pilot Plant, and areas surrounding these facilities. These programs include both joint and independent evaluations for environmental and public health protection of all media, including air, soils and sediments, ground water, and surface water. The focus of these evaluations is on the potential contaminant levels of heavy metals, organic and inorganic compounds, and radionuclides.

This bureau's activities are funded through a grant from the DOE, in accordance with an "umbrella work plan."

6.1.7 The Petroleum Storage Tank Bureau

The Petroleum Storage Tank Bureau (PSTB) carries out the legislative mandate to develop and implement a regulatory program to protect public health and the environment from releases from regulated above-ground storage tanks and underground storage tanks. The PSTB also has primacy to implement the federal underground storage tank program outlined in 40 C.F.R. Part 281, as provided in 40 C.F.R. 281 Subpart C. The PSTB accomplishes this mandate by overseeing and ensuring compliance with installation, operation and maintenance, modification, repair, and closure requirements for tank systems. These activities prevent and detect spills, overfills, and corrosion of tanks, piping, and other metal components. PSTB also oversees and implements investigation and corrective action at sites contaminated by releases from regulated storage tank systems.

The PSTB has four programs, Tanks Operation and Support Program, Prevention and Inspection Program, Remedial Action Program, and the Reimbursement Section, that perform the following activities to ensure compliance with 20.5 NMAC.

1. Maintain a registry of all regulated petroleum storage tanks, certified installers, and storage tank release sites.

2. Inspect facilities at least once every three years to ensure that owners are in compliance with the Petroleum Storage Tank Regulations to minimize the probability of releases to the environment.

3. Provide compliance assistance or, as appropriate, take enforcement actions against non-compliant owners and operators.

4. Approve and oversee corrective action of releases from regulated storage tank sites to ensure expedient and cost-effective corrective action.

5. Encourage compliance or, as appropriate, take enforcement actions against recalcitrant owners and operators of leaking storage tank facilities.

During the term covered by this NPS Management Plan, removal, upgrade, replacement, and remediation of aging or leaking regulated petroleum storage tanks will be considered components

of the NPS Management Program, which may be eligible for support with SRF loan funds (pending review of each application and applicant for eligibility).

6.2 Federal Nonpoint Source Management Programs

6.2.1 USDA USFS (Forest Service)

- **NPS categories to be addressed: rangeland grazing, wildlife management, silviculture, recreation, construction, legacy roads and trails, resource extraction.**

The USDA USFS (also herein referred to as the "Forest Service") manages approximately 9.2 million acres of land in New Mexico. These lands include approximately 3,776 miles of the state's 6,590 miles of perennial streams. Most of the stream miles on USFS land are high quality mountain streams. All of New Mexico's ONRWs are on lands managed by the USFS. The USFS is a designated management agency for NPS control in New Mexico and 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 unmanaged or improperly managed 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 (Forest Plans), 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 the National Forest Management Act (16 U.S.C § 1600, *et. seq.*) (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.

Forest Service soil scientists and hydrologists work with interdisciplinary teams to recommend BMPs, using guidance from 36 C.F.R. Part 220 (for NEPA procedures), Forest Service Handbook 1909.15 (for guidance on conducting environmental analysis)[***], Forest Service Technical Guide FS-990a (National Core BMP Technical Guide[†††]), and various Forest Service manuals and handbooks specific to different types of projects. Their analysis and recommendations are included in specialists' reports which accompany forest planning and decision documents.

Projects of the USFS requiring analysis under NEPA that might affect water quality are reviewed for consistency with the NPS Management Program and goals related to water quality protection by WPS staff. The most relevant types of projects or actions that receive such review are Environmental Assessments or categorical exclusions related to grazing allotment management plans, Environmental Impact Statements for forest restoration or forest fire hazard reduction projects, travel management plans that may affect the amount of use in certain areas by off-road vehicles, and Forest Plan revisions or amendments. Forest Plan revision is currently ongoing with

[***] Forest Service Handbook 1909.15 is available at www.fs.fed.us/cgi-bin/Directives/get_dirs/fsh?1909.15.
[†††] Technical Guide FS-990a is available at www.fs.fed.us/biology/resources/pubs/watershed/FS_National_Core_BMPs_April2012.pdf.

each National Forest in New Mexico. Each plans to complete a Forest Plan revision between 2019 and 2020. WPS staff will participate in forest planning in each forest to encourage future coordination and implementation of the NPS Management Program.

The Watershed Condition Framework (WCF) is a policy development within USFS that may be incorporated into Forest Plan objectives. WCF rates the condition of 12-digit watersheds according to several indicators that cross a range of resource concerns for which USFS has responsibility. WCF establishes performance measures in that each National Forest or Ranger District can identify the characteristics of watersheds which may be changed through management to improve the condition rating. In many watersheds, water quality standards attainment and related characteristics of aquatic ecosystems are among the conditions likely to be identified for improvement. USFS has begun developing plans called Watershed Restoration Action Plans (WRAPs) for watersheds that are targeted for improvement. WPS staff will assist USFS in developing these plans and, where applicable, will provide technical guidance to meet watershed-based planning elements such as load reduction estimates for management measures. More information on WCF (including links to WRAPs) is available at: https://www.fs.fed.us/naturalresources/watershed/condition_framework.shtml.

Of prime importance among USFS responsibilities is management of fire, including prescriptive wildland fire use, fire suppression, and rehabilitation of fire impacts to watersheds. USFS recognizes the importance of fire in New Mexico's forest ecosystems and seeks to utilize fire or allow fire to function naturally where possible. A framework for restoring southwestern forests to withstand fire and other disturbances is described in a publication from the USFS Rocky Mountain Research Station.[13]

Dry and wet periods in New Mexico forests are roughly cyclical, and in the most recent dry period of 2011-2013, over 800,000 acres burned on National Forest lands in New Mexico. Over 100,000 of these acres burned with high severity, and BAER expenditures surpassed $35 million. BAER treatments included over 80,000 acres of seeding, approximately 35,000 acres of mulching, 122 miles of road work (often installation of proper drainage), stabilization or protection of over 1,200 cultural sites, hazard tree removal, and strategic channel treatments in 32 miles of streams (e.g., installation of grade control structures, bank stabilization, and removal of debris near bridges and culverts), over this period. Similar post-fire rehabilitation on federal lands may be critical for reducing the impacts of fire on water quality over the period covered by this plan.

6.2.2 USDA Farm Service Agency

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

The USDA Farm Service Agency (FSA) is responsible for administering the federal Conservation Reserve Program (CRP), which was signed into law by President Ronald Reagan in 1985 and is USDA's largest conservation program. CRP is authorized through 2018 under the Agricultural Act of 2014 with an annually decreasing enrolled acreage cap. Additionally, the contract portion of the Grassland Reserve Program enrollment has been merged with CRP, known as the Conservation Reserve Program – Grasslands.

CRP is a land conservation program where in exchange for a yearly rental payment, farmers who voluntarily enroll in the program agree to remove environmentally sensitive land from agricultural production and plant species that will improve environmental health and quality. Contracts for land enrolled in CRP are 10-15 years in length. The long-term goal of the program is to re-establish valuable land cover to help improve water quality, prevent soil erosion, and reduce loss of wildlife habitat with an annually decreasing enrolled acreage cap.

CRP encourages farmers and ranchers to protect their most fragile farmland and marginal pastureland by conserving and improving soil, water, and wildlife resources. Participants receive cost-share assistance to convert highly erodible and other environmentally sensitive acreage devoted to production of agricultural commodities to long term native habitat. Producers enrolled in CRP are also offered annual rental payments and incentives for implementing approved conservation practices. Practices eligible for cost-share are those selected by a farmer-elected County Committee from a list of practices approved by state FSA Committees and the U.S. 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 NRCS, each acre under CRP contract reduces erosion by an average of 19 tons of topsoil per 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.

The FSA administers the CRP while the NRCS, USFS, New Mexico Cooperative Extension Service (NMCES), and other agencies provide technical and educational assistance.

The Farm Security and Rural Investment Act of 2002, or “2002 Farm Bill,” H.R. 2646, Pub. L. 101-171, 116 Stat. 134, included a national cap on the CRP area of 39.2 million acres. In April 2008, the total enrollment was 34.7 million acres. The 2008 Farm Bill, titled the “Food, Conservation, and Energy Act of 2008,” H.R. 2419, Pub. L. 110–234, 122 Stat. 923, authorized the CRP through fiscal year 2012, and capped program area at 32 million acres starting on Oct 1, 2009. For this reason, the CRP acres in New Mexico decreased in federal fiscal years 2010 and 2011. However, the 2008 Farm Bill explicitly recognized "addressing issues raised by state, regional, and national conservation initiatives" with respect to management of the CRP, and the CRP does have a riparian buffer sub-program which is not subject to a cap. Currently, 7,880 acres in New Mexico are part of that program. The Agricultural Act of 2014, or the “2014 Farm Bill,” H.R. 2642, Pub. L. 113-79, 128 Stat. 649, included the CRP with modifications. The acreage cap gradually lowered to 24 million acres for fiscal years 2017 and 2018. At the end of FY2017, 120,056 CRP acres expired, leaving 396,518 CRP contracted acres in the State of New Mexico.

In addition to conservation concerns, FSA also has primary responsibility for making producer eligibility determinations regarding Conservation Compliance as required by 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.

6.2.3 USDA Natural Resources Conservation Service

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

The USDA NRCS, through programs such as EQIP and the Conservation Technical Assistance (CTA), among others, provide 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; hay land; 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 field offices, includes helping landowners develop conservation plans for implementation by the landowner/operator that include protection and enhancement of water quality through NPS control. The focus of NRCS activities is on a voluntary basis by landowners and managers to affect wise land use. Cost-share programs are available for implementation of conservation practices through both the NRCS and the FSA.

NRCS emphasizes 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 Guides (FOTGs) include water quality management information. FOTGs are the primary scientific references for NRCS. They contain technical information about the conservation of soil, water, air, and related plant and animal resources. FOTGs have been developed for each NRCS field office. FOTGs are composed of data bases, computer programs, technical references, and other materials, available at: www.nrcs.usda.gov/wps/portal/nrcs/main/national/technical/fotg. Other programs administered by the NRCS that provide educational and technical assistance are discussed below.

The Small Watershed Program is another federal program managed by NRCS. It 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 2014 Farm Bill, passed the U.S. Congress in early 2014. In the area of conservation, and compared with the previous 2008 Farm Bill, the 2014 Farm Bill consolidates conservation programs for flexibility, accountability and adaptability at the local level, links basic conservation practices to crop insurance premium subsidies for highly erodible lands and wetlands, builds upon previous successful partnerships, and encourages agricultural producers and partners to design conservation projects that focus on and address regional priorities. These changes are still being implemented by the FSA and the NRCS through 2014. Additional information on Farm Bill programs is available at: www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/farmbill.

The 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 re-vegetation, wetland creation, and mine reclamation.

6.2.4 United States Department of the Interior, Bureau of Land Management

- **NPS categories to be addressed: Rangeland and Grazing/Wildlife Management, Resource Extraction, Recreation, and 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. Approximately 215 miles of perennial streams are located on BLM land. Approximately 69 miles of these streams are listed as impaired on the *State of New Mexico CWA §303(d)/§305(b) Integrated Report and List*, and have TMDLs for the impairment parameters, or are listed as impaired under Category 4C. Potential sources of NPS pollutants on BLM land include rangeland grazing, mining operations, oil and gas development, recreation, and utility line and road construction and maintenance.

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

Of particular state concern to New Mexico regarding NPS control on BLM lands, are development and implementation of standards and guidelines for rangelands and riparian areas. Development of grazing management to accomplish standards and guidelines on BLM land is accomplished through activity plans and site-specific NEPA analysis documents, such as Environmental Assessments, on proposed actions that establish site-specific objectives and mitigation within the general objectives of a particular RMP. The riparian area management program stresses improvement of water quality as a prime objective of the program. This is achieved by annual monitoring of riparian reaches to determine whether reaches are in proper functioning condition (PFC). For areas not meeting PFC, actions are taken to improve PFC status in future years. BLM is cooperating with other federal and state agencies and private groups to identify, restore, and manage all riparian areas on BLM lands in New Mexico. BLM also administers “Restore New Mexico,” a program of landscape-scale restoration efforts to restore grasslands, woodlands, and riparian areas to a healthy and productive condition. Restore New Mexico provides an opportunity for BLM to assist with meeting objectives described in Section 3.

Projects of the BLM requiring analysis under NEPA that might affect water quality are reviewed for consistency with the NPS Management Program and goals related to water quality protection by WPS staff. The most relevant types of projects or actions that receive such review are Environmental Assessments or categorical exclusions related to grazing allotment management plans, documents related to development of oil and gas leases, and Environmental Impact Statements for resource management plans.

6.2.5 U.S. Department of Interior Fish and Wildlife Service

- **NPS categories to be addressed: Agriculture, rangeland grazing, wildlife management, recreation, construction.**

The U.S. Fish and Wildlife Service (USFWS) is the primary agency responsible for administering the federal Endangered Species Act, Migratory Bird Treaty Act, and Fish and Wildlife Coordination Act, some provisions of which relate to pollution-induced habitat degradation. Various USFWS programs such as Partners for Fish and Wildlife, Wildlife and Sport Fish Restoration, and Ecological Services work in partnership with other agencies and organizations to identify sources of pollution, investigate the effects of pollution on fish and wildlife habitat, restore pollution-degraded habitats, provide advice to minimize pesticide use, and provide technical expertise or aid to federal, state, tribal or private entities through grants and conservation agreements.

The USFWS's Partners for Fish and Wildlife Program works with private landowners, local and county agencies, municipalities, Indian nations, pueblos, and tribes, private organizations, corporations, schools, and others to restore and protect wildlife habitat on private or tribal lands. The USFWS focuses on projects in ecosystems and watersheds where conservation efforts will provide the greatest benefit for Federal Trust Species to include migratory birds or federally-listed species. Often, restoration of wildlife habitat involves the improvement of upland, wetland or riparian conditions which can reduce NPS pollution and improve water quality and quantity. Through cost-share agreements, up to $25,000 is available for each Partners for Fish and Wildlife Program project. Before beginning a habitat restoration project, a private landowner must sign an agreement such that the landowner will not return the project area to its former use or alter or remove any project components, *e.g.* fences, riparian vegetation, for a minimum of 10 years.

6.2.6 U.S. Department of Interior Bureau of Indian Affairs

- **NPS categories to be addressed: Agriculture, rangeland grazing, wildlife management, recreation.**

The United States government has a unique legal and political relationship with Indian nations, pueblos, and tribes as provided in the Constitution of the United States, treaties, court decisions and federal statutes. Within the government-to-government relationship, the Bureau of Indian Affairs (BIA) provides services directly or through contracts, grants, or compacts to 562 federally recognized tribes with a service population of about 1.9 million American Indian and Alaska Natives. While the role of the BIA has changed significantly in the last three decades in response to a greater emphasis on Indian self-governance and self-determination, tribes still look to the BIA for a broad spectrum of services. The BIA offers an extensive scope of programs that covers the

entire range of federal, state and local government services, including several that affect water quality.

The Division of Environmental and Cultural Resources Management within BIA provides leadership, guidance, policy and support for the protection of environmental and cultural resources. The Division assures compliance of other BIA programs with applicable environmental and cultural resource statutes.

6.2.7 U.S. Department of the Army, Corps of Engineers

- **NPS categories to be addressed: Recreation, hydromodification**

The USACE Albuquerque District is responsible for several missions that have potential to impact water quality and NPS water pollution. These missions include civil works, emergency management, environmental programs, recreation at USACE reservoirs, and regulation of dredge and fill material into waters of the U.S.

The Regulatory Division is the primary USACE interface with the New Mexico NPS Management Program. The Regulatory Division is responsible for issuing and enforcing permits under the authority of Section 404 of the CWA. Section 404 is intended to control discharges of dredge or fill materials into waters of the United States, including some wetlands and ephemeral waters. Section 401 of the CWA requires certification of compliance with state or tribal water quality standards for any discharge of dredged/fill material permitted under Section 404. For discharges to non-tribal waters in New Mexico, NMED's SWQB is responsible for the Section 401 certification process. The State Water Quality Management Plan describes SWQB responsibilities to certify CWA Section 404 permits. Discharges to tribal waters require certification by the tribe, or by EPA for tribes that do not have water quality standards. Current information on the USACE Albuquerque District Regulatory Program is available at: www.spa.usace.army.mil/Missions/Regulatory-Program-and-Permits.

Through its civil works mission, USACE also implements ecosystem restoration projects that can directly or indirectly address water quality and NPS water pollution. The Middle Rio Grande Bosque Restoration Project, Sandia Pueblo to Isleta Pueblo, is an example of such an initiative. The project will focus on improvements to native bosque habitat, reestablishing fluvial processes to a more natural condition, and enabling scour and sediment mobilization within the Rio Grande channel. The project also restores hydrologic processes between the bosque and river by promoting overbank flows and increased ground water recharge, while reducing the risk of catastrophic fires. The project protects, extends, and improves areas of potential habitat for listed species. There are approximately 261 acres to be restored within 26 miles of the Rio Grande valley at 10 locations.

Protecting surface water resources is also part of the USACE recreation mission. Of particular concern is the spread, through recreation activities, of harmful plants, animals and other organisms. These aquatic nuisance species can hitch a ride on clothing, boats, and items used in the water and can be spread from one water body to another. Under some conditions, these introduced species can become established and create drastic results. USACE implements a public education campaign designed to increase awareness of threats and simple practices that can reduce the spread of nuisance aquatic species.

Additional information regarding USACE missions is available at: www.spa.usace.army.mil/Missions.

6.2.8 Federal Energy Regulatory Commission

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

The Federal Energy Regulatory Commission (FERC) regulates modification of dams and waterways when modification is for non-federal hydroelectric generation. FERC permits for hydroelectric power generation typically include required use of BMPs during construction and operation of facilities. FERC and its licensees consult with the state in development of permits and permit conditions. Additional information about FERC is available at: https://www.ferc.gov/legal/staff-reports/2017/hydropower-primer.pdf.

6.2.9 U.S. Geological Survey

The Water Mission Area of the U.S. Geological Survey (USGS) collects data at numerous ground water and surface water sites throughout New Mexico as part of local and regional studies and through the National Water Quality Assessment (NAWQA) Program. 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 published regularly by USGS on an easily accessible web server. The SWQB uses these data to supplement other data for water quality standards assessment and TMDL development.

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, and improve understanding of the primary natural and human factors that affect water quality conditions.

Topics addressed by the NAWQA program include pesticides, pharmaceuticals, wastewater compounds, volatile organic compounds (VOCs), nutrients, major and trace elements, stable and radiochemical isotopes, and aquatic biota. This information supports the development and evaluation of management, regulatory, and monitoring decisions to protect, use, and enhance water resources. The USGS also continues to publish reports and journal articles for studies undertaken throughout New Mexico.

6.3 Other State Programs

6.3.1 Energy, Minerals, and Natural Resources Department

The chairman of the Oil Conservation Commission, or a designated staff member, and the director of the State Parks Division, or a designated staff member, represent the EMNRD as constituent agencies of the WQCC.

Mining and Minerals Division

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

The Mining and Minerals Division of EMNRD 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.

EMNRD also administers the Mining Act Reclamation Program (MARP), which was created under the New Mexico Mining Act of 1993 to regulate hardrock mining reclamation activities for all minerals except fossil fuels and nonmetallic minerals used in construction.

Forestry Division

- **NPS categories to be addressed: Silviculture, forest road construction.**

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

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 silviculture 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 Forest Improvement Program and New Mexico Forest Stewardship Incentives Program (SIP). The SIP provides for the widest range of practices, such as wetlands protection, disturbed site rehabilitation, and protection or re-establishment of riparian vegetation.

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 silviculture water pollution-NPS assessment to determine the types of BMPs applied.

The New Mexico Forestry Division provides technical assistance to partner agencies and organizations on matters related to forestry, wildland fire and watershed health. Some partnerships are formalized through legal agreements. An agreement between the New Mexico Forestry Division and the NRCS provides for a shared staff position to serve as the New Mexico NRCS State Forester, and the Division’s District staff serve as Technical Service Providers to NRCS Field Offices, Area Offices, and cooperators. A Financial Assistance Agreement with the BLM enables the New Mexico Forestry Division and BLM to collaboratively develop cross-jurisdictional,

landscape-scale forest and woodland restoration treatments for improving forest health and resilience and decreasing wildland fire threat to forests, woodlands and watersheds. In other cases, partnerships are formed to implement grant-funded activities that promote watershed health and water quality. The New Mexico Forestry Division also partners with sister agencies to support common state objectives, such as managing the Watershed Health and Management Subcommittee for the Office of the State Engineer's Drought Task Force.

The New Mexico Legislature significantly increased its support of forest restoration work in 2014, by authorizing the sale of $6.2M in severance tax bonds to "plan, design and construct watershed restoration improvements, including forest thinning, statewide". This legislation was signed into law in March 2014, as part of House Bill 55. The Watershed Restoration Program was expanded in 2015 and 2016, with legislative funds totaling $6M being added. These funds were supplemented by NMDGF Pitman Robertson Federal Funds, for an additional $9.4M for forest and watershed restoration. A total of $21.8M of state and federal funds have been dedicated to the Watershed Restoration Program and have funded a planned 26,403 acres of treatment.

Forest and Watershed Health Office

The New Mexico Forestry Division established the Forest and Watershed Health Office (FWHO) to facilitate and coordinate implementation of the New Mexico Forest and Watershed Health Plan (FWHP).[14] The FWHP contains 20 recommendations for state-level actions needed to achieve ecological restoration across New Mexico's landscapes.

The FWHO coordinates with other entities to improve the efficiency and effectiveness of mutual efforts to protect and restore New Mexico's landscapes. The FWHO coordinator chairs the Coordinating Group whose members represent 20 agencies and organizations and the private sector. The Coordinating Group informs and advises the FWHO and makes recommendations to the State Forester in its role as the Watershed Management Subcommittee. The FWHO, together with other New Mexico Forestry Division staff, the Coordinating Group and its task teams implement action items recommended in the FWHP.

FWHO contributes to watershed health and water quality directly through collaborative project planning, oversight, and implementation and through grant-writing to fund such projects. FWHO participates in state and regional groups and advisory bodies involved in natural resource policy, legislative analysis, grant development and proposal evaluation, outreach and education, and strategic planning that pave the way to more and better work getting done on the ground.

6.3.2 New Mexico Forest and Watershed Restoration Institute

- **NPS Categories to be addressed: Silviculture, rangeland grazing**

The New Mexico Forest and Watershed Restoration Institute (NMFWRI) was authorized by the U.S. Congress, and is funded by the USFS and the New Mexico State Legislature. It promotes, supports, and promulgates two inter-related goals. The first goal is that forest and woodland stands should have many fewer small-diameter trees than currently are common, and that stand structure after a commercial logging operation or pre-commercial thinning should mimic historic patterns of clumps-and-openings. Second, it promotes re-establishing the historic fire regimes of New

Mexico forests, especially the 2-7 year cycle of low-intensity fire in ponderosa pine forests. It is administratively part of New Mexico Highlands University with its office in Las Vegas. It has two sister Institutes at Colorado State University and Northern Arizona University.

The NMFWRI specifically does the following:

- Provides GIS and mapping support to stakeholders that are too small to invest in their own equipment;
- Facilitates collaboration of groups to accomplish landscape-scale forest restoration;
- Provides information on methods and biological effects of thinning and fire to organizations and individuals doing the work; and
- Supports pre- and post-treatment monitoring of forests and woodlands, at levels from stand to landscape.

6.3.3 New Mexico Department of Transportation

- **NPS categories to be addressed: Road construction.**

The New Mexico Department of Transportation (NMDOT) is responsible for the planning, designing, construction and maintenance of New Mexico's federal and state roads and highways. 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 NMDOT.

BMPs are routinely included in operational plans for construction and maintenance projects. The Design Division oversees design and implementation of BMPs. Additional controls are established under the NPDES Program (Section 402(p) of the CWA) for pollution prevention plans on all projects that disturb one acre or more.

Another area in which NMDOT’s mission intersects with the NPS Management Program is in the avoidance, minimization, or mitigation of impacts to waters of the state, including wetlands, as required by Section 404 and (through state certification) Section 401 of the CWA. NMDOT is actively working to increase the effectiveness and reduce the expense of mitigation through an Advance Permittee-Responsible Mitigation (APRM) Program.

6.3.4 State Land Office

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

The New Mexico State Land Office (SLO) administers 8.9 million surface acres and 13 million acres of mineral estate that are held in trust for 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, Farm Service Agency funds and other 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 the 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 SLO 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.

6.3.5 New Mexico Department of Agriculture

- **NPS categories to be addressed: Agriculture, Rangeland Grazing Management, Hydrologic Habitat Modification, Watershed Management.**

New Mexico Department of Agriculture (NMDA) administers regulations concerning distribution and use of agricultural pesticides in New Mexico. The director of the NMDA, or a designated staff member, represents NMDA as a constituent agency of the WQCC. NMDA staff analyze TMDL documents and provide input to agricultural producers on best management practices to aid the rehabilitation of impaired waters.

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, project and program planning assistance, and some financial help to 48 SWCDs in New Mexico. In this capacity, NMDA provides technical support and partnership coordination to implement a wide variety of watershed management projects and programs.

6.3.6 New Mexico State University

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

New Mexico Cooperative Extension Service

The NMCES administers several water quality programs for NPS pollution control that are objective-based with measurable accomplishments. External grants support updating and delivery of New Mexico Farm*A*Syst, a voluntary ground water 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 (https://aces.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

The New Mexico Water Resources Research Institute (WRRI) was established in 1963 by the New Mexico legislature and approved under the federal Water Resources Research Act of 1964. The Institute funds research conducted by faculty and students from universities across the state to address water problems critical to New Mexico and the Southwest. The institute also participates in joint efforts to solve water related problems along the U.S./Mexico border.

Through its support of research and its interaction and cooperation with other water resources entities, the Institute continuously strives to alleviate water problems, working toward ensuring an ample supply of high quality water for future generations. Water quality, including NPS pollution 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 U.S.C. § 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.

The WRRI keeps SWQB informed on research related to NPS activities. For example, for the past three years, the institute has worked with NMED to host an annual conference to support the activities outlined in the Gold King Mine Spill Long Term Monitoring Plan; the institute will produce a proceedings of conference papers in 2019. In addition, NMED is represented on the Program Development and Review Board and the Water Conference Advisory Committee.

6.3.7 New Mexico Department of Game and Fish

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

The NMDGF strategic plan mandates providing information and technical guidance to hunters, anglers, non-consumptive wildlife interests, the Director and the State Game Commission, and all persons or agencies that manage lands resulting in the conservation and enhancement of wildlife habitat and recovery of indigenous species of threatened or endangered wildlife. The NMDGF collaborates with federal, state, and local agencies, tribal governments, non-governmental organizations, and private interests that manage significant land and water areas in New Mexico, to plan and implement habitat improvement projects consistent with the habitat conservation prescriptions recommended in the State Wildlife Action Plan (SWAP)[11] and Statewide Fisheries Management Plan[15]. The NMDGF director, or a designated staff member, represents NMDGF as a constituent agency of the WQCC. NMDGF administers approximately 180,000 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, and administrative sites. 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. NMDGF 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. NMDGF oversees use of BMPs to control erosion from road banks, herbicides used in weed control, and sewage disposal from recreational sites.

Funding applied to NPS efforts by NMDGF comes from the Game Protection Fund (hunting and fishing license sales), the federal Wildlife and Sport Fish Restoration programs, the federal State Wildlife Grant program, and the NMDGF Habitat Stamp program.

NMDGF also administers several wildlife education programs, including Aquatic Resources Education, Project WILD, and Project Wild Aquatic. The Aquatic Resources Education program provides fun and educational ways to introduce kids and adults to the sport of fishing, and to first-hand experiences monitoring watersheds throughout New Mexico. The program is primarily funded by anglers through money provided by the Sports Fish Restoration Act, a federal program that taxes the equipment used by anglers. The goal of Project WILD and Project WILD Aquatic is to assist students of any age in developing the awareness, knowledge, skills, and commitment necessary to result in informed decisions, responsible behavior and constructive actions concerning the environment.

6.3.8 Office of the State Engineer and Interstate Stream Commission

- **NPS categories to be addressed: Agriculture, hydromodification, silviculture, land disposal.**

The Office of the State Engineer (OSE) is charged with administering the state's water resources. The State Engineer has power over the supervision, measurement, appropriation, and distribution of all surface and ground water in New Mexico, including streams and rivers that cross state boundaries.

The Interstate Stream Commission (ISC) is charged with separate duties including protecting New Mexico’s right to water under eight interstate stream Basins, ensuring the state complies with each of those Basins, as well as water planning. The State Engineer is the Secretary of the Interstate Stream Commission.

Office of the State Engineer

The Water Resources Allocation Program within OSE is responsible for processing water rights applications, conducting the scientific research for making those water rights decisions, maintaining water rights records, and enforcing any conditions or restrictions on water use. Water masters in the program measure stream flow, allocate the water within a stream system based on

state water law, and regulate and control diversions. Staff also inventory water resources, monitor water use, and cooperate with the USGS in monitoring ground water levels throughout the state. Published data are available to the public through the OSE library. Additional duties are licensing all well drillers, maintaining and updating the rules and regulations of the State Engineer, inspecting non-federal dams, evaluating subdivision water-supply plans submitted by counties, and promoting water conservation.

In addition to water-rights and water adjudication responsibilities, the OSE maintains a Water Conservation Program that coordinates water conservation activities for the State of New Mexico. The program goals are to increase awareness regarding the value of our water resources; provide assistance to entities initiating water conservation plans and programs and, to assist in the development of state government policies which will encourage the implementation of water conservation measures in various water use sectors.

Water quality 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 on surface water supplies.

Interstate Stream Commission

In 1987, the New Mexico 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. 16 water planning regions have been established under the program. The State Water Plan Act, passed by the New Mexico Legislature in 2003, charged OSE and ISC with developing a State Water Plan which includes among its purposes "protecting both the water supply and water quality". A review and update of the New Mexico State Water Plan is required every five years, although the first such update did not take place until 2018.

In 2013 the ISC updated and revised the 1994 Regional Water Planning Handbook (available at www.ose.state.nm.us/Planning) to provide a common technical platform and process for updating the 16 regional plans by June 2015. This streamlined approach allows updates to be developed cost-effectively using a common methodology to ensure consistency with state water law and policy. The revised Regional Water Planning Handbook includes guidance on water quality, encouraging water planners to focus on key issues that limit or compromise water supplies in the region. This guidance provides an opportunity to strengthen the elements of Regional Water Plans and the State Water Plan related to water quality. The State Water Plan will integrate the information from the updated regional water plans and be completed in December of 2015.

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. Elevated salinity in the Rio Grande Project area, which extends from above Elephant Butte Reservoir, New Mexico, to Fort Quitman, Texas, has long been recognized. The SWQB and the ISC are involved in a long-term water supply investigation of the Rio Grande below Elephant Butte Reservoir to develop solutions to concerns regarding

water quality. SWQB has designed and implemented a salinity monitoring network from 2005 to the present. The network is designed to improve our understanding of nonpoint sources of salinity and the natural and water resources management processes effecting changes in salinity in the Rio Grande from above Elephant Butte Reservoir at San Marcial, downstream to Courchesne Bridge near El Paso, Texas. The effort conducts water quality investigations targeted on understanding nonpoint sources of salinity, potential salinity control solutions; focusing response efforts in this critical border region; and providing the technical basis for an effective salinity control program.

6.4 Local Government Programs

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

6.4.1 Councils of Government

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

Councils of Government (Councils) are 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. 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 water 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 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.

6.4.2 Soil and Water Conservation Districts

- **NPS categories to be addressed: Agriculture, Rangeland Grazing Management, Hydrologic Habitat Modification, Watershed Management.**

New Mexico's SWCDs are subdivisions of New Mexico State Government. They are responsible under state law for directing soil and water conservation programs within their approved boundaries. Through their programs SWCDs implement a variety of projects on private land, as well as local, state, and federally held lands. This is made possible through their unique statutory authority allowing them to conduct and administer projects on all types of landholdings within

their boundaries. Each of the 48 SWCDs in New Mexico have an elected board of five locally-elected District Supervisors who are familiar with local soil and water conservation issues. Two additional district supervisors may serve subject to an annual appointment by the New Mexico Soil and Water Conservation Commission (SWCC). SWCDs can provide assistance at the local level to establish watershed groups, develop WBPs, provide technical expertise on water quality and NPS pollution issues, promote the use of the SRF, assist local governments with NPS pollution management and prevention, and provide water stewardship education to private landowners. SWCDs are able to work with private landowners and other stakeholders on a landscape scale for watershed projects on private, state, tribal and federal lands. The BLM program Restore New Mexico has been implemented to work in concert with SWCDs. The SWCDs have had a pivotal role in identifying and coordinating private landowners within the matrix of public and private lands.

New Mexico's SWCDs encourage the use of BMPs such as rotational grazing to reduce erosion and protect water quality and habitat in streams and watersheds. They directly implement or coordinate these activities when personnel and funding are available. Work done with local landowners includes stream restoration to stop channel bank erosion, along with practices to increase riparian vegetation to protect banks and lower water temperatures. SWCDs provide educational experiences for erosion prevention, road drainage techniques, and rotational grazing. Assistance is provided to landowners and other agencies with practices that stop headcuts and heal gullies; reduce runoff from irrigated fields; and reduce runoff from impervious surfaces. SWCDs administer hazard mitigation projects to assist landowners and public entities with forest thinning on their properties to protect and promote the health of watersheds. SWCDs administer noxious weed programs, providing techniques for local and public landowners to address noxious weed problems in many parts of New Mexico.

Over half of New Mexico's assessed streams are within eight SWCDs (see table). These are the priority SWCDs that WPS will reach out to as described in Section 3.6 above.

SWCD	Miles of Assessed Streams	% of NM's Assessed Streams	Miles of Impaired Streams	% of NM's Impaired Streams
Colfax	667	8.6%	498	12%
East Rio Arriba	505	6.5%	341	8%
San Francisco	520	6.7%	305	7.5%
Tierra y Montes	548	7.1%	301	7.4%
Taos	468	6%	239	5.9%
Grant	498	6.4%	234	5.7%
Cuba	459	6%	215	5.3%
Santa Fe-Pojoaque	434	5.6%	172	4.2%

7 NPS Management Program Efficiency and Effectiveness

7.1 Improved Watershed Planning Efforts

Through early 2019, the NPS Management Program supported the development of 11 WBPs that the EPA has recognized as meeting all of the elements specified in the *NPS Program and Grants Guidelines for States and Territories.* Three of these have been updated since they were first written, while four more WBPs are being written through current projects. Each of these planning efforts and the partnerships that have developed represent a large investment of dollars, time, and the hopes of many program participants. NMED has received positive feedback about these projects and the resulting WBPs, hearing that the WBPs have helped local organizations focus and prioritize and gain support from funding programs, community members, and participants in on-the-ground projects.

NMED will continue to support watershed-based planning with Section 319(h) NPS program funds through two approaches. A small number of comprehensive watershed-based planning projects will be identified and funded through SFAs to revise existing WBPs or develop new WBPs. NMED staff from both MASS and WPS will conduct in-house watershed-based planning, with significant stakeholder involvement, for a small number of watersheds. More detail about each approach is provided in Section 5.2 above.

The investment in watershed-based planning will be reinforced with continued commitment by NMED to implement WBPs. Section 319 watershed project funds will be used exclusively to implement WBPs that have been accepted by EPA, and WAPs. WPS staff will promote awareness of WBPs and WAPs as resources that may help effectively direct other funds.

7.2 Efficient Implementation of Watershed Projects

The NPS Management Program supports identification of effective project approaches through the watershed planning process described in Sections 3.1, 5.2, 7.1, and Appendix A . This level of planning is sufficient to describe the main features of future projects, including their approximate locations, costs, approaches towards achieving pollutant load reductions, and estimates of pollutant load reductions expected from implementation.

To support those planning efforts, and to develop project plans that are of sufficient detail to assure their effective implementation, the NMED will issue SFAs, during which non-governmental or agency cooperators may submit applications describing projects which they are well-positioned to implement. Typically, one SFA every other year will be designed to solicit applications for watershed planning projects and another SFA every other year will be for projects that implement portions of watershed plans.

An evaluation committee nominated by the assigned lead for the SFA will evaluate the applications against criteria specified in the SFA which are consistent with the NPS Management Program. The evaluation may be refined from year to year according to specific priorities and in an effort to make them more understandable to applicants.

Successful applicants will be notified that their application has been selected for development of a sub-grant agreement. A project work plan attached to the agreement will describe the project in detail and will be subject to EPA review and approval, and will serve to document the expectations for the project. For watershed projects, applications typically provide more detail than that found in the watershed plan, and applicants develop work plans that describe the project in sufficient detail to assure effective implementation once they have reasonable assurance that they will receive funding to implement their work plans.

Project work plans are developed by the cooperators with assistance of a WPS project officer, to promote ownership of the projects and strong awareness of responsibilities under resulting agreements. Project work plans are reviewed by the NMED project officer and the Procurement Manager before submittal to EPA. Following EPA review, any resulting modifications to the work plan, and EPA approval of the work plan, the work plan is attached to a sub-grant agreement, and receives additional review by several people within NMED who check the work plan and the agreement for consistency with various administrative and legal requirements.

The result of this process is an annual set of work plans for watershed projects that are well-designed, with sufficient detail to assure effective implementation.

7.3 Program Effectiveness Monitoring

The SWQB established an effectiveness monitoring program with a dedicated staff position in 2008, with the goal of documenting effects on water quality resulting from projects implemented with Section 319 funds. The effectiveness monitoring program is described in the SWQB Quality Assurance Project Plan (QAPP); project level QAPPs have been developed for each of several project areas. The upstream/downstream before/after study design is commonly selected as the most practical and effective means to account for variations in hydrology, weather, and other variables.

Applicants for Section 319 watershed project funding are encouraged to include effectiveness monitoring in their projects. The WPS monitoring coordinator provides training and assistance, and supplemental data collection when appropriate. In cases where a project cooperator is responsible for monitoring, the WPS project officer and/or monitoring coordinator will assist in developing a project level QAPP.

Effectiveness monitoring is conducted within each selected project area at least twice (before and after project implementation) in a three-year period. In many cases, additional projects and the lag time in vegetation growth and channel response warrant longer-term monitoring. In addition, effectiveness monitoring is coordinated with MASS water quality surveys and assessment program. This enables the NPS Program to supplement the data sets used for assessment, to avoid duplication of effort, in compliance with the Quality Management Plan[‡‡‡].

The focus of effectiveness monitoring is detecting water quality changes resulting from NPS pollution control projects in watersheds of impaired reaches. This effort has documented improvements in water quality and significantly helped measure the progress of the NPS

[‡‡‡] The SWQB QAPP and Quality Management Plan are subject to revision. The current SWQB QAPP and Quality Management Plan are available at https://www.env.nm.gov/surface-water-quality/protocols-and-planning.

Management Program towards meeting its objectives. As of early 2019, eight watersheds have been nominated and recognized as NPS Success Stories. A reasonable case was made that projects and management improvements in each watershed produced measurable water quality improvements, and the efforts used to develop, fund, and implement those projects met strategic planning elements in EPA's Strategic Plan applicable to fiscal years 2014 through 2018.[16] NPS Success Stories accepted by EPA are described at:
https://www.epa.gov/nps/success-stories-about-restoring-water-bodies-impaired-nonpoint-source-pollution.

7.4 Reporting

7.4.1 Nonpoint Source Management Program Annual Report

An *NPS Management Program Annual Report* will be prepared for each federal fiscal year (October 1 through September 30) and submitted to EPA by January 31 of the following year. The annual report describes the progress of NMED and other agencies towards carrying out the NPS Management Program. Section 0 above provides lists of activities and verification items that will be reported in the annual report. In addition, summaries of projects completed during the year that were supported with Section 319 funds will be provided, along with pollutant load reduction estimates for the previous year described in Section 7.4.2 below. The annual report is a useful resource for agencies, watershed groups, other citizens' groups, legislators, and others to stay informed of the progress and direction of the state NPS Management Program. The annual report is provided to the public on the NMED web site, at:
www.env.nm.gov/surface-water-quality/nps-annual-reports.

7.4.2 Grants Reporting and Tracking System

The Grants Reporting and Tracking System (GRTS) is a financial and implementation reporting database administered by EPA specifically for state Section 319 grant programs. The WPS Program Manager is responsible for entering into GRTS data describing each assistance agreement, and basic data for projects. NMED project officers are responsible for entering data on a semi-annual basis describing individual 319 projects and state-funded projects used to meet the non-federal share requirement of Section 319. GRTS is used to track all Section 319 projects and all state-funded projects used to meet the non-federal share requirement of Section 319. All Section 319 funds utilized in New Mexico are represented within projects in GRTS, including a large project for each state fiscal year for NPS Program implementation, and another project each state fiscal year for ground water quality related projects.

To increase the accuracy of financial data in GRTS, project managers record invoices received and certified in GRTS, and include prints of that information with each certified invoice forwarded to the SWQB Financial and Administrative Section. The Financial and Administrative Section uses that information to confirm that records associated with a contract or sub-grant agreement agree with financial data in GRTS.

Section 319(h)(11) of the CWA requires each state to report to EPA on an annual basis "reductions in nonpoint source pollutant loading," as a component of the Nonpoint Source Management Program Annual Report. EPA and NMED use GRTS to implement this reporting requirement.

WPS project managers enter estimated pollutant load reductions for all projects in GRTS for which implementation occurred during the previous calendar year, by an EPA-requested deadline usually set in mid-February. The NPS Annual Report described above in Section 7.4.1 will include the pollutant load reduction estimates for the most recent reporting year (e.g., the NPS Annual Report for the period October 1, 2018 – September 30, 2019 will include pollutant load reduction estimates for calendar year 2018).

GRTS is a useful tool for the public to access information about Section 319 grants and projects. Anyone can access much of the information in GRTS without a user name or password. The most user-friendly resource for this is the project list at: https://www.env.nm.gov/nmed_319_and_rsp_project_list, which includes links for each project that pull current data from GRTS, including contact information for NMED project managers and cooperators, project work plans, and final reports for completed projects.

7.4.3 Project Reporting

Project work plans include reporting tasks for individual projects. The requirement is usually for project reports to be prepared and submitted to the NMED project officer by the contractor or cooperating agency on a quarterly basis. These reports provide much of the information used by the project officer to report project details in GRTS. These reports are generally brief and focus on describing the progress of the project against work plan tasks, describing activities planned for the next quarter, and on describing any developments that may require work plan amendments or that otherwise require the attention of NMED or EPA. Quarterly reports may be useful for cooperators, in that they provide structured opportunities to review progress and evaluate next steps. Quarterly reports may also be used by cooperators to maintain good communication with other project participants, their own management, board members, or the public.

7.5 Financial Management

The SWQB has four full-time employees who form the Financial and Administrative Section (Financial Section). The Financial Section assists, monitors, and ensures financial reporting and recording requirements are being met, procurement of tangible goods and contracts meet federal and state requirements, and time reporting is accurately tracked. The Financial Section will continue to develop and implement policies and procedures for tracking of all federal grants within the bureau, and will assure that required match is being met, and keep an accurate and updated master list of current grants, work plans, contracts, and interagency agreements. Financial staff and project officers work together to verify that the bureau is both financially and technically in compliance with the Section 319(h) grant agreements, and will ensure that a final Financial Status Report (FSR) and quarterly financial reports are filed when required.

The SWQB has developed and uses a fiscal accounting system capable of tracking expenditures of both Section 319(h) funds and non-federal matches. The SWQB requires documentation of matching funds when project contractors working on Section 319 projects submit requests for reimbursement. Funds will not be released without confirmation of available corresponding matching funds.

7.6 Adaptive Management

The National Research Council has defined adaptive management as a decision process that "promotes flexible decision making that can be adjusted in the face of uncertainties as outcomes from management actions and other events become better understood."[17] This section describes the concept of adaptive management as applied by the NPS Management Program.

The NPS Management Program will be revised in 2024 – approximately five years after approval of this document by EPA. At that time, strategies and approaches described in this document that have been found to be ineffective will be modified and new strategies will be documented.

At a frequency of less than five years, NMED will apply for Section 319 funding from EPA to support the NPS Management Program. A core work plan that describes the activities of the NMED staff who implement the NPS Management Program will be used to document the activities that will be funded, in greater detail than described in this document. Lessons learned during each successive grant period will be used to refine the core work plan.

On an annual basis, the WPS will prepare a report for the NPS Management Program that describes (among other things) significant new developments affecting the program and problems encountered. This information will be used to make adjustments to the core work plan and the NPS Management Program when these documents are revised. The WPS also prepares SFAs and requests for proposals to seek assistance from locally-based organizations who can help implement the NPS Management Program within specific watersheds, and are open to trying new approaches at developing projects of an appropriate size, complexity, and technical or practical nature to effectively accomplish the goals of the program. Experience gained through this process may also be used to make adjustments to core work plans and the NPS Management Program when these documents are revised.

7.7 Public Input into the NPS Management Program

Public meetings and workshops for collection of input and comments on TMDLs, , NPS Management Program changes, and for other important program issues are held at strategic locations throughout the state. Public meetings and notice of public comment periods are advertised primarily through public notices, press releases, messages to the SWQB email list, and the SWQB quarterly newsletter, *Clearing the Waters.* WQCC meetings are open to the public as well, and often include dedicated time on the agendas for public comments.

The integration of the NPS Program in other programs administered by the SWQB is evident in the public outreach processes in which the bureau engages. WPS staff are integral participants in public meetings related to planning water quality surveys and TMDL development, often boosting attendance of these meetings by encouraging cooperators to attend.

WPS staff engage in public education activities to promote public awareness of the NPS program and NPS pollution and its solutions. The 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.

When stakeholders undertake a planning effort to develop or revise a WBP, they have opportunities to provide input to the NPS Management Program, both in the process of developing the plan (through participation by SWQB staff in aspects of plan preparation), and in the content of the plan itself. The NPS Management Program promotes bottom-up watershed planning and restoration efforts in which stakeholders do not have to agree with or address all problems identified by the SWQB, and the scope of a watershed plan may include priorities (problems or resource issues) not identified by the SWQB. Where aspects of the NPS Management Program do not serve a watershed planning effort well, the watershed plan will be used as a vehicle to communicate to the bureau.

Significantly, watershed planning efforts implemented on the local level generally are conducted with an open-door policy that promotes collaboration and participation by all interested and affected parties within a watershed. The public process is a key element in the final selection of Section 319 planning projects.

7.8 Consistency between Federal and State Programs

Federal consistency review activities are described in Sections 3.3 and 6.2. NMED is committed to reviewing and identifying federal land management programs and projects, development projects, and financial assistance programs that are or may be inconsistent with the State's NPS Management Program. An NMED Environmental Review Coordinator within the Office of the Secretary is responsible for receiving documents to review, assigning them to appropriate bureaus, and compiling comments received into unified NMED comments. Individual staff within NMED (e.g., the SWQB bureau chief and WPS program manager) may also directly receive NEPA documents, identify those that should be reviewed, and forward them to the Environmental Review Coordinator. In response to NMED comments, potential inconsistencies are often resolved by the federal agency preparing a NEPA document, or by the USACE in their decisions regarding the applicability of Section 404 permitting requirements. When significant inconsistencies are not resolved, the state will seek EPA assistance to help resolve issues.

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Appendix A Watershed-Based Plans

The following is an excerpt taken directly from the *2014 Nonpoint Source (NPS) Program and Grants Guidelines for States and Territories* (https://www.epa.gov/nps/319-grant-program-states-and-territories). These elements were first published as part of the 2004 NPS Guidelines, in the October 23, 2003 Federal Register. In 2014, EPA added additional explanation for each element under the headings, "What does this mean?"

Nine Elements of Watershed-based Plans (WBPs)

The nine elements, as well as short explanations of how each element fits in the context of the broader WBP, are provided below. Although they are listed as *a* through *i*, they do not necessarily take place sequentially. For example, element *d* asks for a description of the technical and financial assistance that will be needed to implement the WBP, but this can be done only after you have addressed elements *e* and *i*.

The level of detail needed to address the nine elements of WBPs will vary in proportion to the homogeneity or similarity of land use types and variety and complexity of pollution sources. For example, densely developed urban and suburban watersheds often have multiples sources of pollution from historic and current activities (Superfund sites, point sources, solid waste disposal, leakage from road salt storage, oil handling, stormwater-caused erosion, road maintenance, etc.) in addition to some agricultural activities. Plans will be more complex than in predominantly rural settings in these cases. For this reason, plans for urban and suburban watersheds may need to be developed and implemented at a smaller scale than watersheds with agricultural lands of a similar character.

Element a. Identification of causes of impairment and pollutant sources or groups of similar sources that need to be controlled to achieve needed load reductions, and any other goals identified in the watershed plan. Sources that need to be controlled should be identified at the significant subcategory level along with estimates of the extent to which they are present in the watershed (e.g., X number of dairy cattle feedlots needing upgrading, including a rough estimate of the number of cattle per facility; Y acres of row crops needing improved nutrient management or sediment control; or Z linear miles of eroded streambank needing remediation).

What does this mean?

Your WBP source assessment should encompass the watershed of the impaired waterbody(ies) throughout the watershed, and include map(s) of the watershed that locates the major cause(s) and source(s) of impairment in the planning area. To address these impairments, you will set goals to meet (or exceed) the appropriate water quality standards for pollutant(s) that threaten or impair the physical, chemical, or biological integrity of the watershed covered in the plan.

This element will usually include an accounting of the significant point and nonpoint sources in addition to the natural background levels that make up the pollutant loads causing problems in the watershed. If a TMDL or TMDLs exist for the waters under consideration, this element may be adequately addressed in those

documents. If not, you will need to conduct a similar analysis (which may involve mapping, modeling, monitoring, and field assessments) to make the link between the sources of pollution and the extent to which they cause the water to exceed relevant water quality standards.

Element b. An estimate of the load reductions expected from management measures.

What does this mean?

On the basis of the existing source loads estimated for element *a*, you will similarly determine the reductions needed to meet water quality standards. After identifying the various management measures that will help to reduce the pollutant loads (see element *c* below), you will estimate the load reductions expected as a result of implementing these management measures, recognizing the difficulty in precisely predicting the performance of management measures over time.

Estimates should be provided at the same level as that required in the scale and scope described in element *a* (e.g., the total load reduction expected for dairy cattle feedlots, row crops, eroded streambanks, or implementation of a specific stormwater management practice). For waters for which TMDLs have been approved or are being developed, the plan should identify and incorporate the TMDLs; the plan needs to be designed to achieve the applicable load reductions in the TMDLs. Applicable loads for downstream waters should be included so that water delivered to a downstream or adjacent segment does not exceed the water quality standards for the pollutant of concern at the water segment boundary. The estimate should account for reductions in pollutant loads from point and nonpoint sources identified in the TMDL as necessary to attain the applicable water quality standards.

Element c. A description of the nonpoint source management measures that will need to be implemented to achieve load reductions in element b, and a description of the critical areas in which those measures will be needed to implement this plan.

What does this mean?

The plan should describe the management measures that need to be implemented to achieve the load reductions estimated under element *b*, as well as to achieve any additional pollution prevention goals outlined in the watershed plan (e.g., habitat conservation and protection). Pollutant loads will vary even within land use types, so the plan should also identify the critical areas[12] in which those measures will be needed to implement the plan. This description should be detailed enough to guide needed implementation activities throughout the watershed and can be greatly enhanced by developing an accompanying map with priority areas and practices. Thought should also be given to the possible use of measures that protect important

[12] Critical areas are those producing disproportionately high pollutant loads.

habitats (e.g. wetlands, vegetated buffers, and forest corridors) and other non-polluting areas of the watershed.

In this way, waterbodies would not continue to degrade in some areas of the watershed while other parts are being restored.

Element d. Estimate of the amounts of technical and financial assistance needed, associated costs, and/or the sources and authorities that will be relied upon to implement this plan.

What does this mean?

You should estimate the financial and technical assistance needed to implement the entire plan. This includes implementation and long-term operation and maintenance of management measures, information/education (I/E) activities, monitoring, and evaluation activities. You should also document which relevant authorities might play a role in implementing the plan. Plan sponsors should consider the use of federal, state, local, and private funds or resources that might be available to assist in implementing the plan. Shortfalls between needs and available resources should be identified and addressed in the plan.

Element e. An information and education component used to enhance public understanding of the plan and encourage their early and continued participation in selecting, designing, and implementing the nonpoint source management measures that will be implemented.

What does this mean?

The plan should include an I/E component that identifies the education and outreach activities or actions that will be used to implement the plan. These I/E activities may support the adoption and long-term operation and maintenance of management practices and support stakeholder involvement efforts.

Element f. Schedule for implementing the nonpoint source management measures identified in this plan that is reasonably expeditious.

What does this mean?

You should include a schedule for implementing the management measures outlined in your watershed plan. The schedule should reflect the milestones you develop in *g* and you should begin implementation as soon as possible. Conducting baseline monitoring and outreach for implementing water quality projects are examples of activities that can start right away. It is important that schedules not be "shelved" for lack of funds or program authorities; instead they should identify steps towards obtaining needed funds as feasible.

Element g. A description of interim measurable milestones for determining whether nonpoint source management measures or other control actions are being implemented.

What does this mean?

The WBP should include interim, measurable implementation milestones to measure progress in implementing the management measures. These milestones will be used to track implementation of the management measures, such as whether they are being implemented according to the schedule outlined in element *f,* whereas element *h* (see below) will develop criteria to measure the effectiveness of the management measures by, for example, documenting improvements in water quality. For example, a watershed plan may include milestones for a problem pesticide found at high levels in a stream. An initial milestone may be a 30% reduction in measured stream concentrations of that pesticide after 5 years and 50 percent of the users in the watershed have implemented Integrated Pest Management (IPM). The next milestone could be a 40% reduction after 7 years, when 80% of pesticide users are using IPM. The final goal, which achieves the water quality standard for that stream, may require a 50% reduction in 10 years. Having these waypoints lets the watershed managers know if they are on track to meet their goals, or if they need to re-evaluate treatment levels or timelines.

Element h. A set of criteria that can be used to determine whether loading reductions are being achieved over time and substantial progress is being made toward attaining water quality standards.

What does this mean?

As projects are implemented in the watershed, you will need water quality benchmarks to track progress towards attaining water quality standards. The *criteria* in element *h* (not to be confused with *water quality criteria* in state regulations) are the benchmarks or waypoints to measure against through monitoring. These interim targets can be direct measurements (e.g., fecal coliform concentrations, nutrient loads) or indirect indicators of load reduction (e.g., number of beach closings). These criteria should reflect the time it takes to implement pollution control measures, as well as the time needed for water quality indicators to respond, including lag times (e.g., water quality response as it is influenced by ground water sources that move slowly or the extra time it takes for sediment bound pollutants to break down, degrade or otherwise be isolated from the water column). Appendix B of these guidelines, "Measures and Indicators of Progress and Success," although intended as measures for program success, may provide some examples that may be useful. You should also indicate how you will determine whether the WBP needs to be revised if interim targets are not met. These revisions could involve changing management practices, updating the loading analyses, and reassessing the time it takes for pollution concentrations to respond to treatment.

***Element i. A monitoring component to evaluate the effectiveness of the implementation efforts over time, measured against the criteria established under element* h.**

What does this mean?

The WBP should include a monitoring component to determine whether progress is being made toward attaining or maintaining the applicable water quality standards for the waterbody(ies) addressed in the plan. The monitoring program should be fully integrated with the established schedule and interim milestone criteria identified above. The monitoring component should be designed to assess progress in achieving loading reductions and meeting water quality standards. Watershed-scale monitoring can be used to measure the effects of multiple programs, projects, and trends over time. Instream monitoring does not have to be conducted for individual BMPs unless that type of monitoring is particularly relevant to the project.

For more detailed information on developing watershed-based plans, please see *A Handbook for Developing Watershed Plans to Restore and Protect Our Waters*, U.S. EPA, EPA 841-B-08-002 March 2008, (water.epa.gov/polwaste/nps/handbook_index.cfm). Other resources for watershed planning are available on the Watershed Central website - including the Watershed Central Wiki and Plan Builder tool at water.epa.gov/type/watersheds/datait/watershedcentral/index.cfm.

The following excerpt detailing "alternatives to nine-element watershed-based plans" is also from the 2014 NPS Guidelines (http://water.epa.gov/polwaste/nps/cwact.cfm).

ii. Alternatives to Nine-Element Watershed-based Plans (WBPs)

As discussed in section V.A. of these guidelines, effective planning is always necessary to successfully guide watershed restoration or protection efforts. National experience indicates that WBPs provide an effective, integrated approach to address the diverse situations and needs of each NPS-impaired watershed. WBPs provide a framework to comprehensively assess the causes and sources of NPS pollutants contributing to impairment, and then prioritize restoration and protection strategies to address these water quality problems. The level of detail needed to address the nine elements of WBPs will vary depending on the scale and complexity of pollution sources. EPA continues to expect that states will put the primary focus of § 319-funded watershed projects on implementing WBPs to restore impaired waters.

EPA recognizes that many states and local groups already have in place or are developing watershed plans and strategies at varying levels of scale, scope, and specificity that might contribute significantly to the elements of a WBP. EPA encourages states and others to build on existing planning documents that adequately address some or all of the required (a) through (i) WBP elements. Existing planning documents, such as TMDLs and TMDL implementation plans, may serve as valuable building blocks for a WBP and where applicable, should be incorporated by reference in the WBP.

In a few select cases listed below, EPA recognizes that alternative plans to a WBP may provide an effective roadmap to achieve the water quality goals of § 319-funded restoration or protection efforts. In such cases, states must provide the EPA region with justification for why a complete WBP is not necessary and why an alternative plan is sufficient to guide watershed project implementation. This justification may be described through, or included in, the state's § 319 work plan.

Except when addressing a NPS pollution emergency or urgent NPS public health risk, EPA requires that all projects implementing a WBP or acceptable alternative plan directly address priorities outlined in the state NPS management program. Additionally, the state must ensure that alternative plans reflect a geographically-appropriate scale to achieve water quality goals. Prior to implementation, all plans should include analysis sufficient to ensure that the water quality problem or threat can be fully addressed through the recommended management strategies outlined in the plan.

EPA regions will review and approve all alternative plans proposed for implementation in the state's § 319 grant work plan to ensure the following planning elements are adequately addressed:

- Identification of the causes or sources of NPS impairment, water quality problem, or threat to unimpaired/high quality waters;
- Watershed project goal(s) and explanation of how the proposed project(s) will achieve or make advancements towards achieving water quality goals;
- Schedule and milestones to guide project implementation;
- Proposed management measures (including a description of operation and maintenance requirements) and explanation of how these measures will effectively address the NPS impairment identified above; and
- Water quality results monitoring component, including description of process and measures (e.g., water quality parameters, stream flow metrics, biological indicators) to gauge project success.

EPA regions may approve the use of watershed project funding to implement alternative plans containing the above elements in the following circumstances:

a. **When the impairment is not specific to a pollutant.**
   The current WBP approach places emphasis on identifying major NPS pollutant sources in critical areas as well as planning for and achieving NPS pollutant load reductions. In scenarios where the impairment is not caused by a pollutant, but rather by a non-pollutant-based water quality problem (e.g., obstructions for migratory fish or addressing flow regime alterations), an alternative plan may be sufficient to guide § 319 funded watershed projects. In such cases, the state should provide assurance that appropriate watershed analyses were conducted to ascertain that the water quality problem will be fully addressed by dealing with the non-pollutant source of impairment.

b. **When responding to a NPS pollution emergency or urgent NPS public health risk.**

In scenarios when the proposed § 319 project(s) responds to an urgent, unplanned NPS pollution emergency or urgent NPS public health risk in an area for which a WBP does not exist (e.g., efforts to control erosion and re-establish vegetation in the immediate aftermath of a forest fire, to reduce pollution affecting drinking water safety), an alternative plan may be developed to ensure the timely, targeted use of watershed project funds.

c. When protecting assessed unimpaired/high quality waters.

Where a watershed includes both impaired and unimpaired/high quality waters, a WBP should be developed to address all actions needed to maintain and restore water quality. In scenarios where a state has assessed waters that are largely or fully attaining water quality standards and are located in watersheds where only protection actions are needed (i.e., measures to prevent future degradation), an alternative to a WBP may be warranted.

d. When addressing an isolated, small-scale water quality problem resulting from one or a few sources of pollution.

An alternative plan may be acceptable when the NPS problem and solution are extremely limited in scope and scale, such that the water quality problem is caused by one or a very few pollution sources (e.g., a failing septic system). In such cases, the state must demonstrate (through up- and downstream monitoring, watershed characterization studies, etc.) that this impairment is isolated from other potential contributing causes/sources of pollution in the watershed. Additionally, the state must provide assurance that the proposed watershed project will fully address the water quality problem within one grant period. In meeting these conditions, the state will ensure that multiple smaller problems are not dealt with in a piecemeal fashion when they are actually part of a larger water quality problem involving multiple pollution sources in the watershed.

Appendix B Best Management Practices

This appendix presents a list of Best Management Practices (BMPs) by category, followed by a BMP Bibliography.

Agriculture

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 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

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

Rangeland

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:

- Designate streamside management areas to provide stream shading, soil stabilization, sediment and water filtering effects and wildlife habitat
- Streamside management areas encompass a strip at least 50 feet wide on each side of the stream, measured from the ordinary (yearly average) high-water mark or definable bank
- Limit timber harvest to protect steep slopes (>30%) or unstable areas
- Clearly delineate protected areas in timber sale maps and with special marking on the ground
- Limit the operating period of timber sale activities
- Harvest when soils are frozen
- Eliminate unsuitable stands from harvest units
- Prescribe size, location and shape of clear cuts
- Determine tractor loggable ground
- Properly locate tractor skidding areas
- Use suspended log-yarding on sensitive areas (e.g., streamside management zones and steep slopes)
- Locate log landings properly
- Prepare sites for reforestation
- Revegetate areas disturbed by harvest activities
- Prevent and control erosion on log landings
- Control erosion on skid trails
- Protect meadows during timber harvesting
- Properly locate and design stream crossings
- Keep equipment out of streams
- Use erosion control structures and energy dissipaters
- Maintain erosion control structures
- Review and approve timber sale erosion control measures before sale closure
- Use slash treatments in sensitive areas
- Use soil moisture and wetland limitations for equipment and vehicle use
- Use of sale area maps for designating water protection needs
- Use 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:

- Use fire and fuel management activities to reduce frequency, intensity and destructiveness of wildfires
- Consider water quality in formulating fire prescriptions
- Repair or stabilize watershed damage related to fire suppression activities
- Implement emergency rehabilitation of watersheds following intense fires

Road Construction and Maintenance

Road design:

- Properly design roads and drainage facilities to minimize impacts to water quality
- Design roads for specific types of vehicles and required vehicle speed
- Provide frequent drainage with outsloping where feasible, grade reversals, and frequent cross-drains such as rolling dips
- Minimize the number of roads constructed in a watershed
- Limit the alteration of natural drainage patterns by following contours and minimizing cuts, fill, and stream crossings
- Avoid problem areas such as flood zones, narrow canyon bottoms, wet areas, steep slopes, and highly erodible or unstable soil
- Locate roads away from streams
- Maintain a buffer strip of undisturbed soil and vegetation between the road and stream
- Minimize road grade

Road construction:

- Develop and implement erosion control plans
- Time construction activities to avoid wet periods
- Dispersion of subsurface drainage from cut and fill slopes
- Timely erosion control measures on actively eroding areas
- Properly orient, design and maintain stream crossings
- Construction of stable embankments
- Control sidecast materials
- 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
- Specify riprap composition
- Water source development consistent with water quality protection
- Restrict machinery to the designated construction zone
- Remove debris from stream channels that was added during construction
- Limit removal of vegetation especially adjacent to streams
- Deposit surplus soil and rock in areas where sediment will not threaten streams
- Compact all fill material
- Keep equipment out of streams unless necessary
- Refuel and service machinery well away from streams

- Revegetate denuded areas with appropriate native vegetation

Culvert Installation:

- Determine the necessary culvert diameter for expected high flow
- Culvert should be long enough to extend beyond fill
- Align the culvert with the stream, at the existing grade, and at the depth of the streambed
- Compact surrounding fill
- Protect fill material with armoring

Road maintenance:

- Regular maintenance and inspection
- Inspect drainage structures frequently
- Road surface treatment to prevent erosion
- Correct erosion issues early
- Control traffic during wet periods
- Snow removal controls to avoid resource damage
- Obliterate temporary roads
- Restore borrow pits and quarries
- Prevent side casting materials into streams or wetlands
- Reduce use of salt for deicing roads in sensitive areas

Road closure:

- Remove culverts on roads to be permanently closed
- Reestablish the natural drainage pattern
- Revegetate denuded areas with appropriate native vegetation
- Prevent unauthorized vehicle access

Recreation Management

- Control erosion at facility sites and recreation sites
- Provide and maintain sanitation facilities
- Control refuse disposal
- Provide proper drainage (such as the use of French drains) at hydrants and water faucets within developed recreation sites
- Properly locate pack and riding stock facilities
- Manage off-road vehicle (ORV) use
- Recognize and protect heavy-use areas
- Provide public information on water quality protection at recreation areas
- Close or relocate recreation areas as conditions dictate

Resource Extraction/Exploration/Development

General:

- Limit the total area of disturbed ground
- Implement and maintain erosion control measures
- Reclaim completed mine sites, including revegetation
- Maintain vegetated buffer zone along watercourses
- Control erosion from exploration through closure

Surface mining:

- Control runoff into or through mine
- Treat acid mine drainage

Mill Tailings and Mine Tailings:

- Stabilize tailings
- Relocate tailings
- Channel runoff around tailings

Oil and Gas Exploration and Production:

- Pit closures
- Plug orphan wells
- Provide secondary containment for above ground storage tanks
- Implement spill prevention control and countermeasure plans
- Design access roads for specific types of vehicles and required vehicle speed
- Provide frequent drainage from access roads with outsloping, grade reversals, and native-materials cross-drains such as rolling dips

Hydrologic Habitat Modification

Flow regulation/modification:

- Flow management
- Encourage floodplain protection

Streambank modification/stabilization:

- Stream channel stabilization
- Streambank protection
- Revegetation

Dam Construction:

- Use erosion control methods to protect and reclaim disturbed ground
- Use coffer dams to temporarily divert water around work areas
- Select proper materials for dam construction

Urban Runoff:

- Develop and follow stormwater pollution prevention plans as required
- Use settling ponds to collect suspended material and preserve or restore pre-development hydrology
- Use public education methods to promote landscaping that utilizes rainfall on-site
- Use zoning and land-use planning to minimize impacts to streams and arroyos

Other

Watershed Management:

- When planning watershed restoration efforts, include goals related to reducing or preventing loading of specific NPS pollutants

- In appropriate forest ecosystems, reduce tree density and restore natural fire regimes to increase native herbaceous ground cover
- Control activities under special use permit on USFS lands
- Evaluate cumulative effects on a watershed basis of projects requiring NEPA analysis

Wildlife and Fisheries Management:

- Limit channel disturbance associated with fish habitat improvement structures
- Control sedimentation from wildlife habitat improvements

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New Mexico Department Game & Fish (NMDGF)
New Mexico Environmental Review Tool (ERT) - an interactive tool for conservation planning and review of important resources for wildlife and habitats: https://nmert.org

Habitat Handbook Topics: http://www.wildlife.state.nm.us/conservation/habitat-handbook

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New Mexico State Wildlife Action Plan (SWAP)
http://www.wildlife.state.nm.us/download/conservation/swap/New-Mexico-State-Wildlife-Action-Plan-SWAP-Final-2017.pdf

Powerline Project Guidelines (2007)
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Riparian Grazing Guidelines (2004)
http://www.wildlife.state.nm.us/download/conservation/habitat-handbook/project-guidelines/Riparian-Grazing-Guidelines.pdf

Mining Guidelines (2004)
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Oil and Gas Guidelines (2007) http://www.wildlife.state.nm.us/download/conservation/habitat-handbook/project-guidelines/Oil-and-Gas-Guidelines.pdf

New Mexico Department of Transportation (NMDOT)
NMDOT Drainage Design Criteria:
http://www.dot.state.nm.us/content/dam/nmdot/Infrastructure/drainageDesignCriteria.pdf
NMDOT Plans, Specifications and Estimates Standard Drawings:
http://dot.state.nm.us/content/dam/nmdot/Plans_Specs_Estimates/2014_Specs_For_Highway_And_Bridge_Construction.pdf

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http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs144p2_068512.pdf

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https://www.fhwa.dot.gov/environment/recreational_trails/publications/fs_publications/07232806/index.cfm

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American Association of State Highway Transportation Officials (AASHTO)
AASHTO: Environmental Stewardship Practices, Procedures and Policies for Highway Construction and Maintenance
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Various documents on urban watershed restoration and protection tools including stormwater runoff BMPs (fee required).
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U.S. Environmental Protection Agency (USEPA)
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https://www.epa.gov/nps

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The New Ranch Handbook: A Guide to Restoring Western Rangelands by Nathan F. Sayre.
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Rainwater Harvesting for Drylands and Beyond, Volume 2: Water-Harvesting Earthworks. 2007.
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Appendix C Funding Sources

Funding Sources for Watershed Protection/Improvement Projects.
Watershed health affects people of all backgrounds, including (but not limited to) communities, companies, schools, institutions, farmers, ranchers, and governments. Many different organizations exist to provide assistance in watershed protection efforts, and this list is meant to provide greater awareness of the funding sources that are available to benefit projects in New Mexico. The programs and grants in this document vary in mission and targeted audience, but all focus on improving environmental conservation efforts. Further information can be found by using the link or contact provided.

If you have information about a program that you feel should be added to this list, please contact: Meg Hennessey, Environmental Scientist, NMED, meg.hennessey@state.nm.us

Web site addresses are current as of February 2019.

1. American Canoe Association/L.L. Bean: Club Fostered Stewardship Program

http://www.americancanoe.org/?page=LLBean_CFS_Grant

The Club Fostered Stewardship (CFS) Program provides funding and logistical assistance to local paddling clubs that undertake stewardship projects on local waterways. The purpose of the program is to support volunteer stewardship efforts, and encourage local clubs to take an active role in helping to protect and improve the nation's recreational waterways. CFS grants are available for projects that utilize volunteers in efforts to protect, maintain or restore recreational waterways, provide for or improve public access, or enhance safe navigation.

2. Captain Planet Foundation

http://captainplanetfoundation.org/

The mission of the Captain Planet Foundation is to fund and support hands-on, environmental projects for children and youths. The Foundation’s objective is to encourage innovative programs that empower children and youth around the world to work individually and collectively to solve environmental problems in their neighborhoods and communities.

3. Charles A. and Anne Morrow Lindbergh Foundation

http://www.lindberghfoundation.org/

The Foundation is dedicated to furthering Charles and Anne Morrow Lindbergh's shared vision of a balance between technological advancement and environmental preservation. The Foundation seeks to support present and future generations in working toward such a balance, that we may "...discern nature's essential wisdom and combine it with our scientific knowledge..." (Charles A. Lindbergh) and "balance power over life with reverence for life"

(Anne Morrow Lindbergh). Lindbergh Grants are made in the following categories: agriculture; aviation/aerospace; conservation of natural resources; education; exploration; health; and waste minimization and management.

4. Cottonwood Foundation

http://www.cottonwoodfdn.org/

The Cottonwood Foundation is dedicated to promoting empowerment of people, protection of the environment, and respect for cultural diversity. The foundation focuses its funding on committed, grass roots organizations that rely strongly on volunteer efforts and where foundation support will make a significant difference.

5. Corporation for National Community Service

https://www.nationalservice.gov/build-your-capacity/grants

Corporations for National Community Service provides direct and indirect support to K-12 schools, community groups and higher education institutions to facilitate service-learning projects by: providing grant support for school-community partnerships and higher education institutions; providing training and technical assistance resources to teachers, administrators, parents, schools and community groups; collecting and disseminating research, effective practices, curricula, and program models; and recognizing outstanding youth service through the Presidential Freedom Scholarship, President's Volunteer Service Awards and other program.

6. Educational Foundation of America

https://theefa.org/

The Educational Foundation of America (EFA) was established in 1959 to preserve the lifelong altruistic commitment of its founders, Richard Prentice Ettinger and his wife, Elsie P. Ettinger. EFA provides grants for specific projects. EFA's priorities in environmental funding are the protection and restoration of land and water, and projects that focus on renewable energy, energy conservation, and sustainable production and consumption. The Foundation also funds: air quality protection, recycling programs, the conservation of parks and trails, ecological conservation, and technical assistance and training for environmental groups, policy-makers, and the public.

7. EPA Brownfields and Land Revitalization Programs

http://www.epa.gov/brownfields/

Brownfield sites are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. The program objectives are to provide funding: (1) to inventory, characterize, assess, and conduct planning and community involvement related to brownfield sites; (2) to

capitalize a revolving loan fund (RLF) and provide subgrants to carry out cleanup activities at brownfield sites; and (3) to carry out cleanup activities at brownfield sites that are owned by the grant recipient.

8. EPA Environmental Education Grants

https://www.epa.gov/education

Environmental Education Grants support environmental education projects that enhance the public's awareness, knowledge, and skills to help people make informed decisions that affect environmental quality. EPA's current educational priorities are for projects that: build State capacity to deliver environmental education programs; use EE to advance State education reform goals; improve teaching skills; educate the public through community-based organizations; educate teachers, health professionals, community leaders, and the public about human health threats from pollution, especially as it affects children; and promote environmental careers.

9. EPA Environmental Justice Grants

https://www.epa.gov/environmentaljustice/environmental-justice-grants-funding-and-technical-assistance

The Environmental Justice Collaborative Problem-Solving Cooperative Agreement Program provides financial assistance to eligible organizations working on or planning to work on projects to address local environmental and/or public health issues in their communities. The Environmental Justice Small Grants Program provides financial assistance to eligible organizations to build collaborative partnerships, to identify the local environmental and/or public health issues, and to envision solutions and empower the community through education, training, and outreach.

10. EPA Five Star Restoration Grant Program

https://www.epa.gov/wetlands/5-star-wetland-and-urban-waters-restoration-grants

The Five Star Restoration Program brings together students, conservation corps, other youth groups, citizen groups, corporations, landowners and government agencies to provide environmental education and training through projects that restore wetlands and streams. The program provides challenge grants, technical support and opportunities for information exchange to enable community-based restoration projects.

11. Freeport-McMoRan

http://www.freeportinmycommunity.com/nonprofits/search-our-grants#grants

Freeport-McMoRan Copper & Gold lends its knowledge, business experience, and the generosity of employee volunteers to community programs. Grants are made under five focus areas: Education; Community Safety; Environment; Arts and Culture; and Community/Civic

Development. Under the Environment focus area, Freeport-McMoRan provides funds to organizations or programs that fall under one of the following environmental focus areas: Environmental Quality, Conservation & Management; and Environmental Education.

12. Maki Foundation

http://www.makifoundation.org/

The Maki Foundation, established in 1981, makes grants for environmental protection in the western United States. In particular, the foundation is concerned with protection and preservation of the Rocky Mountain West's remaining wild lands, rivers, and wilderness, as well as the wildlife that depends on these lands. The Maki Foundation's geographic area of interest includes New Mexico, Colorado, Utah, Idaho, Wyoming, and Montana.

13. Marisla Foundation

https://online.foundationsource.com/ws/index.jsp?site=marisla

The Marisla Foundation's Environment Program concentrates on activities that promote the conservation of biological diversity and advance sustainable ecosystem management. The Environment Program also supports the search for solutions to health threats caused by toxic chemicals.

14. Max and Anna Levinson Foundation

http://www.levinsonfoundation.org/

The Foundation makes grants to individuals and groups committed to developing a more just, caring, ecological and sustainable world. The Environment Area of Interest includes the following themes: Protection of Ecosystems and Biological Diversity; Alternative Energy and Conversion from the Oil Economy; Alternative Agriculture and Local Green Economic Development; Breaking the Link Between Resource Extraction, Civil and International Conflict, and Markets; and the Development of Environmental Movements.

15. McCune Charitable Foundation

http://www.nmmccune.org/

The Marshall L. and Perrine D. McCune Charitable Foundation is dedicated to enriching the health, education, environment, and cultural and spiritual life of New Mexicans. The Foundation memorializes its benefactors through proactive grantmaking that seeks to foster positive social change. The Foundation's Programs include: Creating Prosperity in New Mexican Communities, New Energy Economy, Supporting Grassroots Economic Development, and the Arts Economy.

16. Merck Family Fund

http://www.merckff.org/

The Merck Family Fund's goals include restoring and protecting the natural environment and ensuring a healthy planet for generations to come, and strengthening the social fabric and the physical landscape of the urban community.

17. National Fish and Wildlife Foundation

http://www.nfwf.org/

NFWF provides funding on a competitive basis to projects that sustain, restore, and enhance our nation's fish, wildlife, and plants and their habitats.

18. National Park Service: Rivers, Trails, and Conservation Assistance Program

http://www.nps.gov/orgs/rtca/index.htm

The Rivers, Trails, and Conservation Assistance Program is the community assistance arm of the National Park Service. RTCA staff provides technical assistance to community groups and nonprofit organizations, community groups, Indian nations, pueblos, and tribes or their governments, and local, State, or federal government agencies so they can conserve rivers, preserve open space, and develop trails and greenways.

19. Natural Resources Conservation Service: Funding Programs

http://www.nrcs.usda.gov/wps/portal/nrcs/main/nm/programs/

NRCS's natural resources conservation programs help people reduce soil erosion, enhance water supplies, improve water quality, increase wildlife habitat, and reduce damages caused by floods and other natural disasters.

20. New Mexico Environment Department: Clean Water State Revolving Fund

https://www.env.nm.gov/construction-programs/clean-water-state-revolving-fund-cwsrf

NMED maintains a revolving loan fund to provide a source of low-cost financing for a wide range of wastewater or storm drainage projects that protect surface and ground water. Funds may also be used for projects that control NPS water pollution, such as solid waste and septic tank installations.

21. EPA Wetland Program Development Grants

https://www.epa.gov/wetlands/wetland-program-development-grants-and-epa-wetlands-grant-coordinators

Wetland Program Development Grants (WPDGs) provide eligible applicants an opportunity to conduct projects that promote the coordination and acceleration of research, investigations, experiments, training, demonstrations, surveys, and studies relating to the causes, effects, extent, prevention, reduction, and elimination of water pollution.

22. New Mexico Game and Fish Department: Various programs to protect wildlife, enhance habitat while providing education programs for individuals and agencies.

http://www.wildlife.state.nm.us/conservation/

NM Game and Fish Department's mission is to conserve, regulate, propagate and protect the wildlife and fish within the state of New Mexico using a flexible management system that ensures sustainable use for public food supply, recreation and safety; and to provide for off highway motor vehicle recreation that recognizes cultural, historic, and resource values while ensuring public safety. Habitat Stamp and Big Game Enhancement Restoration Funds allocate available resources through multi-agency, multi-year collaborative agreements.

23. New Mexico Soil and Water Conservation Grant Program

These funds are awarded by the SWCC through the Water Quality and Conservation Grant Program. The goal of the grant program is to promote the health of New Mexico's watersheds and conserve the water resources they produce. A limited number of projects addressing one or more of the following areas will be funded over the next fiscal year; Watershed Improvement/Management, Irrigation Efficiency, Riparian Restoration, Natural Resource Information and Education, Ground Water Protection/Conservation. New Mexico's Soil and Water Conservation Districts have to be active participants in the proposal.

Contact conserve@hughes.net for details.

24. New Mexico State Legislature: Water Trust Board

https://www.nmfa.net/financing/water-programs/water-project-fund/

The Water Trust Board was established in 2001 to recommend water projects to the State Legislature for appropriation of funding, in the form of grants or loans, from the Water Project Fund. These water projects must be for: water storage, conveyance, or delivery of water to end users; implementation of federal Endangered Species Act of 1973 collaborative programs; restoration and management of watersheds; flood prevention; or water conservation.

25. New Mexico State Forestry Division: Various programs for communities, forests, plants and resource management.

http://www.emnrd.state.nm.us/SFD/index.html

New Mexico State Forestry is responsible for wildfire suppression on all non-federal, nonmunicipal, non-tribal and non-pueblo lands. We also provide technical advice on forest and

resource management to private landowners, and may include a commercial timber harvest to enhance wildlife habitat, increase water yield, reduce the hazard of insect infestation, diseases or fire including various programs to assist in resource enhancement, management and wildland urban interface fire protection for homeowners.

26. New Mexico State Parks Division: Land and Water Conservation

http://www.emnrd.state.nm.us/SPD/Landandwater.html

State Parks administers the Land and Water Conservation Fund (LWCF) federal grant Program. Funds are provided through the U.S. Department of Interior's National Park Service. The LWCF Program is a 50% federal and 50% local matching grant program. The LWCF Fund Act of 1965 created a program to stimulate, encourage and assist state and local governments to acquire, develop and improve viable outdoor recreation areas and facilities.

27. New Mexico Department of Transportation: Recreational Trails

http://dot.state.nm.us/content/nmdot/en/ProjectsD5.html

The NM Department of Transportation is responsible for administering the Recreational Trails Program (RTP). The RTP is a federal
assistance program made possible through the U.S. Department of Transportation's Federal Highway Administration. The RTP provides up to 80% of project funds to develop, improve and maintain trails and trail-related facilities for motorized and non-motorized recreational trail uses.

28. Patagonia: Environmental Grants

http://www.patagonia.com/grant-guidelines.html
Patagonia funds only environmental work. We are most interested in making grants to organizations that identify and work on the root causes of problems and that approach issues with a commitment to long-term change. Because we believe that the most direct path to real change is through building grassroots momentum, our funding focuses on organizations that create a strong base of citizen support. Because we're a privately held company, we have the freedom to fund groups off the beaten track, and that's where we believe our small grants are most effective.

29. Turner Foundation

http://www.turnerfoundation.org/passions/water/

The Turner Foundation is a private, independent family foundation committed to preventing damage to the natural systems - water, air, and land. The Foundation makes grants in the areas of the environment and population and focuses on four main components: Safeguarding Habitat; Growing the Movement; Creating Solutions for Sustainable Living; and Healthy Planet, Healthy Communities.

30. United States Bureau of Reclamation: Various water conservation programs

http://www.usbr.gov/WaterSMART/

The Bureau of Reclamation is seeking proposals for its WaterSMART Water and Energy Efficiency Grant funding opportunity. Projects that are eligible must conserve water or result in other improvements that address water supply sustainability in the West.

31. USDA Agriculture and Food Research Initiative: Various competitive grants for education, community, agriculture and resource enhancement and management.

https://nifa.usda.gov/program/agriculture-and-food-research-initiative-afri

The National Institute of Food and Agriculture (NIFA) is an agency within the U.S. Department of Agriculture (USDA), part of the executive branch of the Federal Government. Congress created NIFA through the Food, Conservation, and Energy Act of 2008. NIFA replaced the former Cooperative State Research, Education, and Extension Service (REE). The USDA-REE agencies provide federal leadership in creating and disseminating knowledge spanning the biological, physical, and social sciences related to agricultural research, economic analysis, statistics, extension, and higher education.

32. USDA National Forest: Collaborative Forest Restoration Program

http://www.fs.usda.gov/detail/r3/workingtogether/grants/?cid=fsbdev3_022022

Since 2001 the Collaborative Forest Restoration Program (CFRP) has funded 175 projects including close to 500 partners in planning and implementing collaborative forest restoration and small diameter utilization projects in 20 counties across New Mexico. These projects have restored over 30,000 acres and created over 700 jobs.

33. USDA Natural Resources Conservation Service: Financial Assistance Programs

http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial

The Natural Resources Conservation Service (NRCS) offers voluntary programs to eligible landowners and agricultural producers to provide financial and technical assistance to help manage natural resources in a sustainable manner. Through these programs the agency approves contracts to provide financial assistance to help plan and implement conservation practices that address natural resource concerns or opportunities to help save energy, improve soil, water, plant, air, animal and related resources on agricultural lands and non-industrial private forest land. Several of these programs have been funded under legislation commonly referred to as the Farm Bill.

34. USDA Rural Development New Mexico

https://www.rd.usda.gov/nm

Financial programs support such essential public facilities and services as water and sewer systems, housing, health clinics, emergency service facilities and electric and telephone service. Rural Development promotes economic development by supporting loans to businesses through banks, credit unions and community-managed lending pools. They offer technical assistance and information to help agricultural producers and cooperatives get started and improve the effectiveness of their operations. Rural Development provides technical assistance to help communities undertake community empowerment programs.

35. Bureau of Land Management: Restore NM

https://www.blm.gov/programs/fish-and-wildlife/wildlife/partnerships/new-mexico

In 2005, the New Mexico Office of the Bureau of Land Management (BLM) launched the Restore New Mexico initiative with the goal of restoring disturbed lands on a landscape scale through an ambitious partnership approach. What began as a concept has become a widely-successful restoration and reclamation program involving numerous agencies, organizations, ranchers and industry groups. Landscape restoration in New Mexico has focused on controlling invasive brush species, improving riparian habitat, reducing woodland encroachment, and reclaiming abandoned oil and gas well pads.

36. U.S. Fish and Wildlife Service: Partners for Fish and Wildlife Program

http://www.fws.gov/southwest/es/NewMexico/PFW_home.cfm

The Partners for Fish and Wildlife Program is a voluntary partnership program that provides technical and financial assistance to non-federal landowners to improve fish and wildlife habitats for federal trust species (e.g., threatened, endangered, and candidate species, migratory birds, and other declining species).

37. U.S. Fish and Wildlife Service: North American Wetlands Conservation Act grants

http://www.fws.gov/birds/grants/north-american-wetland-conservation-act/small-grants.php
http://www.fws.gov/birds/grants/north-american-wetland-conservation-act/standard-grants.php

The Standard and Small Grant Programs are competitive, matching grant programs that support public-private partnerships carrying out projects in the United States that further the goals of the North American Wetlands Conservation Act. These projects must involve long-term protection, restoration, and/or enhancement of wetlands and associated uplands habitats for the benefit of all wetlands-associated migratory birds.

38. Western Sustainable Agriculture Research and Education (SARE) Grant

http://www.sare.org/Grants

SARE is a program of the U.S. Department of Agriculture that functions through competitive grants conducted cooperatively by farmers, ranchers, researchers and ag professionals to advance farm and ranch systems that are profitable, environmentally sound and good for communities. SARE grants are used to increase knowledge about sustainable agricultural practices and to help farmers and ranchers adopt those practices.

39. Wilburforce

http://www.wilburforce.org/

The Wilburforce Foundation protects wildlife and targeted wildlands in Western North America by actively supporting organizations and leaders advancing conservation solutions. The foundation supports efforts to create a network of protected core reserves, corridors and buffer zones across Western North America that will support ecologically effective landscapes and viable wildlife populations.

40. William and Flora Hewlett Foundation

http://www.hewlett.org/Programs/Environment/

The William and Flora Hewlett Foundation makes grants to address the most serious social and environmental problems facing society. The Foundation places a high value on sustaining and improving institutions that make positive contributions to society. One of the goals of the Environment Program is to save the great ecosystems of the North American West.

Grant Search Resources

41. EPA Water Finance Clearinghouse

https://www.epa.gov/waterdata/water-finance-clearinghouse

Water Finance Clearinghouse is a database of financial assistance sources available to fund a variety of watershed protection projects.

42. Foundation Center: Philanthropy News Digest

http://philanthropynewsdigest.org/rfps?search=1&tags_interest[]=environment

Compilation of recent requests for proposals and/or funding opportunities in the area of environment, both for individuals and organizations. Philanthropy News Digest publishes RFPs and notices of awards as a free service for grant-making organizations and nonprofits.

43. Fundsnet Grant Directory

http://www.fundsnetservices.com/

A collection of environment and conservation grants by Fundsnet.

44. National Council for Science and the Environment

https://www.ncseglobal.org/

A compilation of foundations providing grants for environmental purposes.

45. Red Lodge Clearinghouse

http://rlch.org/

Through case studies, funding information, handbooks, news stories, and summaries of laws, the Red Lodge Clearinghouse supports, connects and informs the partners of collaborative initiatives and others addressing natural resource challenges in their community.

46. River Network

http://www.rivernetwork.org/index.php

River Network works to protect and restore America's rivers by building the capacity of grassroots organizations and acquiring threatened riverlands. River Network offers publications, fundraising tips, technical assistance and resources, and opportunities to network with other groups across the country. River Network's Resource Library provides tools on how to raise more money, build stronger organizations, and protect rivers and their watersheds.

Appendix D Public Involvement and Approval Process

Nonpoint Source Advisory Committee

In August 2017 over 150 staff from New Mexico's natural resources agencies and organizations were invited to participate as members of a NPS Advisory Committee to help review and revise the NPS Management Plan. Invitees included contacts for all of New Mexico's SWCDs, staff in environmental programs in most of New Mexico's Indian nations, pueblos, and tribes, representatives from each WQCC constituent agency, members of the Forest and Watershed Health Coordinating Group coordinated by the New Mexico Division of Forestry, staff from most of the state and federal agencies listed in Section 6, and representatives of a few other environmental nonprofits or other organizations affected by water quality management interested in water quality. Invitees were asked if they would like to serve on the NPS Advisory Committee, and separately whether they would like to attend either of two workshops planned in the fall. The following table indicates those who agreed to serve on the NPS Advisory Committee or who attended one or both workshops. NMED staff are not listed in the following table.

Last Name	First Name	Organization	NPS Advisory Committee member	Attended Northern NM Workshop	Attended Southern NM Workshop
Abeyta	Joseph	Tesuque Pueblo	No	Yes	No
Alfero	Madeline	Silver City Watershed Keepers	Yes	No	Yes
Bloedel	Dan	NRCS	Yes	No	Yes
Bock	Judy	Carlsbad SWCD	Yes	No	No
Bronson	Kali	Bernalillo County	Yes	Yes	No
Cadena	Fernando	Self	No	No	Yes
Chavez	Patrick	Albuquerque Metropolitan Area Flood Control Authority	Yes	Yes	No
Cooper	Martha	The Nature Conservancy	Yes	No	Yes
Durr	Cory	BLM	Yes	No	No
Esslinger	Gary	Elephant Butte Irrigation District	Yes	No	No
Glass	Steve	Ciudad SWCD	Yes	No	Yes
Grijalva	Leslie	International Boundary & Water Commission	Yes	No	No
Hall	Joshua	United States Forest Service, Southwest Region	Yes	Yes	No
Haraden	Peter	Lincoln National Forest	No	No	Yes

Last Name	First Name	Organization	NPS Advisory Committee member	Attended Northern NM Workshop	Attended Southern NM Workshop
Hughes	Debbie	New Mexico Association of Conservation Districts	No	No	Yes
Hurteau	Sarah	The Nature Conservancy	Yes	No	No
Jansens	Jan-Willem	Galisteo Wildway Network / NM Wildways Network	Yes	No	No
Jemison	Roy	United States Forest Service, Southwest Region	Yes	Yes	Yes
Johnson	Barbara	Rio Puerco Alliance	Yes	Yes	No
Johnston	Jessica	Aguas Norteñas	No	Yes	No
Koury	Carolyn	Gila National Forest	Yes	No	Yes
Libbin	Zachary	Elephant Butte Irrigation District	No	No	Yes
Lopez	Patrick	Elephant Butte Irrigation District	Yes	No	Yes
Matison	Jim	WildEarth Guardians	Yes	Yes	No
May	Melissa	San Juan SWCD	Yes	No	No
Mendoza	Kate	Albuquerque Bernalillo County Water Utility Authority	No	Yes	No
Mitchell	Toner	Trout Unlimited	Yes	Yes	No
Montoya	Eliza	Hermit's Peak Watershed Alliance	Yes	Yes	No
Montoya	Tammy	Santa Ana Pueblo	No	Yes	No
Oliver	Ann	Animas Watershed Partnership	Yes	No	No
Redhorse	Dorothy	Navajo Nation Environmental Protection Agency	No	Yes	No
Rich	Susan	New Mexico Energy, Minerals, and Natural Resources Department	Yes	Yes	No
Romero	Enrique	New Mexico Acequia Association	Yes	Yes	No
Romero	Rosemary	Rosemary Romero Consulting	No	Yes	Yes

Last Name	First Name	Organization	NPS Advisory Committee member	Attended Northern NM Workshop	Attended Southern NM Workshop
Sabie	Robert	New Mexico Water Resources Research Institute	Yes	No	Yes
Siwik	Allyson	Gila Resource Information Project	Yes	No	No
Smith	Denise	Town of Silver City	No	No	Yes
Soles	Ellen	Grant SWCD	Yes	No	Yes
Torres	Mark	Valle Vidal Grazing Association	Yes	No	No
Volke	Malia	New Mexico Department of Game and Fish	Yes	Yes	No
Wanstall	Jim	New Mexico Department of Agriculture	Yes	Yes	No
Withnall	Kate	New Mexico Highlands University	Yes	Yes	No

Two workshops, conducted in October and November of 2017 (at Ghost Ranch and Elephant Butte Lake State Park, respectively), allowed NPS Advisory Committee members and others to focus on NPS pollution management in retreat-like settings. Facilitator Rosemary Romero guided a series of presentations and structured discussions to gather ideas and input on the NPS Management Plan. The workshops included agenda items on watershed prioritization methods, WBP alternatives, and a ranking exercise for the activities in the 2014 NPS Management Plan related to watershed based planning (Section 3.1), water quality improvement (Section 3.2), water quality protection (Section 3.3), and education and outreach (Section 3.4). The ranking exercise began with a preparation session during which break-out groups were able to draft recommended revisions to activity descriptions, or draft entirely new activities. Participants then placed votes on activities based on their likely effectiveness towards addressing NPS pollution. A report on the outcome of the workshops is available at www.env.nm.gov/surface-water-quality/nps-plan. Many of the ideas discussed at the workshops were included in the initial draft of the NPS Management Plan provided to EPA for technical review.

Additional input and review was requested from agencies, including an NPS Advisory Committee member when available, to update descriptions in Section 6 of programs that protect and improve water quality. Several of them provided comments on other sections of the NPS plan as well.

EPA Technical Review

A draft of the NPS Management Plan was provided to EPA Region 6 for technical review on April 27, 2018, and comments were received on July 10, 2018. EPA provided positive comments relative

to a checklist used to review such plans. The only edit resulting from this review was for NMED to clarify in Section 5 that TMDLs must be developed for all Category 5 streams, unless water quality standards are met earlier through other mechanisms.

Public Involvement Plan and Limited English Proficiency Analysis

Public Involvement Plan (PIP) and Limited English Proficiency (LEP) analyses were prepared to identify how to provide proper and appropriate public participation opportunities for the NPS Management Plan. The PIP is available at https://www.env.nm.gov/surface-water-quality/nps-plan and the LEP analysis is available from NMED upon request. The PIP outlines the role of the NPS Advisory Committee and describes steps taken under "Formal Public Comment Period" below. The LEP analysis describes the importance of the NPS Management Plan to New Mexicans who speak any language, and outlines procedures for providing information on the Plan to individuals not proficient in English.

Formal Public Comment Period

The sixty-day public comment period was advertised on October 15, 2018 via posting of the public comment draft of the NPS Management Plan on the NMED web site (at www.env.nm.gov/surface-water-quality/nps-plan), publication of public notice of the comment period in the Las Cruces *Sun News* and *Albuquerque Journal*, and an email sent to 1,641 recipients on the SWQB email list. The published public notice and the email included the same information in English and Spanish (translated by a certified translator). An additional email was sent to the forty-two people listed in the table above who served on the NPS Advisory Committee or who attended one or both NPS Advisory Committee workshops. A presentation on the draft NPS Management Plan was provided to the Forest and Watershed Management Coordinating Group (an interagency group coordinated by State Forestry) on October 19, 2018. The public comment period closed on December 14, 2018.

Comments were received from six organizations. The following table lists the comments received, which are in some cases paraphrased or edited slightly for clarity, along with a response to each comment. In cases noted below, the document was revised to address the public comments and questions, resulting in the WQCC draft of the 2019 NPS Management Plan. The original comments received are included below.

#	Commenter	Comment	Response
1	Brewer Oil Company	It would be beneficial for both Brewer and the State if we were able to work with the Clean Water State Revolving Fund program and the Petroleum Storage Tank Bureau to establish financing for the upgrade and/or replacement of ... aging tanks in order to prevent pollution.	NMED received three sets of comments similar to this one, along with internal comments from the NMED Petroleum Storage Tank and Construction Programs Bureaus, supporting eligibility for funding upgrade or replacement of aging petroleum storage tanks with Clean Water SRF loan funds. SWQB concurs that addressing aging tanks with these funds would be an appropriate component of the state NPS Management Program. A new Section 6.1.7 was added describing the Petroleum Storage Tank Bureau and specifying eligibility of tank clean-ups for funding with SRF, as a component of the state NPS Management Program.
2	Hodges Oil Company	Consider including storage tanks that contain regulated substances into the NPS Plan. That would allow tank owners and operators to work within the Clean Water State Revolving Fund program, for achieving optimal pollution prevention.	Please see the response to comment #1, above.

#	Commenter	Comment	Response
3	New Mexico Department of Agriculture (NMDA)	On Page 2-3, in Section 2.1, it is stated; "over 1,900 stream miles are estimated to be impaired by rangeland grazing." NMDA would like to know how this "estimate" was obtained. If the 1,900 stream mile figure cannot be backed by actual on the ground research and monitoring, we suggest that this figure be removed.	This estimate is provided in the *2018-2020 Integrated Report.* It is the sum of stream miles with TMDLs where SWQB field staff noted the presence of grazing livestock within the watersheds of the subject streams, as documented on Probable Source Forms prepared for each water quality monitoring station, during a water quality survey that included that station. A probable source listed for a waterbody has not been proven to be a source or the only source of the identified impairment. A probable source has been documented to exist in the watershed and is known from scientific research to have the potential to contribute pollutants to surface water. Statements such as, "over 1,900 stream miles are estimated to be impaired by rangeland grazing" were edited for consistency with the above description of probable sources. More information on probable sources, including the Probable Source Form, is available at www.env.nm.gov/swqb/PS.
4	NMDA	Throughout Section 2, "rangeland grazing" is cited as a major contributor to non-point source pollution in New Mexico. It has been proven that properly managed rangeland grazing actually improves rangeland/watershed health. Unmanaged or improperly managed grazing can have negative impacts on rangeland/watershed health. NMDA would like this distinction to be made throughout the document.	The NPS Management Program promotes watershed-based planning to identify, quantify, and prioritize sources, and supports, through funding and technical assistance, properly managed grazing. Considering NMED's general concurrence with NMDA, each mention of grazing in the document was reviewed and the requested distinction was made where considered appropriate.

#	Commenter	Comment	Response
5	NMDA	Over the last 30 years, the large majority of livestock producers within our state have made great strides in implementing grazing practices based on proven range science principles. This needs to be recognized. The term unmanaged rangeland grazing should be used instead.	Each mention of grazing in the document was reviewed and the phrase “unmanaged or improperly managed grazing” was used where considered appropriate.
6	NMDA	Section 3.1.1 states that the New Mexico Environment Department (NMED) will “Conduct procurements as necessary for technical or outreach components of primarily in-house WBP efforts.” Will NMED be following the state procurement code when hiring outside contractors? This is not clear.	In most cases NMED will follow NMSA 1978, Sections 13-1-28 through 13-1-199 ("Procurement Code") for these small procurements to assist NMED with in-house WBP efforts. Additionally, NMED will use a sub-grant award process for larger Section 319 projects, including on-the-ground projects that include minor planning components. Some of these minor planning components may be to assist NMED with in-house planning.
7	NMDA	Section 3.2.1 states, “NMED will conduct smaller procurements for specific, targeted projects that will implement WBPs and WBP alternatives, to be funded with Section 319 watershed project funds.” Will NMED be following the state procurement code when hiring outside contractors? This is not clear.	NMED will follow NMSA 1978, Sections 13-1-28 through 13-1-199 ("Procurement Code") for these small procurements.
8	NMDA	Section 6.3.5 reviews NPS categories to be addressed by NMDA. NMDA would like to add language [in the attached full comment], in order to capture its role more accurately.	The additional language in NMDA’s comment is now included.
9	NMDA	Section 6.4.2 reviews NPS categories to be addressed by New Mexico’s Soil and Water Conservation Districts. NMDA would like to revise the language [as described in the attached full comment], in order to capture their role more accurately.	The revisions recommended by NMDA were made.

#	Commenter	Comment	Response
10	New Mexico Department of Game and Fish (NMDGF)	The current prioritization strategy [for watershed-based planning] is general and inclusive, assigning priority status to 446 watersheds in the state. NMDGF recommends that NMED revise the current strategy by identifying a small number (approximately ten to fifteen) of top priority watersheds where water quality improvements would be most attainable and have the greatest benefit. The Plan should prioritize watersheds where: (1) impairments have a high probability of being delisted through management or restoration actions; and (2) there is a high level of biological and ecological value. NMDGF recommends that COAs identified by NMDGF be considered as part of a revised prioritization strategy for water quality projects in the state.	NMED evaluated the Recovery Potential Screening (RPS) tool developed by EPA for this purpose, but so far has not identified an index that can be used to identify watersheds where water quality improvements are most attainable. NMED will continue to explore RPS and may utilize an index produced through RPS to help evaluate applications for future watershed-based planning projects and water quality improvement projects. Regarding benefit, the presence of a Conservation Opportunity Area (COA) will be used to assign a portion of points to such applications as well. Application forms and instructions will provide details about how the points will be applied. Edits were made to Sections 3.1, 3.2, 5.2, 5.3, and 8 to describe the planned use of RPS and COAs.
11	NMDGF	As part of an improved prioritization strategy, the NPS Management Program should reevaluate existing impairments derived from applying potentially inaccurate and/or unattainable water quality standard(s) due to natural conditions or a warming climate. Avoid prioritizing water bodies where current impairment listings are likely inaccurate and/or impossible to remedy through management or restoration actions.	Some of New Mexico's assessed waters are within Assessment Categories 5B and 5C (in the *303(d)/305(b) Integrated Report*). Category 5B is for waters where "a review of the water quality standard will be conducted to verify appropriateness.". Category 5C is for waters where "…additional data are necessary to verify the listing before TMDLs are scheduled." In the 2018-2020 Integrated Report, 101 water body impairments are in Category 5B, and 138 impairments are in Category 5C. The NPS Management Program focuses on Category 4A, 4B, 4C, and 5alt impairments, and Category 5B and 5C impairments are not eligible for Section 319 funding. Water quality standards and assessment decisions are outside the scope of the NPS Management Program.

#	Commenter	Comment	Response
12	NMDGF	To better emphasize the importance of BMPs and passive forms of restoration for addressing NPS pollution, the text that appears on page B-1 should be relocated to the main narrative in Section 5.5.	NMED agrees that passive restoration is often effective and less expensive than active restoration approaches. The text that appeared on page B-1 has been moved to Section 5.5 as requested.
13	NMDGF	Please describe and quantify how the NPS Management Program currently implements passive BMPs compared to structural treatments (active restoration) and evaluate the relative effectiveness of these two methods in achieving improvements to water quality.	Of New Mexico's eight recognized NPS Success Stories (at www.epa.gov/nps/success-stories-about-restoring-water-bodies-impaired-nonpoint-source-pollution), five were achieved primarily through passive restoration. One was achieved through a mix of active and passive approaches, and two (one a mine reclamation and the other facilities development for a popular swimming hole) were achieved through active restoration. The likelihood that water quality improvement projects will produce measurable improvements in water quality is a primary consideration in evaluating applications for Section 319 watershed implementation projects.

#	Commenter	Comment	Response
14	NMDGF	Further discussion is needed regarding how the NPS Management Program could adopt and encourage greater application of BMPs in watersheds across the state.	The 2019 NPS Management Plan includes several new strategies to improve the geographic distribution of projects statewide. Section 3.6.1 includes an effort for NMED staff to more actively work with key SWCDs identified in Section 6.4.2. Section 3.6.1 also states that NMED will work with USFS to develop a programmatic agreement to fund implementation of WBPs on Forest Service land. This agreement will facilitate project implementation in areas without watershed groups. Sections 5.2.1 and 5.3 indicate that priority points may be awarded to geographically underrepresented areas. Prioritizing projects in COAs and with high recovery potential per an RPS index (now described in Sections 5.2 and 5.3) would favor project distribution based on factors other than proximity to Santa Fe. NMED hopes that resulting projects will demonstrate effective approaches for water quality improvement and encourage greater application of BMPs across the state.
15	NMDGF	Section 6.1. This section warrants additional detail regarding how NPS violations are enforced, the frequency and types of violations issued, and resulting outcomes of violations enforcement.	NMED's objective with the new activity related to enforcement is to develop a procedure and make progress in this area. Doing so will allow us to track and evaluate how regulations pertaining to disposal of refuse in a watercourse are enforced.

#	Commenter	Comment	Response
16	NMDGF	Page 6-4 (Section 6.5). This section implies that there are established water quality standards for wetlands and monitoring methods to assess wetlands against their standards. If this is the case, please describe these standards and methods. If not, please clarify the current status of wetlands standards and monitoring in New Mexico.	Wetlands are included in 20.6.4 NMAC (Standards for Interstate and Intrastate Surface Waters) in several places. Many wetlands are considered waters of the state (20.6.4.7.S.(5) NMAC). Most or all waters of the state that are wetlands are "unclassified" waters of the state, covered by 20.6.4.99 NMAC (unless shown to be non-perennial), with designated uses for warm water aquatic life, livestock watering, wildlife habitat, and primary contact. Each of these designated uses have applicable water quality criteria in 20.6.4.900 NMAC. Wetlands which are waters of the state are protected by the Antidegradation Policy at 20.4.6.8 NMAC. Additionally, some wetlands are protected as ONRWs (20.6.4.9.D.(3)(h) NMAC). Wetlands are not presently assessed against their water quality standards in New Mexico. However, the New Mexico Wetlands Program has developed Rapid Assessment Methods (RAMs) for some categories of wetlands and continues to develop RAMs for additional wetland types. More information about RAMs is at https://www.env.nm.gov/surface-water-quality/wetlands-rapid-assessment-methods. The Wetlands Program has a component to develop standards and assessment methods for wetlands, and the RAMs are prototypical assessment methods.

#	Commenter	Comment	Response
17	NMDGF	Page 6-6 (Section 6.1.2). Define and describe TMDL alternatives, how they fit into the existing NPS Management Program framework, and future plans for using TMDL alternatives.	More information on TMDL alternatives is provided in Section 5.2. Sections 5.2 and 6.1.2 were edited to make clear that TMDL alternatives (generally, WBPs) may be prepared for Category 5-alternative waters. TMDL alternatives were not discussed in the 2014 NPS Management Plan. Under the 2019 NPS Management Plan, SWQB will work on in-house watershed-based planning, to produce a WBP that EPA considers a TMDL alternative.
18	NMDGF	Section 7. This section should evaluate how completed WBPs address the greatest water quality needs in the state, and how effective they have been in improving water quality (i.e., resulted in impairment delistings) to date. In this context, please provide the criteria for selecting where new WBPs will be developed, and how frequently new WBPs will be developed in the future.	Under the 2014 NPS Management Plan, a large number of impaired waters with TMDLs received equal priority for developing WBPs. The watersheds with WBPs tend to be those with more public interest than others, as indicated by the proposals or applications NMED received. Of New Mexico's eight NPS Success Stories, none had WBPs at the time the projects or management changes contributing to water quality improvement occurred. Watershed-based planning and implementation and management changes are long-term prospects, therefore more time may be needed to evaluate whether watershed-based planning enhances likelihood of successful implementation. Criteria for selecting where new WBPs will be developed are in Section 5.2.
19	NMDGF	Page B-8. Delete "Conservation Services Division" after "New Mexico Department of Game and Fish (NMDGF)". This Division was renamed "Ecological and Environmental Planning Division."	This revision recommended by NMDGF was made.

#	Commenter	Comment	Response
20	NMDGF	Page B-8. The *Bridge & Road Construction in Riparian Area Guidelines* (2003) should be updated to the current *Bridge and Culvert Construction Guidelines for Stream, Wetland, and Riparian Habitats* that are available at the following link: http://www.wildlife.state.nm.us/download/conservation/habitat-handbook/projectguidelines/feature/Bridge-and-Culvert-Construction-Guidelines-for-Stream-Wetland-and-Riparian-Habitats-2018.pdf	This revision recommended by NMDGF was made.
21	NMDGF	On page B-8, in the NMDGF section, add a link to the new online Environmental Review Tool (https://nmert.org).	This revision recommended by NMDGF was made.
22	New Mexico Municipal League Environmental Quality Association (NMMEQA)	As nutrients are listed as the second most common water quality parameters exceeding water quality standards, the NMMEQA requests that projects to reduce NPS nutrient loading be considered as a priority funding area.	Nutrients are a priority parameter to address in the NPS Management Program. Of the 48 watershed-based planning, Section 319 implementation, and River Stewardship Program projects in progress in 2018, 11 address nutrient impairments.
23	NMMEQA	NMMEQA encourages NMED to develop a pollutant trading program to address nutrient pollution and requests guidance be developed to implement such a program.	Pollutant trading between point and nonpoint sources of pollution is particularly complicated in New Mexico, where the state does not have authority to issue NPDES permits. SWQB staff in both the Point Source Regulation Section and Watershed Protection Section are available to help New Mexico communities explore these options. Pollutant trading is a topic which can be explored in watershed-based planning, where stakeholders support it.
24	NMMEQA	Section 3.3.1 includes an activity to use Section 319 funds to implement WBP alternatives that are post-fire response plans. Does it make sense to focus the majority of money for the repair of the coldwater aquatic life uses? This restriction limits some parts of the state that could have projects.	The New Mexico NPS Management Program is focused on maintaining or achieving water quality standards. Wildfire has the greatest potential to impact coldwater aquatic life uses. Protecting coldwater aquatic life is expected to often protect other designated uses, including public water supplies.

#	Commenter	Comment	Response
25	NMMEQA	Section 3.3.1 includes an activity to "work with the NMED Construction Programs Bureau to pursue the use of Clean Water SRF to protect water quality." What types of projects could be funded by the Clean Water State Revolving Fund loans for NPS pollution? Please provide specifics examples that could be funded with the SRF.	Any project that implements the NPS Management Program could be funded Clean Water SRF funds. Specifically, that currently includes WBP development, WBP implementation, and removal, upgrade, replacement, and remediation of aging or leaking regulated petroleum storage tanks (see comment #1 above).
26	NMMEQA	Section 3.3.2 includes a milestone that reads, "The NMED Construction Programs Bureau will provide a summary of activities related to the use of the Clean Water SRF to protect or improve water quality for each NPS Management Program Annual Report." What types of projects have been funded to date?	This milestone was carried over from the 2014 NPS Management Program plans. Please see the NPS Annual Reports for 2014 – 2018 (https://www.env.nm.gov/surface-water-quality/nps-annual-reports) for what has been reported in past years.
27	NMMEQA	Section 4.2 mentions "appropriate actions to protect water quality where water quality standards are being met." What are some examples of how NMED would apply this? What are some examples of appropriate actions?	This statement applies to WBP alternatives, and a mention of WBP alternatives with a reference to Section 5.2.3 was added to Section 4.2 to clarify this. Treatment of burned slopes is an appropriate action. Arresting erosion within a wet meadow, to maintain the meadow's ability to process and attenuate nutrients, thus reducing the likelihood of future nutrient impairment in downstream waters, is another example.
28	NMMEQA	Section 5.2 states, "TMDLs do not establish separate load reduction goals for each individual point and nonpoint source, but most TMDLs establish an overall load reduction goal." Is a "load reduction goal" for a point source the same as a Wasteload Allocation or WLA? If so, is the statement correct?	A load reduction goal for a point source is not the same as a WLA. The WLA is the loading from point sources that should not be exceeded. SWQB no longer routinely drafts TMDL documents with overall load reduction goals, but most TMDLs approved in the past have these goals. The overall load reduction goal is the measured load minus the target load.

#	Commenter	Comment	Response
29	NMMEQA	Regarding watersheds of Category 4C streams discussed in Section 5.2, what is the basis for retaining these watersheds as priority watersheds?	Past policy and interpretation for NPS Management Programs have allowed the programs to address any impairments not caused by point sources. Category 4C waters are considered to be impaired, and the NPS Management Program appropriately seeks to address those impairments.
30	NMMEQA	What can be done to address the impairment caused by a reduction in flows in watersheds of Category 4C streams?	Base flows may be augmented by collaborative water management and restoration of wetlands.
31	NMMEQA	How could flow regimes be increased in Category 4C streams, especially if they are caused by permanent hydrological modifications or the effects of climate change?	If flow regimes are changed by permanent hydrologic modifications or the effects of climate change, then it may not be feasible to restore them. The NPS Management Program seeks to create a framework to support water quality improvement, where feasible.
32	NMMEQA	How much money has been funded for the Category 4C watersheds in the last few years?	The only present or recent example is the project, "On-The-Ground Improvement Projects for the Mora River – Upper Canadian Plateau Phase 1A," to reduce nutrient loading in the Mora River. Some of the project (about $150,000 in federal and matching funds and in-kind) is in the Wolf Creek watershed, and Wolf Creek is in Category 4C.
33	NMMEQA	NMMEQA supports the Category 5-alternative concept summarized in Section 5.2 and the pursuit of alternative restoration approaches. NMMEQA also feels that this approach is well suited for nutrient impaired streams and suggests that NMED-SWQB select a nutrient impaired watershed for WBP development.	The recommendation that a nutrient impairment be addressed will be considered in selecting a watershed for development of a WBP as a TMDL alternative. Several WBPs at https://www.env.nm.gov/surface-water-quality/accepted-wbp include nutrient impairments among problems to be addressed.

#	Commenter	Comment	Response
34	NMMEQA	[Referring to Section 5.2.1] It would be beneficial to distribute the funds for projects across the state. This may require expanding the types of aquatic life designated uses and impairment categories eligible for funding. Nutrient impairments are widespread throughout the state and impact a variety of aquatic life uses.	Water quality impairments with TMDLs are well distributed across the state, such that focusing on nutrients or specific designated uses does not seem warranted as a means of distributing funds for projects across the state. Under this NPS Management Program plan, any impairment parameter with a TMDL, regardless of which designated use is not supported, may be included in a WBP funded with Section 319 funds. Any such parameter described in a WBP is eligible for Section 319 project funding (to implement the WBP).
35	NMMEQA	According to Section 6.2.2, 7,880 acres in New Mexico are part of the riparian buffer sub-program of the Conservation Reserve Program (CRP). It may be beneficial to review the locations covered by these programs to see if additional efficiencies may be gained by funding other NMED NPS projects in those areas utilizing CWA funds. This may be an additional activity in Section 3.6.1 to assist NMED in achieving the Objective, "Cooperate with other Agencies on Water Quality Protection and Improvement."	SWQB agrees that the CRP riparian buffer sub-program represents a significant conservation achievement that the NPS Management Program could build on. An activity was added to Section 3.6.1, for WPS staff to review the locations covered by the CRP riparian buffer sub-program and seek opportunities to work with FSA or their cooperating producers to coordinate on future water quality projects.
36	New Mexico Petroleum Marketers Association (NMPMA)	I ... request that the aboveground and underground storage tanks (“tanks”) as defined and subject to 20.5 NMAC be included as a component of the state’s Non-Point Source Plan.	Please see the response to comment #1, above.
37	NMPMA	Consistent with objectives 3 and 5, the eligibility to use the Clean Water State Revolving Loan Fund to upgrade or replace tank systems ... will protect the water and ground water quality of the state.	SWQB concurs. Please see the response to comment #1, above.
38	NMPMA	Compliance with 20.5 NMAC is overseen by the New Mexico Environment Department Petroleum Storage Tank Bureau.	Noted. Section 6.1.7 includes this NMAC citation.

Public comment submitted by Brewer Oil Company

From: Tom Hennessy
To: Franklin, Abraham, NMENV
Cc: Bahar, Dana, NMENV
Subject: [EXT] Comment of Draft 2019 NPS Management Plan
Date: Monday, December 10, 2018 9:26:37 AM

Brewer Oil Company, a privately held New Mexico business, requests that storage tanks regulated under 20.5 NMAC be included in the New Mexico Non-Point Source Management Plan.

Brewer currently has over 140 underground storage tanks, the average age of which is 21 years. If the expected life of an underground storage tank is 30 years, there are tanks that have an increased likelihood of failure that could result in groundwater and surface water contamination.

It would be beneficial for both Brewer and the State if we were able to work with the Clean Water State Revolving Fund program and the Petroleum Storage Tank Bureau to establish financing for the upgrade and/or replacement of these aging tanks in order to prevent pollution while we continue to provide essential services to the communities we serve.

Tom Hennessy
Director of Retail Operations

BREWER
Serving New Mexico since 1958

505-884-2040 x 3010
www.breweroil.com

Public Comment Submitted by Hodges Oil Company

HODGES OIL
COMPANY, INC.

December 11, 2018

TO: abraham.franklin@state.nm.us

FROM: Hodges Oil Company, Inc.

SUBJECT: "Comment on draft 2019 NPS Management Plan"

Dear Mr. Franklin,

By way of introduction, my company Hodges Oil, is a medium sized wholesale petroleum distribution company located in Belen, NM that operates exclusively within the State of New Mexico boundaries. It owns storage tanks that inventory and offer for sale (both retail and wholesale) petroleum products. We are the oldest (1923) continuously owned/operated petroleum company in New Mexico. We sell to customers of substantially all trade classes: retail; industrial; commercial; governmental; and agricultural. Our tanks all fall under the oversight and auspices of both the regulatory agencies of the EPA and the New Mexico Environment Department (Storage Tank Bureau). That oversight is based specifically for the protection of ground water (surface and sub-surface).

In New Mexico, we have a rapidly aging storage tank population, with a large percentage of tanks that have been in service in excess of 25 years. Many (but not all) of these are in rural areas, where the residents and communities are dependent upon those products and services. Utilizing traditional financing options would be extremely difficult to justify the high costs of upgrades/replacements to the fuel dispensing systems. Please keep in mind we are not "Big Oil", but rather small independently owned businesses. We typically do not have access to the specialized types of loans that your agency potentially may be able to provide. Loans that possess terms that are more suitable to ensure success.

Our request is, that your agency would consider including storage tanks that contain regulated substances into the NPS Plan. That would allow tank owners and operators to work within the 'Clean Water State Revolving Fund' program. While we are a heavily regulated community, we all, regulator and regulated alike, want the same thing for the State of New Mexico – to protect our most valuable resource, our water! Mr. Franklin, your agencies favorable inclusion would allow for achieving optimal pollution prevention, while simultaneously affording us (tank owners and operators) the opportunity to achieve full compliance with all state and federal regulations, by utilizing feasible economic tools.

Thank you for your thoughtful consideration. Should you require expanded dialogue or additional information please do not hesitate to contact me.

Respectfully,

Benny Hodges
President/CEO
Hodges Oil Company, Inc.

201 WEST REINKEN AVE • P.O. BOX 698 • BELEN, NM 87002
(505) 864-8611 • FAX (505) 864-7344 • benny.h@hodgesoilco.com

Public Comment Submitted by the New Mexico Department of Agriculture

NMED

2018 New Mexico Non-point Source Management Plan Draft

NMDA Comments

Page 2-3; Section 2.1; Paragraphs 2 and 3:

A. In paragraph 2, it is stated; "over 1,900 stream miles are estimated to be impaired by rangeland grazing". The New Mexico Department of Agriculture (NMDA) would like to know how this "estimate" was obtained. The term estimated implies a certain level of guesswork. If the 1,900 steam mile figure cannot be backed by actual on the ground research and monitoring, we suggest that this figure be removed. Paragraph 3 states that "The majority of NPS pollution in New Mexico's streams is attributed to (in order of prevalence) unidentified sources, rangeland grazing". Assuming that the same estimate of 1,900 stream miles was used to arrive at this conclusion, the accuracy of this statement is questionable.

B. Throughout this section, "rangeland grazing" is cited as a major contributor to non-point source pollution in New Mexico. It has been proven that properly managed rangeland grazing actually improves rangeland/watershed health. Unmanaged or improperly managed grazing can have negative impacts on rangeland/watershed health. NMDA would like this distinction to be made throughout the document. Over the last 30 years, the large majority of livestock producers within our state have made great strides in implementing grazing practices based on proven range science principles. This needs to be recognized. The term unmanaged rangeland grazing should be used instead.

Page 3-2; Section 3.1.1; Bullet Point 6:

A. The document states that the New Mexico Environment Department (NMED) will "Conduct procurements as necessary for technical or outreach components of primarily in-house WBP efforts". Will NMED be following the state procurement code when hiring outside contractors? This is not clear.

NMED

2018 New Mexico Non-point Source Management Plan Draft

NMDA Comments

Page 3-4; Section 3.2.1; Bullet Point 2:

A. The document states, "NMED will conduct smaller procurements for specific, targeted projects that will implement WBPs and WBP alternatives, to be funded with Section 319 watershed project funds." Will NMED be following the state procurement code when hiring outside contractors? This is not clear.

Page 6-20; Section 6.3.5:

A. This section reviews NPS categories to be addressed by NMDA. NMDA would like to add the following underlined language, in order to capture its role more accurately.

6.3.5 New Mexico Department of Agriculture

NPS categories to be addressed: Agriculture, Rangeland Grazing Management, Hydrologic Habitat Modification, Watershed Management.

New Mexico Department of Agriculture (NMDA) administers regulations concerning distribution and use of agricultural pesticides in New Mexico. The director of the NMDA, or a designated staff member, represents NMDA as a constituent agency of the WQCC. NMDA staff analyze TMDL studies and provide input to agricultural producers, on best management practices to aid the rehabilitation of impaired waters.

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, project and program planning assistance and some financial help to 48 SWCDs in New Mexico. In this capacity, NMDA provides technical support, and partnership coordination to implement a wide variety of watershed management projects and programs.

NMED

2018 New Mexico Non-point Source Management Plan Draft

NMDA Comments

Page 6-24; Section 6.4.2:

A. This section reviews NPS categories to be addressed by New Mexico's Soil and Water Conservation Districts. NMDA would like to add the following underlined language, and remove the language that is *italicized,* in order to capture their role more accurately.

6.4.2 Soil and Water Conservation Districts

• NPS categories to be addressed: Agriculture, Rangeland Grazing Management, Hydrologic Habitat Modification, Watershed Management.

New Mexico's SWCDs are subdivisions of New Mexico State Government. They are responsible under state law for directing soil and water conservation programs within their approved boundaries. *Primarily on private lands, but also in coordination with tribal*, Through their programs SWCDs implement a variety of projects on private land as well as local, state and federally held lands. This is made possible through their unique statutory authority, allowing them to conduct and administer projects on all types of landholdings within their boundaries. Each of the 48 SWCDs in New Mexico have an elected board of five *to seven* locally elected District Supervisors who are familiar with local soil and water conservation issues. Two additional district supervisors may serve through an annual appointment by the New Mexico Soil and Water Conservation Commission (SWCC). SWCDs can provide assistance at the local level to establish watershed groups, develop WBPs, provide technical expertise on water quality and NPS pollution issues, promote the use of the SRF, assist local governments with NPS pollution management and prevention, and provide water stewardship education to private landowners. SWCDs are able to work with private landowners and other stakeholders on a landscape scale for watershed projects on private, state, tribal and federal lands. The BLM program Restore New Mexico has been implemented to work in concert with SWCDs. The SWCDs have had a pivotal role in identifying and coordinating private landowners within the matrix of public and private lands. New Mexico's SWCDs encourage the use of BMPs such as *riparian fencing and* rotational grazing to reduce erosion and protect water quality and habitat in streams and watersheds. They directly implement or coordinate these

NMED

2018 New Mexico Non-point Source Management Plan Draft

NMDA Comments

activities when personnel and funding are available. Work done with local landowners includes stream restoration to stop channel bank erosion, along with practices to increase riparian vegetation to protect banks and lower water temperatures. SWCDs provide educational experiences for erosion prevention, road drainage techniques, and rotational grazing. Assistance is provided to landowners and other agencies with *structures* practices that stop head cuts and heal gullies; reduce runoff from irrigated fields; and reduce runoff from impervious surfaces. SWCDs administer hazard mitigation projects to assist landowners and public entities with forest thinning on their properties to protect and promote the health of watersheds. SWCDs administer noxious weed programs, providing techniques for local and public landowners to address noxious weed problems in many parts of New Mexico.

Public Comment Submitted by the New Mexico Department of Game and Fish

7 December 2018

Abe Franklin
Program Manager
Watershed Protection Section
Surface Water Quality Bureau
New Mexico Environment Department
PO Box 5469
Santa Fe, NM 87502-5469

RE: Draft 2019 Nonpoint Source Management Plan; NMDGF No. 18716

Dear Abe Franklin:

The Department of Game and Fish (Department) has reviewed the Draft 2019 Nonpoint Source Management Plan (Plan). The Plan describes the New Mexico Nonpoint Source (NPS) Management Program and related actions to prevent NPS pollutants from entering both surface water and groundwater. The plan further describes how the New Mexico Environment Department Surface Water Quality Bureau engages in statewide activities related to water quality protection, education, and outreach, and supports planning and collaboration to implement water quality improvement projects. Collectively, these efforts aim to help New Mexico meet its surface water quality standards to protect designated uses and protect groundwater quality for municipal, domestic, and agricultural uses.

The Plan would benefit from further development regarding the prioritization of watersheds for water quality improvement activities. The current prioritization strategy is general and inclusive, assigning priority status to a large number (446) of watersheds in the state. To date, it appears that about 5 percent of these 446 priority watersheds have been addressed by Watershed Based Plans (WBPs). The Department recommends revising the current prioritization strategy to better target the most pressing water quality issues across New Mexico. This revised strategy should identify a smaller number (~10-15) of top priority watersheds where water quality improvements would be most attainable and have the greatest benefit. **The Plan should prioritize watersheds where: (1) impairments have a high probability of being delisted through management or restoration actions**, such as where a stream is impaired due to heavy metals derived from a legacy mine in the upper watershed; and **(2) there is a high level of biological and ecological value.** This should include watersheds with superior potential to support high levels of biodiversity, endemic or special status species, native fauna that are particularly sensitive to water quality (e.g., Texas hornshell, Gila Trout, Rio Grande cutthroat trout), and habitats that are considered imperiled globally or within the state. The Department has identified 16 Conservation Opportunity Areas (COAs) across New Mexico where improvements in water quality may maximize opportunities to promote these biological and

ecological values. The Department recommends that COAs be considered as part of a revised prioritization strategy for water quality projects in the state. The State Wildlife Action Plan for New Mexico lists and describes COAs beginning on page 67. The New Mexico Environmental Review Tool website (https://nmert.org/) provides access to COA boundaries and associated watershed and stream features via an interactive web map. The list of priority watersheds should be evaluated on a continual basis in response to changing conditions.

As part of an improved prioritization strategy, the NPS Management Program should re-evaluate existing impairments derived from applying potentially inaccurate and/or unattainable water quality standard(s) due to natural conditions or a warming climate (e.g., sediment, temperature). Avoid prioritizing water bodies where current impairment listings are likely inaccurate and/or impossible to remedy through management or restoration actions.

Best Management Practices (BMPs) are briefly discussed in section 5.5, but most information about BMPs is contained within Appendix B. To better emphasize the importance of BMPs and passive forms of restoration for addressing NPS pollution, the text that appears on page B-1 should be relocated to the main narrative under section 5.5. Additionally, please describe and quantify how the NPS Management Program currently implements BMPs compared to structural treatments (active restoration), and evaluate the relative effectiveness of these two methods in achieving improvements to water quality. Further discussion is needed regarding how the NPS Management Program could adopt and encourage greater application of BMPs in watersheds across the state.

The Department also provides the following specific comments to components of the draft Plan.

Section 6.1. This section warrants additional detail regarding how NPS violations are enforced, the frequency and types of violations issued, and resulting outcomes of violations enforcement.

Page 6-4, 6-5. This section implies that there are established water quality standards for wetlands and monitoring methods to assess wetlands against their standards. If this is the case, please describe these standards and methods. If not, please clarify the current status of wetlands standards and monitoring in New Mexico.

Page 6-6. Define and describe Total Maximum Daily Load (TMDL) alternatives, how they fit into the existing NPS Management Program framework, and future plans for using TMDL alternatives.

Section 7. This section should also evaluate how the completed WBPs address the greatest water quality needs in the state, and how effective they have been in improving water quality (i.e., resulted in impairment delistings) to date. In this context, please provide the criteria for selecting where new WBPs will be developed, and how frequently new WBPs will be developed in the future.

Page B-8. Delete "Conservation Services Division" after "New Mexico Department of Game and Fish (NMDGF)". This Division was renamed "Ecological and Environmental Planning Division".

Page B-8. The *Bridge & Road Construction in Riparian Area Guidelines (2003)* should be updated to the current *Bridge and Culvert Construction Guidelines for Stream, Wetland, and Riparian Habitats* that are available at the following link:
http://www.wildlife.state.nm.us/download/conservation/habitat-handbook/project-guidelines/feature/Bridge-and-Culvert-Construction-Guidelines-for-Stream-Wetland-and-Riparian-Habitats-2018.pdf

Page B-8, New Mexico Department of Game and Fish (NMDGF) section. Add a link to the Department's newly available online Environmental Review Tool (https://nmert.org/). This interactive tool allows users to submit proposed projects for review of potential impacts to special status species and their habitats in New Mexico. It generates automated project reports that provide Department guidance regarding routine or low-impact projects, and initiates the Department review process for activities that may require a custom review of potential considerations for wildlife and wildlife habitats.

Thank you for the opportunity to review and comment on the Plan. If you have any questions, please contact Malia Volke, Aquatic and Riparian Habitat Specialist, at 505-476-8160 or malia.volke@state.nm.us.

Sincerely,

Chuck Hayes, Assistant Chief
Ecological and Environmental Planning Division

CH/mv
cc: USFWS NMES Field Office

Public Comment Submitted by the New Mexico Municipal League Environmental Quality Association

New Mexico Municipal League

P.O. Box 846 • Santa Fe, New Mexico 87504-0846
Phone (505) 982-5573 • 1-800-432-2036
FAX No. 1-505-984-1392

December 12, 2018

Abraham Franklin
NMED/SWQB
PO Box 5469
Santa Fe, NM 87502-5469
Abraham.franklin@state.nm.us

Re: Comment on draft 2019 Nonpoint Source Management Plan

Dear Mr. Franklin:

The New Mexico Municipal League Environmental Quality Association (NMMEQA) appreciates the opportunity to provide comments on the draft 2019 Nonpoint Source (NPS) Management Plan issued by the New Mexico Environment Department on October 15, 2018. NMMEQA is a subsection of the New Mexico Municipal League representing all 106 incorporated municipalities in the state.

As noted in the draft 2019 NPS Management Plan, NPS pollution is the main category of surface water pollution in New Mexico (P. 2-3, second paragraph). Because of that, NPSs greatly impact point sources as often the burden to clean up streams is unfairly transferred to point sources. As nutrients are listed as the second most common water quality parameters exceeding water quality standards (P. 2-3, bottom paragraph), the NMMEQA requests that projects to reduce NPS pollution of nutrients be considered as a priority funding area. In addition, NMMEQA encourages the NMED develop a pollutant trading program to address nutrient pollution and requests guidance be developed to implement such a program.

The NMMEQA provides additional comments in the attached document. Please let me know if you would like clarification on the comments. I may be reached at (505) 955-4232.

Sincerely,

Alex A. Puglisi

Alex Puglisi, President
NMMEQA

Abraham Franklin
NMED/SWQB
PO Box 5469
Santa Fe, NM 87502-5469
Abraham.franklin@state.nm.us

New Mexico Municipal League Environmental Quality Association (NMMEQA) Comments on New Mexico Environment Department Draft 2018 Nonpoint Source Management Plan November 2018

PP. 3-6 and 3-7
In Section 3.3.1, NMED lists activities to achieve Objective 3 – Protect Water Quality:

- Within two years of any major wildfire, with severity outside the natural range of variability for the affected forest types, occurring in the watershed of one or more streams with a high quality coldwater, coldwater, or cool water aquatic life designated use, a portion of Section 319 watershed project funds are used for implementing WBP alternatives that are post-fire response plans.

NMMEQA Comment: Although it is true that the majority of the waters are impaired by NPSs, does it make sense to focus the majority of money for the repair of the coldwater aquatic life uses (high quality coldwater, coldwater and coolwater). This restriction also limits some parts of the state that could have projects that qualify for funding.

- Work with the NMED Construction Programs Bureau to pursue the use of Clean Water SRF to protect water quality.

NMMEQA Comment: The NMMEQA questions what this would entail? What types of projects could be funded by the Clean Water State Revolving Fund loans for NPSs? Please provide specifics examples that could be funded with the SRF. It is not clear how much impact these funds will have since the funds are available through a loan and not a grant.

P. 3-9 states: "The NMED Construction Programs Bureau will provide a summary of activities related to the use of the Clean Water SRF to protect or improve water quality for each NPS Management Program Annual Report."

NMMEQA Comment: What types of projects have been funded to date? The NMED NPS Management Plan 2017 Annual report describes one that is cited in the NMED Construction Programs Bureau (CPB) 2017 annual report. The Village of Tijeras project may be viewed as a NPS project as the community is using the loan funds to install a community-wide collection system to eliminate the septic tanks systems (nonpoint sources of nutrients). Are there others that have been approved?

P. 4-2
Section 4.2. 2nd paragraph

"Protection of water quality is another key aspect of the NPS Management Program. Planning efforts supported with Section 319 NPS program funds will often focus on TMDL implementation and meeting

watershed-based planning elements in the 2014 NPS Guidelines, ***but may also identify appropriate actions to protect water quality where water quality standards are being met.*** A portion of watershed project Section 319 funds will be used to support projects that protect water quality following unnaturally intense wildfire, if such fires occur during the period covered by the plan. These projects will be developed through rapid planning processes, and will be conducted in watersheds with one or more streams with a coldwater or cool water aquatic life designated use, where a major wildfire has occurred with severity outside the natural range of variability for the affected forest types. Some watershed project Section 319 funds will also be used to implement WAPs, WBP alternatives that typically describe actions that may both protect and restore wetlands and downstream waters." (emphasis added)

NMMEQA Comment: Regarding the emphasized phrase in the above paragraph, what are some examples of how NMED would apply this? What are some examples of appropriate actions?

P. 5-3
"Watersheds of Impaired Waters with TMDLs (Category 4A). The primary basis for identifying priority watersheds for watershed-based planning in New Mexico is the TMDL program. TMDL writers look closely at existing data to confirm impairment, collect supplemental data as needed to characterize loading, and publish analyses using a public process. These final documents typically include estimates of load reductions required for a stream to meet the New Mexico water quality standards. TMDLs establish separate maximum acceptable loads for point and nonpoint sources. ***TMDLs do not establish separate load reduction goals for each individual point and nonpoint source, but most TMDLs establish an overall load reduction goal.*** All impaired waters with TMDLs in New Mexico have NPS load allocations as part of their TMDLs. Further, watershed based planning, which builds on the basic analysis provided with TMDLs and provides implementation plans for TMDLs, can and should include accounting of both point and nonpoint sources. If an AU is clearly impacted disproportionately by point sources, regulatory mechanisms are likely to serve a greater role in addressing those water quality problems than the NPS Management Program. An impairment with an approved TMDL is identified as a Category 4A impairment on the Integrated List." (emphasis added)

NMMEQA Comment: Is a "load reduction goal" for a point source the same as a Wasteload Allocation or WLA? If so, regarding the emphasized sentence, is the statement correct? From established TMDLs, it appears that separate WLAs are developed for each point source.

PP. 5-3 to 5-4
"Watersheds of Waters Impaired by Flow Regime Modification (Category 4C)
From the standpoint of protecting designated uses, another limited category of streams recognized in the State of New Mexico CWA §303(d)/§305(b) Integrated Report and List are those streams where available information indicates that at least one designated use is not supported, but a TMDL is not required because the impairment is due to reduced flow rather than an excess of pollutants (Category 4C streams). Watersheds with Category 4C streams are retained as priority watersheds for watershed-based planning in the 2019 NPS Management Plan."

NMMEQA Comment: What is the basis for retaining these watersheds as priority watersheds? What can be done to address the impairment caused by a reduction in flows in these watersheds? How could flow regimes be increased especially if they are caused by permanent hydrological modifications or the effects of climate change? How much money has been funded for the Category 4C watersheds in the last few years?

project Section 319 funds will also be used to implement WAPs, WBP alternatives that typically describe actions that may both protect and restore wetlands and downstream waters." (emphasis added)

NMMEQA Comment: Regarding the emphasized phrase in the above paragraph, what are some examples of how NMED would apply this?

P. 5-3
"Watersheds of Impaired Waters with TMDLs (Category 4A). The primary basis for identifying priority watersheds for watershed-based planning in New Mexico is the TMDL program. TMDL writers look closely at existing data to confirm impairment, collect supplemental data as needed to characterize loading, and publish analyses using a public process. These final documents typically include estimates of load reductions required for a stream to meet the New Mexico water quality standards. TMDLs establish separate maximum acceptable loads for point and nonpoint sources. ***TMDLs do not establish separate load reduction goals for each individual point and nonpoint source, but most TMDLs establish an overall load reduction goal.*** All impaired waters with TMDLs in New Mexico have NPS load allocations as part of their TMDLs. Further, watershed-based planning, which builds on the basic analysis provided with TMDLs and provides implementation plans for TMDLs, can and should include accounting of both point and nonpoint sources. If an AU is clearly impacted disproportionately by point sources, regulatory mechanisms are likely to serve a greater role in addressing those water quality problems than the NPS Management Program. An impairment with an approved TMDL is identified as a Category 4A impairment on the Integrated List." (emphasis added)

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P. 5-4
"EPA also created an assessment Category 5-alternative, which is very similar to Category 4B. Distinctions are provided in a 2015 memorandum from EPA, suggesting that states use Category 5-alternative for impairment parameters that are "assigned a low priority for TMDL development because an alternative restoration approach is being pursued." TMDL development for a stream in Category 5-alternative may proceed if the alternative restoration approach is not implemented or does not result in water quality standards attainment. Category 5-alternative was created to encourage integration of

P. 5-4
"EPA also created an assessment Category 5-alternative, which is very similar to Category 4B. Distinctions are provided in a 2015 memorandum from EPA, suggesting that states use Category 5-alternative for impairment parameters that are "assigned a low priority for TMDL development because an alternative restoration approach is being pursued." TMDL development for a stream in Category 5-alternative may proceed if the alternative restoration approach is not implemented or does not result in water quality standards attainment. Category 5-alternative was created to encourage integration of CWA programs (e.g., NPS Management Programs and Assessment programs), to reduce the amount of time between water quality problem recognition and water quality problem solution, and to encourage more public involvement in local water quality planning. In the term of this NPS Management Program Plan, at least one pilot watershed will be selected for WBP development to explore this option. Candidate watersheds are the Coyote Creek watershed (a tributary of the Mora River), the Willow Creek watershed (in the Upper Gila watershed), and the San Vincente Creek watershed (in the Mimbres watershed). These were identified because of the presence of interested stakeholders and at least one impairment parameter for which a TMDL has not yet been prepared."

NMMEQA Comment: The NMMEQA supports the Category 5 alternative concept and the pursuit of alternative restoration approaches. NMMEQA also feels that this approach is well suited for nutrient impaired streams and suggests that the NMED-SWQB select a nutrient impaired watershed for Watershed Based Plan development.

P. 5-7
"5.2.1 Comprehensive Watershed-Based Planning Projects In 2020 and 2022, watersheds will be selected for development of comprehensive WBPs through an SFA, at a rate of approximately one to three projects every two years. An SFA is a competitive project selection process by which NMED will award sub-grants of Section 319 funding to sub-grant recipients, to implement watershed-based planning or implementation projects. These WBP projects may cover more than one priority watershed for planning. An analysis of Section 319 planning and implementation projects revealed that 61% of projects initiated between 2012 and 2018 addressed streams in just three northern New Mexico counties – Rio Arriba, San Miguel, and Sandoval. Further, 82% (28/34) of projects occurred within a one hundred-mile radius of Santa Fe. ***In order to better address NPS concerns statewide, the SFA may indicate that applications for projects in eligible watersheds in underrepresented areas will receive priority points.*** These projects will be funded with Section 319 NPS program funds or with state funds if state funds are made available for this purpose. During the period covered by this NPS Management Plan revision, SWQB will also develop at least one WBP as an in-house project with substantive stakeholder involvement, and propose that one or more impairments in the planning area be placed in Category 5-alternative. WPS staff may also pursue in-house WBP development, once again with substantive stakeholder involvement, for stream impairments that are described by TMDLs (i.e., Category 4A streams)." (emphasis added)

NMMEQA Comment: It would be beneficial to distribute the funds for projects across the state. This may require expanding the types of aquatic life designated uses and impairment categories that would eligible for funding (expand the priorities criteria). Nutrient impairments are widespread throughout the state and impact a variety of aquatic life uses.

P. 6-11

CWA programs (e.g., NPS Management Programs and Assessment programs), to reduce the amount of time between water quality problem recognition and water quality problem solution, and to encourage more public involvement in local water quality planning. In the term of this NPS Management Program Plan, at least one pilot watershed will be selected for WBP development to explore this option. Candidate watersheds are the Coyote Creek watershed (a tributary of the Mora River), the Willow Creek watershed (in the Upper Gila watershed), and the San Vincente Creek watershed (in the Mimbres watershed). These were identified because of the presence of interested stakeholders and at least one impairment parameter for which a TMDL has not yet been prepared."

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NMMEQA Comment: It would be beneficial to distribute the funds for projects across the state. This may require expanding the types of aquatic life designated uses and impairment categories that would eligible for funding (expand the priorities criteria). Nutrient impairments are widespread throughout the state and impact a variety of aquatic life uses.

P. 6-11
The USDA Farm Service Agency Conservation Reserve Program "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 NRCS, each acre under CRP contract reduces erosion by an average of 19 tons of topsoil per 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."

NMMEQA Comment: The Conservation Reserve Program has interesting features especially as they relate to nutrient reductions. Although the program has a cap of 32 million acres for farmland, there is no cap on the amount of riparian buffer acres that could be covered. According to the draft NPSMP, currently, 7,880 acres in New Mexico are part of that program. It may be beneficial to review the locations of the acres covered by these programs to see if there is additional efficiencies to be gained by funding other NMED NPS projects in those areas utilizing CWA funds. This may be an additional activity which assists in to achieving "Priority 6" – Cooperate with other Agencies on Water Quality Protection and Improvement (Activity 3.6.1. P. 3-13)

Public Comment Submitted by the New Mexico Petroleum Marketers Association

December 10, 2018

I, Ruben Baca, State Executive Director of New Mexico Petroleum Marketers Association request that the aboveground and underground storage tanks ("tanks") as defined and subject to 20.5 NMAC be included as a component of the state's Non-Point Source Plan. As the tank infrastructure ages, the risk of releases to the environment also increase. Consistent with objectives 3 and 5, the eligibility to use of the Clean Water State Revolving Loan Fund to upgrade or replace tank systems to achieve optimal pollution prevention as well as removing potential sources (non-compliant or unused tank systems), and existing contamination will protect the water and ground water quality of the state. Compliance with 20.5 NMAC is overseen by the New Mexico Environment Department Petroleum Storage Tank Bureau.

Respectfully,

Ruben Baca

Changes Made in Response to Internal Comments

The following changes were made after the public comment period, and prior to submittal to WQCC, in response to comments received from NMED staff.

- The GWQB requested that their activity to "develop, evaluate, and refine a new water quality outreach promotion to provide or educate at-risk domestic well owners a free water treatment system" be removed from Section 3.5.1.
- The specific potential candidate watersheds for development of a WBP as a TMDL alternative (i.e., for streams which may be placed into Category 5-alternative), mentioned in Section 5.2 in the Public Comment draft, are no longer considered likely candidates. This section no longer mentions specific candidate watersheds.
- An updated organizational chart for NMED was inserted in Section 6.1.
- A new Section 6.1.7 describing the Petroleum Storage Tank Bureau was added to the list of agencies and programs addressing NPS pollution.

In addition, minor updates were made to information such as internet links that changed since the plan was initially drafted in early 2018.

WQCC Review and Approval

The proposed final 2019 NPS Management Plan was provided for WQCC review on March 8, 2019. WQCC approved the document during their April 9, 2019 meeting, and incorporated it into the Statewide Water Quality Management Plan. WQCC approval is documented in an order of adoption included below.

Submittal of NPS Management Plan by the Governor of New Mexico

Secretary of Environment James C. Kenney submitted the 2019 NPS Management Plan to EPA Acting Regional Administrator David W. Gray on behalf of Governor Michelle Lujan Grisham on June 11, 2019. Secretary Kenney's letter is included below.

EPA Review and Approval

EPA Region 6 staff reviewed the 2019 NPS Management Plan and recommended approval. Acting Regional Administrator David W. Gray approved the Plan on August 1, 2019. Mr. Gray's approval letter is included below.

STATE OF NEW MEXICO
WATER QUALITY CONTROL COMMISSION

IN THE MATTER OF:

THE APPROVAL OF THE STATE OF NEW MEXICO NONPOINT SOURCE MANAGEMENT PLAN AND INCORPORATION INTO THE STATEWIDE WATER QUALITY MANAGEMENT PLAN AND CONTINUING PLANNING PROCESS

ORDER

THIS MATTER came before the New Mexico Water Quality Control Commission on April 9, 2019, at a regularly scheduled meeting. The Commission is New Mexico's water pollution control agency. NMSA 1978, § 74-6-3(E). As such, it is responsible for adopting a "comprehensive water quality management program" and "developing a continuing planning process." NMSA 1978, § 74-6-4(B). Having considered the proposed final *New Mexico Nonpoint Source Management Plan, 2019* that is part of this state's continuing planning process, and together with oral presentation at the meeting, IT IS HEREBY ORDERED:

The *New Mexico Nonpoint Source Management Plan, 2019,* is hereby approved and adopted by the Commission, as revised, and incorporated into New Mexico's Statewide Water Quality Management Plan and Continuing Planning Process.

ISSUED this 9 day of April 2019.

Chair
Water Quality Control Commission

NEW MEXICO
ENVIRONMENT DEPARTMENT

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Michelle Lujan Grisham
Governor

Howie C. Morales
Lt. Governor

James C. Kenney
Cabinet Secretary

Jennifer J. Pruett
Deputy Secretary

May 28, 2019

David Gray
Acting Regional Administrator
USEPA Region 6
1201 Elm Street, Suite 500
Dallas, Texas 75270

Dear Mr. Gray:

Enclosed please find the updated New Mexico Water Quality Control Commission's (WQCC) Clean Water Act Section 319(b) *New Mexico Nonpoint Source Management Program – 2019* document for EPA review and approval. The WQCC approved the program document at its April 9, 2019, meeting. This document replaces the formerly approved 2014 version of the *New Mexico Nonpoint Source Management Program*. The Nonpoint Source Management Program is also incorporated by reference in Section VII of the State of New Mexico Statewide Water Quality Management Plan (WQMP) adopted in fulfillment of separate requirements in Clean Water Act Sections 208 and 303.

Public participation in the development of the *New Mexico Nonpoint Source Management Program – 2019* document included organization of a Nonpoint Source Advisory Committee, which provided input to the New Mexico Environment Department during two day-long workshops conducted in Fall 2017. Public notice was provided for a 60-day public comment period from October 15 through December 14, 2018. Six organizations submitted 38 comments during the comment period, which resulted in some changes to the document. These and other efforts to engage the public and cooperating agencies while developing the plan are described in Appendix D of the document.

EPA regulations at 40 CFR 130.6(e) address procedural requirements for transmitting updates to the WQMP and require a letter from the Governor or the Governor's designee. On behalf of the Governor of the State of New Mexico, I hereby certify that the WQMP updates are consistent with all other parts of the Plan.

Electronic versions of both the *New Mexico Nonpoint Source Management Program – 2019* and the WQMP are available on the Environment Department's website at:
www.env.nm.gov/surface-water-quality/nps-plan and
www.env.nm.gov/surface-water-quality/wqmp-cpp.

If you have any questions or concerns, please feel free to contact me at (505) 827-2855 or Abraham Franklin, Watershed Protection Section Manager, at (505) 827-2793.

Sincerely,

James Kenney, Cabinet Secretary
New Mexico Environment Department
On behalf of Governor Michelle Lujan Grisham

Enclosures

Cc: (w/enclosures)
Charles Maguire, EPA R6, Water Division Director
John Bingaman, Chief of Staff, Office of Governor Michelle Lujan Grisham

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1201 ELM STREET, SUITE 500
DALLAS, TEXAS 75270

Office of the Regional Administrator

August 1, 2019

Mr. James C. Kenney
Cabinet Secretary
New Mexico Environment Department
Post Office Box 5469
Santa Fe, New Mexico 87502-5469

Dear Secretary Kenney:

Thank you for submitting the updated 2019 *New Mexico Nonpoint Source Management Plan* (SMP). The Environmental Protection Agency (EPA) appreciates the efforts of the New Mexico Environment Department's (NMED) Surface Water Quality Bureau in submitting this update to the 2014 SMP. Pursuant to the Clean Water Act §319(d), EPA Region 6 staff in the Watershed Management Section have reviewed the SMP for consistency with requirements under the CWA §319(b). EPA hereby approves the SMP. This approval concurrently updates New Mexico's Water Quality Management Plan.

The 2013 *Nonpoint Source Program and Grants Guidelines for States and Territories* suggests that States review and update their Program every five years. Future interim updates and revisions may be made at any time.

EPA recognizes the exceptional efforts of the State of New Mexico to control nonpoint source pollution and restore water quality. I look forward to continued cooperation between our agencies, and if you have any questions please feel free to contact me at (214) 665-2100, or have your staff contact Ms. Carmen Assunto, State, Local Government Liaison at (214) 665-2200.

Sincerely,

David W. Gray
Acting Regional Administrator


NEW MEXICO
ENVIRONMENT DEPARTMENT