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**WATER QUALITY TECHNICAL NOTE NO. NM 5**

**SUBJECT: WQP – "WATER QUALITY AND WATER POLLUTION CONTROL IN NEW MEXICO 2000" State of New Mexico Water Quality Control Commission Publication.**

**Purpose:** To distribute information to the field.

This transmits excerpts of the latest Clean Water Act 305(b) Report to Congress, "Water Quality and Water Pollution Control in New Mexico – 2000". It details the condition of New Mexico's waters as well as some of the ongoing efforts to improve water quality in state. This is published every 2 years by the State of New Mexico Water Quality Control Commission and represents the combined efforts of the New Mexico Environment Department, several other state agencies, several federal agencies and several municipal representatives. There is an overview and recommendations section at the beginning of the report. Included here is a table of contents, an overview and recommendations section and the table of assessed lakes not supporting their designated uses. The 303(d) list in the FOTG, Section I should be referred to for impaired stream reaches. Additional chapters may be downloaded from the NMED Website: ftp://www.nmenv.state.nm.us/upload/swqb_0707/305b_2000.html

File the attached publication in the Water Quality Tech Note section of your field office reference library.

ROSENDO TREVINO III
State Conservationist

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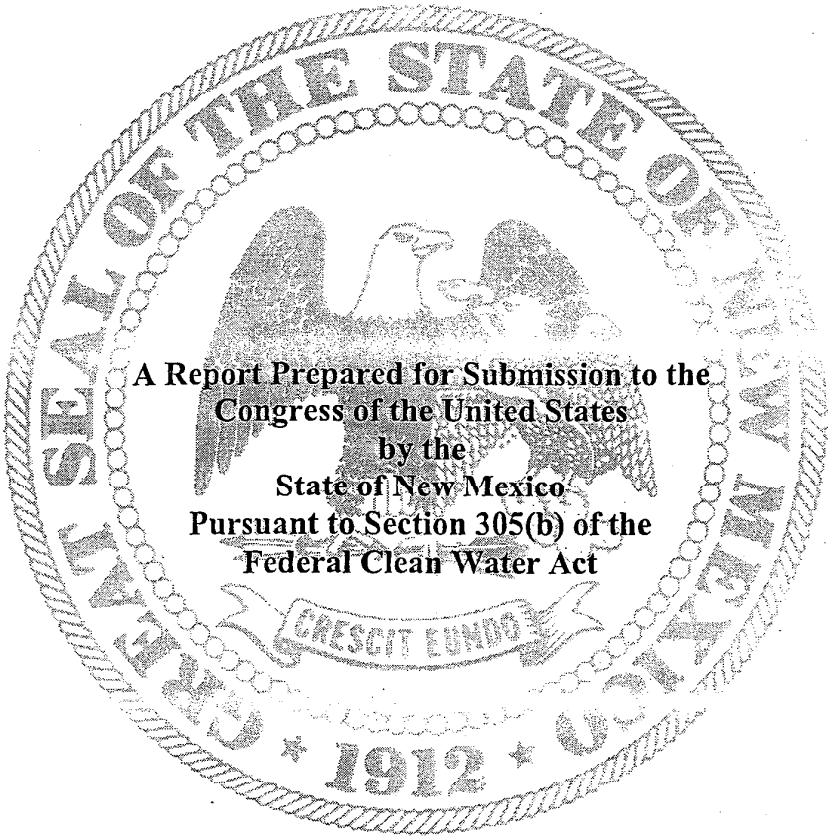
# WATER QUALITY AND WATER POLLUTION CONTROL IN NEW MEXICO

# 2000




**A Report Prepared for Submission to the Congress of the United States by the State of New Mexico Pursuant to Section 305(b) of the Federal Clean Water Act**


New Mexico Water Quality Control Commission

**P.O. Box 26110**
**Santa Fe, New Mexico 87502**



**Additional copies** of this document are available upon request by e-mail at "*gary_king@nmenv.state.nm.us*", by telephone at (505) 827-2928, or by fax at (505) 827-0160. Requests can also be mailed directly c/o Gary King, Total Maximum Daily Load Development Section, Surface Water Quality Bureau, Water & Waste Management Division, New Mexico Environment Department, Harold Runnels Building N2105, 1190 St. Francis Drive, P.O. Box 26110, Santa Fe, New Mexico USA 87502. This document was originally created in Microsoft® Word™ 2000 (9.0.2720). Adobe® Acrobat™ (4.0) print files of individual chapters can be downloaded from the Internet at http://www.nmenv.state.nm.us/swqb/305b_2000.html. Other electronic versions available upon request.

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# EXECUTIVE SUMMARY

## PART I: SURFACE AND GROUND WATER QUALITY

### SURFACE WATER QUALITY

Information about surface water quality throughout New Mexico is based on the results of the New Mexico Environment Department's (NMED) intensive surveys, water quality monitoring of projects under the State's Nonpoint Source Pollution Management Program, Total Maximum Daily Load surveys and studies, preliminary statewide studies of mercury in fish tissues, water quality monitoring conducted under the National Pollutant Discharge Elimination (NPDES) System program and review of physical and chemical data entered by various agencies into the United States Environmental Protection Agency's (EPA) database.

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

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

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

Reported sources of water quality impairment in New Mexico are diverse and include agriculture, recreation, hydromodification and resource extraction. Causes of impairment include toxic metals, temperature, plant nutrients, bottom deposits and other causes. Over 91% of all water quality impairment identified in New Mexico's rivers is due to nonpoint sources of water pollution. All of the known lake water quality impairment is due to nonpoint source water pollution.

In 1994-1995, the State of New Mexico issued fish consumption advisories for 23 lakes and reservoirs and one river due to elevated mercury concentrations in fish. Twenty five lakes were added to the 1998 CWA §303(d) list fish consumption advisories for mercury, even though the water quality standard for mercury was not exceeded in these lakes.

Estimates by the United States Forest Service (USFS) based on comparing the extent of hydric soils in the State to the extent of present wetlands show that New Mexico's wetlands, which currently total approximately 481,900 acres, have been reduced over 33% since the 1780s. Due to these historical trends, point and nonpoint pollution and drainage, all wetlands are considered threatened in New Mexico.

### GROUND WATER QUALITY

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

#### Ground Water Contamination Inventories

NMED maintains an ongoing inventory of known ground water contamination cases in the State. At least 1,235 cases have been identified from 1927 through December 1999, with 188 public and 1,907 private water-supply wells impacted. Ground water contamination most frequently occurs in vulnerable aquifer areas where the water table is shallow.

#### Causes and Sources of Ground Water Contamination

Approximately 13% of ground water contamination in the State has been caused by nonpoint sources, predominantly small household septic tanks or cesspools. Nonpoint source contamination may be caused by diffuse sources such as large numbers of small septic tanks spread over a subdivision, residual minerals from evapotransporation, animal feedlot operations, areas disturbed by mineral exploration and/or storage of wast products, urban runoff or application of agricultural chemicals.

Point sources are discharges at specific identified locations such as surface impoundments, landfills, and injection wells. Accidental spills and leaking underground storage tanks account for almost half of all point source contamination.

#### Public Drinking Water Systems

The 1996 reauthorization of the federal Safe Drinking Water Act (SDWA) mandates that EPA set new or revised standards for two constituents which are naturally occurring in New Mexico ground water: radon and arsenic.

EPA must promulgate a standard for radon by December 2000, with a proposal by August 1999. There is at present no drinking water standard for radon. Radon is an important issue for this state. Present sampling data suggest that radon could possibly be evident in 84% of New Mexico's water supply wells. Annual treatment costs to remove radon could be substantial, depending on the level at which EPA sets the standard.

EPA promulgation of a revised regulation for arsenic has been mandated for no later than January 1, 2001. Like radon, the costs to remove arsenic could be substantial depending on the level at which EPA sets the standard.

# PART 2: WATER QUALITY MANAGEMENT

## THE STATE ROLE IN WATER QUALITY MANAGEMENT

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

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

### Programs for Surface Water Pollution Control

New Mexico uses a variety of mechanisms including State, federal, and/or local components to protect its surface waters from becoming polluted. The principal mechanism used to protect waters from municipal and non-municipal point source discharges is the federal NPDES program. While NPDES permits for discharges in New Mexico are issued and enforced by EPA, the State plays a significant role in this permit program, by providing water quality certification for these permits as well as inspecting the facilities for compliance with their permit. NMED administers and enforces Surface Water Protection and Utility Operator Certification regulations for the WQCC.

Nonpoint source surface water pollution is addressed by the State Nonpoint Source Water Pollution Management Program. NMED is the lead agency for this program which utilizes a variety of State, local and federal agency programs to achieve implementation of Best Management Practices to prevent and abate nonpoint source pollution. As part of this program, the State assures that water quality standards are maintained and wetlands are protected through the water quality certification process for CWA § 404 dredge-and-fill permits issued by the United States Army Corps of Engineers.

### Programs for Ground Water Pollution Control

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

Water Quality Act programs include a ground water discharge permit program that protects ground water quality through the issuance of ground water pollution prevention permits; an abatement program that includes requirements for the assessment and abatement of releases that cause or threaten to cause exceedances of ground water quality standards; and a spill response program that includes provisions for the reporting and cleanup of spills that impact ground water quality.

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

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

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

## PROGRAMS FOR WATER QUALITY ASSESSMENT

### Surface Water Quality Assessments

The State uses a wide variety of methods for assessment of its water quality. Second-party data including discharger's reports, published literature, data stored in EPA's database as well as data generated by the United States Geological Survey (USGS) are routinely reviewed. NMED generates large amounts of data through intensive surveys, assessment of citizen complaints, special studies aimed at areas of special concern (e.g., mercury concentration in fish), volunteer monitoring programs, short and longterm nonpoint source pollution monitoring and effluent monitoring.

### Ground Water Monitoring and Data Management

Ground water quality monitoring is carried out under many of the State ground water quality protection and remediation programs and by the USGS. The scope and variety of ground water quality investigations in New Mexico has created the need for computerized data management. NMED is committed to agency-wide improvements in information management in order to reduce the burden on staff, the regulated community and other stakeholders. Through a *OneStop* grant from EPA, the initial steps of this process have been made to centralize environmental data. NMED is beginning the process that will result in the purchase and modification of an integrated environmental database system. Incorporating groundwater monitoring data as well as the other core needs of NMED, this system will result in improvements in the way that the public obtains environmental data from the agency.

## PROGRAM EVALUATION

### Surface Water

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

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

### Ground Water

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

## RECOMMENDATIONS FOR SURFACE WATER AND GROUND WATER QUALITY MANAGEMENT

The following recommendations are divided into two groups: first, recommendations are made to the United States Congress on desirable legislation and necessary funding of water quality management; and secondly, recommendations are made to the EPA on administration of the CWA and other federal acts which contain water quality protection provisions.

# RECOMMENDATIONS TO THE CONGRESS OF THE UNITED STATES

### Nonpoint Source Controls

1. New Mexico's Nonpoint Source Control Program was first fully-approved by EPA in September of 1989. Consequently, the State has been implementing the program for only 10 years. We believe that it cannot yet be determined to what extent the State's largely voluntary approach is having in controlling nonpoint source pollution.

***The states should have an adequate period of time to fully determine the efficacy of their existing nonpoint source control programs. Only after such time should federal mandates be developed and then only for those elements of a state's program that are not making adequate progress toward meeting a state's water quality standards.***

2. Language in some proposed federal legislation calls for the states to adequately treat all of their nonpoint source concerns such that runoff from these areas would meet state water quality standards in some arbitrary period of time. Due to vast differences in the types of nonpoint source problems faced by individual states, any such artificial deadline may be adequate for one state yet impossible to meet for its neighbor. Secondly, in the west, where the majority of the nonpoint source concerns identified to date are associated with runoff from vast areas of mountains, rangelands, irrigated farmlands, extensive road networks et cetera, the sheer magnitude of the problem will preclude attainment of standards unless exorbitant commitments of limited financial resources are dedicated to these problems. Finally, even the expenditure of such vast resources may not have immediate benefit in the arid portions of the west because establishment and/or reestablishment of adequate groundcover to prevent overland flows of sediment-laden waters is dependent upon adequate precipitation, which is never assured.

***In every instance in which a deadline is established requiring the attainment of water quality standards by nonpoint sources of pollution, remove the deadline and substitute the following phrase:***

**..."as rapidly as possible based on the ecological potential of the area as determined by the state."**

3. Over one-third of New Mexico's lands are owned by the federal government where most nonpoint source pollution in the State occurs. The majority of New Mexico's Category I watersheds as determined in the Clean Water Action Plan (CWAP) Unified Watershed Assessment (UWA) are located within federal land boundaries. These are the watersheds where new CWA § 319 monies under the CWAP will be directed. Most of New Mexico's high quality coldwater fisheries are contained within these federal lands. The USFS and the Bureau of Land Management have been designated by the WQCC as management agencies for water quality protection within the context of the New Mexico Water Quality Management Plan and the State's Nonpoint Source Management Program. It is difficult, however, for these federal agencies to apply for § 319 funding due to the EPA requirement for a 40% non-federal match for any § 319 funds. This situation discourages the federal agencies from applying for § 319 grant funds for important water quality improvement projects.

***The EPA language requiring a "non-federal" match of 40% for all CWA § 319 grant awards should be changed so as to allow for the utilization of federal match dollars.***

## Indian Tribes

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

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

## Funding

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

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

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

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

3. Section 402 of the CWA states NPDES permits "..are for fixed terms not exceeding five years." Title 40 Section 122.6 of the *Code of Federal Regulations* allows for the administrative continuance of expired permits beyond five years under specified conditions including but not limited to timely reapplication by the permittee. Permits are often continued due to lack of resources to prepare renewed permits. Currently, approximately 90% of the individual NPDES permits in New Mexico are five or more years old. Outdated permits may not be protective of current water quality standards adopted by the State and revised once every three years in accordance with Section 303 of the CWA.

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

## Hazardous and Radiological Waste

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

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

## Federal Facilities

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

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

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

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

## 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

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

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

## Drinking Water Standards

The EPA is considering drafting new national drinking water standards based on preliminary arsenic studies without sufficient scientific warranty to base those standards on. More stringent drinking water standards would be extremely costly to the Citizens of New Mexico. Capital costs will likely range from $250 million to over $500 million, depending on where the standards are set. Annual operating costs could range between 2 – 5% of capital costs. It is likely that there will be no measurable benefits (as opposed to calculable benefits such as reduced risk) associated with a lower standard. There is no conclusive evidence, and no evidence whatsoever in the United States, to show that arsenic at the current maximum contaminant level (MCL) poses a risk to human health of greater than $10^{-4}$, the value which has been accepted by EPA as providing adequate safety to consumers.

***The United States Congress should delay the Safe Drinking Water Act requirement for a new arsenic drinking water standard until EPA can demonstrate a need for a new standard based on epidemiological evidence collected in the United States.***

# RECOMMENDATIONS TO THE U.S. ENVIRONMENTAL PROTECTION AGENCY

## National Pollutant Discharge Elimination System Permit Program

1. EPA largely focuses NPDES enforcement and permitting on discharges categorized as "major." In New Mexico and elsewhere most NPDES majors have good compliance with secondary or Best Available Technology treatment limits and have current NPDES permits. Many "minors," however, are not consistently meeting their NPDES permit requirements (e.g., reporting, effluent limits, or operation and maintenance), and many have outdated permits. EPA permit-issuance strategies also differentiate between majors and minors with regard to reviewing and addressing the potential for toxic pollutants. Majors are carefully addressed while minors are given little or no attention. Despite the lesser flow of the minors, these discharges may create significant water pollution or public health problems. Although EPA Region VI has stepped up enforcement against minors, and has made some effort to expand its review of minors in the permitting process, they continue to receive a low priority from the EPA.

***EPA should change the focus of its National Pollutant Discharge Elimination System program so that priorities are not focused as intensely on permit classification. EPA should conduct its enforcement and permitting activities on the basis of factors in addition to discharge volume including compliance records, designated stream uses, water quality standard violations, and potential risk to the environment or public health.***

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

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

## Pretreatment

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

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

***EPA should continue to place greater emphasis on its pretreatment program, to ensure pretreatment programs are required where necessary regardless of the size or ownership of the plant, and to take adequate enforcement action to meet the federal Clean Water Act's policy of no discharge of toxic substances in toxic amounts into the environment. The Agency should apply its regulations evenly so that no municipality is granted an unintended economic advantage over another municipality with a pretreatment program.***

## Sludge Management

Beginning in 1987, EPA has incorporated by reference the sludge regulation requirements of 40 CFR 257 or, as appropriate, 40 CFR 503 into NPDES permits issued in New Mexico. These regulations broadly cover areas such as pathogen control, safety, ground water protection, endangered species, floodplains, and surface water. New Mexico has had an effective ground water protection regulatory program in place since 1977. Because the State ground water regulations do not address certain areas such as pathogen control, the federal and State ground water protection programs are not completely equivalent. Thus, compliance with one program does not ensure compliance with the other. EPA's advance into the area of ground water protection has resulted in a duality of regulations for sludge disposal with regard to ground water protection.

***EPA should ensure that federal sludge regulations and the administration of federal sludge programs do not result in dual regulation or undermine existing state programs. This can be achieved by federal regulations which provide that a state ground water program which satisfies national minimum requirements becomes the basis for cleanup or control under any and all federal programs relating to ground water protection in that state. The regulations developed should focus primarily on public health protection and on surface and ground water protection.***

## Indian Tribes

The 1987 Amendments to the CWA and the 1986 Amendments to the SDWA allows EPA to treat Indian tribes as states. The tribes have indicated a great interest in receiving technical assistance from EPA, especially for water quality standards development and implementation. In some cases, for example arsenic in the Middle Rio Grande Basin of New Mexico, tribal water quality standards have been adopted that are far more stringent than existing background conditions, by three orders of magnitude, and are thus unattainable.

The CWA also provides that EPA shall provide a "*...mechanism for the resolution of any unreasonable consequences that may arise as a result of differing water quality standards that may be set by States and Indian Tribes located on common bodies of water.*" The CWA provides that relevant factors include the effects of differing water quality permit requirements on upstream and downstream dischargers and economic impacts.

***EPA should, in keeping with its trust responsibility to tribes, work with the tribes to ensure that water quality standards and programs adopted by the tribes are scientifically defensible and technically achievable.***

## Reporting Criteria

Salt cedar invasion and infestation is one of the significant contributors water quality impairment in New Mexico. Yet, no water quality impairment code for sources exist except *hydromodification*, and *removal of riparian vegetation* to classify this threat to the native riparian biome and its associated water quality. Exotic vegetation invasion and displacement of native riparian vegetation poses a significant threat to maintenance of New Mexico's water quality.

***EPA should review and amend the Codes of Designated Uses and Nonpoint Sources of Pollution to:***

1. ***Include source codes for*** **Improper Functioning Watersheds, Wildlife Management** ***and*** **Fish Hatchery Operations;**
2. ***Break out*** **Natural Sources** ***from general heading code*** **Other** ***and make it a general heading code with appropriate subcodes;***
3. ***Exotic noxious weeds should be placed under the general heading*** **Other;** ***and***
4. ***Disclose omission sources.***

## Table 16. Assessed Lakes either Fully Supporting w/ Impacts Observed, Partially Supporting or Not Supporting Their Designated Uses.

| Water Body (Basin, segment) Evaluated or Monitored (E/M) | Trophic Status[a] | Uses Affected[b] (see Table 18a) | Probable Cause of Nonsupport | Toxics at Acute Levels[c] | Toxics at Chronic Levels[c] | Probable Sources of Nonsupport (See Table 18b) | Total Size Affected (Acres) | Status of Support[d] |
|---|---|---|---|---|---|---|---|---|
| Lagunitas Lakes (Rio Grande, 2120) E | E | HQCWF | Nutrients, pH, Siltation, Dissolved oxygen | - | - | Agriculture (1500), Recreation (8700, 8701, 8702, 8703), Reduction of riparian vegetation (7600), Bank destabilization (7700) | 10 | U |
| Laguna Larga (Rio Grande, 2120) E | ND | HQCWF | Nutrients, pH, Siltation, Dissolved oxygen | - | - | Agriculture (1500), Recreation (8700, 8701, 8702, 8703), Reduction of riparian vegetation (7600), Bank destabilization (7700) | 15 | U |
| Cabresto Lake (Rio Grande, 2120) M | M | HQCWF | Fish tissue mercury | - | Hg (Fish) | Unknown (9000) | 15 | PS |
| Heart Lake (Rio Grande, 2120) E | ND | HQCWF | Nutrients, pH, Siltation, Dissolved oxygen | - | - | Agriculture (1500), Recreation (8700, 8701, 8702, 8703), Reduction of riparian vegetation (7600), Bank destabilization (7700) | 3 | U |
| Shuree Ponds (Rio Grande, 2120) E | ND | HQCWF | Nutrients, pH, Siltation, Dissolved oxygen | - | - | Agriculture (1500), Recreation (8700, 8701, 8702, 8703), Reduction of riparian vegetation (7600), Bank destabilization (7700) | 8 | U |

[a] Trophic status based on Carlson trophic state index:
ND = Not determined E = Eutrophic ME = Mesoeutrophic M = Mesotrophic OM = Oligomesotrophic O = Oligotrophic NA = Not Applicable

[b] Conclusions concerning attainment of fishery uses are largely based on water quality analysis, where available, biological data are used to verify these results.

[c] All toxins for which EPA has prepared a federal Clean Water Act § 304(a) guidance document were reviewed as required by EPA.

[d] Use support summary for assessed New Mexico Lakes:
FSIO = Fully supporting, Impacts Observed PS = Partially supporting NS = Not supporting U = Unknown/lack of current data precludes adequate evaluation

**Table 16. Assessed Lakes either Fully Supporting w/ Impacts Observed, Partially Supporting or Not Supporting Their Designated Uses, con't.**

| Water Body (Basin, segment) Evaluated or Monitored (E/M) | Trophic Status [a] | Uses Affected [b] (see Table 18a) | Probable Cause of Nonsupport | Toxics at Acute Levels [c] | Toxics at Chronic Levels [c] | Probable Sources of Nonsupport (See Table 18b) | Total Size Affected (Acres) | Status of Support [d] |
|---|---|---|---|---|---|---|---|---|
| Alice Lake (Rio Grande, 1120) E | ND | HQCWF | Nutrients, pH, Siltation, Dissolved oxygen | - | - | Agriculture (1500), Recreation (8700, 8701, 8702, 8703), Reduction of riparian vegetation (7600), Bank destabilization (7700) | 4 | U |
| Goose Lake (Rio Grande, 1120) E | E | HQCWF | Nutrients, Siltation | - | - | Agriculture (1500), Recreation (8700, 8701, 8702, 8703), Reduction of riparian vegetation (7600), Bank destabilization (7700) | 5 | NS |
| San Leonardo Lake (Rio Grande,2120) M | O | HQCWF | pH | - | - | Natural (8600) | 5 | FSIO |
| Heron Reservoir (Rio Grande, 2117)M | OM | HQCWF | Fish tissue mercury | - | Hg (Fish) | Unknown (9000) | 5,906 | PS |
| El Vado Reservoir (Rio Grande, 2117) M | M | CWF | Nuisance algae, Siltation, Fish tissue mercury | - | Hg (Fish) | Agriculture (1500), Recreation (8700), Unknown (9000) | 3,500 | PS |
| Canjilon Lakes (Rio Grande, 2116) M | M to E | HQCWF | Nutrients, pH, Siltation, Dissolved oxygen | - | - | Agriculture (1500), Recreation (8700, 8701, 8702, 8703), Reduction of riparian vegetation (7600), Bank destabilization (7700) | 18 | FSIO |
| Abiquiu Reservoir (Rio Grande, 2114) M | OM | CWF, WWF | Siltation | - | - | Spills (8400), Agriculture (1500), Unknown (9000) | 4,000 | FSIO |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Hopewell Lake (Rio Grande, 2112) E | E | HQCWF | pH, Dissolved oxygen, Turbidity, Nuisance algae, Siltation | - | - | Recreation (8700), Agriculture (1500), Reduction of riparian vegetation (7600), Bank destabilization (7700) | 14 | PS |
| Cochiti Reservoir (Rio Grande, 2109) M | E | WWF, CWF | Siltation, Nuisance algae, Pesticides | - | - | Agriculture (1500) | 1,240 | PS |
| Fenton Lake (Rio Grande, 2106) E | E | HQCWF, SC | Total phosphorus, Nuisance algae, Siltation | - | - | Land disposal (6500), Agriculture (1500), Recreation (8700), Road Maintenance (8300), Reduction of riparian vegetation (7600) | 27 | PS |
| Bluewater Reservoir (Rio Grande, 2106) M | ME | HQCWF | Metals, Turbidity, Nutrients, Temperature, Conductivity, Siltation | Al | Cd | Agriculture (1500), Silviculture (2000), Recreation (8700, 8702), Road Maintenance (8300), Reduction of riparian vegetation (7600), Bank destabilization (7700) | 2,350 | FSIO |
| Elephant Butte Reservoir (Rio Grande, 2104) E | E | WWF | Metals, Fish tissue mercury Siltation, | - | Hg (Fish) | Agriculture (1500), Recreation (8700), Unknown (9000) | 40,000 | PS |
| Caballo Reservoir (Rio Grande, 2102) M | E | WWF | Nutrients, Fish tissue mercury Siltation, | - | Hg (Fish) | Agriculture (1500), Recreation (8700), Unknown (9000) | 11,000 | PS |
| McAllister Lake (Pecos River, 2211.3) M | E | CWF, SC | Nutrients, Nuisance algae, Siltation | - | - | Recreation (8700, 8701), Natural (8600), Agriculture (1201), Reduction of riparian vegetation (7600), Bank destabilization (7700) | 100 | PS |

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## Table 16. Assessed Lakes either Fully Supporting w/ Impacts Observed, Partially Supporting or Not Supporting Their Designated Uses, con't.

| Water Body (Basin, segment) Evaluated or Monitored (E/M) | Trophic Status [a] | Uses Affected [b] (see Table 18a) | Probable Cause of Nonsupport | Toxics at Acute Levels [c] | Toxics at Chronic Levels [c] | Probable Sources of Nonsupport (See Table 18b) | Total Size Affected (Acres) | Status of Support [d] |
|---|---|---|---|---|---|---|---|---|
| Storrie Reservoir (Pecos River, 2211.5)M | M | CWF, WWF | Nutrients, Siltation | - | - | Agriculture (1500), Recreation (8700, 8701, 8702), Reduction of riparian vegetation (7600), Bank destabilization (7700) | 1,200 | FSIO |
| Santa Rosa Lake (Pecos River, 2210) M | ME | WWF | Nutrients, Siltation, Fish tissue mercury | - | Hg (Fish) | Agriculture (1500), Recreation (8700, 8701, 8702), Unknown (9000), Reduction of riparian vegetation (7600), Bank destabilization (7700) | 1,500 | PS |
| Power Dam Lake (Pecos River, unclassified) E | ND | MCWF, WWF | Nutrients, Siltation | - | - | Agriculture (1500), Recreation (8700, 8701, 8702), Reduction of riparian vegetation (7600), Bank destabilization (7700) | 20 | U |
| Sumner Reservoir (Pecos River, 2210) M | E | WWF | Nutrients, Nuisance algae, Siltation, Fish tissue mercury | - | Hg (Fish) | Agriculture (1500), Recreation (8700), Unknown (9000), Reduction of riparian vegetation (7600), Bank destabilization (7700) | 4,650 | PS |
| Alto Lake (Pecos River, 2209) E | E | HQCWF | Dissolved oxygen, Nutrients, Nuisance algae, Siltation, Turbidity | - | - | Agriculture (1500), Recreation (8700), Silviculture (2300), Reduction of riparian vegetation (7600), Bank destabilization (7700) | 20 | PS |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Bonito Lake (Pecos River, 2209) E | E | HQCWF | pH, Dissolved oxygen, Nutrients, Nuisance algae, Turbidity, Siltation | - | - | Agriculture (1500), Recreation (8700), Silviculture (2300), Reduction of riparian vegetation (7600), Bank destabilization (7700) | 45 | FSIO |
| Brantley Reservoir (Pecos River, 2205) M | ME | WWF | Fish tissue mercury | - | Hg (Fish) | Unknown (9000) | 2,000 | PS |
| Avalon Reservoir (Pecos River, 2204) M | E | WWF | Fish tissue mercury, Siltation, Nutrients | - | Hg (fish) | Unknown (9000), Agriculture (1200, 1500) | 930 | PS |
| Tansill Lake (Pecos River, 2203) E | ND | WWF | Nutrients, Siltation | - | - | Recreation (8700, 8701, 8702, 8703), Hydromodification (7400), Construction (3200), Reduction of riparian vegetation (7600), Bank destabilization (7700) | 94 | U |
| Bataan Lake (Pecos River, 2203) E | ND | WWF | Nutrients, Siltation | - | - | Recreation (8700, 8701, 8702, 8703), Hydromodification (7400), Construction (3200), Reduction of riparian vegetation (7600), Bank destabilization (7700) | 42 | U |
| Lake Maloya (Canadian River, 2306) M | E | HQCWF | Metals, Nutrients, Nuisance algae | Zn | - | Recreation (8700), Road Maintenance (8300), Unknown (9000), Reduction of riparian vegetation (7600), Bank destabilization (7700) | 150 | FSIO |

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[c] All toxins for which EPA has prepared a federal Clean Water Act § 304(a) guidance document were reviewed as required by EPA.

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## Table 16. Assessed Lakes either Fully Supporting w/ Impacts Observed, Partially Supporting or Not Supporting Their Designated Uses, con't.

| Water Body (Basin, segment) Evaluated or Monitored (E/M) | Trophic Status [a] | Uses Affected [b] (see Table 18a) | Probable Cause of Nonsupport | Toxics at Acute Levels [c] | Toxics at Chronic Levels [c] | Probable Sources of Nonsupport (See Table 18b) | Total Size Affected (Acres) | Status of Support [d] |
|---|---|---|---|---|---|---|---|---|
| Eagle Nest Lake (Canadian River, 2306) M | E | HQCWF | Nutrients, Nuisance algae, Siltation | - | - | Agriculture (1500), Recreation (8700, 8701), Reduction of riparian vegetation (7600), Bank destabilization (7700) | 2,000 | FSIO |
| Morphy Lake (Canadian River, 2306) E | E | HQCWF | Nutrients, pH, Dissolved oxygen, Siltation | - | - | Agriculture (1500), Silviculture (2000), Recreation (8700) | 50 | PS |
| Springer Lake (Canadian River, unclassified) M | M | MCWF, WWF | Nutrients, Siltation | - | - | Agriculture (1500), Recreation (8700), 8701, 8702, 8703) | 450 | FSIO |
| Charette Lakes (Canadian River, 2305.5) M | E | CWF, WWF | Temperature, Nutrients, Fish tissue mercury, Siltation | - | Hg (Fish) | Agriculture (1500), Recreation (8700, 8701, 8702, 8703), Unknown (9000) | 410 | FSIO |
| Maxwell Lake #12 (Canadian River, unclassified) M | E | CWF, WWF | Nutrients, Siltation | - | - | Agriculture (1500), Unknown (9000) | 335 | FSIO |
| Maxwell Lake #13 (Canadian River, unclassified) M | E | CWF, WWF | Nutrients, Siltation, Pesticides | - | - | Agriculture (1200), Unknown (9000) | 326 | FSIO |
| Maxwell Lake #14 (Canadian River, unclassified) M | E | CWF, WWF | Nutrients, Siltation | - | - | Agriculture (1200), Unknown (9000) | 120 | FSIO |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Stubblefield Reservoir (Canadian River, unclassified) M | E | CWF, WWF | Nutrients, Siltation | - | - | Agriculture (1500), Recreation (8700, 8701) | 683 | FSIO |
| Laguna Madre (Canadian River, unclassified) M | E | CWF, WWF | Nutrients, Siltation | - | - | Agriculture (1200, 1500), Recreation (8700, 8701), Reduction of riparian vegetation (7600), Bank destabilization (7700) | 390 | FSIO |
| Conchas Reservoir (Canadian River, 2304) M | M | WWF | Nutrients, Fish tissue mercury | - | Hg (Fish) | Agriculture (1500), Recreation (8700, 8701), Unknown (9000), Reduction of riparian vegetation (7600), Bank destabilization (7700) | 16,600 | PS |
| Clayton Lake (Canadian River, unclassified) M | ME | WWF | Dissolved oxygen, Nutrients, Siltation | - | - | Agriculture (1500), Recreation (8700, 8701, 8702), Reduction of riparian vegetation (7600), Bank destabilization (7700) | 176 | FSIO |
| Ute Reservoir (Canadian River, 2302) unclassifed) M | M | WWF | Metals, Fish tissue mercury, Siltation | - | Al, Hg, (Fish) | Agriculture (1500), Recreation (8700, 8701) | 8,200 | PS |
| Lake Farmington (Beeline) (San Juan River, 2401) M | O | WWF | Fish tissue mercury | - | Hg (Fish) | Unknown (9000) | 198 | PS |
| Navajo Reservoir (San Juan River, 2406) M | OM | CWF, WWF | Metals, Fish tissue mercury | - | Hg (Fish) | Unknown (9000) | 15,000 | PS |

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| Water Body (Basin, segment) Evaluated or Monitored (E/M) | Trophic Status [a] | Uses Affected [b] (see Table 18a) | Probable Cause of Nonsupport | Toxics at Acute Levels [c] | Toxics at Chronic Levels [c] | Probable Sources of Nonsupport (See Table 18b) | Total Size Affected (Acres) | Status of Support [d] |
|---|---|---|---|---|---|---|---|---|
| Jackson Lake (San Juan River, unclassified) M | E | MCWF, WWF | Nutrients | - | - | Ariculture (1500), Recreation (8700), Hydromodification (7400), Reduction of riparian vegetation (7600), Bank destabilization (7700) | 60 | FSIO |
| Quemado Lake (Lower Colorado River, unclassified) E | E | CWF | Nutrients, Nusiance algae, Siltation, Agriculture | - | - | Natural (8600), Silviculture (2100), Recreation (8700), Agriculture (1500), Reduction of riparian vegetation (7600), Bank destabilization (7700) | 130 | PS |
| Ramah Lake | | WH, LW, IRR, MCWF, SCR | Nutrients, Nusiance algae, Siltation, Agriculture | - | - | Natural (8600), Silviculture (2100), Recreation (8700), Agriculture (1500), Reduction of riparian vegetation (7600), Bank destabilization (7700) | 130 | U |
| McGaffey Lake (Lower Colorado River, unclassified) M | E | CWF, SC | pH, Nutrients, Nuisance algae, Siltation | - | - | Natural (8600), Recreation (8700, 8701), Road Maintenance (8300), Reduction of riparian vegetation (7600), Bank destabilization (7700) | 13 | NS |
| Snow Lake (Gila River, 2503) E | E | MQCWF, SC | Nutrients, Nuisance algae, Siltation | - | - | Natural (8600), Silviculture (2000), Agriculture (1500), Reduction of riparian vegetation (7600), Bank destabilization (7700) | 100 | FSIO |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Wall LakeE (Gila River, unclassified) E | | HQCWF, SC | Dissolved oxygen Nutrients, Nuisance algae, Siltation | - | - | Agriculture (1500), Silviculture (2000), Natural (8600), Road Maintenance (8300), Reduction of riparian vegetation (7600), Bank destabilization (7700) | 10 | PS |
| Lake Roberts (Gila River, unclassified) E | E | CWF, SC | Dissolved oxygen, Nutrients, Siltation | - | - | Natural (8600), Agriculture (1500), Land Disposal (6500), Reduction of riparian vegetation (7600), Bank destabilization (7700) | 71 | FSIO |
| Bear Canyon Reservoir (Southwestern Closed Basins, 2804) E | E | HQCWF | Dissolved oxygen, Nutrients, Siltation | - | - | Agriculture (1500), Reduction of riparian vegetation (7600), Bank destabilization (7700) | 22 | PS |

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[c] All toxins for which EPA has prepared a federal Clean Water Act § 304(a) guidance document were reviewed as required by EPA.

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**Table 16. Assessed *Playa* Lakes either Fully Supporting w/ Impacts Observed, Partially Supporting or Not Supporting Their Designated Uses.**

| Water Body (Basin, segment) Evaluated or Monitored (E/M) | Trophic Status [a] | Uses Affected [b] (see Table 18a) | Probable Cause of Nonsupport | Toxics at Acute Levels [c] | Toxics at Chronic Levels [c] | Probable Sources of Nonsupport (See Table 18b) | Total Size Affected (Acres) | Status of Support [d] |
|---|---|---|---|---|---|---|---|---|
| Chicosa Lake (Canadian River, unclassified) E | ND | WWF | pH, Dissolved oxygen, Nutrients, Siltation | - | - | Agriculture (1500), Recreation (8700, 8701, 8702) Reduction of riparian vegetation (7600), Bank destabilization (7700) | 40 | U |
| Laguna Gatuna | NA | WH, LW | High salinity, Siltation | - | - | Agriculture (1500), Resource Extraction (5500, 5900), Unknown (9000), Reduction of riparian vegetation (7600) | 392 | NS |
| Williams Sink | NA | WH, LW | High salinity | - | - | Mill Tailing (5600), Salt Storage Site (8900) | 350 | PS |
| Lane Salt Lake | NA | WH, LW | High salinity | - | - | Agriculture (1500), Resource Extraction (5501), Natural (8600) | 400 | NS |
| Middle Lake (4 lakes area) | NA | WH, LW | High salinity, Siltation | - | - | Agriculture (1500), Natural (8600), Reduction of riparian vegetation (7600) | 40 | FSIO |
| Laguna Uno | NA | WH, LW | High salinity, Siltation, Mine waste | - | - | Agriculture (1500), Mill and Mine Tailings (5600, 5700), Reduction of riparian vegetation (7600) | 600 | NS |
| Laguna Walden | NA | WH, LW | Siltation | - | - | Agriculture (1500), Natural (8600), Reduction of riparian vegetation (7600) | 60 | FSIO |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Laguna Quatro | NA | WH, LW | High salinity, Siltation | - | - | Agriculture (1500), Resource Extraction (5500, 5900), Unknown (9000), Reduction of riparian vegetation (7600) | 150 | NS |
| Laguna Tres | NA | WH, LW | High salinity | - | - | Agriculture (1500), Resource Extraction (5200, 5500) | 400 | NS |
| Chicosa Lake | U | WH, LW | Siltation | - | - | Agriculture (1500), Reduction of riparian vegetation (7600) | 40 | PS |
| "Sacaton" (No Name) Playa | NA | WH, LW | Siltation | - | - | Agriculture (1400, 1500) | 600 | FSIO |
| N. Lordsburg Playa | NA | WH, LW | Siltation, High radium | - | - | Agriculture (1500), Natural (8600), Unknown (9000) | 2,880 | PS |
| S. Lordsburg Playa | NA | WH, LW | Siltation | - | - | Agriculture (1500), Highway Maintenance/Runoff (8300), Natural (8600) | 7,040 | FSIO |
| S. Lake Lucero | NA | WH, LW | High Salinity, Siltation | - | - | Natural (8600), Unknown (9000), Reduction of riparian vegetation (7600) | 3,885 | PS |
| N. Lake Lucero | NA | WH, LW | Siltation | - | - | Natural (8600), Unknown (9000), Reduction of riparian vegetation (7600) | 3,895 | PS |
| Lake Stinky | M | WH, LW | High pH, Siltation | - | - | Hydromodification (7400), Road/Parking Lot Runoff (8701), Natural (8600) | 25 | PS |
| Gabaldon Lake | M | WH, LW | High pH, Siltation | - | - | Silviculture (2200), Dredging (7200), Natural (8600) | 5 | PS |

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| Water Body (Basin, segment) Evaluated or Monitored (E/M) | Trophic Status [a] | Uses Affected [b] (see Table 18a) | Probable Cause of Nonsupport | Toxics at Acute Levels [c] | Toxics at Chronic Levels [c] | Probable Sources of Nonsupport (See Table 18b) | Total Size Affected (Acres) | Status of Support [d] |
|---|---|---|---|---|---|---|---|---|
| Pine Lake | E | WH, LW | Siltation | - | - | Agriculture (1500), Natural (8600), Unknown (9000) Bank destabilization (7700) | 80 | FSIO |
| "Little El Caso" Lk (NN) | M | WH, LW | Siltation | - | - | Agriculture (1500), Natural (8600), Unknown (9000) Bank destabilization (7700) | 10 | FSIO |
| "Laguna Seco" (NN) | ME | WH, LW | Siltation | - | - | Agriculture (1400, 1500), Road Construction Maintenance (2300), Bank destabilization (7700) | 20 | FSIO |
| Laguna Americana | ME | WH, LW | Siltation | - | - | Agriculture (1500), Hydromodification (7200, 7600), Reduction of riparian vegetation (7600), | 10 | PS |
| T6NR13WS19 (NN) | ME | WH, LW | Siltation | - | - | Agriculture (1500), Reduction of riparian vegetation (7600) | 4 | PS |
| El Caso Lake (Big) | E | WH, LW | Siltation | - | - | Agriculture (1500), Natural (8600), Unknown (9000), Bank destabilization (7700) | 80 | FSIO |
| Green Acres Lake | E | WH, LW, WWF | Siltation, Nutrients, Oil and grease | - | - | Urban runoff/stormsewers (4000), Highway maintenance/ Runoff (8300), Natural (8600), Refuse Disposal/Littering (8703), Unknown (9000), Reduction of riparian vegetation (7600). Bank destabilization (7700) | 10 | PS |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Little Tule Lake | E | WH, LW | Siltation | - | - | Agriculture (1400, 1500), Bank destabilization (7700) | 8 | FSIO |
| Tule Lake | E | WH, LW | Siltation | - | - | Agriculture (1400, 1500), Bank destabilization (7700) | 50 | FSIO |
| Dennis Chavez Lake | E | WH, LW, WWF | Siltation, Nutrients, Oil and grease | - | - | Urban runoff/storm sewers (4000), Natural (8600), Refuse desposal/littering (8703) | 4 | PS |
| Laguna del Perro | ME | WH, LW | Siltation | | | Agriculture (1400, 1500) | 4,690 | FSIO |
| "Mikes" Playa (NN) | ME | WH, LW | Siltation | - | - | Agriculture (1400, 1500), Bank destabilization (7700) | 30 | FSIO |
| Williams Playa | E | WH, LW | Nutrients, Nuisance algae | - | - | Urban runoff/storm sewers (4000), Domestic point source (0201), Natural (8600) | 15 | FSIO |
| Ingram Playa | E | WH, LW | Nutrients, Nuisance algae | - | - | Urban runoff/stormsewers (4000), Natural (8600) | 8 | FSIO |
| Malpais Springs | ME | WH, LW | Siltation | - | - | Agriculture (1500), Natural Natural (8600), Reduction of riparian vegetation (7600), Bank destabilization (7700) | 1 | FSIO |
| Mound Springs | ME | WH, LW | Siltation | - | - | Agriculture (1500), Natural (8600), Reduction of riparian vegetation (7600), Bank destabilization (7700) | 1 | FSIO |

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# Table 17. Codes for Designated Uses and Nonpoint Sources of Pollution.

## 17a: Codes for Uses Not Fully Supported (In Order of Stringency):

| | | | | | |
|---|---|---|---|---|---|
| DWS | = | Domestic Water Supply | IRR | = | Irrigation |
| HQCWF | = | High quality coldwater fishery | LW | = | Livestock watering |
| CWF | = | Coldwater fishery | WH | = | Wildlife habitat |
| MCWF | = | Marginal coldwater fishery | PC | = | Primary contact |
| WWF | = | Warmwater fishery | SC | = | Secondary contact |
| LWWF | = | Limited warmwater fishery | FC | = | Fish Culture |

## 17b: Codes for Sources of Nonsupport:

| | |
|---|---|
| **0100** | **Industrial point sources** |
| **0200** | **Municipal point sources** |
| 0201 | Domestic point sources |
| **0400** | **Combined sewer overflows** (septic tanks, etc.) |
| **1000** | **Agriculture** |
| 1100 | Nonirrigated crop production |
| 1200 | Irrigated crop production |
| 1201 | Irrigation return flows |
| 1300 | Specialty crop production (e.g. truck farming and orchards) |
| 1400 | Pastureland |
| 1500 | Rangeland |
| 1510 | Riparian grazing |
| 1600 | Feedlots - all types |
| 1700 | Aquaculture |
| 1800 | Animal holding/management areas |
| 1900 | Manure lagoons |
| **2000** | **Silviculture** |
| 2100 | Harvesting, restoration, residue management |
| 2200 | Forest management |
| 2300 | Road construction maintenance |
| **3000** | **Construction** |
| 3100 | Highway/road/bridge |
| 3200 | Land development |
| 3201 | Resort development |
| 3300 | Hydroelectric |
| **4000** | **Urban runoff/Storm sewers** |
| **5000** | **Resource Extraction** |
| 5100 | Surface mining |
| 5200 | Subsurface mining |
| 5300 | Placer mining |
| 5400 | Dredge mining |
| 5500 | Petroleum activities |
| 5501 | Pipelines |
| 5600 | Mill tailing |
| 5700 | Mine tailings |
| 5800 | Road construction/maintenance |
| 5900 | Spills |
| **6000** | **Land Disposal** |
| 6100 | Sludge |
| 6200 | Wastewater |
| 6300 | Landfills |
| 6400 | Industrial land treatment |
| 6500 | Onsite wastewater systems |
| 6600 | Hazardous waste |
| 6700 | Septage disposal |
| 6800 | UST leaks |
| **7000** | **Hydromodification** |
| 7100 | Channelization |
| 7200 | Dredging |
| 7300 | Dam construction/repair |
| 7400 | Flow regulation/modification |
| 7500 | Bridge construction |
| 7600 | Removal of riparian vegetation |
| 7700 | Streambank modification/destabilization |
| **8000** | **Other** |
| 8010 | Vector control activities |
| 8100 | Atmospheric deposition |
| 8200 | Waste storage/storage tank leaks |
| 8300 | Highway maintenance/runoff |
| 8400 | Spills |
| 8500 | In-place contaminants |
| 8600 | Natural |
| 8700 | Recreational activities |
| 8701 | Road/parking lot runoff |
| 8702 | Off-road vehicles |
| 8703 | Refuse disposal/littering |
| 8704 | Spills |
| 8705 | Ski slope runoff |
| 8800 | Upstream Impoundment |
| 8900 | Salt storage sites |
| **9000** | **Source Unknown** |