

1 EXECUTIVE SUMMARY/OVERVIEW

2
3 PART I: SURFACE AND GROUND WATER QUALITY

4 SURFACE WATER QUALITY

5 The assessment and protection of surface water in the semi-arid state of New Mexico is
6 vitally important to the health and well-being of humans, aquatic life, and wildlife. General
7 uses of surface water in New Mexico include recreation, aquatic life habitat, propagation of
8 fish, ceremonial purposes, irrigation, industrial application, municipal water supply,
9 domestic water supply, livestock watering, and wildlife habitat. Surface water supply is
10 limited in many portions of the state.

11 Surface Water Impairment Inventories

12 Information about surface water quality throughout New Mexico is based on ~~the results~~
13 ~~of~~chemical/physical, biological, toxicological, and habitat data collected during the New
14 Mexico Environment Department's (NMED) intensive surveys, water quality monitoring of
15 projects under the State's Nonpoint Source Pollution Management Program, Total Maximum Daily
16 Load (TMDL) surveys and studies, preliminary statewide studies of mercury in fish tissues, water
17 quality compliance monitoring conducted under the National Pollutant Discharge Elimination
18 System (NPDES) program, long-term water quality monitoring collected by the U.S.
19 Geological Survey (USGS) at stream gages, and review of physical and chemical data entered by
20 various agencies into the United States Environmental Protection Agency's (EPA) database
21 (STORET).

22 ~~Conclusions concerning attainment of fishery uses are based on water quality analyses;~~
23 ~~where available, biological data were used to verify these results.~~

1 From a total of over 5,875 perennial stream miles, almost ~~3,080**~~ assessed miles, or
2 ~~52**%~~, have some level of threatened or impaired designated or attainable uses while ~~124,140**~~
3 out of a total of 148,883 lake acres, or ~~83**%~~, do not fully support designated uses. ~~Of the river~~
4 ~~miles that are impaired, designated uses in 1,247.45 river miles were partially supported; in 1,427.7~~
5 ~~river miles, pollution was such that one or more designated uses were not supported.~~

6 ~~Of the lake acres impaired, designated uses were not supported in 1,960 acres. The~~
7 ~~remaining impaired acres still provided partial support for designated uses.~~

8 **Causes and Sources of Surface Water Impairment**

9 **Heavy metal contamination, stream bottom deposits (sedimentation/siltation),**
10 **temperature, and turbidity are the major causes of surface water impairment based on**
11 **current designated, existing, and/or attainable uses.** ~~Reported-Probable~~ sources of surface
12 water quality impairment in New Mexico are diverse and include **livestock grazing, habitat**
13 **alteration, hydromodification, and runoff related to road construction and maintenance.**
14 ~~natural, lack of proper forest management, invasive riparian plants, agriculture, recreation,~~
15 ~~hydromodification and resource extraction. Causes of impairment include toxic metals,~~
16 ~~temperature, plant nutrients, bottom deposits and other causes.~~ Over ~~91~~**95%** of all water quality
17 impairment identified in New Mexico's rivers is due to nonpoint sources of water pollution.

18 ~~All of the known lake water quality impairment is due to nonpoint source water pollution.~~

19 ~~In 1994-1995,~~ **†**The State of New Mexico **has** issued fish consumption advisories for 23
20 lakes and reservoirs and one river due to elevated mercury concentrations in fish (**NMDOH et al.**
21 **2001**). Twenty-four lakes were included on the 2000 CWA §303(d) list fish consumption
22 advisories for mercury, even though the water quality standard for mercury was not exceeded in
23 these lakes. **Because New Mexico does not have any specific standards related to levels of**

1 mercury in fish tissue, these findings are now listed as “Observed Effects” under the new
2 integrated listings methodology (USEPA 2001, USEPA 2003).

3 Estimates by the United States Forest Service (USFS) based on comparing the extent of
4 hydric soils in the State to the extent of present wetlands show that New Mexico's wetlands, which
5 currently total approximately 481,900 acres, have been reduced over 33% since the 1780s. Due to
6 these historical trends, point and nonpoint pollution and drainage, ~~the all-wetlands are~~ status of all
7 wetlands is ~~considered-threatened~~ a primary concern in New Mexico. In response, the
8 Watershed Protection Section of the Surface Water Quality Bureau has recently received a
9 USEPA grant to develop a wetlands protection program.

10 GROUND WATER QUALITY

11 Approximately 90% of the population of New Mexico depends on ground water for its
12 drinking water. The water quality for the 81% of the population utilizing ground water sources
13 from public water supplies is monitored routinely. Nearly one half of the total water used for all
14 purposes in New Mexico is ground water. In many locations, ground water is the only available
15 supply.

16 Ground Water Contamination ~~Inventories~~ Cases

17 As of February 2004, approximately 200 facilities that have ground water discharge
18 permits had confirmed ground water contamination. At least 135 additional sites had either
19 confirmed ground water contamination or presented a threat to ground water. ~~NMED~~
20 ~~maintains an ongoing inventory of known ground water contamination cases in the State. At least~~
21 ~~1,235 cases have been identified from 1927 through December 1999, with 188 public and 1,907~~
22 ~~private water supply wells impacted.~~ Ground water contamination most frequently occurs in
23 vulnerable aquifer areas where the water table is shallow.

1 **Causes and Sources of Ground Water Contamination**

2 **More than half** ~~Approximately 13%~~ of ground water contamination in the State has been
3 caused by nonpoint sources, predominantly small household septic tanks or cesspools. Nonpoint
4 source contamination may be caused by diffuse sources such as large numbers of small septic tanks
5 spread over a subdivision, residual minerals from ~~evapotransporation~~**evapotranspiration**, -animal
6 feedlot operations, **dairies** areas disturbed by mineral exploration and/or storage of waste products,
7 urban runoff or application of agricultural chemicals.

8 Point sources are discharges at specific identified locations such as surface impoundments,
9 landfills, and injection wells. In New Mexico, accidental spills and leaking ~~underground~~ storage
10 tanks account for almost half of all point source contamination events.

11 **Public Drinking Water Systems**

12 The 1996 reauthorization of the federal Safe Drinking Water Act (SDWA) mandated that
13 EPA set new or revised standards for some naturally occurring ground water chemical constituents
14 in New Mexico such as radon, radionuclides and arsenic. According to the 1996 amendments,
15 EPA should have promulgated a standard for radon by December 2000, with a proposal by August
16 1999.

17 However, there is no drinking water standard for radon at the present time. Although the
18 primary risk from radon is through breathing it in indoor air, present sampling data suggest that
19 radon could occur in 84% of New Mexico's water supply wells. Annual treatment costs to remove
20 radon from water supplies could be substantial, depending on the level at which EPA sets the
21 standard. In the draft EPA regulation, states are encouraged to adopt a Multi Media Mitigation
22 (MMM) program. A MMM program would require the State Indoor Radon and Drinking Water
23 programs to work together to decrease radon levels in homes. As a result, States with MMM

1 programs for indoor air will only be required to meet a less stringent alternate MCL for drinking
2 water.

3 EPA promulgated a revised regulation for arsenic in ~~January 2000~~ **October 2001** setting a
4 national maximum contaminant level of 10 µg/L. Like radon, the costs to remove arsenic will be
5 substantial.

6 **PART 2: WATER QUALITY MANAGEMENT**

7 **THE STATE ROLE IN WATER QUALITY MANAGEMENT**

8

9 Water quality management in New Mexico has both state and federal aspects. The State
10 establishes standards for state and interstate water bodies and for ground water, assesses the quality
11 of surface and ground waters, adopts regulations, and takes actions to protect and maintain surface
12 and ground water quality. The State also coordinates with EPA in implementing the federal Clean
13 Water Act (CWA) [33 U.S.C. 1288] and other federal acts which contain water quality protection
14 provisions.

15 At the state level, the New Mexico Water Quality Control Commission (WQCC), under the
16 authority of the New Mexico Water Quality Act, has adopted the basic framework for water quality
17 management. Major components of this framework include surface and ground water quality
18 standards, regulations, and the State's Nonpoint Source Management Program.

19 **Programs for Surface Water Pollution Control**

20 New Mexico uses a variety of mechanisms including State, federal, and/or local
21 components to protect its surface waters from becoming polluted. The principal mechanism used
22 to protect waters from municipal and non-municipal point source discharges is the federal NPDES
23 program. While NPDES permits for discharges in New Mexico are issued and enforced by EPA,

1 the State plays a significant role in this permit program, by providing water quality certification for
2 these permits as well as inspecting the facilities for compliance **permit requirements**~~with their~~
3 ~~permits~~. NMED administers and enforces Surface Water Protection and Utility Operator
4 Certification regulations for the WQCC.

5 The State Nonpoint Source Water Pollution Management Program addresses nonpoint
6 source surface water pollution. NMED is the lead agency for this program, which utilizes a variety
7 of State, local and federal agency programs to achieve implementation of Best Management
8 Practices to prevent and abate nonpoint source pollution. As part of this program, the State assures
9 that water quality standards are maintained and wetlands are protected through the water quality
10 certification process for CWA §~~404~~ dredge-and-fill permits issued by the United States Army
11 Corps of Engineers. **The recently acquired wetlands grant will also be administered as part of**
12 **this program.**

13 **Programs for Ground Water Pollution Control**

14 Programs established under the New Mexico Water Quality Act, Oil and Gas Act,
15 Hazardous Waste Act, Ground Water Protection Act, Solid Waste Act, Emergency Management
16 Act, Voluntary Remediation Act and Environmental Improvement Act are designed to maintain
17 ground water quality.

18 Water Quality Act programs include a ground water discharge permit program that protects
19 ground water quality through the issuance of ground water pollution prevention permits; an
20 abatement program that includes requirements for the assessment and abatement of releases that
21 cause or threaten to cause ~~exceedances~~**exceedences** of ground water quality standards; and a spill
22 response program that includes provisions for the reporting and cleanup of spills that impact
23 ground water quality. Regulations under the Oil and Gas Act "regulate the disposition of water

1 produced or used in connection with the drilling for or producing of oil and gas....". The Oil and
2 Gas Act also regulates disposition of non-domestic and non-hazardous solid waste produced by the
3 oil and gas industry. Hazardous Waste Act regulations include requirements for preventing and
4 cleaning up releases of hazardous waste and releases from ~~underground~~-storage tanks. The Ground
5 Water Protection Act provides a state cleanup fund for corrective action at sites contaminated by
6 leaking ~~underground~~-storage tanks. The Emergency Management Act provides for the Hazardous
7 Materials Emergency Response Plan, which gives NMED the responsibility for providing
8 necessary information to first responders at hazardous materials and radiological incidents. Under
9 the authority of the Environmental Improvement Act, regulations have been adopted that cover
10 liquid waste disposal, septage and public water supply. The goal of the Voluntary Remediation Act
11 is to facilitate the expeditious, voluntary cleanup of contaminated properties, thereby promoting
12 their redevelopment and productive use.

13 Several federal programs contribute to ground water quality protection in New Mexico.
14 The federal Superfund program ~~also impacts~~ **provides funds to** the state, and NMED's Superfund
15 Oversight Section identifies, investigates, and oversees remediation of abandoned **and**
16 **uncontrolled** hazardous waste sites under a Superfund Memorandum of Agreement with EPA.

17 The New Mexico State Legislature has given extensive authority to counties and
18 municipalities for land use and protection of public health and safety, areas with substantial
19 implications for ground water quality protection. Most have not taken full advantage of this
20 authority. The present zoning authority of the counties can be coupled with a wellhead protection
21 program to effectively protect ground water drinking water sources in partnership with the State
22 Environment Department and EPA. Many small systems, which rely on surface water for their
23 drinking water, may establish a watershed protection program for their surface water sources.

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2 **PROGRAMS FOR WATER QUALITY ASSESSMENT**

3 **Surface Water Quality Assessments**

4 The State uses a wide variety of methods for assessment of its surface water quality.
5 Second-party data including discharger's reports, published literature, data stored in EPA's database
6 as well as data generated by the United States Geological Survey (USGS) are routinely reviewed.
7 NMED generates large amounts of data through intensive surveys, assessment of citizen
8 complaints, special studies aimed at areas of special concern (e.g., mercury concentration in fish),
9 volunteer monitoring programs, short and long-term nonpoint source pollution monitoring and
10 effluent monitoring. **The process of assessing recent surface water quality data against current**
11 **water quality standards is detailed in Chapter 4 and the Assessment Protocol (SWQB/NMED**
12 **2004b).**

13 **Ground Water Monitoring and Data Management**

14 Ground water quality monitoring is carried out under many of the State ground water quality
15 protection and remediation programs and by the USGS. The scope and variety of ground water
16 quality investigations in New Mexico has created the need for computerized data management.
17 NMED **has purchased and is continuing to implement a department-wide database that is**
18 **capable of storing all ground water quality data. The department has experienced problems**
19 **because analytical data are received from a wide variety of sources and the data are not in a**
20 **consistent format that is readily uploaded into the new database. Until a solution has been**
21 **identified and implemented, ground water data will not all reside in a single repository for**
22 **the department. Once a data input solution is realized, vast improvements will be made in**
23 **the way the public and the NMED accesses environmental quality data for ground water.**

1 ~~committed to agency wide improvements in information management in order to reduce the burden~~
2 ~~on staff, the regulated community and other stakeholders. Through an *OneStop* grant from EPA,~~
3 ~~the initial steps of this process have been made to centralize environmental data. NMED is~~
4 ~~beginning the process that will result in the purchase and modification of an integrated~~
5 ~~environmental database system. Incorporating groundwater monitoring data as well as the other~~
6 ~~core needs of NMED, this system will result in improvements in the way that the public obtains~~
7 ~~environmental data from the agency.~~

8 PROGRAM EVALUATION

9 Surface Water

10 Various qualitative and quantitative measures have been used by EPA, the states, and others
11 to measure the effectiveness of water quality management programs. The cost of administering
12 these programs continues to grow at a steady rate. The primary function of these programs is to
13 maintain suitable water quality necessary to protect existing, designated and attainable uses. New
14 Mexico was one of the first states to have all of its municipalities achieve secondary treatment
15 capability. In general, "major" dischargers normally do a good job of meeting permit requirements
16 while "minor" dischargers continue to have noncompliance problems that are not being completely
17 addressed due to EPA enforcement policies.

18 Nonpoint source water pollution in New Mexico is receiving ever more attention.
19 Significant efforts have been initiated by the United States Forest Service (USFS) **and other land**
20 **management agencies** in cooperation with NMED in a large number of different settings, to
21 reduce and eliminate such pollution in a number of the State's highest quality waters. These efforts
22 have led in several cases to the elimination of longstanding nonpoint source problems.

23 Ground Water

1 ~~Measures of g~~Ground water protection programs effectiveness ~~are~~^{is} documented through
2 site-specific monitoring at permitted facilities and facilities that are abating ground water
3 contamination. Although there is no overall index to determine the rate at which ground waters are
4 polluted or remediated, state and federal programs that ensure the quality of the state's ground
5 water have been successful in both ground water quality protection and clean-up efforts.
6

1 standards in some arbitrary period of time. Due to vast differences in the types of nonpoint source
2 problems faced by individual states, any such artificial deadline may be adequate for one state yet
3 impossible to meet for its neighbor. Secondly, in the west, where the majority of the nonpoint
4 source concerns identified to date are associated with runoff from vast areas of mountains,
5 rangelands, irrigated farmlands, extensive road networks et cetera, the sheer magnitude of the
6 problem will preclude attainment of standards unless exorbitant commitments of limited financial
7 resources are dedicated to these problems. Finally, even the expenditure of such vast resources
8 may not have immediate benefit in the arid portions of the west because establishment and/or
9 reestablishment of adequate groundcover to prevent overland flows of sediment-laden waters is
10 dependent upon adequate precipitation, which is never assured, **and control of grazing (both by**
11 **livestock and elk, in some areas).**

12 *In every instance in which a deadline is established requiring the attainment of*
13 *water quality standards by nonpoint sources of pollution (except in cases related*
14 *to septic tanks), remove the deadline and substitute the following phrase:*
15 **..."as rapidly as possible based on the ecological potential of the area as**
16 **determined by the state."**

17 3. Over one-third of New Mexico's lands are owned by the federal government where most
18 nonpoint source pollution in the State occurs. The majority of New Mexico's Category I
19 watersheds as determined in the Clean Water Action Plan (CWAP) Unified Watershed Assessment
20 (UWA) are located within federal land boundaries. These are the watersheds where new CWA §
21 319 monies under the CWAP will be directed. Most of New Mexico's high quality coldwater
22 fisheries are contained within these federal lands. The USFS and the Bureau of Land Management
23 have been designated by the WQCC as management agencies for water quality protection within

1 the context of the New Mexico Water Quality Management Plan and the State's Nonpoint Source
2 Management Program. It is difficult, however, for these federal agencies to apply for § 319
3 funding due to the EPA requirement for a 40% non-federal match for any § 319 funds. This
4 situation discourages the federal agencies from applying for § 319 grant funds for important water
5 quality improvement projects.

6 *The EPA language requiring a “non-federal” match of 40% for all CWA § 319*
7 *grant awards should be changed so as to allow for the utilization of federal*
8 *match dollars. The federal land management agencies and other agencies with*
9 *federal land management authorization should be directed and funded to*
10 *immediately commence meaningful restoration treatments on the watersheds*
11 *and riparian areas **under their jurisdiction**. This should include but not be*
12 *limited to reduction of tree densities and forest litter removal, removal of*
13 *invasive non-native riparian vegetation and reduction of invaded grasslands by*
14 *woodland trees and woody vegetation.*

15 **4. The required 40% non-federal match for any § 319 funds is cost prohibitive in states**
16 **with large land areas and small populations, such as New Mexico. These states do not have**
17 **the tax base to provide the 40% match. The 40% match is also cost prohibitive to Indian**
18 **Tribes that do not have a tax base with which to provide the match.**

19 *CWA § 319(h) and 40 CFR 35.265 requiring a match of 40% for all CWA § 319 grant*
20 *awards should be changed to a formula that acknowledges states with large land areas*
21 *and modest populations and tax bases. The 40% match should be lowered for Indian*
22 *Tribes.*

23

1 **Indian Tribes**

2 ~~The funding set asides for Indian tribes in the CWA puts tribes in direct competition with~~
3 ~~the states for the limited available federal funds. The funding provided to tribes is inadequate to~~
4 ~~develop or implement effective water quality programs.~~

5 ~~*The United States Congress should provide sufficient dedicated funds to Indian*~~
6 ~~*tribes so that they can develop and implement an effective water quality*~~
7 ~~*management program. These funds should be in addition to, not in place of,*~~
8 ~~*monies allocated to the states.*~~

9 **Funding**

10 1. Technical information in many areas is essential to any state water pollution control program.
11 These areas include sampling and monitoring technology, containment and remediation
12 technology, risk assessment, and standards development. Such information is of wide applicability
13 and would be useful to all states. It is more desirable for federal agencies to assemble and
14 disseminate this information than for states to utilize their limited resources on such projects.

15 *The United States Congress should provide adequate funding to federal and*
16 *state agencies including universities and other publicly-funded institutes to*
17 *foster and support basic ecological, hydrologic, medical, public health, and*
18 *other research efforts relevant to water quality protection and to support*
19 *technical assistance and technology transfer to the states.*

20 **2. The USGS used to have an extensive network of stream gages around the United States.**
21 **Their funding has been drastically cut over the years, to the point that only a handful of gages**
22 **can be operated with financial assistance from cooperators (such as state agencies and**
23 **municipalities). Water quantity and quality information from long-tern USGS gages is of**

1 wide applicability and is extremely useful when attempting to identify long-term trends and
2 to determine total maximum daily loads of specific pollutants.

3 *The United States Congress should re-instate adequate funding to the USGS to*
4 *foster and support collection and analysis of water quantity and water quality*
5 *data.*

6 ~~23.~~ The CWA requires all municipal wastewater treatment plants to meet secondary treatment
7 standards as defined by federal regulations. Over the past two decades, an enormous investment of
8 public funds has been made by federal, state and local governments to construct a national
9 wastewater treatment infrastructure that would meet this goal. However, once constructed, the
10 effectiveness and longevity of this wastewater infrastructure is heavily dependent upon the skill
11 and competence of the operators who maintain it. In fact, the absence of effective operation and
12 maintenance programs has been implicated as the primary cause of most NPDES permit
13 noncompliance nationwide as well as in New Mexico. Thus, the lack of good operation and
14 maintenance at treatment facilities both jeopardizes the attainment of secondary treatment and
15 reduces the benefit of the huge expenditure of public funds made to achieve this goal.

16 *The United States Congress should provide additional dedicated funding to*
17 *state-operated programs which address the operation and maintenance of*
18 *wastewater treatment facilities in order to prevent water pollution and National*
19 *Pollutant Discharge Elimination System permit noncompliance.*

20
21 ~~3. Section 402 of the CWA states NPDES permits "...are for fixed terms not exceeding five years."~~
22 ~~Title 40 Section 122.6 of the Code of Federal Regulations allows for the administrative~~
23 ~~continuance of expired permits beyond five years under specified conditions including but not~~

1 ~~limited to timely reapplication by the permittee. Permits are often continued due to lack of~~
2 ~~resources to prepare renewed permits. Currently, approximately 90% of the individual NPDES~~
3 ~~permits in New Mexico are five or more years old. Outdated permits may not be protective of~~
4 ~~current water quality standards adopted by the State and revised once every three years in~~
5 ~~accordance with Section 303 of the CWA.~~

6 ~~*The United States Congress should provide adequate funding to the federal and state agencies*~~
7 ~~*charged with administering the NPDES permit program so that the enormous backlog of out-of-*~~
8 ~~*date NPDES permits might be promptly reduced and then in the future all permits may be*~~
9 ~~*renewed on a timely basis.*~~

11 **Hazardous and Radiological Waste**

12 CWA § 303(c) and its implementing regulations at 40 CFR 131 require states to develop
13 and implement water quality standards with sufficient criteria to protect designated uses. Among
14 the pollutants of ecological and human health concern are natural and manmade or concentrated
15 radioactive compounds. CWA § 502(6) currently recognizes 'radioactive materials' as a 'pollutant';
16 yet the Atomic Energy Act (42 U.S.C. 2011 et seq.) exempts certain of these compounds.
17 Consequently, pollutants such as plutonium and enriched uranium are not yet regulated under the
18 NPDES system.

19 *The Atomic Energy Act should be amended to require the NPDES permit to be*
20 *the sole regulatory vehicle for any point source discharge of any pollutant to*
21 *"waters of the United States."*

23 **Federal Facilities**

1 1. Federal agencies have an obligation to protect water quality at their facilities and in their
2 projects and to remediate pollution that occurs. There are known instances of surface and ground
3 water contamination, sometimes of a very serious nature, caused by federal facilities in New
4 Mexico and elsewhere.

5 *Federal installations and projects should not only be required to comply with all*
6 *pertinent federal and state laws and regulations but should also be expected to*
7 *lead in the area of environmental protection by prevention of adverse impacts*
8 *during construction and operation and by cleanup or reclamation upon*
9 *discovery of a problem.*

10 2. Federal laws, such as the Comprehensive Environmental Response, Compensation and
11 Liability Act ([CERCLA](#)), commonly known as Superfund, place responsibility on federal agencies
12 for investigating and remediating old hazardous waste sites on federal lands. The Department of
13 Defense (DoD) has responded positively to this mandate by initiating and continuing work at active
14 defense installations in New Mexico and nationwide. DoD/state Memoranda of Agreement
15 provide funds to states to participate in investigation and cleanup work. Left out of these efforts,
16 however, are formerly used defense sites that are not presently the property of DoD. Several such
17 sites in New Mexico are known or suspected to be contributing to ground water pollution and other
18 environmental problems.

19 *The United States Congress should encourage the Department of Defense to*
20 *aggressively investigate and remediate formerly used defense sites, to include*
21 *states as partners, and to use existing mechanisms such as DoD/state*
22 *Memoranda of Agreement to provide monies to states for required site-specific*
23 *tasks such as review of work for compliance with state environmental laws.*

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Ground Water Quality Management

1. Prevention of ground water pollution is always more protective of public health and environmental quality as well as being more cost-effective than trying to cleanup an aquifer once it has become contaminated. Cleanup is always expensive, often costing hundreds of thousands or even millions of dollars, and often taking decades to accomplish. Cleanup to natural background levels is often impossible at any price. In addition, the health effects of chronic exposure to even low-level contamination are poorly quantified but may be significant. Therefore, it is a more prudent use of public funds to prevent exposure of the nation's citizens to contaminated water supplies than to restore the ground water to its original condition.

The primary focus of federal ground water pollution prevention efforts should be to support state pollution control programs and initiatives.

2. Ground water protection is, and should remain, actively managed and implemented at the state and local levels. New Mexico and other states are taking the lead in developing and implementing ground water monitoring, protection, remediation and management programs suited to their particular needs. Some of these programs have been in existence for decades and should be used as models for other states that are developing new ground water protection programs.

Any federal legislation dedicated to ground water protection should include a statement of a general national goal and then explicitly recognize the primary role of the states and local governments in all facets of ground water protection.

Delegation of Superfund to States

1 ~~New Mexico currently does not have a State Superfund program and relies on the federal~~
2 ~~Superfund law to address abandoned or uncontrolled hazardous waste sites in the state. In the~~
3 ~~Superfund reauthorization debates taking place in Congress, New Mexico supports the delegation~~
4 ~~of the federal Superfund program to the states. However, delegation should allow states to retain~~
5 ~~all state rights, especially state applicable standards, and to have the flexibility to apply the~~
6 ~~Superfund program in a manner that meets specific needs of the state. This is especially critical in~~
7 ~~arid western states where policies and procedures developed for eastern states are not applicable.~~
8 ~~Additionally, inhabitants of sparsely populated areas of western states deserve equal protection~~
9 ~~from potential health or environmental problems. Yet, the federal Hazard Ranking System assigns~~
10 ~~lower priority to these factors and makes Superfund difficult to apply to sites in western states like~~
11 ~~New Mexico.~~

12 ~~*The United States Congress should provide a mechanism whereby*~~
13 ~~*administration of Superfund is delegated to states to better address state and*~~
14 ~~*local water quality problems associated with abandoned or uncontrolled*~~
15 ~~*hazardous waste sites.*~~

17 **Drinking Water Standards**

18 The EPA has promulgated a new national drinking water standard for arsenic. This more
19 stringent drinking water standard will be extremely costly to the Citizens of New Mexico. Capital
20 costs will likely range from \$250 million to over \$500 million. Annual operating costs could range
21 between 2 - 5% of capital costs.

22 ~~*The United States Congress should delay implementation of the new arsenic*~~
23 ~~*drinking water standard until EPA can demonstrate cost-effective technology*~~

1 *for the removal of arsenic, and provide sufficient funding to the states for*
2 *implementation.*

3
4 **RECOMMENDATIONS TO THE U.S ENVIRONMENTAL PROTECTION AGENCY**

5
6 **National Pollutant Discharge Elimination System Permit Program**

7 1. The CWA clearly states "it is the national policy that the discharge of toxic pollutants in
8 toxic amounts be prohibited." EPA relies heavily on biomonitoring tests performed on the effluent
9 from wastewater treatment plants to determine attainment of that policy. The fish species that is
10 normally tested, *Pimephales promelas* (Fathead minnow), is a warmwater species. Because
11 coldwater species are generally more sensitive to pollutants, biomonitoring tests based only on a
12 warmwater species may not be protective of coldwater ecosystems.

13 *Coldwater species should be developed for biomonitoring discharges to*
14 *coldwater fisheries with the same degree of accuracy as those currently*
15 *performed with the Fathead minnow. Rainbow trout (Oncorhynchus mykiss)*
16 *is readily available and culture techniques for it have been well developed.*
17 *Although non-native, it is widespread and may prove to be a suitable surrogate*
18 *for coldwater species, including native fishes. Rainbow trout are currently*
19 *readily available from six state hatcheries for biomonitor-reporting purposes.*
20 *Other widespread species, such as the Longnose Dace (northern part of the*
21 *state) and the Speckled Dace (southern part of the state) (Rhinichthys*
22 *cataractae and R. osculus, respectively) should also be considered. Coldwater*

1 *species should be used for biomonitoring tests when discharges are to an*
2 *aquatic system with an existing coldwater fisheries use.*

4 **Pretreatment**

5 With the above-stated national policy of the CWA in mind, EPA has implemented its
6 pretreatment program through the NPDES permit program. There are two ways that EPA
7 implements the pretreatment program: 1) through regulations requiring certain municipalities to
8 administer and enforce their own EPA-approved pretreatment programs; and 2) through EPA
9 enforcement against industrial dischargers which discharge into publicly owned treatment works
10 that are not regulated under approved pretreatment programs.

11 In New Mexico, five municipalities are currently required to fully develop pretreatment
12 programs. The EPA has conducted a detailed pretreatment inspection of all pretreatment program
13 municipalities in New Mexico once each year. Some local governments remain reluctant to
14 enforce pretreatment requirements effectively in cases where industrial sites are available in other
15 cities without pretreatment programs. Other industries settle or relocate in areas served by private
16 wastewater treatment plants not subject to the pretreatment regulations, since the treatment plants
17 are not "Publicly Owned Treatment Plants."

18 *EPA should continue to place greater emphasis on its pretreatment program, to*
19 *ensure pretreatment programs are required where necessary regardless of the*
20 *size or ownership of the plant, and to take adequate enforcement action to meet*
21 *the federal Clean Water Act's policy of no discharge of toxic substances in toxic*
22 *amounts into the environment. The Agency should apply its regulations evenly*

1 ~~reference the sludge regulation requirements of 40 CFR 257 or, as appropriate, 40 CFR 503 into~~
2 ~~NPDES permits issued in New Mexico. These regulations broadly cover areas such as pathogen~~
3 ~~control, safety, ground water protection, endangered species, floodplains, and surface water. New~~
4 ~~Mexico has had an effective ground water protection regulatory program in place since 1977.~~
5 ~~Because the State ground water regulations do not address certain areas such as pathogen control,~~
6 ~~the federal and State ground water protection programs are not completely equivalent. Thus,~~
7 ~~compliance with one program does not ensure compliance with the other. EPA's advance into the~~
8 ~~area of ground water protection has resulted in a duality of regulations for sludge disposal with~~
9 ~~regard to ground water protection.~~

10 ~~*EPA should ensure that federal sludge regulations and the administration of*~~
11 ~~*federal sludge programs do not result in dual regulation or undermine existing*~~
12 ~~*state programs. The regulations developed should focus primarily on public*~~
13 ~~*health protection and on surface and ground water protection.*~~

15 Indian Tribes

16 The 1987 Amendments to the CWA and the 1986 Amendments to the SDWA allow EPA to
17 treat Indian tribes in the same manner as states. The tribes have indicated a great interest in
18 receiving technical assistance from EPA, especially for water quality standards development and
19 implementation. **Several tribes in New Mexico have developed or are in the process of**
20 **developing surface water quality standards.**

21 The CWA also provides that EPA shall provide a "...mechanism for the resolution of any
22 unreasonable consequences that may arise as a result of differing water quality standards that may
23 be set by States and Indian Tribes located on common bodies of water." —In some cases, for

1 example arsenic in the Middle Rio Grande Basin of New Mexico, tribal water quality standards
2 have been adopted that are ~~far~~ more stringent than existing background conditions, ~~by three orders~~
3 ~~of magnitude,~~ and ~~are thus~~ **may be** unattainable. The CWA provides that **USEPA will take into**
4 **account** relevant factors include the effects of differing water quality permit requirements on
5 upstream and downstream dischargers and economic impacts.

6 *EPA should, in keeping with its trust responsibility to tribes and the dispute*
7 *resolution mechanism mentioned above, work with ~~the~~ tribes and states to*
8 *ensure that water quality standards and programs adopted by ~~the~~ tribes and*
9 *states are scientifically defensible, ~~and~~ technically achievable, and protective of*
10 *downstream uses.*

11

12 **Surface Water Reporting Criteria**

13 **As part of the new integrated listing methodology, USEPA revised and expanded their**
14 **national standard list of causes of impairment and probable sources of impairment. Even so,**
15 **several prevalent probable sources of impairment in the western states are not included on**
16 **the list. For example, S**salt cedar invasion and infestation is one of the significant contributors to
17 water quality impairment in New Mexico, ~~—Y~~yet, no **specific probable** ~~water quality impairment~~
18 ~~code for~~ sources **code** exists **for this item.** ~~—except hydromodification, and removal of riparian~~
19 ~~vegetation to classify this threat to the native riparian biome and its associated water quality.~~
20 Exotic vegetation invasion and displacement of native riparian vegetation poses a significant threat
21 to maintenance of New Mexico's water quality.

1 EPA, with input from states and tribes, should review and amend the national
2 standard list of probable sources to include: ~~Codes of Designated Uses and~~

3 ~~Nonpoint Sources of Pollution to:~~

4 1. ~~Include~~ Source codes for ~~Improper Functioning Watersheds, Wildlife~~
5 ~~Management and~~ Fish Hatchery Operations;

6 2. ~~Break out Natural Sources from general heading code Other and make~~
7 ~~it a general heading code with appropriate sub-codes;~~

8 23. Source codes for ~~Place~~ Exotic ~~N~~noxious ~~W~~weeds, Non-native Vegetation,
9 and Salt Cedar Invasion ~~under the general heading Other; and~~

10 4. ~~Disclose omission sources whose failure to perform BMP management~~
11 ~~responsibilities result in or exacerbate pollution.~~

12 Water Quantity

13 The objective of the Clean Water Act (CWA) is to “restore and maintain the chemical,
14 physical, and biological integrity of our nation’s waters” (CWA Section 101[a]). In 1994, the
15 Supreme Court reiterated that the intent of the CWA is to ensure physical and biological
16 integrity as well as chemical. Physical integrity includes flows necessary to protect the uses of
17 the water. Sufficient instream flows are necessary to maintain river form, function, and
18 processes. Also, several states, including New Mexico, are regularly developing total
19 maximum daily loads (TMDL) for impaired surface water bodies. Target values are based on
20 a numeric criterion or a surrogate numeric value that represents a narrative criterion. A
21 water body’s assimilative capacity varies with water quantity. Therefore, TMDLs are by
22 definition related to water quantity because target values are calculated based on a flow, the
23 current water quality criterion, and a conversion factor used to convert units into lbs/day.

1 **Instream flows, high flows, and the timing of these flows are critical components of water**
2 **supply, water quality, and the ecological integrity of stream systems. Unfortunately, the**
3 **responsibilities to manage water quantity and water quality concerns are fragmented among**
4 **a variety of state and federal agencies. This fragmentation adds to the challenge of**
5 **developing and implementing effective TMDL planning documents to address surface water**
6 **quality impairment.**

7 *EPA should increase their agencies focus on restoring and maintaining the physical*
8 *integrity of the nations surface water by engaging various federal agencies charged with*
9 *the management of water quantity. The connection between water quality and water*
10 *quantity is intrinsic and an inherent part of the TMDL program and other aspects of the*
11 *Clean Water Act.*

12