

**STATE OF NEW MEXICO  
WATER QUALITY CONTROL COMMISSION**

**IN THE MATTER OF PROPOSED  
AMENDMENTS TO 20.6.4 NMAC  
ESTABLISHING A NUTRIENT  
TEMPORARY STANDARD**

No. 19- 46

**Surface Water Quality Bureau,  
Water Protection Division,  
New Mexico Environment Department,**

Petitioner.



**PETITION TO AMEND 20.6.4 NMAC, ESTABLISHING A NUTRIENT TEMPORARY  
STANDARD, AND REQUEST FOR HEARING**

The Surface Water Quality Bureau (“Bureau”) of the Water Protection Division (“Division”) of the New Mexico Environment Department (“Department”) respectfully petitions the Water Quality Control Commission (“WQCC”) to amend the Standards for Interstate and Intrastate Surface Waters (20.6.4 NMAC) to create a new section, 20.6.4.318 NMAC, for Doggett Creek and establish a Temporary Water Quality Standard (“TS”) for the City of Raton Wastewater Treatment Plant (“WWTP”), NPDES Permit No. NM0020273.

The Bureau requests that the WQCC set the hearing date for the March 12, 2020, WQCC meeting. The Bureau expects the public hearing to last four (4) hours, depending on the level and extent of public involvement and participation.

As support for this Petition, a Statement of Reasons is attached hereto as Attachment 1. The proposed amendments to Rule 20.6.4 NMAC, are attached hereto as Attachment 2. A copy of the “Nutrient Temporary Standards for: City of Raton Wastewater Treatment Plant NPDES Permit No. NM0020273 to Doggett Creek” is attached hereto as Attachment 3.

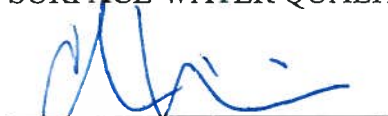
## JURISDICTION

Pursuant to the Water Quality Act (“Act”), NMSA 1978, Sections 74-6-1 to -17 (1967 as amended through 2019), and the Standards for Interstate and Intrastate Surface Waters, 20.6.4 NMAC, the WQCC is authorized to “adopt water quality standards for surface and ground waters of the state based on credible scientific data and other evidence appropriate under the [Act] . . . [giving the] weight it deems appropriate to all facts and circumstances.” NMSA 1978, §74-6-4(D). The Act authorizes the WQCC to adopt regulations to “specify a standard of performance for new sources that reflects the greatest reduction in the concentration of water contaminants,” giving due consideration of and weight to “the technical practicability and economic reasonableness of reducing or eliminating water contaminants from the sources involved . . .” NMSA 1978, § 74-6-4(E).

**WHEREFORE**, the Bureau requests that the Commission set this Petition for hearing on March 12, 2020, and appoint a Hearing Officer in this matter.

Respectfully submitted,

NEW MEXICO ENVIRONMENT DEPARTMENT  
SURFACE WATER QUALITY BUREAU



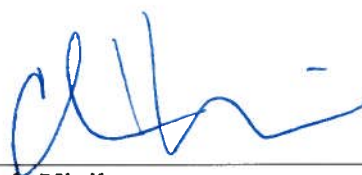
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**CERTIFICATE OF SERVICE**

I hereby certify that a true and correct copy of the foregoing Petition to Amend the Standards for Interstate and Intrastate Surface Waters Regulations 20.6.4 NMAC, and Request for Hearing was served by hand delivery and email on the following on October 29, 2019:

Cody Barnes, Administrator  
Water Quality Control Commission  
Room S-2104, Runnels Building  
1190 St. Francis Dr.  
Santa Fe, New Mexico 87505



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**IN THE MATTER OF PROPOSED  
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ESTABLISHING A NUTRIENT  
TEMPORARY STANDARD**

**STATEMENT OF REASONS**

The Surface Water Quality Bureau (“Bureau”) of the Water Protection Division (“Division”) of the New Mexico Environment Department (“Department”) respectfully petitions the Water Quality Control Commission (“WQCC”) to amend the Standards for Interstate and Intrastate Surface Waters (20.6.4 NMAC) to create a new section, 20.6.4.318 NMAC, for Doggett Creek and establish a Temporary Water Quality Standard (“TS”) for the City of Raton Wastewater Treatment Plant (“WWTP”), NPDES Permit No. NM0020273 for the following reasons:

**BACKGROUND**

1. Nutrients are one of the leading causes of water quality impairment in New Mexico waters. According to the state’s 2018-2020 Integrated Report, nutrients are the second leading cause of impairment in New Mexico’s perennial rivers and streams and the fourth leading cause of impairment in lakes and reservoirs, impairing 1,140 miles and 5,750 acres, respectively. Nutrient pollution in waterbodies results in large daily swings of dissolved oxygen, which can change aquatic community dynamics. In some cases, these changes can result in nuisance algal blooms that lead to fish kills and other harmful effects.
2. The Standards for Interstate and Intrastate Surface Waters (“Water Quality Standards”), 20.6.4 NMAC, include a narrative criterion for distinguishing nutrient conditions that contribute to production of undesirable or nuisance aquatic life. The state interprets this

narrative criterion using numeric nutrient threshold values that are based on reference conditions and applied to specific site classes in perennial, wadeable streams.

3. Facilities discharging to surface waters covered by the thresholds often need water quality-based effluent limits (“WQBELs”) for nutrients. Because of the limited available dilution in many receiving waters, some facilities will have WQBELs (whether based on total maximum daily loads or not) that require the threshold concentrations to be met “end-of-pipe.” However, these required WQBELs might not be economically or technologically achievable for many permittees; in these instances, the adoption of a temporary water quality standard may be appropriate.
4. New Mexico’s temporary standards regulations at 20.6.4.10(F) NMAC are based on the U.S. Environmental Protection Agency (“EPA”) regulation on Water Quality Standard variances at 40 C.F.R. 131.14. The New Mexico regulation defines a temporary standard as “a time-limited designated use and criterion for a specific pollutant(s) or water quality parameter(s) that reflect the highest attainable condition [“HAC”] during the term of the temporary standard” 20.6.4.10(F)(12) NMAC. In New Mexico, the HAC may be considered synonymous with the State’s definition of “temporary standard” as the “highest degree of protection feasible in the short-term.” 20.6.4.10(F)(1)(b) NMAC.
5. A temporary standard provides a mechanism for making progress toward attaining a designated use and water quality criterion that are not currently attainable. If a temporary standard has a term longer than 5 years, the HAC must be re-evaluated at least once every five (5) years with the opportunity for public input. 40 C.F.R. 131.14(b)(1)(v). Further, all temporary standards in New Mexico are subject to a

required review during each succeeding triennial review of water quality standards.  
20.6.4.10(F)(8) NMAC.

6. In 2017, the WQCC approved 20.6.4.10(F) NMAC, creating a framework for adopting temporary standards. The New Mexico temporary standards regulation is based on the EPA regulation on Water Quality Standard variances at 40 C.F.R. 131.14. The EPA approved the New Mexico regulation under the Clean Water Act effective on August 11, 2017.

#### CITY OF RATON WASTE WATER TREATMENT PLANT

7. The Bureau has conducted a substantial and widespread economic and social impact and HAC analysis for the City of Raton Wastewater Treatment Plant (“WWTP”), in accordance with 40 C.F.R. § 131.10(g) and 20.6.4.10(F) NMAC, to determine if the underlying nutrients standard is attainable now or within a defined period of time.
8. The Bureau has concluded that the underlying nutrients Water Quality Standard, including numeric interpretations of narrative criteria, is not attainable by the WWTP because “controls more stringent than those required by sections 301(b) and 306 of the [Clean Water] Act would result in substantial and widespread economic and social impact” to the City of Raton and the surrounding community. 40 C.F.R. § 131.10(g)(6).
9. The analysis identifies the highest attainable interim effluent condition to be achieved during the term of the temporary standard.
10. To implement the nutrients temporary standard for the City of Raton WWTP, it will be necessary to adopt a new water quality segment: 20.6.4.318 NMAC – *Doggett Creek*, and establish a discharger-specific temporary standard for the City of Raton WWTP, NPDES Permit No. NM0020273.

11. A temporary standard is appropriate in this case because all the following are met:
  - a. Existing or proposed discharge control technologies will comply with applicable technology-based effluent limitations, feasible technological controls, and other management alternatives [20.6.4.10(F)(1)(c) NMAC];
  - b. The underlying designated use and criterion, including numeric interpretations of narrative criteria, are not attainable now or within a defined period of time, but may be attainable in the longer term [20.6.4.10(F)(1)(a) NMAC];
  - c. It is feasible to make incremental improvements in water quality during the proposed term of the temporary standard; and
  - d. The temporary standard will not result in any lowering of currently attained ambient water quality [20.6.4.10(F)(1)(b) NMAC].

1 **TITLE 20 ENVIRONMENTAL PROTECTION**  
2 **CHAPTER 6 WATER QUALITY**  
3 **PART 4 STANDARDS FOR INTERSTATE AND INTRASTATE SURFACE WATERS**  
4

5 **20.6.4.1 ISSUING AGENCY:** Water Quality Control commission.  
6 [20.6.4.1 NMAC - Rp 20 NMAC 6.1.1001, 10/12/2000]  
7

8 **20.6.4.2 SCOPE:** Except as otherwise provided by statute or regulation of the water quality control  
9 commission, this part governs all surface waters of the state of New Mexico, which are subject to the New Mexico  
10 Water Quality Act, Sections 74-6-1 through 74-6-17 NMSA 1978.  
11 [20.6.4.2 NMAC - Rp 20 NMAC 6.1.1002, 10/12/2000; A, 5/23/2005]  
12

13 **20.6.4.3 STATUTORY AUTHORITY:** This part is adopted by the water quality control commission  
14 pursuant to Subsection C of Section 74-6-4 NMSA 1978.  
15 [20.6.4.3 NMAC - Rp 20 NMAC 6.1.1003, 10/12/2000]  
16

17 **20.6.4.4 DURATION:** Permanent.  
18 [20.6.4.4 NMAC - Rp 20 NMAC 6.1.1004, 10/12/2000]  
19

20 **20.6.4.5 EFFECTIVE DATE:** October 12, 2000, unless a later date is indicated in the history note at the  
21 end of a section.  
22 [20.6.4.5 NMAC - Rp 20 NMAC 6.1.1005, 10/12/2000]  
23

24 **20.6.4.6 OBJECTIVE:**

25 **A.** The purpose of this part is to establish water quality standards that consist of the designated use or  
26 uses of surface waters of the state, the water quality criteria necessary to protect the use or uses and an  
27 antidegradation policy.

28 **B.** The state of New Mexico is required under the New Mexico Water Quality Act (Subsection C of  
29 Section 74-6-4 NMSA 1978) and the federal Clean Water Act, as amended (33 U.S.C. Section 1251 *et seq.*) to adopt  
30 water quality standards that protect the public health or welfare, enhance the quality of water and are consistent with  
31 and serve the purposes of the New Mexico Water Quality Act and the federal Clean Water Act. It is the objective of  
32 the federal Clean Water Act to restore and maintain the chemical, physical and biological integrity of the nation's  
33 waters, including those in New Mexico. This part is consistent with Section 101(a)(2) of the federal Clean Water  
34 Act, which declares that it is the national goal that wherever attainable, an interim goal of water quality that provides  
35 for the protection and propagation of fish, shellfish and wildlife and provides for recreation in and on the water be  
36 achieved by July 1, 1983. Agricultural, municipal, domestic and industrial water supply are other essential uses of  
37 New Mexico's surface water; however, water contaminants resulting from these activities will not be permitted to  
38 lower the quality of surface waters of the state below that required for protection and propagation of fish, shellfish  
39 and wildlife and recreation in and on the water, where practicable.

40 **C.** Pursuant to Subsection A of Section 74-6-12 NMSA 1978, this part does not grant to the water  
41 quality control commission or to any other entity the power to take away or modify property rights in water.  
42 [20.6.4.6 NMAC - Rp 20 NMAC 6.1.1006, 10/12/2000; A, 5/23/2005]  
43

44 **20.6.4.7 DEFINITIONS:** Terms defined in the New Mexico Water Quality Act, but not defined in this  
45 part will have the meaning given in the Water Quality Act.

46 **A. Terms beginning with numerals or the letter "A," and abbreviations for units.**

47 (1) "4T3 temperature" means the temperature not to be exceeded for four or more  
48 consecutive hours in a 24-hour period on more than three consecutive days.

49 (2) "6T3 temperature" means the temperature not to be exceeded for six or more  
50 consecutive hours in a 24-hour period on more than three consecutive days.

51 (3) **Abbreviations** used to indicate units are defined as follows:

52 (a) "cfu/100 mL" means colony-forming units per 100 milliliters; the results for *E.*  
53 *coli* may be reported as either colony forming units (CFU) or the most probable number (MPN), depending on the  
54 analytical method used;

55 (b) "cfs" means cubic feet per second;



- 1 (c) "µg/L" means micrograms per liter, equivalent to parts per billion when the  
2 specific gravity of the solution equals 1.0;
- 3 (d) "µS/cm" means microsiemens per centimeter; one µS/cm is equal to one  
4 µmho/cm;
- 5 (e) "mg/kg" means milligrams per kilogram, equivalent to parts per million;
- 6 (f) "mg/L" means milligrams per liter, equivalent to parts per million when the  
7 specific gravity of the solution equals 1.0;
- 8 (g) "MPN/100 mL" means most probable number per 100 milliliters; the results for  
9 *E. coli* may be reported as either CFU or MPN, depending on the analytical method used;
- 10 (h) "NTU" means nephelometric turbidity unit;
- 11 (i) "pCi/L" means picocuries per liter;
- 12 (j) "pH" means the measure of the acidity or alkalinity and is expressed in standard  
13 units (su).
- 14 (4) "Acute toxicity" means toxicity involving a stimulus severe enough to induce a response  
15 in 96 hours of exposure or less. Acute toxicity is not always measured in terms of lethality, but may include other  
16 toxic effects that occur within a short time period.
- 17 (5) "Adjusted gross alpha" means the total radioactivity due to alpha particle emission as  
18 inferred from measurements on a dry sample, including radium-226, but excluding radon-222 and uranium. Also  
19 excluded are source, special nuclear and by-product material as defined by the Atomic Energy Act of 1954.
- 20 (6) "Aquatic life" means any plant or animal life that uses surface water as primary habitat  
21 for at least a portion of its life cycle, but does not include avian or mammalian species.
- 22 (7) "Attainable" means achievable by the imposition of effluent limits required under  
23 sections 301(b) and 306 of the Clean Water Act and implementation of cost-effective and reasonable best  
24 management practices for nonpoint source control.
- 25 **B. Terms beginning with the letter "B".**
- 26 (1) "Best management practices" or "BMPs":
- 27 (a) for national pollutant discharge elimination system (NPDES) permitting  
28 purposes means schedules of activities, prohibitions of practices, maintenance procedures and other management  
29 practices to prevent or reduce the pollution of "waters of the United States;" BMPs also include treatment  
30 requirements, operating procedures and practices to control plant site runoff, spillage or leaks, sludge or waste  
31 disposal or drainage from raw material storage; or
- 32 (b) for nonpoint source pollution control purposes means methods, measures or  
33 practices selected by an agency to meet its nonpoint source control needs; BMPs include but are not limited to  
34 structural and nonstructural controls and operation and maintenance procedures; BMPS can be applied before,  
35 during and after pollution-producing activities to reduce or eliminate the introduction of pollutants into receiving  
36 waters; BMPs for nonpoint source pollution control purposes shall not be mandatory except as required by state or  
37 federal law.
- 38 (2) "Bioaccumulation" refers to the uptake and retention of a substance by an organism  
39 from its surrounding medium and food.
- 40 (3) "Bioaccumulation factor" is the ratio of a substance's concentration in tissue versus its  
41 concentration in ambient water, in situations where the organism and the food chain are exposed.
- 42 (4) "Biomonitoring" means the use of living organisms to test the suitability of effluents for  
43 discharge into receiving waters or to test the quality of surface waters of the state.
- 44 **C. Terms beginning with the letter "C".**
- 45 (1) "CAS number" means an assigned number by chemical abstract service (CAS) to  
46 identify a substance. CAS numbers index information published in chemical abstracts by the American chemical  
47 society.
- 48 (2) "Chronic toxicity" means toxicity involving a stimulus that lingers or continues for a  
49 relatively long period relative to the life span of an organism. Chronic effects include, but are not limited to,  
50 lethality, growth impairment, behavioral modifications, disease and reduced reproduction.
- 51 (3) "Classified water of the state" means a surface water of the state, or reach of a surface  
52 water of the state, for which the commission has adopted a segment description and has designated a use or uses and  
53 applicable water quality criteria in 20.6.4.101 through 20.6.4.899 NMAC.
- 54 (4) "Closed basin" is a basin where topography prevents the surface outflow of water and  
55 water escapes by evapotranspiration or percolation.

1 (5) "Coldwater" in reference to an aquatic life use means a surface water of the state where  
2 the water temperature and other characteristics are suitable for the support or propagation or both of coldwater  
3 aquatic life.

4 (6) "Coolwater" in reference to an aquatic life use means the water temperature and other  
5 characteristics are suitable for the support or propagation of aquatic life whose physiological tolerances are  
6 intermediate between and may overlap those of warm and coldwater aquatic life.

7 (7) "Commission" means the New Mexico water quality control commission.

8 (8) "Criteria" are elements of state water quality standards, expressed as constituent  
9 concentrations, levels or narrative statements, representing a quality of water that supports a use. When criteria are  
10 met, water quality will protect the designated use.

11 **D. Terms beginning with the letter "D".**

12 (1) "DDT and derivatives" means 4,4'-DDT (CAS number 50293), 4,4'-DDE (CAS  
13 number 72559) and 4,4'-DDD (CAS number 72548).

14 (2) "Department" means the New Mexico environment department.

15 (3) "Designated use" means a use specified in 20.6.4.97 through 20.6.4.899 NMAC for a  
16 surface water of the state whether or not it is being attained.

17 (4) "Dissolved" refers to the fraction of a constituent of a water sample that passes through a  
18 0.45-micrometer pore-size filter. The "dissolved" fraction is also termed "filterable residue."

19 (5) "Domestic water supply" means a surface water of the state that could be used for  
20 drinking or culinary purposes after disinfection.

21 **E. Terms beginning with the letter "E".**

22 (1) "E. coli" means the bacteria Escherichia coli.

23 (2) "Ephemeral" when used to describe a surface water of the state means the water body  
24 contains water briefly only in direct response to precipitation; its bed is always above the water table of the adjacent  
25 region.

26 (3) "Existing use" means a use actually attained in a surface water of the state on or after  
27 November 28, 1975, whether or not it is a designated use.

28 **F. Terms beginning with the letter "F".**

29 (1) "Fish culture" means production of coldwater or warmwater fishes in a hatchery or  
30 rearing station.

31 (2) "Fish early life stages" means the egg and larval stages of development of fish ending  
32 when the fish has its full complement of fin rays and loses larval characteristics.

33 **G. Terms beginning with the letter "G". [RESERVED]**

34 **H. Terms beginning with the letter "H".**

35 (1) "High quality coldwater" in reference to an aquatic life use means a perennial surface  
36 water of the state in a minimally disturbed condition with considerable aesthetic value and superior coldwater  
37 aquatic life habitat. A surface water of the state to be so categorized must have water quality, stream bed  
38 characteristics and other attributes of habitat sufficient to protect and maintain a propagating coldwater aquatic life  
39 population.

40 (2) "Human health-organism only" means the health of humans who ingest fish or other  
41 aquatic organisms from waters that contain pollutants.

42 **I. Terms beginning with the letter "I".**

43 (1) "Industrial water supply" means the use or storage of water by a facility for process  
44 operations unless the water is supplied by a public water system. Industrial water supply does not include irrigation  
45 or other agricultural uses.

46 (2) "Intermittent" when used to describe a surface water of the state means the water body  
47 contains water for extended periods only at certain times of the year, such as when it receives seasonal flow from  
48 springs or melting snow.

49 (3) "Interstate waters" means all surface waters of the state that cross or form a part of the  
50 border between states.

51 (4) "Intrastate waters" means all surface waters of the state that are not interstate waters.

52 (5) "Irrigation" means application of water to land areas to supply the water needs of  
53 beneficial plants.

54 (6) "Irrigation storage" means storage of water to supply the needs of beneficial plants.

55 **J. Terms beginning with the letter "J". [RESERVED]**

56 **K. Terms beginning with the letter "K". [RESERVED]**

1           **L. Terms beginning with the letter “L”.**

2           (1)       **“LC-50”** means the concentration of a substance that is lethal to fifty percent of the test  
3 organisms within a defined time period. The length of the time period, which may vary from 24 hours to one week  
4 or more, depends on the test method selected to yield the information desired.

5           (2)       **“Limited aquatic life”** as a designated use, means the surface water is capable of  
6 supporting only a limited community of aquatic life. This subcategory includes surface waters that support aquatic  
7 species selectively adapted to take advantage of naturally occurring rapid environmental changes, ephemeral or  
8 intermittent water, high turbidity, fluctuating temperature, low dissolved oxygen content or unique chemical  
9 characteristics.

10          (3)       **“Livestock watering”** means the use of a surface water of the state as a supply of water  
11 for consumption by livestock.

12           **M. Terms beginning with the letter “M”.**

13          (1)       **“Marginal coldwater”** in reference to an aquatic life use means that natural intermittent  
14 or low flows, or other natural habitat conditions severely limit maintenance of a coldwater aquatic life population or  
15 historical data indicate that the temperature in the surface water of the state may exceed 25°C (77°F).

16          (2)       **“Marginal warmwater”** in reference to an aquatic life use means natural intermittent or  
17 low flow or other natural habitat conditions severely limit the ability of the surface water of the state to sustain a  
18 natural aquatic life population on a continuous annual basis; or historical data indicate that natural water temperature  
19 routinely exceeds 32.2°C (90°F).

20          (3)       **“Maximum temperature”** means the instantaneous temperature not to be exceeded at  
21 any time.

22          (4)       **“Minimum quantification level”** means the minimum quantification level for a  
23 constituent determined by official published documents of the United States environmental protection agency.

24           **N. Terms beginning with the letter “N”.**

25          (1)       **“Natural background”** means that portion of a pollutant load in a surface water  
26 resulting only from non-anthropogenic sources. Natural background does not include impacts resulting from historic  
27 or existing human activities.

28          (2)       **“Natural causes”** means those causal agents that would affect water quality and the  
29 effect is not caused by human activity but is due to naturally occurring conditions.

30          (3)       **“Nonpoint source”** means any source of pollutants not regulated as a point source that  
31 degrades the quality or adversely affects the biological, chemical or physical integrity of surface waters of the state.

32           **O. Terms beginning with the letter “O”.**

33          (1)       **“Organoleptic”** means the capability to produce a detectable sensory stimulus such as  
34 odor or taste.

35          (2)       **“Oversight agency”** means a state or federal agency, such as the United States  
36 department of agriculture forest service, that is responsible for land use or water quality management decisions  
37 affecting nonpoint source discharges where an outstanding national resource water is located.

38           **P. Terms beginning with the letter “P”.**

39          (1)       **“Playa”** means a shallow closed basin lake typically found in the high plains and deserts.

40          (2)       **“Perennial”** when used to describe a surface water of the state means the water body  
41 typically contains water throughout the year and rarely experiences dry periods.

42          (3)       **“Point source”** means any discernible, confined and discrete conveyance from which  
43 pollutants are or may be discharged into a surface water of the state, but does not include return flows from irrigated  
44 agriculture.

45          (4)       **“Practicable”** means that which may be done, practiced or accomplished; that which is  
46 performable, feasible, possible.

47          (5)       **“Primary contact”** means any recreational or other water use in which there is  
48 prolonged and intimate human contact with the water, such as swimming and water skiing, involving considerable  
49 risk of ingesting water in quantities sufficient to pose a significant health hazard. Primary contact also means any  
50 use of surface waters of the state for cultural, religious or ceremonial purposes in which there is intimate human  
51 contact with the water, including but not limited to ingestion or immersion, that could pose a significant health  
52 hazard.

53          (6)       **“Public water supply”** means the use or storage of water to supply a public water  
54 system as defined by New Mexico’s Drinking Water Regulations, 20.7.10 NMAC. Water provided by a public water  
55 system may need to undergo treatment to achieve drinking water quality.

56           **Q. Terms beginning with the letter “Q”. [RESERVED]**

1           **R. Terms beginning with the letter “R”. [RESERVED]**

2           **S. Terms beginning with the letter “S”.**

3           (1)       **“Secondary contact”** means any recreational or other water use in which human contact  
4 with the water may occur and in which the probability of ingesting appreciable quantities of water is minimal, such  
5 as fishing, wading, commercial and recreational boating and any limited seasonal contact.

6           (2)       **“Segment”** means a classified water of the state described in 20.6.4.101 through  
7 20.6.4.899 NMAC. The water within a segment should have the same uses, similar hydrologic characteristics or  
8 flow regimes, and natural physical, chemical and biological characteristics and exhibit similar reactions to external  
9 stresses, such as the discharge of pollutants.

10          (3)       **“Specific conductance”** is a measure of the ability of a water solution to conduct an  
11 electrical current.

12          (4)       **“State”** means the state of New Mexico.

13          (5)       **“Surface water(s) of the state”** means all surface waters situated wholly or partly within  
14 or bordering upon the state, including lakes, rivers, streams (including intermittent streams), mudflats, sandflats,  
15 wetlands, sloughs, prairie potholes, wet meadows, playa lakes, reservoirs or natural ponds. Surface waters of the  
16 state also means all tributaries of such waters, including adjacent wetlands, any manmade bodies of water that were  
17 originally created in surface waters of the state or resulted in the impoundment of surface waters of the state, and  
18 any “waters of the United States” as defined under the Clean Water Act that are not included in the preceding  
19 description. Surface waters of the state does not include private waters that do not combine with other surface or  
20 subsurface water or any water under tribal regulatory jurisdiction pursuant to Section 518 of the Clean Water Act.  
21 Waste treatment systems, including treatment ponds or lagoons designed and actively used to meet requirements of  
22 the Clean Water Act (other than cooling ponds as defined in 40 CFR Part 423.11(m) that also meet the criteria of  
23 this definition), are not surface waters of the state, unless they were originally created in surface waters of the state  
24 or resulted in the impoundment of surface waters of the state.

25          **T. Terms beginning with the letter “T”.**

26          (1)       **“TDS”** means total dissolved solids, also termed “total filterable residue.”

27          (2)       **“Toxic pollutant”** means those pollutants, or combination of pollutants, including  
28 disease-causing agents, that after discharge and upon exposure, ingestion, inhalation or assimilation into any  
29 organism, either directly from the environment or indirectly by ingestion through food chains, will cause death,  
30 shortened life spans, disease, adverse behavioral changes, reproductive or physiological impairment or physical  
31 deformations in such organisms or their offspring.

32          (3)       **“Tributary”** means a perennial, intermittent or ephemeral waterbody that flows into a  
33 larger waterbody, and includes a tributary of a tributary.

34          (4)       **“Turbidity”** is an expression of the optical property in water that causes incident light to  
35 be scattered or absorbed rather than transmitted in straight lines.

36          **U. Terms beginning with the letter “U”. [RESERVED]**

37          **V. Terms beginning with the letter “V”. [RESERVED]**

38          **W. Terms beginning with the letter “W”.**

39          (1)       **“Warmwater”** with reference to an aquatic life use means that water temperature and  
40 other characteristics are suitable for the support or propagation or both of warmwater aquatic life.

41          (2)       **“Water contaminant”** means any substance that could alter if discharged or spilled the  
42 physical, chemical, biological or radiological qualities of water. “Water contaminant” does not mean source, special  
43 nuclear or by-product material as defined by the Atomic Energy Act of 1954, but may include all other radioactive  
44 materials, including but not limited to radium and accelerator-produced isotopes.

45          (3)       **“Water pollutant”** means a water contaminant in such quantity and of such duration as  
46 may with reasonable probability injure human health, animal or plant life or property, or to unreasonably interfere  
47 with the public welfare or the use of property.

48          (4)       **“Wetlands”** means those areas that are inundated or saturated by surface or ground water  
49 at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of  
50 vegetation typically adapted for life in saturated soil conditions in New Mexico. Wetlands that are constructed  
51 outside of a surface water of the state for the purpose of providing wastewater treatment and that do not impound a  
52 surface water of the state are not included in this definition.

53          (5)       **“Wildlife habitat”** means a surface water of the state used by plants and animals not  
54 considered as pathogens, vectors for pathogens or intermediate hosts for pathogens for humans or domesticated  
55 livestock and plants.

56          **X. Terms beginning with the letters “X” through “Z”. [RESERVED]**

1 [20.6.4.7 NMAC - Rp 20 NMAC 6.1.1007, 10/12/2000; A, 7/19/2001; A, 5/23/2005; A, 7/17/2005; A, 8/1/2007; A,  
2 12/1/2010; A, 1/14/2011; A, 3/2/2017]

3  
4 **20.6.4.8 ANTIDegradation Policy and Implementation Plan:**

5 **A. Antidegradation Policy:** This antidegradation policy applies to all surface waters of the state.

6 (1) Existing instream water uses and the level of water quality necessary to protect the  
7 existing uses shall be maintained and protected in all surface waters of the state.

8 (2) Where the quality of a surface water of the state exceeds levels necessary to support the  
9 propagation of fish, shellfish, and wildlife, and recreation in and on the water, that quality shall be maintained and  
10 protected unless the commission finds, after full satisfaction of the intergovernmental coordination and public  
11 participation provisions of the state's continuing planning process, that allowing lower water quality is necessary to  
12 accommodate important economic and social development in the area in which the water is located. In allowing  
13 such degradation or lower water quality, the state shall assure water quality adequate to protect existing uses fully.  
14 Further, the state shall assure that there shall be achieved the highest statutory and regulatory requirements for all  
15 new and existing point sources and all cost-effective and reasonable BMPs for nonpoint source control.  
16 Additionally, the state shall encourage the use of watershed planning as a further means to protect surface waters of  
17 the state.

18 (3) No degradation shall be allowed in waters designated by the commission as outstanding  
19 national resource waters (ONRWs), except as provided in Subparagraphs (a) through (e) of this paragraph and in  
20 Paragraph (4) of this Subsection A.

21 (a) After providing a minimum 30-day public review and comment period, the  
22 commission determines that allowing temporary and short-term degradation of water quality is necessary to  
23 accommodate public health or safety activities in the area in which the ONRW is located. Examples of public health  
24 or safety activities include but are not limited to replacement or repair of a water or sewer pipeline or a roadway  
25 bridge. In making its decision, the commission shall consider whether the activity will interfere with activities  
26 implemented to restore or maintain the chemical, physical or biological integrity of the water. In approving the  
27 activity, the commission shall require that:

28 (i) the degradation shall be limited to the shortest possible time and shall  
29 not exceed six months;

30 (ii) the degradation shall be minimized and controlled by best management  
31 practices or in accordance with permit requirements as appropriate; all practical means of minimizing the duration,  
32 magnitude, frequency and cumulative effects of such degradation shall be utilized;

33 (iii) the degradation shall not result in water quality lower than necessary to  
34 protect any existing use in the ONRW; and

35 (iv) the degradation shall not alter the essential character or special use that  
36 makes the water an ONRW.

37 (b) Prior to the commission making a determination, the department or appropriate  
38 oversight agency shall provide a written recommendation to the commission. If the commission approves the  
39 activity, the department or appropriate oversight agency shall oversee implementation of the activity.

40 (c) Where an emergency response action that may result in temporary and short-  
41 term degradation to an ONRW is necessary to mitigate an immediate threat to public health or safety, the emergency  
42 response action may proceed prior to providing notification required by Subparagraph (a) of this paragraph in  
43 accordance with the following:

44 (i) only actions that mitigate an immediate threat to public health or safety  
45 may be undertaken pursuant to this provision; non-emergency portions of the action shall comply with the  
46 requirements of Subparagraph (a) of this paragraph;

47 (ii) the discharger shall make best efforts to comply with requirements (i)  
48 through (iv) of Subparagraph (a) of this paragraph;

49 (iii) the discharger shall notify the department of the emergency response  
50 action in writing within seven days of initiation of the action;

51 (iv) within 30 days of initiation of the emergency response action, the  
52 discharger shall provide a summary of the action taken, including all actions taken to comply with requirements (i)  
53 through (iv) of Subparagraph (a) of this paragraph.

54 (d) Preexisting land-use activities, including grazing, allowed by federal or state law  
55 prior to designation as an ONRW, and controlled by best management practices (BMPs), shall be allowed to

1 continue so long as there are no new or increased discharges resulting from the activity after designation of the  
2 ONRW.

3 (e) Acequia operation, maintenance, and repairs are not subject to new requirements  
4 because of ONRW designation. However, the use of BMPs to minimize or eliminate the introduction of pollutants  
5 into receiving waters is strongly encouraged.

6 (4) This antidegradation policy does not prohibit activities that may result in degradation in  
7 surface waters of the state when such activities will result in restoration or maintenance of the chemical, physical or  
8 biological integrity of the water.

9 (a) For ONRWs, the department or appropriate oversight agency shall review on a  
10 case-by-case basis discharges that may result in degradation from restoration or maintenance activities, and may  
11 approve such activities in accordance with the following:

12 (i) the degradation shall be limited to the shortest possible time;  
13 (ii) the degradation shall be minimized and controlled by best management  
14 practices or in accordance with permit requirements as appropriate, and all practical means of minimizing the  
15 duration, magnitude, frequency and cumulative effects of such degradation shall be utilized;

16 (iii) the degradation shall not result in water quality lower than necessary to  
17 protect any existing use of the surface water; and

18 (iv) the degradation shall not alter the essential character or special use that  
19 makes the water an ONRW.

20 (b) For surface waters of the state other than ONRWs, the department shall review  
21 on a case-by-case basis discharges that may result in degradation from restoration or maintenance activities, and  
22 may approve such activities in accordance with the following:

23 (i) the degradation shall be limited to the shortest possible time;  
24 (ii) the degradation shall be minimized and controlled by best management  
25 practices or in accordance with permit requirements as appropriate, and all practical means of minimizing the  
26 duration, magnitude, frequency and cumulative effects of such degradation shall be utilized; and

27 (iii) the degradation shall not result in water quality lower than necessary to  
28 protect any existing use of the surface water.

29 (5) In those cases where potential water quality impairment associated with a thermal  
30 discharge is involved, this antidegradation policy and implementing method shall be consistent with Section 316 of  
31 the federal Clean Water Act.

32 (6) In implementing this section, the commission through the appropriate regional offices of  
33 the United States environmental protection agency will keep the administrator advised and provided with such  
34 information concerning the surface waters of the state as he or she will need to discharge his or her responsibilities  
35 under the federal Clean Water Act.

36 **B. Implementation Plan:** The department, acting under authority delegated by the commission,  
37 implements the water quality standards, including the antidegradation policy, by describing specific methods and  
38 procedures in the continuing planning process and by establishing and maintaining controls on the discharge of  
39 pollutants to surface waters of the state. The steps summarized in the following paragraphs, which may not all be  
40 applicable in every water pollution control action, list the implementation activities of the department. These  
41 implementation activities are supplemented by detailed antidegradation review procedures developed under the  
42 state's continuing planning process. The department:

43 (1) obtains information pertinent to the impact of the effluent on the receiving water and  
44 advises the prospective discharger of requirements for obtaining a permit to discharge;

45 (2) reviews the adequacy of existing data and conducts a water quality survey of the  
46 receiving water in accordance with an annually reviewed, ranked priority list of surface waters of the state requiring  
47 total maximum daily loads pursuant to Section 303(d) of the federal Clean Water Act;

48 (3) assesses the probable impact of the effluent on the receiving water relative to its  
49 attainable or designated uses and numeric and narrative criteria;

50 (4) requires the highest and best degree of wastewater treatment practicable and  
51 commensurate with protecting and maintaining the designated uses and existing water quality of surface waters of  
52 the state;

53 (5) develops water quality based effluent limitations and comments on technology based  
54 effluent limitations, as appropriate, for inclusion in any federal permit issued to a discharger pursuant to Section 402  
55 of the federal Clean Water Act;

- 1 (6) requires that these effluent limitations be included in any such permit as a condition for  
2 state certification pursuant to Section 401 of the federal Clean Water Act;
- 3 (7) coordinates its water pollution control activities with other constituent agencies of the  
4 commission, and with local, state and federal agencies, as appropriate;
- 5 (8) develops and pursues inspection and enforcement programs to ensure that dischargers  
6 comply with state regulations and standards, and complements EPA's enforcement of federal permits;
- 7 (9) ensures that the provisions for public participation required by the New Mexico Water  
8 Quality Act and the federal Clean Water Act are followed;
- 9 (10) provides continuing technical training for wastewater treatment facility operators through  
10 the utility operators training and certification programs;
- 11 (11) provides funds to assist the construction of publicly owned wastewater treatment  
12 facilities through the wastewater construction program authorized by Section 601 of the federal Clean Water Act,  
13 and through funds appropriated by the New Mexico legislature;
- 14 (12) conducts water quality surveillance of the surface waters of the state to assess the  
15 effectiveness of water pollution controls, determines whether water quality standards are being attained, and  
16 proposes amendments to improve water quality standards;
- 17 (13) encourages, in conjunction with other state agencies, implementation of the best  
18 management practices set forth in the New Mexico statewide water quality management plan and the nonpoint  
19 source management program, such implementation shall not be mandatory except as provided by federal or state  
20 law;
- 21 (14) evaluates the effectiveness of BMPs selected to prevent, reduce or abate sources of water  
22 pollutants;
- 23 (15) develops procedures for assessing use attainment as required by 20.6.4.15 NMAC and  
24 establishing site-specific standards; and
- 25 (16) develops list of surface waters of the state not attaining designated uses, pursuant to  
26 Sections 305(b) and 303(d) of the federal Clean Water Act.  
27 [20.6.4.8 NMAC - Rp 20 NMAC 6.1.1101, 10/12/2000; A, 5/23/2005; A, 8/1/2007; A, 1/14/2011]

28  
29 **20.6.4.9 OUTSTANDING NATIONAL RESOURCE WATERS:**

30 **A. Procedures for nominating an ONRW:** Any person may nominate a surface water of the state  
31 for designation as an ONRW by filing a petition with the commission pursuant to the guidelines for water quality  
32 control commission regulation hearings. A petition to designate a surface water of the state as an ONRW shall  
33 include:

- 34 (1) a map of the surface water of the state, including the location and proposed upstream and  
35 downstream boundaries;
- 36 (2) a written statement and evidence based on scientific principles in support of the  
37 nomination, including specific reference to one or more of the applicable ONRW criteria listed in Subsection B of  
38 this section;
- 39 (3) water quality data including chemical, physical or biological parameters, if available, to  
40 establish a baseline condition for the proposed ONRW;
- 41 (4) a discussion of activities that might contribute to the reduction of water quality in the  
42 proposed ONRW;
- 43 (5) any additional evidence to substantiate such a designation, including a discussion of the  
44 economic impact of the designation on the local and regional economy within the state of New Mexico and the  
45 benefit to the state; and
- 46 (6) affidavit of publication of notice of the petition in a newspaper of general circulation in  
47 the affected counties and in a newspaper of general statewide circulation.

48 **B. Criteria for ONRWs:** A surface water of the state, or a portion of a surface water of the state,  
49 may be designated as an ONRW where the commission determines that the designation is beneficial to the state of  
50 New Mexico, and:

- 51 (1) the water is a significant attribute of a state special trout water, national or state park,  
52 national or state monument, national or state wildlife refuge or designated wilderness area, or is part of a designated  
53 wild river under the federal Wild and Scenic Rivers Act; or
- 54 (2) the water has exceptional recreational or ecological significance; or

1 (3) the existing water quality is equal to or better than the numeric criteria for protection of  
2 aquatic life and contact uses and the human health-organism only criteria, and the water has not been significantly  
3 modified by human activities in a manner that substantially detracts from its value as a natural resource.

4 C. Pursuant to a petition filed under Subsection A of this section, the commission may classify a  
5 surface water of the state or a portion of a surface water of the state as an ONRW if the criteria set out in Subsection  
6 B of this section are met.

7 D. Waters classified as ONRWs: The following waters are classified as ONRWs:

8 (1) Rio Santa Barbara, including the west, middle and east forks from their headwaters  
9 downstream to the boundary of the Pecos Wilderness; and

10 (2) the waters within the United States forest service Valle Vidal special management unit  
11 including:

12 (a) Rio Costilla, including Comanche, La Cueva, Fernandez, Chuckwagon, Little  
13 Costilla, Powderhouse, Holman, Gold, Grassy, LaBelle and Vidal creeks, from their headwaters downstream to the  
14 boundary of the United States forest service Valle Vidal special management unit;

15 (b) Middle Ponil creek, including the waters of Greenwood Canyon, from their  
16 headwaters downstream to the boundary of the Elliott S. Barker wildlife management area;

17 (c) Shuree lakes;

18 (d) North Ponil creek, including McCrystal and Seally Canyon creeks, from their  
19 headwaters downstream to the boundary of the United States forest service Valle Vidal special management unit;  
20 and

21 (e) Leandro creek from its headwaters downstream to the boundary of the United  
22 States forest service Valle Vidal special management unit.

23 (3) the named perennial surface waters of the state, identified in Subparagraph (a) below,  
24 located within United States department of agriculture forest service wilderness. Wilderness are those lands  
25 designated by the United States congress as wilderness pursuant to the Wilderness Act. Wilderness areas included in  
26 this designation are the Aldo Leopold wilderness, Apache Kid wilderness, Blue Range wilderness, Chama River  
27 Canyon wilderness, Cruces Basin wilderness, Dome wilderness, Gila wilderness, Latir Peak wilderness, Pecos  
28 wilderness, San Pedro Parks wilderness, Wheeler Peak wilderness, and White Mountain wilderness.

29 (a) The following waters are designated in the Rio Grande basin:

30 (i) in the Aldo Leopold wilderness: Byers Run, Circle Seven creek, Flower  
31 canyon, Holden Prong, Indian canyon, Las Animas creek, Mud Spring canyon, North Fork Palomas creek, North  
32 Seco creek, Pretty canyon, Sids Prong, South Animas canyon, Victorio Park canyon, Water canyon;

33 (ii) in the Apache Kid wilderness Indian creek and Smith canyon;

34 (iii) in the Chama River Canyon wilderness: Chavez canyon, Ojitos canyon,  
35 Rio Chama;

36 (iv) in the Cruces Basin wilderness: Beaver creek, Cruces creek, Diablo  
37 creek, Escondido creek, Lobo creek, Osha creek;

38 (v) in the Dome wilderness: Capulin creek, Medio creek, Sanchez  
39 canyon/creek;

40 (vi) in the Latir Peak wilderness: Bull creek, Bull Creek lake, Heart lake,  
41 Lagunitas Fork, Lake Fork creek, Rito del Medio, Rito Primero, West Latir creek;

42 (vii) in the Pecos wilderness: Agua Sarca, Hidden lake, Horseshoe lake  
43 (Alamitos), Jose Vigil lake, Nambe lake, Nat lake IV, No Fish lake, North Fork Rio Quemado, Rinconada, Rio  
44 Capulin, Rio de las Trampas (Trampas creek), Rio de Truchas, Rio Frijoles, Rio Medio, Rio Molino, Rio Nambe,  
45 Rio San Leonardo, Rito con Agua, Rito Gallina, Rito Jaroso, Rito Quemado, San Leonardo lake, Santa Fe lake,  
46 Santa Fe river, Serpent lake, South Fork Rio Quemado, Trampas lake (East), Trampas lake (West);

47 (viii) in the San Pedro Parks wilderness: Agua Sarca, Cañon Madera, Cave  
48 creek, Cecilia Canyon creek, Clear creek (North SPP), Clear creek (South SPP), Corralitos creek, Dove creek, Jose  
49 Miguel creek, La Jara creek, Oso creek, Rio Capulin, Rio de las Vacas, Rio Gallina, Rio Puerco de Chama, Rito  
50 Anastacio East, Rito Anastacio West, Rito de las Palomas, Rito de las Perchas, Rito de los Pinos, Rito de los Utes,  
51 Rito Leche, Rito Redondo, Rito Resumidero, San Gregorio lake;

52 (ix) in the Wheeler Peak wilderness: Black Copper canyon, East Fork Red  
53 river, Elk lake, Horseshoe lake, Lost lake, Sawmill creek, South Fork lake, South Fork Rio Hondo, Williams lake.

54 (b) The following waters are designated in the Pecos River basin:

55 (i) in the Pecos wilderness: Albright creek, Bear creek, Beatty creek,  
56 Beaver creek, Carpenter creek, Cascade canyon, Cave creek, El Porvenir creek, Hollinger creek, Holy Ghost creek,



1 Horsethief creek, Jack's creek, Jarosa canyon/creek, Johnson lake, Lake Katherine, Lost Bear lake, Noisy brook,  
2 Panchuela creek, Pecos Baldy lake, Pecos river, Rio Mora, Rio Valdez, Rito Azul, Rito de los Chimayosos, Rito de  
3 los Esteros, Rito del Oso, Rito del Padre, Rito las Trampas, Rito Maestas, Rito Oscuro, Rito Perro, Rito  
4 Sebadilloses, South Fork Bear creek, South Fork Rito Azul, Spirit lake, Stewart lake, Truchas lake (North), Truchas  
5 lake (South), Winsor creek;

6 (ii) in the White Mountain wilderness: Argentina creek, Aspen creek,  
7 Bonito creek, Little Bonito creek, Mills canyon/creek, Rodamaker creek, South Fork Rio Bonito, Turkey  
8 canyon/creek.

9 (c) The following waters are designated in the Gila River basin:

10 (i) in the Aldo Leopold wilderness: Aspen canyon, Black Canyon creek,  
11 Bonner canyon, Burnt canyon, Diamond creek, Falls canyon, Fisherman canyon, Running Water canyon, South  
12 Diamond creek;

13 (ii) in the Gila wilderness: Apache creek, Black Canyon creek, Brush  
14 canyon, Canyon creek, Chicken Coop canyon, Clear creek, Cooper canyon, Cow creek, Cub creek, Diamond creek,  
15 East Fork Gila river, Gila river, Gilita creek, Indian creek, Iron creek, Langstroth canyon, Lilley canyon, Little  
16 creek, Little Turkey creek, Lookout canyon, McKenna creek, Middle Fork Gila river, Miller Spring canyon,  
17 Mogollon creek, Panther canyon, Prior creek, Rain creek, Raw Meat creek, Rocky canyon, Sacaton creek, Sapillo  
18 creek, Sheep Corral canyon, Skeleton canyon, Squaw creek, Sycamore canyon, Trail canyon, Trail creek, Trout  
19 creek, Turkey creek, Turkey Feather creek, Turnbo canyon, West Fork Gila river, West Fork Mogollon creek, White  
20 creek, Willow creek, Woodrow canyon.

21 (d) The following waters are designated in the Canadian River basin: in the Pecos  
22 wilderness Daily creek, Johns canyon, Middle Fork Lake of Rio de la Casa, Middle Fork Rio de la Casa, North Fork  
23 Lake of Rio de la Casa, Rito de Gascon, Rito San Jose, Sapello river, South Fork Rio de la Casa, Sparks creek  
24 (Manuelitas creek).

25 (e) The following waters are designated in the San Francisco River basin:

26 (i) in the Blue Range wilderness: Pueblo creek;  
27 (ii) in the Gila wilderness: Big Dry creek, Lipsey canyon, Little Dry creek,  
28 Little Whitewater creek, South Fork Whitewater creek, Spider creek, Spruce creek, Whitewater creek.

29 (f) The following waters are designated in the Mimbres Closed basin: in the Aldo  
30 Leopold wilderness Corral canyon, Mimbres river, North Fork Mimbres river, South Fork Mimbres river.

31 (g) The following waters are designated in the Tularosa Closed basin: in the White  
32 Mountain wilderness Indian creek, Nogal Arroyo, Three Rivers.

33 (h) The wetlands designated are identified on the *Maps and List of Wetlands Within*  
34 *United States Forest Service Wilderness Areas Designated as Outstanding National Resource Waters* published at  
35 the New Mexico state library and available on the department's website.

36 [20.6.4.9 NMAC - Rn, Subsections B, C and D of 20.6.4.8 NMAC, 5/23/2005; A, 5/23/2005; A, 7/17/2005; A,  
37 2/16/2006; A, 12/1/2010; A, 1/14/2011]

#### 39 20.6.4.10 REVIEW OF STANDARDS; NEED FOR ADDITIONAL STUDIES:

40 A. Section 303(c)(1) of the federal Clean Water Act requires that the state hold public hearings at  
41 least once every three years for the purpose of reviewing water quality standards and proposing, as appropriate,  
42 necessary revisions to water quality standards.

43 B. It is recognized that, in some cases, numeric criteria have been adopted that reflect use  
44 designations rather than existing conditions of surface waters of the state. Narrative criteria are required for many  
45 constituents because accurate data on background levels are lacking. More intensive water quality monitoring may  
46 identify surface waters of the state where existing quality is considerably better than the established criteria. When  
47 justified by sufficient data and information, the water quality criteria will be modified to protect the attainable uses.

48 C. It is also recognized that contributions of water contaminants by diffuse nonpoint sources of water  
49 pollution may make attainment of certain criteria difficult. Revision of these criteria may be necessary as new  
50 information is obtained on nonpoint sources and other problems unique to semi-arid regions.

#### 51 D. Site-specific criteria.

52 (1) The commission may adopt site-specific numeric criteria applicable to all or part of a  
53 surface water of the state based on relevant site-specific conditions such as:

54 (a) actual species at a site are more or less sensitive than those used in the national  
55 criteria data set;

1 (b) physical or chemical characteristics at a site such as pH or hardness alter the  
2 biological availability and/or toxicity of the chemical;  
3 (c) physical, biological or chemical factors alter the bioaccumulation potential of a  
4 chemical;  
5 (d) the concentration resulting from natural background exceeds numeric criteria for  
6 aquatic life, wildlife habitat or other uses if consistent with Subsection E of 20.6.4.10 NMAC; or  
7 (e) other factors or combination of factors that upon review of the commission may  
8 warrant modification of the default criteria, subject to EPA review and approval.

9 (2) Site-specific criteria must fully protect the designated use to which they apply. In the case  
10 of human health-organism only criteria, site-specific criteria must fully protect human health when organisms are  
11 consumed from waters containing pollutants.

12 (3) Any person may petition the commission to adopt site-specific criteria. A petition for the  
13 adoption of site-specific criteria shall:

14 (a) identify the specific waters to which the site-specific criteria would apply;  
15 (b) explain the rationale for proposing the site-specific criteria;  
16 (c) describe the methods used to notify and solicit input from potential stakeholders  
17 and from the general public in the affected area, and present and respond to the public input received;  
18 (d) present and justify the derivation of the proposed criteria.

19 (4) A derivation of site-specific criteria shall rely on a scientifically defensible method, such  
20 as one of the following:

21 (a) the recalculation procedure, the water-effect ratio for metals procedure or the  
22 resident species procedure as described in the water quality standards handbook (EPA-823-B-94-005a, 2nd edition,  
23 August 1994);

24 (b) the streamlined water-effect ratio procedure for discharges of copper (EPA-822-  
25 R-01-005, March 2001);

26 (c) the biotic ligand model as described in aquatic life ambient freshwater quality  
27 criteria - copper (EPA-822-R-07-001, February 2007);

28 (d) the methodology for deriving ambient water quality criteria for the protection of  
29 human health (EPA-822-B-00-004, October 2000) and associated technical support documents; or

30 (e) a determination of the natural background of the water body as described in  
31 Subsection E of 20.6.4.10 NMAC.

32 **E. Site-specific criteria based on natural background.** The commission may adopt site-specific  
33 criteria equal to the concentration resulting from natural background where that concentration protects the  
34 designated use. The concentration resulting from natural background supports the level of aquatic life and wildlife  
35 habitat expected to occur naturally at the site absent any interference by humans. Domestic water supply, primary or  
36 secondary contact, or human health-organism only criteria shall not be modified based on natural background. A  
37 determination of natural background shall:

38 (1) consider natural spatial and seasonal to interannual variability as appropriate;

39 (2) document the presence of natural sources of the pollutant;

40 (3) document the absence of human sources of the pollutant or quantify the human  
41 contribution; and

42 (4) rely on analytical, statistical or modeling methodologies to quantify the natural  
43 background.

44 **F. Temporary standards:**

45 (1) Any person may petition the commission to adopt a temporary standard applicable to all  
46 or part of a surface water of the state as provided for in this section and applicable sections in 40 CFR Part 131,  
47 Water Quality Standards; specifically, Section 131.14. The commission may adopt a proposed temporary standard  
48 if the petitioner demonstrates that:

49 (a) attainment of the associated designated use may not be feasible in the short term  
50 due to one or more of the factors listed in 40 CFR 131.10(g), or due to the implementation of actions necessary to  
51 facilitate restoration such as through dam removal or other significant wetland or water body reconfiguration  
52 activities as demonstrated by the petition and supporting work plan requirements in Paragraphs (4) and (5) of  
53 Subsection F of 20.6.4.10 NMAC;

54 (b) the proposed temporary standard represents the highest degree of protection  
55 feasible in the short term, limits the degradation of water quality to the minimum necessary to achieve the original

1 standard by the expiration date of the temporary standard, and adoption will not cause the further impairment or loss  
2 of an existing use;

3 (c) for point sources, existing or proposed discharge control technologies will  
4 comply with applicable technology-based limitations and feasible technological controls and other management  
5 alternatives, such as a pollution prevention program; and

6 (d) for restoration activities, nonpoint source or other control technologies shall  
7 limit downstream impacts, and if applicable, existing or proposed discharge control technologies shall be in place  
8 consistent with Subparagraph (c) of Paragraph (1) of Subsection F of 20.6.4.10 NMAC.

9 (2) A temporary standard shall apply to specific designated use(s), pollutant(s), or  
10 permittee(s), and to specific water body segment(s). The adoption of a temporary standard does not exempt  
11 dischargers from complying with all other applicable water quality standards or control technologies.

12 (3) Designated use attainment as reported in the federal Clean Water Act, Section  
13 305(b)/303(d) Integrated Report shall be based on the original standard and not on a temporary standard.

14 (4) A petition for a temporary standard shall:

15 (a) identify the currently applicable standard(s), the proposed temporary standard  
16 for the specific pollutant(s), the permittee(s), and the specific surface water body segment(s) of the state to which the  
17 temporary standard would apply;

18 (b) include the basis for any factor(s) specific to the applicability of the temporary  
19 standard (for example critical flow under Subsection B of 20.6.4.11 NMAC);

20 (c) demonstrate that the proposed temporary standard meets the requirements in this  
21 subsection;

22 (d) present a work plan with timetable of proposed actions for achieving compliance  
23 with the original standard in accordance with Paragraph (5) of Subsection F of 20.6.4.10 NMAC;

24 (e) include any other information necessary to support the petition.

25 (5) As a condition of a petition for a temporary standard, in addition to meeting the  
26 requirements in this Subsection, the petitioner shall prepare a work plan in accordance with Paragraph (4) of  
27 Subsection F of 20.6.4.10 NMAC and submit the work plan to the department for review and comment. The work  
28 plan shall identify the factor(s) listed in 40 CFR 131.10(g) or Subparagraph (a) of Paragraph (1) of Subsection F of  
29 20.6.4.10 NMAC affecting attainment of the standard that will be analyzed and the timeline for proposed actions to  
30 be taken to achieve the uses attainable over the term of the temporary standard, including baseline water quality, and  
31 any investigations, projects, facility modifications, monitoring, or other measures necessary to achieve compliance  
32 with the original standard. The work plan shall include provisions for review of progress in accordance with  
33 Paragraph (8) of Subsection F of 20.6.4.10 NMAC, public notice and consultation with appropriate state, tribal,  
34 local and federal agencies.

35 (6) The commission may condition the approval of a temporary standard by requiring  
36 additional monitoring, relevant analyses, the completion of specified projects, submittal of information, or any other  
37 actions.

38 (7) Temporary standards may be implemented only after a public hearing before the  
39 commission, commission approval and adoption pursuant to Subsection F of 20.6.4.10 NMAC for all state purposes,  
40 and the federal Clean Water Act Section 303 (c) approval for any federal action.

41 (8) All temporary standards are subject to a required review during each succeeding review  
42 of water quality standards conducted in accordance with Subsection A of 20.6.4.10 NMAC. The petitioner shall  
43 provide a written report to the commission documenting the progress of proposed actions, pursuant to a reporting  
44 schedule stipulated in the approved temporary standard. The purpose of the review is to determine progress  
45 consistent with the original conditions of the petition for the duration of the temporary standard. If the petitioner  
46 cannot demonstrate that sufficient progress has been made the commission may revoke approval of the temporary  
47 standard or provide additional conditions to the approval of the temporary standard.

48 (9) The commission may consider a petition to extend a temporary standard. The effective  
49 period of a temporary standard shall be extended only if demonstrated to the commission that the factors precluding  
50 attainment of the underlying standard still apply, that the petitioner is meeting the conditions required for approval  
51 of the temporary standard, and that reasonable progress towards meeting the underlying standard is being achieved.

52 (10) A temporary standard shall expire no later than the date specified in the approval of the  
53 temporary standard. Upon expiration of a temporary standard, the original standard becomes applicable.

54 (11) Temporary standards shall be identified in 20.6.4.97-899 NMAC as appropriate for the  
55 surface water affected.

1 (12) "Temporary standard" means a time-limited designated use and criterion for a specific  
2 pollutant(s) or water quality parameter(s) that reflect the highest attainable condition during the term of the  
3 temporary standard.  
4 [20.6.4.10 NMAC - Rp 20 NMAC 6.1.1102, 10/12/2000; Rn, 20.6.4.9 NMAC, 5/23/2005; A, 5/23/2005; A,  
5 12/1/2010; A, 3/2/2017]

6  
7 **20.6.4.11 APPLICABILITY OF WATER QUALITY STANDARDS:**

8 **A. [RESERVED]**

9 **B. Critical low flow:** The critical low flow of a stream at a particular site shall be used in developing  
10 point source discharge permit requirements to meet numeric criteria set in 20.6.4.97 through 20.6.4.900 NMAC and  
11 Subsection F of 20.6.4.13 NMAC.

12 (1) For human health-organism only criteria, the critical low flow is the harmonic mean flow;  
13 "harmonic mean flow" is the number of daily flow measurements divided by the sum of the reciprocals of the flows;  
14 that is, it is the reciprocal of the mean of reciprocals. For ephemeral waters the calculation shall be based upon the  
15 nonzero flow intervals and modified by including a factor to adjust for the proportion of intervals with zero flow.  
16 The equations are as follows:

17  
18 Harmonic Mean =  $\frac{n}{\sum 1/Q}$

19  
20  
21 where  $n$  = number of flow values  
22 and  $Q$  = flow value

23 Modified Harmonic Mean =  $\left[ \frac{\sum_{i=1}^{Nt-N_0} \frac{1}{Q_i}}{Nt - N_0} \right]^{-1} \times \left[ \frac{Nt - N_0}{Nt} \right]$

24 where  $Q_i$  = nonzero flow  
25  $Nt$  = total number of flow values  
26 and  $N_0$  = number of zero flow values

27  
28 (2) For all other narrative and numeric criteria, the critical low flow is the minimum average  
29 four consecutive day flow that occurs with a frequency of once in three years (4Q3). The critical low flow may be  
30 determined on an annual, a seasonal or a monthly basis, as appropriate, after due consideration of site-specific  
31 conditions.

32 **C. Guaranteed minimum flow:** The commission may allow the use of a contractually guaranteed  
33 minimum streamflow in lieu of a critical low flow determined under Subsection B of this section on a case-by-case  
34 basis and upon consultation with the interstate stream commission. Should drought, litigation or any other reason  
35 interrupt or interfere with minimum flows under a guaranteed minimum flow contract for a period of at least 30  
36 consecutive days, such permission, at the sole discretion of the commission, may then be revoked. Any minimum  
37 flow specified under such revoked permission shall be superseded by a critical low flow determined under  
38 Subsection B of this section. A public notice of the request for a guaranteed minimum flow shall be published in a  
39 newspaper of general circulation by the department at least 30 days prior to scheduled action by the commission.  
40 These water quality standards do not grant to the commission or any other entity the power to create, take away or  
41 modify property rights in water.

42 **D. Mixing zones:** A limited mixing zone, contiguous to a point source wastewater discharge, may be  
43 allowed in any stream receiving such a discharge. Mixing zones serve as regions of initial dilution that allow the  
44 application of a dilution factor in calculations of effluent limitations. Effluent limitations shall be developed that  
45 will protect the most sensitive existing, designated or attainable use of the receiving water.

46 **E. Mixing zone limitations:** Wastewater mixing zones, in which the numeric criteria set under  
47 Subsection F of 20.6.4.13 NMAC, 20.6.4.97 through 20.6.4.899 NMAC or 20.6.4.900 NMAC may be exceeded,  
48 shall be subject to the following limitations:

1 (1) Mixing zones are not allowed for discharges to lakes, reservoirs, or playas; these  
2 effluents shall meet all applicable criteria set under Subsection F of 20.6.4.13 NMAC, 20.6.4.97 through 20.6.4.899  
3 NMAC and 20.6.4.900 NMAC at the point of discharge.

4 (2) The acute aquatic life criteria, as set out in Subsection I, Subsection J, and Subsection K  
5 of 20.6.4.900 NMAC, shall be attained at the point of discharge for any discharge to a surface water of the state with  
6 a designated aquatic life use.

7 (3) The general criteria set out in Subsections A, B, C, D, E, G, H and J of 20.6.4.13 NMAC,  
8 and the provision set out in Subsection D of 20.6.4.14 NMAC are applicable within mixing zones.

9 (4) The areal extent and concentration isopleths of a particular mixing zone will depend on  
10 site-specific conditions including, but not limited to, wastewater flow, receiving water critical low flow, outfall  
11 design, channel characteristics and climatic conditions and, if needed, shall be determined on a case-by-case basis.  
12 When the physical boundaries or other characteristics of a particular mixing zone must be known, the methods  
13 presented in Section 4.4.5, "Ambient-induced mixing," in "Technical support document for water quality-based  
14 toxics control" (March 1991, EPA/505/2-90-001) shall be used.

15 (5) All applicable water quality criteria set under Subsection F of 20.6.4.13 NMAC,  
16 20.6.4.97 through 20.6.4.899 NMAC and 20.6.4.900 NMAC shall be attained at the boundaries of mixing zones. A  
17 continuous zone of passage through or around the mixing zone shall be maintained in which the water quality meets  
18 all applicable criteria and allows the migration of aquatic life presently common in surface waters of the state with  
19 no effect on their populations.

20 **F. Multiple uses:** When a surface water of the state has more than a single designated use, the  
21 applicable numeric criteria shall be the most stringent of those established for such water.

22 **G.** Human health-organism only criteria in Subsection J of 20.6.4.900 NMAC apply to those waters  
23 with a designated, existing or attainable aquatic life use. When limited aquatic life is a designated use, the human  
24 health-organism only criteria apply only if adopted on a segment-specific basis. The human health-organism only  
25 criteria for persistent toxic pollutants, as identified in Subsection J of 20.6.4.900 NMAC, also apply to all tributaries  
26 of waters with a designated, existing or attainable aquatic life use.

27 **H. Unclassified waters of the state:** Unclassified waters of the state are those surface waters of the  
28 state not identified in 20.6.4.101 through 20.6.4.899 NMAC. An unclassified surface water of the state is presumed  
29 to support the uses specified in Section 101(a)(2) of the federal Clean Water Act. As such, it is subject to 20.6.4.98  
30 NMAC if nonperennial or subject to 20.6.4.99 NMAC if perennial. The commission may include an ephemeral  
31 unclassified surface water of the state under 20.6.4.97 NMAC only if a use attainability analysis demonstrates  
32 pursuant to 20.6.4.15 NMAC that attainment of Section 101(a)(2) uses is not feasible.

33 **I. Exceptions:** Numeric criteria for temperature, dissolved solids, dissolved oxygen, sediment or  
34 turbidity adopted under the Water Quality Act do not apply when changes in temperature, dissolved solids,  
35 dissolved oxygen, sediment or turbidity in a surface water of the state are attributable to:

36 (1) natural causes (discharges from municipal separate storm sewers are not covered by this  
37 exception.); or

38 (2) the reasonable operation of irrigation and flood control facilities that are not subject to  
39 federal or state water pollution control permitting; major reconstruction of storage dams or diversion dams except  
40 for emergency actions necessary to protect health and safety of the public are not covered by this exception.

41 [20.6.4.11 NMAC - Rp 20 NMAC 6.1.1103, 10/12/2000; A, 10/11/2002; Rn, 20.6.4.10 NMAC, 5/23/2005; A,  
42 5/23/2005; A, 12/1/2010]

43  
44 **20.6.4.12 COMPLIANCE WITH WATER QUALITY STANDARDS:** The following provisions apply  
45 to determining compliance for enforcement purposes; they do not apply for purposes of determining attainment of  
46 uses. The department has developed assessment protocols for the purpose of determining attainment of uses that are  
47 available for review from the department's surface water quality bureau.

48 **A.** Compliance with acute water quality criteria shall be determined from the analytical results of a  
49 single grab sample. Acute criteria shall not be exceeded.

50 **B.** Compliance with chronic water quality criteria shall be determined from the arithmetic mean of  
51 the analytical results of samples collected using applicable protocols. Chronic criteria shall not be exceeded more  
52 than once every three years.

53 **C.** Compliance with water quality standards for total ammonia shall be determined by performing the  
54 biomonitoring procedures set out in Subsections D and E of 20.6.4.14 NMAC, or by attainment of applicable  
55 ammonia criteria set out in Subsections K, L and M of 20.6.4.900 NMAC.

1           **D.** Compliance with the human health-organism only criteria shall be determined from the analytical  
2 results of representative grab samples, as defined in the water quality management plan. Human health-organism  
3 only criteria shall not be exceeded.

4           **E.** The commission may establish a numeric water quality criterion at a concentration that is below  
5 the minimum quantification level. In such cases, the water quality standard is enforceable at the minimum  
6 quantification level.

7           **F.** For compliance with hardness-dependent numeric criteria, dissolved hardness (as mg CaCO<sub>3</sub>/L)  
8 shall be determined from a sample taken at the same time that the sample for the contaminant is taken.

9           **G. Compliance schedules:** It shall be the policy of the commission to allow on a case-by-case basis  
10 the inclusion of a schedule of compliance in a NPDES permit issued to an existing facility. Such schedule of  
11 compliance will be for the purpose of providing a permittee with adequate time to make treatment facility  
12 modifications necessary to comply with water quality based permit limitations determined to be necessary to  
13 implement new or revised water quality standards or wasteload allocation. Compliance schedules may be included  
14 in NPDES permits at the time of permit renewal or modification and shall be written to require compliance at the  
15 earliest practicable time. Compliance schedules shall also specify milestone dates so as to measure progress towards  
16 final project completion (e.g., design completion, construction start, construction completion, date of compliance).

17           **H.** It is a policy of the commission to allow a temporary standard approved and adopted pursuant to  
18 Subsection F of 20.6.4.10 NMAC to be included in the applicable federal Clean Water Act permit as enforceable  
19 limits and conditions. The temporary standard and any schedule of actions may be included at the earliest  
20 practicable time, and shall specify milestone dates so as to measure progress towards meeting the original standard.  
21 [20.6.4.12 NMAC - Rp 20 NMAC 6.1.1104, 10/12/2000; A, 10/11/2002; Rn, 20.6.4.11 NMAC, 5/23/2005; A,  
22 5/23/2005; A, 12/1/2010; A, 3/2/2017]  
23

24 **20.6.4.13 GENERAL CRITERIA:** General criteria are established to sustain and protect existing or  
25 attainable uses of surface waters of the state. These general criteria apply to all surface waters of the state at all  
26 times, unless a specified criterion is provided elsewhere in this part. Surface waters of the state shall be free of any  
27 water contaminant in such quantity and of such duration as may with reasonable probability injure human health,  
28 animal or plant life or property, or unreasonably interfere with the public welfare or the use of property.

29           **A. Bottom deposits and suspended or settleable solids:**

30           (1) Surface waters of the state shall be free of water contaminants including fine sediment  
31 particles (less than two millimeters in diameter), precipitates or organic or inorganic solids from other than natural  
32 causes that have settled to form layers on or fill the interstices of the natural or dominant substrate in quantities that  
33 damage or impair the normal growth, function or reproduction of aquatic life or significantly alter the physical or  
34 chemical properties of the bottom.

35           (2) Suspended or settleable solids from other than natural causes shall not be present in  
36 surface waters of the state in quantities that damage or impair the normal growth, function or reproduction of aquatic  
37 life or adversely affect other designated uses.

38           **B. Floating solids, oil and grease:** Surface waters of the state shall be free of oils, scum, grease and  
39 other floating materials resulting from other than natural causes that would cause the formation of a visible sheen or  
40 visible deposits on the bottom or shoreline, or would damage or impair the normal growth, function or reproduction  
41 of human, animal, plant or aquatic life.

42           **C. Color:** Color-producing materials resulting from other than natural causes shall not create an  
43 aesthetically undesirable condition nor shall color impair the use of the water by desirable aquatic life presently  
44 common in surface waters of the state.

45           **D. Organoleptic quality:**

46           (1) **Flavor of fish:** Water contaminants from other than natural causes shall be limited to  
47 concentrations that will not impart unpalatable flavor to fish.

48           (2) **Odor and taste of water:** Water contaminants from other than natural causes shall be  
49 limited to concentrations that will not result in offensive odor or taste arising in a surface water of the state or  
50 otherwise interfere with the reasonable use of the water.

51           **E. Plant nutrients:** Plant nutrients from other than natural causes shall not be present in  
52 concentrations that will produce undesirable aquatic life or result in a dominance of nuisance species in surface  
53 waters of the state.

54           **F. Toxic pollutants:**

55           (1) Except as provided in 20.6.4.16 NMAC, surface waters of the state shall be free of toxic  
56 pollutants from other than natural causes in amounts, concentrations or combinations that affect the propagation of

1 fish or that are toxic to humans, livestock or other animals, fish or other aquatic organisms, wildlife using aquatic  
2 environments for habitation or aquatic organisms for food, or that will or can reasonably be expected to  
3 bioaccumulate in tissues of fish, shellfish and other aquatic organisms to levels that will impair the health of aquatic  
4 organisms or wildlife or result in unacceptable tastes, odors or health risks to human consumers of aquatic  
5 organisms.

6 (2) Pursuant to this section, the human health-organism only criteria shall be as set out in  
7 20.6.4.900 NMAC. When a human health-organism only criterion is not listed in 20.6.4.900 NMAC, the following  
8 provisions shall be applied in accordance with 20.6.4.11, 20.6.4.12 and 20.6.4.14 NMAC.

9 (a) The human health-organism only criterion shall be the recommended human  
10 health criterion for “consumption of organisms only” published by the U.S. environmental protection agency  
11 pursuant to Section 304(a) of the federal Clean Water Act. In determining such criterion for a cancer-causing toxic  
12 pollutant, a cancer risk of  $10^{-5}$  (one cancer per 100,000 exposed persons) shall be used.

13 (b) When a numeric criterion for the protection of human health for the  
14 consumption of organism only has not been published by the U.S. environmental protection agency, a quantifiable  
15 criterion may be derived from data available in the U.S. environmental protection agency's Integrated Risk  
16 Information System (IRIS) using the appropriate formula specified in *Methodology For Deriving Ambient Water*  
17 *Quality Criteria For The Protection Of Human Health (2000)*, EPA-822-B-00-004.

18 (3) Pursuant to this section, the chronic aquatic life criteria shall be as set out in 20.6.4.900  
19 NMAC. When a chronic aquatic life criterion is not listed in 20.6.4.900 NMAC, the following provisions shall be  
20 applied in sequential order in accordance with 20.6.4.11, 20.6.4.12 and 20.6.4.14 NMAC.

21 (a) The chronic aquatic life criterion shall be the “freshwater criterion continuous  
22 concentration” published by the U.S. environmental protection agency pursuant to Section 304(a) of the federal  
23 Clean Water Act;

24 (b) If the U.S. environmental protection agency has not published a chronic aquatic  
25 life criterion, a geometric mean LC-50 value shall be calculated for the particular species, genus or group that is  
26 representative of the form of life to be preserved, using the results of toxicological studies published in scientific  
27 journals.

28 (i) The chronic aquatic life criterion for a toxic pollutant that does not  
29 bioaccumulate shall be ten percent of the calculated geometric mean LC-50 value; and

30 (ii) The chronic aquatic life criterion for a toxic pollutant that does  
31 bioaccumulate shall be: the calculated geometric mean LC-50 adjusted by a bioaccumulation factor for the particular  
32 species, genus or group representative of the form of life to be preserved, but when such bioaccumulation factor has  
33 not been published, the criterion shall be one percent of the calculated geometric mean LC-50 value.

34 (4) Pursuant to this section, the acute aquatic life criteria shall be as set out in 20.6.4.900  
35 NMAC. When an acute aquatic life criterion is not listed in 20.6.4.900 NMAC, the acute aquatic life criterion shall  
36 be the “freshwater criterion maximum concentration” published by the U.S. environmental protection agency  
37 pursuant to Section 304(a) of the federal Clean Water Act.

38 (5) Within 90 days of the issuance of a final NPDES permit containing a numeric criterion  
39 selected or calculated pursuant to Paragraph 2, Paragraph 3 or Paragraph 4 of Subsection F of this section, the  
40 department shall petition the commission to adopt such criterion into these standards.

41 **G. Radioactivity:** The radioactivity of surface waters of the state shall be maintained at the lowest  
42 practical level and shall in no case exceed the criteria set forth in the New Mexico Radiation Protection Regulations,  
43 20.3.1 and 20.3.4 NMAC.

44 **H. Pathogens:** Surface waters of the state shall be free of pathogens from other than natural causes  
45 in sufficient quantity to impair public health or the designated, existing or attainable uses of a surface water of the  
46 state.

47 **I. Temperature:** Maximum temperatures for surface waters of the state have been specified in  
48 20.6.4.97 through 20.6.4.900 NMAC. However, the introduction of heat by other than natural causes shall not  
49 increase the temperature, as measured from above the point of introduction, by more than 2.7°C (5°F) in a stream, or  
50 more than 1.7°C (3°F) in a lake or reservoir. In no case will the introduction of heat be permitted when the  
51 maximum temperature specified for the reach would thereby be exceeded. These temperature criteria shall not apply  
52 to impoundments constructed offstream for the purpose of heat disposal. High water temperatures caused by  
53 unusually high ambient air temperatures are not violations of these criteria.

54 **J. Turbidity:** Turbidity attributable to other than natural causes shall not reduce light transmission  
55 to the point that the normal growth, function or reproduction of aquatic life is impaired or that will cause substantial  
56 visible contrast with the natural appearance of the water. Activities or discharges shall not cause turbidity to

1 increase more than 10 NTU over background turbidity when the background turbidity, measured at a point  
2 immediately upstream of the activity, is 50 NTU or less, nor to increase more than twenty percent when the  
3 background turbidity is more than 50 NTU. However, limited-duration turbidity increases caused by dredging,  
4 construction or other similar activities may be allowed provided all practicable turbidity control techniques have  
5 been applied and all appropriate permits, certifications and approvals have been obtained.

6 **K. Total dissolved solids (TDS):** TDS attributable to other than natural causes shall not damage or  
7 impair the normal growth, function or reproduction of animal, plant or aquatic life. TDS shall be measured by either  
8 the "calculation method" (sum of constituents) or the filterable residue method. Approved test procedures for these  
9 determinations are set forth in 20.6.4.14 NMAC.

10 **L. Dissolved gases:** Surface waters of the state shall be free of nitrogen and other dissolved gases at  
11 levels above one hundred ten percent saturation when this supersaturation is attributable to municipal, industrial or  
12 other discharges.

13 **M. Biological integrity:** Surface waters of the state shall support and maintain a balanced and  
14 integrated community of aquatic organisms with species composition, diversity and functional organization  
15 comparable to those of natural or minimally impacted water bodies of a similar type and region.  
16 [20.6.4.13 NMAC - Rp 20 NMAC 6.1.1105, 10/12/2000; A, 10/11/2002; Rn, 20.6.4.12 NMAC, 5/23/2005; A,  
17 5/23/2005; A, 12/1/2010]

#### 18 19 **20.6.4.14 SAMPLING AND ANALYSIS:**

20 **A.** Sampling and analytical techniques shall conform with methods described in the following  
21 references unless otherwise specified by the commission pursuant to a petition to amend these standards:

22 (1) *"Guidelines Establishing Test Procedures For The Analysis Of Pollutants Under The*  
23 *Clean Water Act,"* 40 CFR Part 136 or any test procedure approved or accepted by EPA using procedures provided  
24 in 40 CFR Parts 136.3(d), 136.4, and 136.5;

25 (2) *Standard Methods For The Examination Of Water And Wastewater*, latest edition,  
26 American public health association;

27 (3) *Methods For Chemical Analysis Of Water And Waste*, and other methods published by  
28 EPA office of research and development or office of water;

29 (4) *Techniques Of Water Resource Investigations Of The U.S. Geological Survey;*

30 (5) *Annual Book Of ASTM Standards:* volumes 11.01 and 11.02, water (I) and (II), latest  
31 edition, ASTM international;

32 (6) *Federal Register*, latest methods published for monitoring pursuant to Resource  
33 Conservation and Recovery Act regulations;

34 (7) *National Handbook Of Recommended Methods For Water-Data Acquisition*, latest  
35 edition, prepared cooperatively by agencies of the United States government under the sponsorship of the U.S.  
36 geological survey; or

37 (8) *Federal Register*, latest methods published for monitoring pursuant to the Safe Drinking  
38 Water Act regulations.

39 **B. Bacteriological Surveys:** The monthly geometric mean shall be used in assessing attainment of  
40 criteria when a minimum of five samples is collected in a 30-day period.

#### 41 **C. Sampling Procedures:**

42 (1) Streams: Stream monitoring stations below discharges shall be located a sufficient  
43 distance downstream to ensure adequate vertical and lateral mixing.

44 (2) Lakes: Sampling stations in lakes shall be located at least 250 feet from a discharge.

45 (3) Lakes: Except for the restriction specified in Paragraph (2) of this subsection, lake  
46 sampling stations shall be located at any site where the attainment of a water quality criterion is to be assessed.  
47 Water quality measurements taken at intervals in the entire water column at a sampling station shall be averaged for  
48 the epilimnion, or in the absence of an epilimnion, for the upper one-third of the water column of the lake to  
49 determine attainment of criteria, except that attainment of criteria for toxic pollutants shall be assessed during  
50 periods of complete vertical mixing, e.g., during spring or fall turnover, or by taking depth-integrated composite  
51 samples of the water column.

52 **D.** Acute toxicity of effluent to aquatic life shall be determined using the procedures specified in U.S.  
53 environmental protection agency *"Methods For Measuring The Acute Toxicity Of Effluents And Receiving Waters*  
54 *To Freshwater And Marine Organisms"* (5<sup>th</sup> Ed., 2002, EPA 821-R-02-012), or latest edition thereof if adopted by  
55 EPA at 40 CFR Part 136, which is incorporated herein by reference. Acute toxicities of substances shall be  
56 determined using at least two species tested in whole effluent and a series of effluent dilutions. Acute toxicity due to



1 discharges shall not occur within the wastewater mixing zone in any surface water of the state with an existing or  
2 designated aquatic life use.

3 E. Chronic toxicity of effluent or ambient surface waters of the state to aquatic life shall be  
4 determined using the procedures specified in U.S. environmental protection agency “*Short-Term Methods For*  
5 *Estimating The Chronic Toxicity Of Effluents And Receiving Waters To Freshwater Organisms*” (4<sup>th</sup> Ed., 2002, EPA  
6 821-R-02-013), or latest edition thereof if adopted by EPA at 40 CFR Part 136, which is incorporated herein by  
7 reference. Chronic toxicities of substances shall be determined using at least two species tested in ambient surface  
8 water or whole effluent and a series of effluent dilutions. Chronic toxicity due to discharges shall not occur at the  
9 critical low flow, or any flow greater than the critical low flow, in any surface water of the state with an existing or  
10 designated aquatic life use more than once every three years.  
11 [20.6.4.14 NMAC - Rp 20 NMAC 6.1.1106, 10/12/2000; Rn, 20.6.4.13 NMAC, 5/23/2005 & A, 5/23/2005; A,  
12 12/1/2010]

#### 13 14 **20.6.4.15 USE ATTAINABILITY ANALYSIS:**

15 A. A use attainability analysis is a scientific study conducted for the purpose of assessing the factors  
16 affecting the attainment of a use. Whenever a use attainability analysis is conducted, it shall be subject to the  
17 requirements and limitations set forth in 40 CFR Part 131, Water Quality Standards; specifically, Subsections  
18 131.3(g), 131.10(g), 131.10(h) and 131.10(j) shall be applicable.

19 (1) The commission may remove a designated use specified in Section 101(a)(2) of the  
20 federal Clean Water Act or adopt subcategories of a Section 101(a)(2) use requiring less stringent criteria only if a  
21 use attainability analysis demonstrates that attaining the use is not feasible because of a factor listed in 40 CFR  
22 131.10(g). Section 101(a)(2) uses, which refer to the protection and propagation of fish, shellfish and wildlife and  
23 recreation in and on the water, are also specified in Subsection B of 20.6.4.6 NMAC.

24 (2) A designated use cannot be removed if it is an existing use unless a use requiring more  
25 stringent criteria is designated.

26 B. A use attainability analysis shall assess the physical, chemical, biological, economic or other  
27 factors affecting the attainment of a use. The analysis shall rely on scientifically defensible methods such as the  
28 methods described in the following documents:

29 (1) *Technical Support Manual: Waterbody Surveys And Assessments For Conducting Use*  
30 *Attainability Analyses*, volume I (November 1983) and volume III (November 1984) or latest editions, United States  
31 environmental protection agency, office of water, regulations and standards, Washington, D.C., for the evaluation of  
32 aquatic life or wildlife uses;

33 (2) the department’s *Hydrology Protocol*, latest edition, approved by the commission, for  
34 identifying ephemeral and intermittent waters; or

35 (3) *Interim Economic Guidance For Water Quality Standards - Workbook*, March 1995,  
36 United States environmental protection agency, office of water, Washington, D.C. for evaluating economic impacts.

37 C. If a use attainability analysis based on the department’s *Hydrology Protocol* (latest edition),  
38 approved by the commission, demonstrates to the satisfaction of the department that Section 101(a)(2) uses are not  
39 feasible in an ephemeral water body, the department shall post the use attainability analysis on its water quality  
40 standards website and notify its interested parties list of a 30-day public comment period. After reviewing any  
41 comments received, the department may proceed by submitting the use attainability analysis and response to  
42 comments to region 6 EPA for technical approval. If technical approval is granted, the water shall be subject to  
43 20.6.4.97 NMAC. The use attainability analysis, the technical approval, and the applicability of 20.6.4.97 NMAC to  
44 the water shall be posted on the department’s water quality standards website. The department shall periodically  
45 petition the commission to list ephemeral waters under Subsection C of 20.6.4.97 NMAC and to incorporate changes  
46 to classified segments as appropriate.

47 D. **Use attainability analysis conducted by an entity other than the department.** Any person may  
48 submit notice to the department stating the intent to conduct a use attainability analysis. The proponent shall  
49 develop a work plan to conduct the use attainability analysis and shall submit the work plan to the department and  
50 region 6 EPA for review and comment. The work plan shall identify the scope of data currently available and the  
51 scope of data to be gathered, the factors affecting use attainment that will be analyzed and provisions for public  
52 notice and consultation with appropriate state and federal agencies. Upon approval of the work plan by the  
53 department, the proponent shall conduct the use attainability analysis in accordance with the approved work plan.  
54 The cost of such analysis shall be the responsibility of the proponent. Upon completion of the use attainability  
55 analysis, the proponent shall submit the data, findings and conclusions to the department. The department or the

1 proponent may petition the commission to modify the designated use if the conclusions of the analysis support such  
2 action.

3 [20.6.4.15 NMAC - Rp 20 NMAC 6.1.1107, 10/12/2000; Rn, 20.6.4.14 NMAC, 5/23/2005; A, 5/23/2005; A,  
4 7/17/2005; A, 12/1/2010]

5  
6 **20.6.4.16 PLANNED USE OF A PISCICIDE:** The use of a piscicide registered under the Federal  
7 Insecticide, Fungicide, and Rodenticide Act (FIFRA), 7 U.S.C. Section 136 *et seq.*, and under the New Mexico  
8 Pesticide Control Act (NMPCA), Section 76-4-1 *et seq.* NMSA 1978 (1973) in a surface water of the state, shall not  
9 be a violation of Subsection F of 20.6.4.13 NMAC when such use is covered by a federal national pollutant  
10 discharge elimination system (NPDES) permit or has been approved by the commission under procedures provided  
11 in this section. The use of a piscicide which is covered by a NPDES permit shall require no further review by the  
12 commission and the person whose application is covered by the NPDES permit shall meet the additional notification  
13 and monitoring requirements outlined in Subsection G of 20.6.4.16 NMAC. The commission may approve the  
14 reasonable use of a piscicide under this section if the proposed use is not covered by a NPDES permit to further a  
15 Clean Water Act objective to restore and maintain the physical or biological integrity of surface waters of the state,  
16 including restoration of native species.

17 **A.** Any person seeking commission approval of the use of a piscicide not covered by a NPDES  
18 permit shall file a written petition concurrently with the commission and the surface water bureau of the department.  
19 The petition shall contain, at a minimum, the following information:

- 20 (1) petitioner's name and address;  
21 (2) identity of the piscicide and the period of time (not to exceed five years) or number of  
22 applications for which approval is requested;  
23 (3) documentation of registration under FIFRA and NMPCA and certification that the  
24 petitioner intends to use the piscicide according to the label directions, for its intended function;  
25 (4) target and potential non-target species in the treated waters and adjacent riparian area,  
26 including threatened or endangered species;  
27 (5) potential environmental consequences to the treated waters and the adjacent riparian area,  
28 and protocols for limiting such impacts;  
29 (6) surface water of the state proposed for treatment;  
30 (7) results of pre-treatment survey;  
31 (8) evaluation of available alternatives and justification for selecting piscicide use;  
32 (9) documentation of notice requesting public comment on the proposed use within a 30-day  
33 period, including information as described in Paragraphs (1), (2) and (6) of Subsection A of 20.6.4.16 NMAC,  
34 provided to:

- 35 (a) local political subdivisions;  
36 (b) local water planning entities;  
37 (c) local conservancy and irrigation districts; and  
38 (d) local media outlets, except that the petitioner shall only be required to publish  
39 notice in a newspaper of circulation in the locality affected by the proposed use.

- 40 (10) copies of public comments received in response to the publication of notice and the  
41 petitioner's responses to public comments received;  
42 (11) post-treatment assessment monitoring protocol; and  
43 (12) any other information required by the commission.

44 **B.** Within 30 days of receipt of the petition, the department shall review the petition and file a  
45 recommendation with the commission to grant, grant with conditions or deny the petition. The recommendation  
46 shall include reasons, and a copy shall be sent to the petitioner by certified mail.

47 **C.** The commission shall review the petition, the public comments received under Paragraphs (9) and  
48 (10) of Subsection A of 20.6.4.16 NMAC, the petitioner's responses to public comments and the department's  
49 technical recommendations for the petition. A public hearing shall be held if the commission determines there is  
50 substantial public interest. The commission shall notify the petitioner and those commenting on the petition of the  
51 decision whether to hold a hearing and the reasons therefore in writing.

52 **D.** If the commission determines there is substantial public interest a public hearing shall be held  
53 within 90 days of receipt of the department's recommendation in the locality affected by the proposed use in  
54 accordance with 20.1.3 NMAC, Adjudicatory Procedures - Water Quality Control Commission. Notice of the  
55 hearing shall be given in writing by the petitioner to individuals listed under Subsection A of 20.6.4.16 NMAC as  
56 well as to individuals who provided public comment under that subsection at least 30 days prior to the hearing.

1 E. In a hearing provided for in this section or, if no hearing is held, in a commission meeting, the  
2 registration of a piscicide under FIFRA and NMPCA shall provide a rebuttable presumption that the determinations  
3 of the EPA Administrator in registering the piscicide, as outlined in 7 U.S.C. Section 136a(c)(5), are valid. For  
4 purposes of this Section the rebuttable presumptions regarding the piscicide include:

- 5 (1) Its composition is such as to warrant the proposed claims for it;  
6 (2) Its labeling and other material submitted for registration comply with the requirements of  
7 FIFRA and NMPCA;  
8 (3) It will perform its intended function without unreasonable adverse effects on the  
9 environment; and  
10 (4) When used in accordance with all FIFRA label requirements it will not generally cause  
11 unreasonable adverse effects on the environment.  
12 (5) "Unreasonable adverse effects on the environment" has the meaning provided in FIFRA,  
13 7 U.S.C. Section 136(bb): "any unreasonable risk to man or the environment, taking into account the economic,  
14 social, and environmental costs and benefits of the use of any pesticide."

15 F. After a public hearing, or commission meeting if no hearing is held, the commission may grant the  
16 petition in whole or in part, may grant the petition subject to conditions, or may deny the petition. In granting any  
17 petition in whole or part or subject to conditions, the commission shall require the petitioner to implement post-  
18 treatment assessment monitoring and provide notice to the public in the immediate and near downstream vicinity of  
19 the application prior to and during the application.

20 G. Any person whose application is covered by a NPDES permit shall provide written notice to local  
21 entities as described in Subsection A of 20.6.4.16 NMAC and implement post-treatment assessment monitoring  
22 within the application area as described in Subsection F of 20.6.4.16 NMAC.  
23 [20.6.4.16 NMAC - Rn, Paragraph (6) of Subsection F of 20.6.4.12 NMAC, 5/23/2005; A, 5/23/2005; A, 3/2/2017]

24  
25 **20.6.4.17 - 20.6.4.49 [RESERVED]**

26  
27 **20.6.4.50 BASINWIDE PROVISIONS** - Special provisions arising from interstate compacts, international  
28 treaties or court decrees or that otherwise apply to a basin are contained in 20.6.4.51 through 20.6.4.59 NMAC.  
29 [20.6.4.50 NMAC - N, 5/23/2005]

30  
31 **20.6.4.51 [RESERVED]**

32  
33 **20.6.4.52 PECOS RIVER BASIN** - In order to protect existing and designated uses, it is a goal of the state  
34 of New Mexico to prevent increases in TDS in the Pecos river above the following benchmark values, which are  
35 expressed as flow-weighted, annual average concentrations, at three USGS gaging stations: at Santa Rosa 500 mg/L;  
36 near Artesia 2,700 mg/L; and near Malaga 3,600 mg/L. The benchmark values serve to guide state action. They are  
37 adopted pursuant to the New Mexico Water Quality Act, not the Clean Water Act.  
38 [20.6.4.52 NMAC - N, 12/1/2010]

39  
40 **20.6.4.53 [RESERVED]**

41  
42 **20.6.4.54 COLORADO RIVER BASIN** - For the tributaries of the Colorado river system, the state of New  
43 Mexico will cooperate with the Colorado river basin states and the federal government to support and implement the  
44 salinity policy and program outlined in the most current "review, water quality standards for salinity, Colorado river  
45 system" or equivalent report by the Colorado river salinity control forum.

46 A. Numeric criteria expressed as the flow-weighted annual average concentration for salinity are  
47 established at three points in the Colorado river basin as follows: below Hoover dam, 723 mg/L; below Parker dam,  
48 747 mg/L; and at Imperial dam, 879 mg/L.

49 B. As a part of the program, objectives for New Mexico shall include the elimination of discharges of  
50 water containing solids in solution as a result of the use of water to control or convey fly ash from coal-fired electric  
51 generators, wherever practicable.  
52 [20.6.4.54 NMAC - Rn, Paragraphs (1) through (3) of Subsection K of 20.6.4.12 NMAC, 5/23/2005; A, 5/23/2005]

53  
54 **20.6.4.55 - 20.6.4.96 [RESERVED]**

1 **20.6.4.97 Ephemeral Waters:** Ephemeral surface waters of the state as identified below and  
2 additional ephemeral waters as identified on the department's water quality standards website pursuant to  
3 Subsection C of 20.6.4.15 NMAC are subject to the designated uses and criteria as specified in this section.  
4 Ephemeral waters classified in 20.6.4.101-899 NMAC are subject to the designated uses and criteria as specified in  
5 those sections.

6 **A. Designated uses:** livestock watering, wildlife habitat, limited aquatic life and secondary contact.

7 **B. Criteria:** the use-specific criteria in 20.6.4.900 NMAC are applicable to the designated uses.

8 **C. Waters:**

9 (1) the following waters are designated in the Rio Grande basin:

10 (a) Cunningham gulch from Santa Fe county road 55 upstream 1.4 miles to a point  
11 upstream of the Lac minerals mine, identified as Ortiz mine on U.S. geological survey topographic maps;

12 (b) an unnamed tributary from Arroyo Hondo upstream 0.4 miles to the Village of  
13 Oshara water reclamation facility outfall;

14 (c) an unnamed tributary from San Pedro creek upstream 0.8 miles to the PAA-KO  
15 community sewer outfall;

16 (d) Inditos draw from the crossing of an unnamed road along a power line one-  
17 quarter mile west of McKinley county road 19 upstream to New Mexico highway 509;

18 (e) an unnamed tributary from the diversion channel connecting Blue canyon and  
19 Socorro canyon upstream 0.6 miles to the New Mexico firefighters academy treatment facility outfall;

20 (f) an unnamed tributary from the Albuquerque metropolitan arroyo flood control  
21 authority (AMAFCA) Rio Grande south channel upstream of the crossing of New Mexico highway 47 upstream to  
22 I-25;

23 (g) the south fork of Cañon del Piojo from Canon del Piojo upstream 1.2 miles to an  
24 unnamed tributary;

25 (h) an unnamed tributary from the south fork of Cañon del Piojo upstream 1 mile to  
26 the Resurrection mine outfall;

27 (i) Arroyo del Puerto from San Mateo creek upstream 6.8 miles to the Ambrosia  
28 Lake mine entrance road;

29 (j) an unnamed tributary from San Mateo creek upstream 1.5 miles to the Roca  
30 Honda mine facility outfall;

31 (k) San Isidro arroyo from the Lee Ranch mine facility outfall upstream to Tinaja  
32 arroyo;

33 (l) Tinaja arroyo from San Isidro arroyo upstream to Mulatto canyon; and

34 (m) Mulatto canyon from Tinaja arroyo upstream to 1 mile northeast of the Cibola  
35 national forest boundary.

36 (2) the following waters are designated in the Pecos river basin:

37 (a) an unnamed tributary from Hart canyon upstream 1 mile to South Union road;

38 (b) Aqua Chiquita from Rio Peñasco upstream to McEwan canyon; and

39 (c) Grindstone canyon upstream of Grindstone reservoir.

40 (3) the following waters are designated in the Canadian river basin:

41 (a) Bracket canyon upstream of the Vermejo river;

42 (b) an unnamed tributary from Bracket canyon upstream 2 miles to the Ancho mine;  
43 and

44 (c) Gachupin canyon from the Vermejo river upstream 2.9 miles to an unnamed  
45 west tributary near the Ancho mine outfall.

46 (4) in the San Juan river basin an unnamed tributary of Kim-me-ni-oli wash upstream of the  
47 mine outfall.

48 (5) the following waters are designated in the Little Colorado river basin:

49 (a) Defiance draw from County Road 1 to upstream of West Defiance Road; and

50 (b) an unnamed tributary of Defiance draw from McKinley county road 1 upstream  
51 to New Mexico highway 264.

52 (6) the following waters are designated in the closed basins:

53 (a) in the Tularosa river closed basin San Andres canyon downstream of South San  
54 Andres canyon; and

55 (b) in the Mimbres river closed basin San Vicente arroyo from the Mimbres river  
56 upstream to Maudes canyon.

1 [20.6.4.97 NMAC - N, 5/23/2005; A, 12/1/2010; A, 3/2/2017]

2  
3 **20.6.4.98 INTERMITTENT WATERS:** All non-perennial surface waters of the state, except those  
4 ephemeral waters included under section 20.6.4.97 NMAC or classified in 20.6.4.101-899 NMAC.

5 **A. Designated uses:** livestock watering, wildlife habitat, marginal warmwater aquatic life and  
6 primary contact.

7 **B. Criteria:** the use-specific criteria in 20.6.4.900 NMAC are applicable to the designated uses,  
8 except that the following site-specific criteria apply: the monthly geometric mean of E. coli bacteria 206 cfu/100  
9 mL or less, single sample 940 cfu/100 mL or less.

10 [20.6.4.98 NMAC - N, 5/23/2005; A, 12/1/2010; A, 3/2/2017]

11  
12 **20.6.4.99 PERENNIAL WATERS:** All perennial surface waters of the state except those classified in  
13 20.6.4.101-899 NMAC.

14 **A. Designated uses:** Warmwater aquatic life, livestock watering, wildlife habitat and primary  
15 contact.

16 **B. Criteria:** The use-specific criteria in 20.6.4.900 NMAC are applicable to the designated uses,  
17 except that the following site-specific criteria apply: the monthly geometric mean of E. coli bacteria 206 cfu/100 mL  
18 or less, single sample 940 cfu/100 mL or less.

19 [20.6.4.99 NMAC - N, 5/23/2005; A, 12/1/2010; A, 3/2/2017]

20  
21 **20.6.4.100 [RESERVED]**

22  
23 **20.6.4.101 RIO GRANDE BASIN:** The main stem of the Rio Grande from the international boundary  
24 with Mexico upstream to one mile downstream of Percha dam.

25 **A. Designated uses:** irrigation, marginal warmwater aquatic life, livestock watering, wildlife habitat  
26 and primary contact.

27 **B. Criteria:**  
28 (1) The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
29 designated uses except that the following segment-specific criterion applies: temperature 34°C (93.2°F) or less.  
30 (2) At mean monthly flows above 350 cfs, the monthly average concentration for: TDS 2,000  
31 mg/L or less, sulfate 500 mg/L or less and chloride 400 mg/L or less.

32 **C. Remarks:** sustained flow in the Rio Grande below Caballo reservoir is dependent on release from  
33 Caballo reservoir during the irrigation season; at other times of the year, there may be little or no flow.

34 [20.6.4.101 NMAC - Rp 20 NMAC 6.1.2101, 10/12/2000; A, 12/15/2001; A, 5/23/2005; A, 12/1/2010; A, 3/2/2017]

35  
36 **20.6.4.102 RIO GRANDE BASIN:** The main stem of the Rio Grande from one mile downstream of  
37 Percha dam upstream to Caballo dam.

38 **A. Designated uses:** irrigation, livestock watering, wildlife habitat, primary contact and warmwater  
39 aquatic life.

40 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
41 designated uses, except that the following segment-specific criteria apply: the monthly geometric mean of E. coli  
42 bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.

43 **C. Remarks:** sustained flow in the Rio Grande downstream of Caballo reservoir is dependent on  
44 release from Caballo reservoir during the irrigation season; at other times of the year, there may be little or no flow.

45 [20.6.4.102 NMAC - Rp 20 NMAC 6.1.2102, 10/12/2000; A, 5/23/2005; A, 12/1/2010; A, 3/2/2017]

46  
47 **20.6.4.103 RIO GRANDE BASIN:** The main stem of the Rio Grande from the headwaters of Caballo  
48 reservoir upstream to Elephant Butte dam and perennial reaches of tributaries to the Rio Grande in Sierra  
49 and Socorro counties, excluding waters on tribal lands.

50 **A. Designated uses:** irrigation, livestock watering, wildlife habitat, marginal coldwater aquatic life,  
51 secondary contact and warmwater aquatic life.

52 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
53 designated uses.

54 **C. Remarks:** flow in this reach of the Rio Grande main stem is dependent upon release from  
55 Elephant Butte dam.

56 [20.6.4.103 NMAC - Rp 20 NMAC 6.1.2103, 10/12/2000; A, 5/23/2005; A, 12/1/2010]

1  
2 **20.6.4.104 RIO GRANDE BASIN: Caballo and Elephant Butte reservoir.**

3 **A. Designated uses:** irrigation storage, livestock watering, wildlife habitat, primary contact and  
4 warmwater aquatic life.

5 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
6 designated uses, except that the following segment-specific criteria apply: the monthly geometric mean of *E. coli*  
7 bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.

8 [20.6.4.104 NMAC - Rp 20 NMAC 6.1.2104, 10/12/2000; A, 5/23/2005; A, 12/1/2010]  
9

10 **20.6.4.105 RIO GRANDE BASIN: The main stem of the Rio Grande from the headwaters of Elephant**  
11 **Butte reservoir upstream to Alameda bridge (Corrales bridge), excluding waters on Isleta pueblo.**

12 **A. Designated uses:** irrigation, marginal warmwater aquatic life, livestock watering, public water  
13 supply, wildlife habitat and primary contact.

14 **B. Criteria:**

15 (1) The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
16 designated uses.

17 (2) At mean monthly flows above 100 cfs, the monthly average concentration for: TDS 1,500  
18 mg/L or less, sulfate 500 mg/L or less and chloride 250 mg/L or less.

19 [20.6.4.105 NMAC - Rp 20 NMAC 6.1.2105, 10/12/2000; A, 5/23/2005; A, 12/1/2010]  
20

21 **20.6.4.106 RIO GRANDE BASIN: The main stem of the Rio Grande from Alameda bridge (Corrales**  
22 **bridge) upstream to the Angostura diversion works, excluding waters on Santa Ana pueblo, and intermittent**  
23 **water in the Jemez river below the Jemez pueblo boundary, excluding waters on Santa Ana and Zia pueblos,**  
24 **that enters the main stem of the Rio Grande. Portions of the Rio Grande in this segment are under the joint**  
25 **jurisdiction of the state and Sandia pueblo.**

26 **A. Designated uses:** irrigation, marginal warmwater aquatic life, livestock watering, wildlife habitat  
27 and primary contact; and public water supply on the Rio Grande.

28 **B. Criteria:**

29 (1) The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
30 designated uses.

31 (2) At mean monthly flows above 100 cfs, the monthly average concentration for: TDS 1,500  
32 mg/L or less, sulfate 500 mg/L or less and chloride 250 mg/L or less.

33 [20.6.4.106 NMAC - Rp 20 NMAC 6.1.2105.1, 10/12/2000; A, 5/23/2005; A, 12/1/2010]  
34

35 **20.6.4.107 RIO GRANDE BASIN: The Jemez river from the Jemez pueblo boundary upstream to**  
36 **Soda dam near the town of Jemez Springs and perennial reaches of Vallecito creek.**

37 **A. Designated uses:** coldwater aquatic life, primary contact, irrigation, livestock watering and  
38 wildlife habitat; and public water supply on Vallecito creek.

39 **B. Criteria:** The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
40 designated uses, except that the following segment-specific criterion applies: temperature 25°C (77°F).

41 [20.6.4.107 NMAC - Rp 20 NMAC 6.1.2105.5, 10/12/2000; A, 5/23/2005; A, 12/1/2010]  
42

43 **20.6.4.108 RIO GRANDE BASIN: Perennial reaches of the Jemez river and all its tributaries above**  
44 **Soda dam near the town of Jemez Springs, except San Gregorio lake and Sulphur creek above its confluence**  
45 **with Redondo creek, and perennial reaches of the Guadalupe river and all its tributaries.**

46 **A. Designated uses:** domestic water supply, fish culture, high quality coldwater aquatic life,  
47 irrigation, livestock watering, wildlife habitat and primary contact.

48 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
49 designated uses, except that the following segment-specific criteria apply: specific conductance 400 µS/cm or less  
50 (800 µS/cm or less on Sulphur creek); the monthly geometric mean of *E. coli* bacteria 126 cfu/100 mL or less, single  
51 sample 235 cfu/100 mL or less; and pH within the range of 2.0 to 8.8 on Sulphur creek.

52 [20.6.4.108 NMAC - Rp 20 NMAC 6.1.2106, 10/12/2000; A, 5/23/2005; A, 12/1/2010; A, 7/10/2012]

53 [NOTE: The segment covered by this section was divided effective 5/23/2005. The standards for the additional  
54 segment are under 20.6.4.124 NMAC. The standards for San Gregorio lake are in 20.6.4.134 NMAC, effective  
55 7/10/2012]  
56

1 **20.6.4.109 RIO GRANDE BASIN: Perennial reaches of Bluewater creek excluding Bluewater lake and**  
2 **waters on tribal lands, Rio Moquino upstream of Laguna pueblo, Seboyeta creek, Rio Pagate upstream of**  
3 **Laguna pueblo, the Rio Puerco upstream of the northern boundary of Cuba, and all other perennial reaches**  
4 **of tributaries to the Rio Puerco, including the Rio San Jose in Cibola county from the USGS gaging station at**  
5 **Correo upstream to Horace springs excluding waters on tribal lands.**

6 **A. Designated uses:** coldwater aquatic life, domestic water supply, fish culture, irrigation, livestock  
7 watering, wildlife habitat and primary contact; and public water supply on La Jara creek.

8 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
9 designated uses, except that the following segment-specific criteria apply: phosphorus (unfiltered sample) 0.1 mg/L  
10 or less; the monthly geometric mean of *E. coli* bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or  
11 less.

12 [20.6.4.109 NMAC - Rp 20 NMAC 6.1.2107, 10/12/2000; A, 5/23/2005; A, 12/1/2010; A, 7/10/2012]

13 [NOTE: The standards for Bluewater lake are in 20.6.4.135 NMAC, effective 7/10/2012]

14  
15 **20.6.4.110 RIO GRANDE BASIN: The main stem of the Rio Grande from Angostura diversion works**  
16 **upstream to Cochiti dam, excluding the reaches on San Felipe, Kewa and Cochiti pueblos.**

17 **A. Designated uses:** irrigation, livestock watering, wildlife habitat, primary contact, coldwater  
18 aquatic life and warmwater aquatic life.

19 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
20 designated uses, except that the following segment-specific criteria apply: pH within the range of 6.6 to 9.0 and  
21 temperature 25°C (77°F) or less.

22 [20.6.4.110 NMAC - Rp 20 NMAC 6.1.2108, 10/12/2000; A, 5/23/2005; A, 12/1/2010; A, 3/2/2017]

23  
24 **20.6.4.111 RIO GRANDE BASIN: Perennial reaches of Las Huertas creek from the San Felipe pueblo**  
25 **boundary to the headwaters.**

26 **A. Designated uses:** high quality coldwater aquatic life, irrigation, livestock watering, wildlife  
27 habitat and primary contact.

28 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
29 designated uses, except that the following segment-specific criterion applies: temperature 25°C (77°F) or less.

30 [20.6.4.111 NMAC - Rp 20 NMAC 6.1.2108.5, 10/12/2000; A, 7/25/2001; A, 5/23/2005; A, 12/1/2010]

31 [NOTE: The segment covered by this section was divided effective 5/23/2005. The standards for the additional  
32 segment are under 20.6.4.125 NMAC.]

33  
34 **20.6.4.112 [RESERVED]**

35 [20.6.4.112 NMAC - Rp 20 NMAC 6.1.2109, 10/12/2000; A, 5/23/2005; Repealed, 12/1/2010]

36  
37 **20.6.4.113 RIO GRANDE BASIN: The Santa Fe river and perennial reaches of its tributaries from the**  
38 **Cochiti pueblo boundary upstream to the outfall of the Santa Fe wastewater treatment facility.**

39 **A. Designated uses:** irrigation, livestock watering, wildlife habitat, primary contact and coolwater  
40 aquatic life.

41 **B. Criteria:** The use-specific criteria in 20.6.4.900 NMAC are applicable to the designated uses,  
42 except that the following segment-specific criterion applies: temperature 30°C (86°F) or less.

43 [20.6.4.113 NMAC - Rp 20 NMAC 6.1.2110, 10/12/2000; A, 10/11/2002; A, 5/23/2005; A, 12/1/2010; A,  
44 2/14/2013]

45  
46 **20.6.4.114 RIO GRANDE BASIN: The main stem of the Rio Grande from the Cochiti pueblo**  
47 **boundary upstream to Rio Pueblo de Taos excluding waters on San Ildefonso, Santa Clara and Ohkay**  
48 **Owingeh pueblos, Embudo creek from its mouth on the Rio Grande upstream to the Picuris Pueblo**  
49 **boundary, the Santa Cruz river from the Santa Clara pueblo boundary upstream to the Santa Cruz dam, the**  
50 **Rio Tesuque except waters on the Tesuque and Pojoaque pueblos, and the Pojoaque river from the San**  
51 **Ildefonso pueblo boundary upstream to the Pojoaque pueblo boundary. Some Rio Grande waters in this**  
52 **segment are under the joint jurisdiction of the state and San Ildefonso pueblo.**

53 **A. Designated uses:** irrigation, livestock watering, wildlife habitat, marginal coldwater aquatic life,  
54 primary contact and warmwater aquatic life; and public water supply on the main stem Rio Grande.

55 **B. Criteria:**

1 (1) The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
2 designated uses, except that the following segment-specific criteria apply: 6T3 temperature 22°C (71.6°F) and  
3 maximum temperature 25°C (78.8°F). In addition, the following criteria based on a 12-month rolling average are  
4 applicable to the public water supply use for monitoring and public disclosure purposes only:  
5

Radionuclide	pCi/L
Americium-241	1.9
Cesium-137	6.4
Plutonium-238	1.5
Plutonium-239/240	1.5
Strontium-90	3.5
Tritium	4,000

6  
7 (2) At mean monthly flows above 100 cfs, the monthly average concentration for: TDS 500  
8 mg/L or less, sulfate 150 mg/L or less and chloride 25 mg/L or less.  
9 [20.6.4.114 NMAC - Rp 20 NMAC 6.1.2111, 10/12/2000; A, 5/23/2005; A, 12/1/2010]

10  
11 **20.6.4.115 RIO GRANDE BASIN: The perennial reaches of Rio Vallecitos and its tributaries except**  
12 **Hopewell lake, and perennial reaches of Rio del Oso and perennial reaches of El Rito creek above the town of**  
13 **El Rito.**

14 **A. Designated uses:** domestic water supply, irrigation, high quality coldwater aquatic life, livestock  
15 watering, wildlife habitat and primary contact; public water supply on the Rio Vallecitos and El Rito creek.

16 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
17 designated uses, except that the following segment-specific criteria apply: specific conductance 300 µS/cm or less;  
18 the monthly geometric mean of *E. coli* bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.

19 [20.6.4.115 NMAC - Rp 20 NMAC 6.1.2112, 10/12/2000; A, 5/23/2005; A, 12/1/2010; A, 7/10/2012]

20 [NOTE: The standards for Hopewell lake are in 20.6.4.134 NMAC, effective 7/10/2012]

21  
22 **20.6.4.116 RIO GRANDE BASIN: The Rio Chama from its mouth on the Rio Grande upstream to**  
23 **Abiquiu reservoir, perennial reaches of the Rio Tusas, perennial reaches of the Rio Ojo Caliente, perennial**  
24 **reaches of Abiquiu creek and perennial reaches of El Rito creek downstream of the town of El Rito.**

25 **A. Designated uses:** irrigation, livestock watering, wildlife habitat, coldwater aquatic life,  
26 warmwater aquatic life and secondary contact.

27 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
28 designated uses, except that the following segment-specific criterion applies: temperature 31°C (87.8°F) or less.

29 [20.6.4.116 NMAC - Rp 20 NMAC 6.1.2113, 10/12/2000; A, 5/23/2005; A, 12/1/2010; A, 3/2/2017]

30  
31 **20.6.4.117 RIO GRANDE BASIN: Abiquiu reservoir.**

32 **A. Designated uses:** irrigation storage, livestock watering, wildlife habitat, primary contact,  
33 coldwater aquatic life and warmwater aquatic life.

34 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
35 designated uses, except that the following segment-specific criterion applies: temperature 25°C (77°F) or less.

36 [20.6.4.117 NMAC - Rp 20 NMAC 6.1.2114, 10/12/2000; A, 5/23/2005; A, 12/1/2010]

37  
38 **20.6.4.118 RIO GRANDE BASIN: The Rio Chama from the headwaters of Abiquiu reservoir**  
39 **upstream to El Vado reservoir and perennial reaches of the Rio Gallina and Rio Puerco de Chama north of**  
40 **state highway 96. Some Rio Chama waters in this segment are under the joint jurisdiction of the state and**  
41 **the Jicarilla Apache tribe.**

42 **A. Designated uses:** irrigation, livestock watering, wildlife habitat, coldwater aquatic life,  
43 warmwater aquatic life and primary contact.

44 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
45 designated uses, except that the following segment-specific criterion applies: temperature 26°C (78.8°F) or less.

46 [20.6.4.118 NMAC - Rp 20 NMAC 6.1.2115, 10/12/2000; A, 5/23/2005; A, 12/1/2010]



1 **20.6.4.119 RIO GRANDE BASIN: All perennial reaches of tributaries to the Rio Chama above**  
2 **Abiquiu dam, except Canjilon lakes a, c, e and f and the Rio Gallina and Rio Puerco de Chama north of state**  
3 **highway 96 and excluding waters on Jicarilla Apache reservation, and the main stem of the Rio Chama from**  
4 **the headwaters of El Vado reservoir upstream to the New Mexico-Colorado line. Some Cañones creek and**  
5 **Rio Chama waters in this segment are under the joint jurisdiction of the state and the Jicarilla Apache tribe.**

6 **A. Designated uses:** domestic water supply, fish culture, high quality coldwater aquatic life,  
7 irrigation, livestock watering, wildlife habitat and primary contact; and public water supply on the Rio Brazos and  
8 Rio Chama.

9 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
10 designated uses, except that the following segment-specific criteria apply: specific conductance 500 µS/cm or less  
11 (1,000 µS or less for Coyote creek); the monthly geometric mean of *E. coli* bacteria 126 cfu/100 mL or less, single  
12 sample 235 cfu/100 mL or less.

13 [20.6.4.119 NMAC - Rp 20 NMAC 6.1.2116, 10/12/2000; A, 5/23/2005; A, 12/1/2010; A, 7/10/2012]

14 [NOTE: The standards for Canjilon lakes a, c, e and f are in 20.6.4.134 NMAC, effective 7/10/2012]

15  
16 **20.6.4.120 RIO GRANDE BASIN: El Vado and Heron reservoirs.**

17 **A. Designated uses:** irrigation storage, livestock watering, wildlife habitat, public water supply,  
18 primary contact and coldwater aquatic life.

19 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
20 designated uses, except that the following segment-specific criteria apply: the monthly geometric mean of *E. coli*  
21 bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.

22 [20.6.4.120 NMAC - Rp 20 NMAC 6.1.2117, 10/12/2000; A, 5/23/2005; A, 12/1/2010]

23  
24 **20.6.4.121 RIO GRANDE BASIN: Perennial tributaries to the Rio Grande in Bandelier national**  
25 **monument and their headwaters in Sandoval county and all perennial reaches of tributaries to the Rio**  
26 **Grande in Santa Fe county unless included in other segments and excluding waters on tribal lands.**

27 **A. Designated uses:** domestic water supply, high quality coldwater aquatic life, irrigation, livestock  
28 watering, wildlife habitat and primary contact; and public water supply on Little Tesuque creek, the Rio en Medio,  
29 and the Santa Fe river.

30 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
31 designated uses, except that the following segment-specific criteria apply: specific conductance 300 µS/cm or less;  
32 the monthly geometric mean of *E. coli* bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.

33 [20.6.4.121 NMAC - Rp 20 NMAC 6.1.2118, 10/12/2000; A, 5/23/2005; A, 12/1/2010; A, 2/14/2013]

34 [NOTE: The segment covered by this section was divided effective 5/23/2005. The standards for the additional  
35 segments are under 20.6.4.126, 20.6.4.127 and 20.6.4.128 NMAC.]

36  
37 **20.6.4.122 RIO GRANDE BASIN: The main stem of the Rio Grande from Rio Pueblo de Taos**  
38 **upstream to the New Mexico-Colorado line, the Red river from its mouth on the Rio Grande upstream to the**  
39 **mouth of Placer creek, and the Rio Pueblo de Taos from its mouth on the Rio Grande upstream to the mouth**  
40 **of the Rio Grande del Rancho. Some Rio Grande and Rio Pueblo de Taos waters in this segment are under**  
41 **the joint jurisdiction of the state and Taos pueblo.**

42 **A. Designated uses:** coldwater aquatic life, fish culture, irrigation, livestock watering, wildlife  
43 habitat and primary contact.

44 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
45 designated uses, except that the following segment-specific criteria apply: the monthly geometric mean of *E. coli*  
46 bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.

47 [20.6.4.122 NMAC - Rp 20 NMAC 6.1.2119, 10/12/2000; A, 5/23/2005; A, 12/1/2010]

48  
49 **20.6.4.123 RIO GRANDE BASIN: Perennial reaches of the Red river upstream of the mouth of Placer**  
50 **creek, all perennial reaches of tributaries to the Red river, and all other perennial reaches of tributaries to**  
51 **the Rio Grande in Taos and Rio Arriba counties unless included in other segments and excluding waters on**  
52 **Santa Clara, Ohkay Owingeh, Picuris and Taos pueblos.**

53 **A. Designated uses:** domestic water supply, high quality coldwater aquatic life, irrigation, livestock  
54 watering, wildlife habitat and primary contact; and public water supply on the Rio Pueblo and Rio Fernando de  
55 Taos.

1           **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
2 designated uses, except that the following segment-specific criteria apply: specific conductance 400 µS/cm or less  
3 (500 µS/cm or less for the Rio Fernando de Taos); the monthly geometric mean of E. coli bacteria 126 cfu/100 mL  
4 or less, single sample 235 cfu/100 mL or less; and phosphorus (unfiltered sample) less than 0.1 mg/L for the Red  
5 river.

6 [20.6.4.123 NMAC - Rp 20 NMAC 6.1.2120, 10/12/2000; A, 5/23/2005; A, 12/1/2010]

7 [NOTE: The segment covered by this section was divided effective 5/23/2005. The standards for the additional  
8 segment are under 20.6.4.129 NMAC.]  
9

10 **20.6.4.124 RIO GRANDE BASIN: Perennial reaches of Sulphur creek from its confluence with**  
11 **Redondo creek upstream to its headwaters.**

12           **A. Designated uses:** limited aquatic life, wildlife habitat, livestock watering and secondary contact.

13           **B. Criteria:** the use-specific criteria set forth in 20.6.4.900 NMAC are applicable to the designated  
14 uses, except that the following segment-specific criteria apply: pH within the range of 2.0 to 9.0, maximum  
15 temperature 30°C (86°F), and the chronic aquatic life criteria of Subsections I and J of 20.6.4.900 NMAC.  
16 [20.6.4.124 NMAC - N, 5/23/2005; A, 12/1/2010; A, 3/2/2017]  
17

18 **20.6.4.125 RIO GRANDE BASIN: Perennial reaches of San Pedro creek from the San Felipe pueblo**  
19 **boundary to the headwaters.**

20           **A. Designated uses:** coldwater aquatic life, irrigation, livestock watering, wildlife habitat and  
21 primary contact.

22           **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
23 designated uses, except that the following segment-specific criterion applies: temperature 25°C (77°F) or less.  
24 [20.6.4.125 NMAC - N, 5/23/2005; A, 12/1/2010]  
25

26 **20.6.4.126 RIO GRANDE BASIN: Perennial portions of Cañon de Valle from Los Alamos national**  
27 **laboratory (LANL) stream gage E256 upstream to Burning Ground spring, Sandia canyon from Sigma**  
28 **canyon upstream to LANL NPDES outfall 001, Pajarito canyon from Arroyo de La Delfe upstream into**  
29 **Starmers gulch and Starmers spring and Water canyon from Area-A canyon upstream to State Route 501.**

30           **A. Designated uses:** coldwater aquatic life, livestock watering, wildlife habitat and secondary  
31 contact.

32           **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
33 designated uses.  
34 [20.6.4.126 NMAC - N, 5/23/2005; A, 12/1/2010]  
35

36 **20.6.4.127 RIO GRANDE BASIN: Perennial portions of Los Alamos canyon upstream from Los**  
37 **Alamos reservoir and Los Alamos reservoir.**

38           **A. Designated uses:** coldwater aquatic life, livestock watering, wildlife habitat, irrigation and  
39 primary contact.

40           **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
41 designated uses.  
42 [20.6.4.127 NMAC - N, 5/23/2005; A, 12/1/2010]  
43

44 **20.6.4.128 RIO GRANDE BASIN: Ephemeral and intermittent portions of watercourses within lands**  
45 **managed by U.S. department of energy (DOE) within LANL, including but not limited to: Mortandad**  
46 **canyon, Cañada del Buey, Ancho canyon, Chaquehui canyon, Indio canyon, Fence canyon, Potrillo canyon**  
47 **and portions of Cañon de Valle, Los Alamos canyon, Sandia canyon, Pajarito canyon and Water canyon not**  
48 **specifically identified in 20.6.4.126 NMAC. (Surface waters within lands scheduled for transfer from DOE to**  
49 **tribal, state or local authorities are specifically excluded.)**

50           **A. Designated uses:** livestock watering, wildlife habitat, limited aquatic life and secondary contact.

51           **B. Criteria:** the use-specific criteria in 20.6.4.900 NMAC are applicable to the designated uses,  
52 except that the following segment-specific criteria apply: the acute total ammonia criteria set forth in Subsection K  
53 of 20.6.4.900 NMAC (salmonids absent).  
54 [20.6.4.128 NMAC - N, 5/23/2005; A, 12/1/2010]  
55

56 **20.6.4.129 RIO GRANDE BASIN: Perennial reaches of the Rio Hondo.**

1           **A. Designated uses:** domestic water supply, high quality coldwater aquatic life, irrigation, livestock  
2 watering, wildlife habitat and primary contact.

3           **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
4 designated uses, except that the following segment-specific criteria apply: specific conductance 400  $\mu$ S/cm or less  
5 and phosphorus (unfiltered sample) less than 0.1 mg/L.  
6 [20.6.4.129 NMAC - N, 5/23/2005; A, 12/1/2010]

7  
8 **20.6.4.130 RIO GRANDE BASIN: The Rio Puerco from the Rio Grande upstream to Arroyo Chijuilla,**  
9 **excluding the reaches on Isleta, Laguna and Cañoncito Navajo pueblos. Some waters in this segment are**  
10 **under the joint jurisdiction of the state and Isleta, Laguna or Cañoncito Navajo pueblos.**

11           **A. Designated uses:** irrigation, warmwater aquatic life, livestock watering, wildlife habitat and  
12 primary contact.

13           **B. Criteria:**  
14           (1) The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
15 designated uses.

16           (2) At mean monthly flows above 100 cfs, the monthly average concentration for: TDS 1,500  
17 mg/L or less, sulfate 500 mg/L or less and chloride 250 mg/L or less.  
18 [20.6.4.130 NMAC - N, 12/1/2010]

19  
20 **20.6.4.131 RIO GRANDE BASIN: The Rio Puerco from the confluence of Arroyo Chijuilla upstream**  
21 **to the northern boundary of Cuba.**

22           **A. Designated uses:** warmwater aquatic life, irrigation, livestock watering, wildlife habitat and  
23 primary contact.

24           **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
25 designated uses.  
26 [20.6.4.131 NMAC - N, 12/1/2010]

27  
28 **20.6.4.132 RIO GRANDE BASIN: Rio Grande (Klauer) spring.**

29           **A. Designated uses:** domestic water supply, wildlife habitat, livestock watering, coldwater aquatic  
30 life use and primary contact.

31           **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
32 designated uses.  
33 [20.6.4.132 NMAC - N, 12/1/2010]

34  
35 **20.6.4.133 RIO GRANDE BASIN: Bull Creek lake, Cow lake, Elk lake, Goose lake, Heart lake,**  
36 **Hidden lake (Lake Hazel), Horseshoe lake, Horseshoe (Alamitos) lake, Jose Vigil lake, Lost lake, Middle Fork**  
37 **lake, Nambe lake, Nat II lake, Nat IV lake, No Fish lake, Pioneer lake, San Leonardo lake, Santa Fe lake,**  
38 **Serpent lake, South Fork lake, Trampas lakes (east and west) and Williams lake.**

39           **A. Designated uses:** high quality coldwater aquatic life, irrigation, domestic water supply, primary  
40 contact, livestock watering and wildlife habitat.

41           **B. Criteria:** The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
42 designated uses, except that the following segment-specific criteria apply: specific conductance 300  $\mu$ S/cm or less;  
43 the monthly geometric mean of *E. coli* bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.  
44 [20.6.4.133 NMAC - N, 7/10/2012]

45  
46 **20.6.4.134 RIO GRANDE BASIN: Cabresto lake, Canjilon lakes a, c, e and f, Fawn lakes (east and**  
47 **west), Hopewell lake and San Gregorio lake.**

48           **A. Designated uses:** high quality coldwater aquatic life, irrigation, domestic water supply, primary  
49 contact, livestock watering and wildlife habitat.

50           **B. Criteria:** The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
51 designated uses, except that the following segment-specific criteria apply: specific conductance 300  $\mu$ S/cm or less;  
52 the monthly geometric mean of *E. coli* bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.  
53 [20.6.4.134 NMAC - N, 7/10/2012]

54  
55 **20.6.4.135 RIO GRANDE BASIN: Bluewater lake.**

1           **A. Designated uses:** coldwater aquatic life, irrigation, domestic water supply, primary contact,  
2 livestock watering and wildlife habitat.

3           **B. Criteria:** The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
4 designated uses except that the following segment-specific criteria apply: phosphorus (unfiltered sample) 0.1 mg/L  
5 or less; the monthly geometric mean of *E. coli* bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or  
6 less.  
7 [20.6.4.135 NMAC - N, 7/10/2012]  
8

9 **20.6.4.136 RIO GRANDE BASIN: The Santa Fe river from the outfall of the Santa Fe wastewater  
10 treatment facility to Guadalupe street.**

11           **A. Designated uses:** limited aquatic life, wildlife habitat, primary contact, livestock watering, and  
12 irrigation.

13           **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
14 designated uses.  
15 [20.6.4.136 NMAC - N, 2/14/2013]  
16

17 **20.6.4.137 RIO GRANDE BASIN: The Santa Fe river from Guadalupe street to Nichols reservoir.**

18           **A. Designated uses:** coolwater aquatic life, wildlife habitat, primary contact, livestock watering, and  
19 irrigation.

20           **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
21 designated uses.  
22 [20.6.4.137 NMAC - N, 2/14/2013]  
23

24 **20.6.4.138 RIO GRANDE BASIN: Nichols and McClure reservoirs.**

25           **A. Designated uses:** high quality coldwater aquatic life, wildlife habitat, primary contact, public  
26 water supply and irrigation.

27           **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
28 designated uses, except that the following segment-specific criteria apply: specific conductance 300  $\mu$ S/cm or less;  
29 the monthly geometric mean of *E. coli* bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.  
30 [20.6.4.138 NMAC - N, 2/14/2013]  
31

32 **20.6.4.139 RIO GRANDE BASIN: Perennial reaches of Galisteo creek and perennial reaches of its  
33 tributaries from Kewa pueblo upstream to 2.2 miles upstream of Lamy.**

34           **A. Designated uses:** coolwater aquatic life, primary contact, irrigation, livestock watering, domestic  
35 water supply and wildlife habitat; and public water supply on Cerrillos reservoir.

36           **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
37 designated uses, except that the following segment-specific criteria apply: the monthly geometric mean of *E. coli*  
38 bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.  
39 [20.6.4.139 NMAC - N, 2/14/2013]  
40

41 **20.6.4.140 - 20.6.4.200 [RESERVED]**  
42

43 **20.6.4.201 PECOS RIVER BASIN: The main stem of the Pecos river from the New Mexico-Texas line  
44 upstream to the mouth of the Black river (near Loving).**

45           **A. Designated uses:** irrigation, livestock watering, wildlife habitat, primary contact and warmwater  
46 aquatic life.

47           **B. Criteria:**

48           (1) The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
49 designated uses, except that the following segment-specific criterion applies: dissolved boron for irrigation use  
50 2,000  $\mu$ g/L or less.

51           (2) At all flows above 50 cfs: TDS 20,000 mg/L or less, sulfate 3,000 mg/L or less and  
52 chloride 10,000 mg/L or less.  
53 [20.6.4.201 NMAC - Rp 20 NMAC 6.1.2201, 10/12/2000; A, 5/23/2005; A, 12/1/2010]  
54

1 **20.6.4.202 PECOS RIVER BASIN: The main stem of the Pecos river from the mouth of the Black**  
2 **river upstream to lower Tansil dam, including perennial reaches of the Black river, the Delaware river and**  
3 **Blue spring.**

4 **A. Designated uses:** industrial water supply, irrigation, livestock watering, wildlife habitat, primary  
5 contact and warmwater aquatic life.

6 **B. Criteria:**

7 (1) The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
8 designated uses, except that the following segment-specific criterion applies: temperature 34°C (93.2°F) or less.

9 (2) At all flows above 50 cfs: TDS 8,500 mg/L or less, sulfate 2,500 mg/L or less and chloride  
10 3,500 mg/L or less.

11 **C. Remarks:** diversion for irrigation frequently limits summer flow in this reach of the main stem  
12 Pecos river to that contributed by springs along the watercourse.

13 [20.6.4.202 NMAC - Rp 20 NMAC 6.1.2202, 10/12/2000; A, 5/23/2005; A, 12/1/2010]

14 [NOTE: The segment covered by this section was divided effective 5/23/2005. The standards for Lower Tansil Lake  
15 and Lake Carlsbad are under 20.6.4.218 NMAC.]

16  
17 **20.6.4.203 PECOS RIVER BASIN: The main stem of the Pecos river from the headwaters of Lake**  
18 **Carlsbad upstream to Avalon dam.**

19 **A. Designated uses:** industrial water supply, livestock watering, wildlife habitat, primary contact  
20 and warmwater aquatic life.

21 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
22 designated uses, except that the following segment-specific criteria apply: temperature 34°C (93.2°F) or less; the  
23 monthly geometric mean of E. coli bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.

24 [20.6.4.203 NMAC - Rp 20 NMAC 6.1.2203, 10/12/2000; A, 5/23/2005; A, 12/1/2010]

25 [NOTE: The segment covered by this section was divided effective 5/23/2005. The standards for Lower Tansil Lake  
26 and Lake Carlsbad are under 20.6.4.218 and for Avalon Reservoir are under 20.6.4.219 NMAC.]

27  
28 **20.6.4.204 PECOS RIVER BASIN: The main stem of the Pecos river from the headwaters of Avalon**  
29 **reservoir upstream to Brantley dam.**

30 **A. Designated uses:** irrigation, livestock watering, wildlife habitat, secondary contact and  
31 warmwater aquatic life.

32 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
33 designated uses.

34 [20.6.4.204 NMAC - Rp 20 NMAC 6.1.2204, 10/12/2000; A, 5/23/2005; A, 12/1/2010]

35 [NOTE: The segment covered by this section was divided effective 5/23/2005. The standards for Avalon Reservoir  
36 are under 20.6.4.219 NMAC.]

37  
38 **20.6.4.205 PECOS RIVER BASIN: Brantley reservoir.**

39 **A. Designated uses:** irrigation storage, livestock watering, wildlife habitat, primary contact and  
40 warmwater aquatic life.

41 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
42 designated uses.

43 [20.6.4.205 NMAC - Rp 20 NMAC 6.1.2205, 10/12/2000; A, 5/23/2005; A, 12/1/2010]

44  
45 **20.6.4.206 PECOS RIVER BASIN: The main stem of the Pecos river from the headwaters of Brantley**  
46 **reservoir upstream to Salt creek (near Acme), perennial reaches of the Rio Peñasco downstream from state**  
47 **highway 24 near Dunken, perennial reaches of the Rio Hondo and its tributaries downstream of Bonney**  
48 **canyon and perennial reaches of the Rio Felix.**

49 **A. Designated uses:** irrigation, livestock watering, wildlife habitat, secondary contact and  
50 warmwater aquatic life.

51 **B. Criteria:**

52 (1) The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
53 designated uses.

54 (2) At all flows above 50 cfs: TDS 14,000 mg/L or less, sulfate 3,000 mg/L or less and  
55 chloride 6,000 mg/L or less.

56 [20.6.4.206 NMAC - Rp 20 NMAC 6.1.2206, 10/12/2000; A, 05/23/2005; A, 12/1/2010; A, 3/2/2017]

1  
2 **20.6.4.207 PECOS RIVER BASIN: The main stem of the Pecos river from Salt creek (near Acme)**  
3 **upstream to Sumner dam.**

4 **A. Designated uses:** irrigation, marginal warmwater aquatic life, livestock watering, wildlife habitat  
5 and secondary contact.

6 **B. Criteria:**

7 (1) The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
8 designated uses.

9 (2) At all flows above 50 cfs: TDS 8,000 mg/L or less, sulfate 2,500 mg/L or less and  
10 chloride 4,000 mg/L or less.

11 [20.6.4.207 NMAC - Rp 20 NMAC 6.1.2207, 10/12/2000; A, 5/23/2005; A, 12/1/2010]  
12

13 **20.6.4.208 PECOS RIVER BASIN: Perennial reaches of the Rio Peñasco and its tributaries above state**  
14 **highway 24 near Dunken, perennial reaches of the Rio Bonito downstream from state highway 48 (near**  
15 **Angus), the Rio Ruidoso downstream of the U.S. highway 70 bridge near Seeping Springs lakes, perennial**  
16 **reaches of the Rio Hondo upstream from Bonney canyon and perennial reaches of Agua Chiquita.**

17 **A. Designated uses:** fish culture, irrigation, livestock watering, wildlife habitat, coldwater aquatic  
18 life and primary contact.

19 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
20 designated uses, except that the following segment-specific criteria apply: temperature 30°C (86°F) or less, and  
21 phosphorus (unfiltered sample) less than 0.1 mg/L.

22 [20.6.4.208 NMAC - Rp 20 NMAC 6.1.2208, 10/12/2000; A, 5/23/2005; A, 12/1/2010]  
23

24 **20.6.4.209 PECOS RIVER BASIN: Perennial reaches of Eagle creek upstream of Alto dam to the**  
25 **Mescalero Apache boundary, perennial reaches of the Rio Bonito and its tributaries upstream of state**  
26 **highway 48 (near Angus) excluding Bonito lake, and perennial reaches of the Rio Ruidoso and its tributaries**  
27 **upstream of the U.S. highway 70 bridge near Seeping Springs lakes, above and below the Mescalero Apache**  
28 **boundary.**

29 **A. Designated uses:** domestic water supply, high quality coldwater aquatic life, irrigation, livestock  
30 watering, wildlife habitat, public water supply and primary contact.

31 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
32 designated uses, except that the following segment-specific criteria apply: specific conductance 600 µS/cm or less in  
33 Eagle creek, 1,100 µS/cm or less in Bonito creek and 1,500 µS/cm or less in the Rio Ruidoso; phosphorus (unfiltered  
34 sample) less than 0.1 mg/L; the monthly geometric mean of *E. coli* bacteria 126 cfu/100 mL or less, single sample  
35 235 cfu/100 mL or less.

36 [20.6.4.209 NMAC - Rp 20 NMAC 6.1.2209, 10/12/2000; A, 5/23/2005; A, 12/1/2010; A, 7/10/2012]

37 [NOTE: The standards for Bonito lake are in 20.6.4.223 NMAC, effective 7/10/2012]  
38

39 **20.6.4.210 PECOS RIVER BASIN: Sumner reservoir.**

40 **A. Designated uses:** irrigation storage, livestock watering, wildlife habitat, primary contact and  
41 warmwater aquatic life.

42 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
43 designated uses, except that the following segment-specific criteria apply: the monthly geometric mean of *E. coli*  
44 bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.

45 [20.6.4.210 NMAC - Rp 20 NMAC 6.1.2210, 10/12/2000; A, 5/23/2005; A, 12/1/2010]  
46

47 **20.6.4.211 PECOS RIVER BASIN: The main stem of the Pecos river from the headwaters of Sumner**  
48 **reservoir upstream to Tecolote creek excluding Santa Rosa reservoir.**

49 **A. Designated uses:** fish culture, irrigation, marginal warmwater aquatic life, livestock watering,  
50 wildlife habitat and primary contact.

51 **B. Criteria:**

52 (1) The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
53 designated uses.

54 (2) At all flows above 50 cfs: TDS 3,000 mg/L or less, sulfate 2,000 mg/L or less and  
55 chloride 400 mg/L or less.

56 [20.6.4.211 NMAC - Rp 20 NMAC 6.1.2211, 10/12/2000; A, 5/23/2005; A, 12/1/2010; A, 7/10/2012]

1 [NOTE: The standards for Santa Rosa reservoir are in 20.6.4.225 NMAC, effective 7/10/2012]

2  
3 **20.6.4.212 PECOS RIVER BASIN: Perennial tributaries to the main stem of the Pecos river from the**  
4 **headwaters of Sumner reservoir upstream to Santa Rosa dam.**

5 **A. Designated uses:** irrigation, coldwater aquatic life, livestock watering, wildlife habitat and  
6 primary contact.

7 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
8 designated uses, except that the following segment-specific criterion applies: temperature 25°C (77°F) or less.  
9 [20.6.4.212 NMAC - Rp 20 NMAC 6.1.2211.1, 10/12/2000; A, 5/23/2005; A, 12/1/2010]

10  
11 **20.6.4.213 PECOS RIVER BASIN: McAllister lake.**

12 **A. Designated uses:** coldwater aquatic life, secondary contact, livestock watering and wildlife  
13 habitat.

14 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
15 designated uses, except that the following segment-specific criterion applies: temperature 25°C (77°F) or less.  
16 [20.6.4.213 NMAC - Rp 20 NMAC 6.1.2211.3, 10/12/2000; A, 5/23/2005; A, 12/1/2010]

17  
18 **20.6.4.214 PECOS RIVER BASIN: Storrie lake.**

19 **A. Designated uses:** coldwater aquatic life, warmwater aquatic life, primary contact, livestock  
20 watering, wildlife habitat, public water supply and irrigation storage.

21 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
22 designated uses, except that the following segment-specific criteria apply: the monthly geometric mean of E. coli  
23 bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.  
24 [20.6.4.214 NMAC - Rp 20 NMAC 6.1.2211.5, 10/12/2000; A, 5/23/2005; A, 12/1/2010]

25  
26 **20.6.4.215 PECOS RIVER BASIN: Perennial reaches of the Gallinas river and all its tributaries**  
27 **upstream of the diversion for the Las Vegas municipal reservoir, perennial reaches of Tecolote creek**  
28 **upstream of Blue creek, and all perennial tributaries of Tecolote creek.**

29 **A. Designated uses:** domestic water supply, high quality coldwater aquatic life, irrigation, livestock  
30 watering, wildlife habitat, industrial water supply and primary contact; and public water supply on the Gallinas river.

31 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
32 designated uses, except that the following segment-specific criteria apply: specific conductance 300 µS/cm or less  
33 (450 µS/cm or less in Wright Canyon creek); the monthly geometric mean of E. coli bacteria 126 cfu/100 mL or  
34 less, single sample 235 cfu/100 mL or less.

35 [20.6.4.215 NMAC - Rp 20 NMAC 6.1.2212, 10/12/2000; A, 5/23/2005; A, 12/1/2010; A, 2/13/2018]

36 [NOTE: This segment was divided effective 2/13/2018. The standards for Tecolote creek from I-25 to Blue creek  
37 are under 20.6.4.230 NMAC.]

38  
39 **20.6.4.216 PECOS RIVER BASIN: The main stem of the Pecos river from Tecolote creek upstream to**  
40 **Cañon de Manzanita.**

41 **A. Designated uses:** irrigation, livestock watering, wildlife habitat, marginal coldwater aquatic life  
42 and primary contact.

43 **B. Criteria:**  
44 (1) The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
45 designated uses, except that the following segment-specific criterion applies: temperature 30°C (86°F) or less.  
46 (2) At all flows above 10 cfs: TDS 250 mg/L or less, sulfate 25 mg/L or less and chloride 5  
47 mg/L or less.

48 [20.6.4.216 NMAC - Rp 20 NMAC 6.1.2213, 10/12/2000; A, 5/23/2005; A, 12/1/2010]

49  
50 **20.6.4.217 PECOS RIVER BASIN: Perennial reaches of Cow creek and all perennial reaches of its**  
51 **tributaries and the main stem of the Pecos river from Cañon de Manzanita upstream to its headwaters,**  
52 **including perennial reaches of all tributaries thereto except lakes identified in 20.6.4.222 NMAC.**

53 **A. Designated uses:** domestic water supply, fish culture, high quality coldwater aquatic life,  
54 irrigation, livestock watering, wildlife habitat and primary contact; and public water supply on the main stem of the  
55 Pecos river.

1           **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
2 designated uses, except that the following segment-specific criteria apply: specific conductance 300 µS/cm or less;  
3 the monthly geometric mean of *E. coli* bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.  
4 [20.6.4.217 NMAC - Rp 20 NMAC 6.1.2214, 10/12/2000; A, 5/23/2005; A, 12/1/2010; A, 7/10/2012]  
5 [NOTE: The segment covered by this section was divided effective 5/23/2005. The standards for the additional  
6 segments are under 20.6.4.220 and 20.6.4.221 NMAC.]  
7

8 **20.6.4.218 PECOS RIVER BASIN: Lower Tansil lake and Lake Carlsbad.**

9           **A. Designated uses:** industrial water supply, livestock watering, wildlife habitat, primary contact  
10 and warmwater aquatic life.

11           **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
12 designated uses, except that the following segment-specific criterion applies: temperature 34°C (93.2°F) or less.  
13 [20.6.4.218 NMAC - N, 5/23/2005; A, 12/1/2010]  
14

15 **20.6.4.219 PECOS RIVER BASIN: Avalon reservoir.**

16           **A. Designated uses:** irrigation storage, livestock watering, wildlife habitat, secondary contact and  
17 warmwater aquatic life.

18           **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
19 designated uses.  
20 [20.6.4.219 NMAC - N, 5/23/2005; A, 12/1/2010]  
21

22 **20.6.4.220 PECOS RIVER BASIN: Perennial reaches of the Gallinas river and its tributaries from its**  
23 **mouth upstream to the diversion for the Las Vegas municipal reservoir, except Pecos Arroyo.**

24           **A. Designated uses:** irrigation, livestock watering, wildlife habitat, marginal coldwater aquatic life  
25 and primary contact.

26           **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
27 designated uses, except that the following segment-specific criterion applies: temperature 30°C (86°F) or less.  
28 [20.6.4.220 NMAC - N, 5/23/2005; A, 12/1/2010]  
29

30 **20.6.4.221 PECOS RIVER BASIN: Pecos Arroyo.**

31           **A. Designated uses:** livestock watering, wildlife habitat, warmwater aquatic life and primary  
32 contact.

33           **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
34 designated uses, except that the following segment-specific criteria apply: the monthly geometric mean of *E. coli*  
35 bacteria 206 cfu/100 mL, single sample 940 cfu/100 mL.  
36 [20.6.4.221 NMAC - N, 5/23/2005; A, 12/1/2010]  
37

38 **20.6.4.222 PECOS RIVER BASIN: Johnson lake, Katherine lake, Lost Bear lake, Pecos Baldy lake,**  
39 **Spirit lake, Stewart lake and Truchas lakes (north and south).**

40           **A. Designated uses:** high quality coldwater aquatic life, irrigation, domestic water supply, primary  
41 contact, livestock watering and wildlife habitat.

42           **B. Criteria:** The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
43 designated uses, except that the following segment-specific criteria apply: specific conductance 300 µS/cm or less;  
44 the monthly geometric mean of *E. coli* bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.  
45 [20.6.4.222 NMAC - N, 7/10/2012]  
46

47 **20.6.4.223 PECOS RIVER BASIN: Bonito lake.**

48           **A. Designated uses:** high quality coldwater aquatic life, irrigation, domestic water supply, primary  
49 contact, livestock watering, wildlife habitat and public water supply.

50           **B. Criteria:** The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
51 designated uses except that the following segment-specific criteria apply: specific conductance 1100 µS/cm or less;  
52 phosphorus (unfiltered sample) less than 0.1 mg/L; the monthly geometric mean of *E. coli* bacteria 126 cfu/100 mL  
53 or less, single sample 235 cfu/100 mL or less.  
54 [20.6.4.223 NMAC - N, 7/10/2012]  
55

56 **20.6.4.224 PECOS RIVER BASIN: Monastery lake.**



- 1           **A. Designated uses:** coolwater aquatic life, primary contact, livestock watering and wildlife habitat.  
2           **B. Criteria:** The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
3 designated uses, except that the following segment-specific criteria apply: the monthly geometric mean of *E. coli*  
4 bacteria 206 cfu/100 mL or less, single sample 940 cfu/100 mL or less.  
5 [20.6.4.224 NMAC - N, 7/10/2012]  
6
- 7 **20.6.4.225       PECOS RIVER BASIN: Santa Rosa reservoir.**  
8           **A. Designated uses:** coolwater aquatic life, irrigation, primary contact, livestock watering and  
9 wildlife habitat.  
10          **B. Criteria:** The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
11 designated uses.  
12 [20.6.4.225 NMAC - N, 7/10/2012]  
13
- 14 **20.6.4.226       PECOS RIVER BASIN: Perch lake.**  
15          **A. Designated uses:** coolwater aquatic life, primary contact, livestock watering and wildlife habitat.  
16          **B. Criteria:** The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
17 designated uses except that the following segment-specific criteria apply: the monthly geometric mean of *E. coli*  
18 bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.  
19 [20.6.4.226 NMAC - N, 7/10/2012]  
20
- 21 **20.6.4.227       PECOS RIVER BASIN: Lea lake.**  
22          **A. Designated uses:** warmwater aquatic life, primary contact and wildlife habitat.  
23          **B. Criteria:** The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
24 designated uses except that the following segment-specific criteria apply: the monthly geometric mean of *E. coli*  
25 bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.  
26 [20.6.4.227 NMAC - N, 7/10/2012]  
27
- 28 **20.6.4.228       PECOS RIVER BASIN: Cottonwood lake and Devil's Inkwell.**  
29          **A. Designated uses:** coolwater aquatic life, primary contact and wildlife habitat.  
30          **B. Criteria:** The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
31 designated uses, except that the following segment-specific criteria apply: the monthly geometric mean of *E. coli*  
32 bacteria 206 cfu/100 mL or less, single sample 940 cfu/100 mL or less.  
33 [20.6.4.228 NMAC - N, 7/10/2012]  
34
- 35 **20.6.4.229       PECOS RIVER BASIN: Mirror lake.**  
36          **A. Designated uses:** warmwater aquatic life, primary contact and wildlife habitat.  
37          **B. Criteria:** The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
38 designated uses, except that the following segment-specific criteria apply: the monthly geometric mean of *E. coli*  
39 bacteria 206 cfu/100 mL or less, single sample 940 cfu/100 mL or less.  
40 [20.6.4.229 NMAC - N, 7/10/2012]  
41
- 42 **20.6.4.230       PECOS RIVER BASIN: Perennial reaches of Tecolote creek from I-25 to Blue creek.**  
43          **A. Designated uses:** domestic water supply, coolwater aquatic life, irrigation, livestock watering,  
44 wildlife habitat, and primary contact.  
45          **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
46 designated uses, except that the following segment-specific criteria apply: the monthly geometric mean of *E. coli*  
47 bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.  
48 [20.6.4.230 NMAC - N, 2/13/2018]  
49
- 50 **20.6.4.231 - 20.6.4.300   [RESERVED]**  
51
- 52 **20.6.4.301       CANADIAN RIVER BASIN: The main stem of the Canadian river from the New Mexico-**  
53 **Texas line upstream to Ute dam, and any flow that enters the main stem from Revuelto creek.**  
54          **A. Designated uses:** irrigation, marginal warmwater aquatic life, livestock watering, wildlife habitat  
55 and primary contact.  
56          **B. Criteria:**

1 (1) The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
2 designated uses.

3 (2) TDS 6,500 mg/L or less at flows above 25 cfs.  
4 [20.6.4.301 NMAC - Rp 20 NMAC 6.1.2301, 10/12/2000; A, 5/23/2005; A, 12/1/2010]  
5

6 **20.6.4.302 CANADIAN RIVER BASIN: Ute reservoir.**

7 A. **Designated uses:** livestock watering, wildlife habitat, public water supply, industrial water  
8 supply, primary contact and warmwater aquatic life.

9 B. **Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
10 designated uses, except that the following segment-specific criteria apply: the monthly geometric mean of E. coli  
11 bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.  
12 [20.6.4.302 NMAC - Rp 20 NMAC 6.1.2302, 10/12/2000; A, 5/23/2005; A, 12/1/2010]  
13

14 **20.6.4.303 CANADIAN RIVER BASIN: The main stem of the Canadian river from the headwaters of**  
15 **Ute reservoir upstream to Conchas dam, the perennial reaches of Pajarito and Ute creeks and their perennial**  
16 **tributaries.**

17 A. **Designated uses:** irrigation, marginal warmwater aquatic life, livestock watering, wildlife habitat  
18 and primary contact.

19 B. **Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
20 designated uses.  
21 [20.6.4.303 NMAC - Rp 20 NMAC 6.1.2303, 10/12/2000; A, 5/23/2005; A, 12/1/2010]  
22

23 **20.6.4.304 CANADIAN RIVER BASIN: Conchas reservoir.**

24 A. **Designated uses:** irrigation storage, livestock watering, wildlife habitat, public water supply,  
25 primary contact and warmwater aquatic life.

26 B. **Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
27 designated uses, except that the following segment-specific criteria apply: the monthly geometric mean of E. coli  
28 bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.  
29 [20.6.4.304 NMAC - Rp 20 NMAC 6.1.2304, 10/12/2000; A, 5/23/2005; A, 12/1/2010]  
30

31 **20.6.4.305 CANADIAN RIVER BASIN: The main stem of the Canadian river from the headwaters of**  
32 **Conchas reservoir upstream to the New Mexico-Colorado line, perennial reaches of the Conchas river, the**  
33 **Mora river downstream from the USGS gaging station near Shoemaker, the Vermejo river downstream from**  
34 **Rail canyon and perennial reaches of Raton, Chicorica (except Lake Maloya and Lake Alice) and Uña de**  
35 **Gato creeks.**

36 A. **Designated uses:** irrigation, marginal warmwater aquatic life, livestock watering, wildlife habitat  
37 and primary contact.

38 B. **Criteria:**  
39 (1) The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
40 designated uses.

41 (2) TDS 3,500 mg/L or less at flows above 10 cfs.  
42 [20.6.4.305 NMAC - Rp 20 NMAC 6.1.2305, 10/12/2000; A, 5/23/2005; A, 12/1/2010; A, 3/2/2017]

43 [NOTE: This segment was divided effective 12/1/2010. The standards for Lake Alice and Lake Maloya are under  
44 20.6.4.311 and 20.6.4.312 NMAC, respectively-]  
45

46 **20.6.4.306 CANADIAN RIVER BASIN: The Cimarron river downstream from state highway 21 in**  
47 **Cimarron to the Canadian river and all perennial reaches of tributaries to the Cimarron river downstream**  
48 **from state highway 21 in Cimarron.**

49 A. **Designated uses:** irrigation, warmwater aquatic life, livestock watering, wildlife habitat and  
50 primary contact; and public water supply on Cimarroncito creek.

51 B. **Criteria:**  
52 (1) The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
53 designated uses.

54 (2) TDS 3,500 mg/L or less at flows above 10 cfs.  
55 [20.6.4.306 NMAC - Rp 20 NMAC 6.1.2305.1, 10/12/2000; A, 7/19/2001; A, 5/23/2005; A, 12/1/2010]  
56

1 **20.6.4.307 CANADIAN RIVER BASIN: Perennial reaches of the Mora river from the USGS gaging**  
2 **station near Shoemaker upstream to the state highway 434 bridge in Mora, all perennial reaches of**  
3 **tributaries to the Mora river downstream from the USGS gaging station at La Cueva in San Miguel and**  
4 **Mora counties except lakes identified in 20.6.4.313 NMAC, perennial reaches of Ocate creek and its**  
5 **tributaries downstream of Ocate, and perennial reaches of Rayado creek downstream of Miami lake**  
6 **diversion in Colfax county.**

7 **A. Designated uses:** marginal coldwater aquatic life, warmwater aquatic life, primary contact,  
8 irrigation, livestock watering and wildlife habitat.

9 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
10 designated uses.

11 [20.6.4.307 NMAC - Rp 20 NMAC 6.1.2305.3, 10/12/2000; A, 5/23/2005; A, 12/1/2010; A, 7/10/2012]

12  
13 **20.6.4.308 CANADIAN RIVER BASIN: Charette lakes.**

14 **A. Designated uses:** coldwater aquatic life, warmwater aquatic life, secondary contact, livestock  
15 watering and wildlife habitat.

16 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
17 designated uses.

18 [20.6.4.308 NMAC - Rp 20 NMAC 6.1.2305.5, 10/12/2000; A, 5/23/2005; A, 12/1/2010]

19  
20 **20.6.4.309 CANADIAN RIVER BASIN: The Mora river and perennial reaches of its tributaries**  
21 **upstream from the state highway 434 bridge in Mora except lakes identified in 20.6.4.313 NMAC, all**  
22 **perennial reaches of tributaries to the Mora river upstream from the USGS gaging station at La Cueva,**  
23 **perennial reaches of Coyote creek and its tributaries, the Cimarron river and its perennial tributaries above**  
24 **state highway 21 in Cimarron except Eagle Nest lake, all perennial reaches of tributaries to the Cimarron**  
25 **river north and northwest of highway 64 except north and south Shuree ponds, perennial reaches of Rayado**  
26 **creek and its tributaries above Miami lake diversion, Ocate creek and perennial reaches of its tributaries**  
27 **upstream of Ocate, perennial reaches of the Vermejo river upstream from Rail canyon and all other**  
28 **perennial reaches of tributaries to the Canadian river northwest and north of U.S. highway 64 in Colfax**  
29 **county unless included in other segments.**

30 **A. Designated uses:** domestic water supply, irrigation, high quality coldwater aquatic life, livestock  
31 watering, wildlife habitat, and primary contact; and public water supply on the Cimarron river upstream from  
32 Cimarron and on perennial reaches of Rayado creek and its tributaries.

33 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
34 designated uses, except that the following segment-specific criteria apply: specific conductance 500  $\mu$ S/cm or less;  
35 the monthly geometric mean of *E. coli* bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.  
36 [20.6.4.309 NMAC - Rp 20 NMAC 6.1.2306, 10/12/2000; A, 7/19/2001; A, 5/23/2005; A, 12/1/2010; A, 7/10/2012]  
37 [NOTE: The segment covered by this section was divided effective 5/23/2005. The standards for the additional  
38 segment are under 20.6.4.310 NMAC. The standards for Shuree ponds are in 20.6.4.314 NMAC and the standards  
39 for Eagle Nest lake are in 20.6.4.315 NMAC, effective 7/10/2012]

40  
41 **20.6.4.310 CANADIAN RIVER BASIN: Perennial reaches of Corruppa creek.**

42 **A. Designated uses:** livestock watering, wildlife habitat, irrigation, primary contact and coldwater  
43 aquatic life.

44 **B. Criteria:**

45 (1) The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
46 designated uses, except that the following segment-specific criteria apply: temperature 25°C (77°F) or less; the  
47 monthly geometric mean of *E. coli* bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.

48 (2) TDS 1,200 mg/L or less, sulfate 600 mg/L or less, chloride 40 mg/L or less.

49 [20.6.4.310 NMAC - N, 5/23/2005; A, 12/1/2010]

50  
51 **20.6.4.311 Lake Alice.**

52 **A. Designated uses:** marginal coldwater aquatic life, irrigation, livestock watering, wildlife habitat,  
53 primary contact and public water supply.

54 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
55 designated uses.

56 [20.6.4.311 NMAC - N, 12/1/2010]

- 1  
2 **20.6.4.312 Lake Maloya.**  
3 **A. Designated uses:** coldwater aquatic life, irrigation, livestock watering, wildlife habitat, primary  
4 contact and public water supply.  
5 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
6 designated uses.  
7 [20.6.4.312 NMAC - N, 12/1/2010]  
8  
9 **20.6.4.313 CANADIAN RIVER BASIN: Encantada lake, Maestas lake, Middle Fork lake of Rio de la**  
10 **Casa, North Fork lake of Rio de la Casa and Pacheco lake.**  
11 **A. Designated uses:** high quality coldwater aquatic life, irrigation, domestic water supply, primary  
12 contact, livestock watering and wildlife habitat.  
13 **B. Criteria:** The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
14 designated uses, except that the following segment-specific criteria apply: specific conductance 300 µS/cm or less;  
15 the monthly geometric mean of *E. coli* bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.  
16 [20.6.4.313 NMAC - N, 7/10/2012]  
17  
18 **20.6.4.314 CANADIAN RIVER BASIN: Shuree ponds (north and south).**  
19 **A. Designated uses:** high quality coldwater aquatic life, irrigation, domestic water supply, primary  
20 contact, livestock watering and wildlife habitat.  
21 **B. Criteria:** The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
22 designated uses except that the following segment-specific criteria apply: specific conductance 500 µS/cm or less;  
23 the monthly geometric mean of *E. coli* bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.  
24 [20.6.4.314 NMAC - N, 7/10/2012]  
25  
26 **20.6.4.315 CANADIAN RIVER BASIN: Eagle Nest lake.**  
27 **A. Designated uses:** high quality coldwater aquatic life, irrigation, domestic water supply, primary  
28 contact, livestock watering, wildlife habitat and public water supply.  
29 **B. Criteria:** The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
30 designated uses except that the following segment-specific criteria apply: specific conductance 500 µS/cm or less;  
31 the monthly geometric mean of *E. coli* bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.  
32 [20.6.4.315 NMAC - N, 7/10/2012]  
33  
34 **20.6.4.316 CANADIAN RIVER BASIN: Clayton lake.**  
35 **A. Designated uses:** coolwater aquatic life, primary contact, livestock watering and wildlife habitat.  
36 **B. Criteria:** The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
37 designated uses, except that the following segment-specific criteria apply: the monthly geometric mean of *E. coli*  
38 bacteria 206 cfu/100 mL or less, single sample 940 cfu/100 mL or less.  
39 [20.6.4.316 NMAC - N, 7/10/2012]  
40  
41 **20.6.4.317 CANADIAN RIVER BASIN: Springer lake.**  
42 **A. Designated uses:** coolwater aquatic life, irrigation, primary contact, livestock watering, wildlife  
43 habitat, and public water supply.  
44 **B. Criteria:** The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
45 designated uses.  
46 [20.6.4.317 NMAC - N, 7/10/2012; A, 3/2/2017]  
47  
48 **20.6.4.318 CANADIAN RIVER BASIN: Doggett creek.**  
49 **A. Designated Uses:** Warmwater aquatic life, livestock watering, wildlife habitat and primary  
50 contact.  
51 **B. Criteria:** The use-specific criteria in 20.6.4.900 NMAC are applicable to the designated uses,  
52 except that the following site-specific criteria apply: the monthly geometric mean of *E. coli* bacteria 206 cfu/100 mL  
53 or less, single sample 940 cfu/100 mL or less.  
54 **C. Discharger-specific temporary standard:**  
55 **(1) Discharger:** City of Raton wastewater treatment plant.  
56 **(2) NPDES permit number:** NM0020273, Outfall 001.

- 1                    (3) Receiving waterbody: Doggett creek, 20.6.4.318 NMAC.  
2                    (4) Discharge latitude/longitude: 36° 52' 13.91" N / 104° 25' 39.18" W.  
3                    (5) Pollutants: nutrients: total nitrogen and total phosphorus.  
4                    (6) Factor of issuance: substantial and widespread economic and social impacts (40 C.F.R.  
5 131.10(g)(6).  
6                    (7) Highest attainable condition: interim effluent condition of 8.0 mg/L total nitrogen and  
7 1.6 mg/L total phosphorus as 30-day averages. The highest attainable condition shall be either the  
8 highest attainable condition identified at the time of the adoption, or any higher attainable condition  
9 later identified during any reevaluation, whichever is more stringent (40 C.F.R. 131.14(b)(1)(iii)).  
10                   (8) Effective date of temporary standard: This temporary standard becomes effective for  
11 Clean Water Act purposes on the date of EPA approval.  
12                   (9) Expiration date of temporary standard: no later than 20 years from the effective date.  
13                   (10) Reevaluation period: at each succeeding review of water quality standards, and at least  
14 once every five years from the effective date of the temporary standard (20.6.4.10(F)(8) NMAC; 40 C.F.R.  
15 131.14(b)(1)(V)). If the Discharger cannot demonstrate that sufficient progress has been made, the commission may  
16 revoke approval of the temporary standard or provide additional conditions to the approval of the temporary  
17 standard. If the reevaluation is not completed at the frequency specified or the Department does not submit the  
18 reevaluation to EPA within 30 days of completion, the underlying designated use and criterion will be the applicable  
19 water quality standard for Clean Water Act purposes until the Department completes and submits the reevaluation to  
20 EPA. Public input on the reevaluation will be invited during NPDES permit renewals or triennial reviews, as  
21 applicable, in accordance with the State's most current approved water quality management plan and continuing  
22 planning process.  
23                   (11) Timetable for proposed actions: Tasks and target completion dates are listed in most  
24 recent, WOCC-approved version of the New Mexico Environment Department, Surface Water Quality Bureau  
25 document, "Nutrient Temporary Standard for: City of Raton Wastewater Treatment Plant NPDES Permit Number  
26 NM0020273 to Doggett Creek."  
27 [20.6.4.318 NMAC - N. XX/XX/2020]

28  
29 **20.6.4.31820.6.4.319 - 20.6.4.400 [RESERVED]**

30  
31 **20.6.4.401 SAN JUAN RIVER BASIN: The main stem of the San Juan river from the Navajo Nation**  
32 **boundary at the Hogback upstream to its confluence with the Animas river. Some waters in this segment are**  
33 **under the joint jurisdiction of the state and the Navajo Nation.**

34        **A. Designated uses:** public water supply, industrial water supply, irrigation, livestock watering,  
35 wildlife habitat, primary contact, marginal coldwater aquatic life and warmwater aquatic life.

36        **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
37 designated uses, except that the following segment-specific criterion applies: temperature 32.2°C (90°F) or less.  
38 [20.6.4.401 NMAC - Rp 20 NMAC 6.1.2401, 10/12/2000; A, 5/23/2005; A, 12/1/2010]

39 [NOTE: The segment covered by this section was divided effective 5/23/2005. The standards for the additional  
40 segment are under 20.6.4.408 NMAC.]  
41

42 **20.6.4.402 SAN JUAN RIVER BASIN: La Plata river from its confluence with the San Juan river**  
43 **upstream to the New Mexico-Colorado line.**

44        **A. Designated uses:** irrigation, marginal warmwater aquatic life, marginal coldwater aquatic life,  
45 livestock watering, wildlife habitat and primary contact.

46        **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
47 designated uses, except that the following segment-specific criterion applies: temperature 32.2°C (90°F) or less.  
48 [20.6.4.402 NMAC - Rp 20 NMAC 6.1.2402, 10/12/2000; A, 5/23/2005; A, 12/1/2010]  
49

50 **20.6.4.403 SAN JUAN RIVER BASIN: The Animas river from its confluence with the San Juan river**  
51 **upstream to Estes arroyo.**

52        **A. Designated uses:** Public water supply, industrial water supply, irrigation, livestock watering,  
53 wildlife habitat, coolwater aquatic life, and primary contact.

54        **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
55 designated uses, except that the following segment-specific criterion applies: temperature 29°C (84.2°F) or less.  
56 [20.6.4.403 NMAC - Rp 20 NMAC 6.1.2403, 10/12/2000; A, 5/23/2005; A, 12/1/2010; A, 3/2/2017]

- 1  
2 **20.6.4.404 SAN JUAN RIVER BASIN: The Animas river from Estes arroyo upstream to the Southern**  
3 **Ute Indian tribal boundary.**  
4 **A. Designated uses:** Coolwater aquatic life, irrigation, livestock watering, wildlife habitat, public  
5 water supply, industrial water supply and primary contact.  
6 **B. Criteria:** The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
7 designated uses, except that the following segment-specific criterion applies: phosphorus (unfiltered sample) 0.1  
8 mg/L or less.  
9 [20.6.4.404 NMAC - Rp 20 NMAC 6.1.2404, 10/12/2000; A, 5/23/2005; A, 12/1/2010; A, 3/2/2017]  
10  
11 **20.6.4.405 SAN JUAN RIVER BASIN: The main stem of the San Juan river from Canyon Largo**  
12 **upstream to the Navajo dam.**  
13 **A. Designated uses:** high quality coldwater aquatic life, irrigation, livestock watering, wildlife  
14 habitat, public water supply, industrial water supply and primary contact.  
15 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
16 designated uses, except that the following segment-specific criteria apply: specific conductance 400 µS/cm or less;  
17 the monthly geometric mean of E. coli bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.  
18 [20.6.4.405 NMAC - Rp 20 NMAC 6.1.2405, 10/12/2000; A, 5/23/2005; A, 12/1/2010]  
19  
20 **20.6.4.406 SAN JUAN RIVER BASIN: Navajo reservoir in New Mexico.**  
21 **A. Designated uses:** coldwater aquatic life, warmwater aquatic life, irrigation storage, livestock  
22 watering, wildlife habitat, public water supply, industrial water supply and primary contact.  
23 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
24 designated uses, except that the following segment-specific criteria apply: phosphorus (unfiltered sample) 0.1 mg/L  
25 or less; the monthly geometric mean of E. coli bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or  
26 less.  
27 [20.6.4.406 NMAC - Rp 20 NMAC 6.1.2406, 10/12/2000; A, 5/23/2005; A, 12/1/2010]  
28  
29 **20.6.4.407 SAN JUAN RIVER BASIN: Perennial reaches of the Navajo river from the Jicarilla**  
30 **Apache reservation boundary to the Colorado border and perennial reaches of Los Pinos river in New**  
31 **Mexico.**  
32 **A. Designated uses:** coldwater aquatic life, irrigation, livestock watering, public water supply,  
33 wildlife habitat and primary contact.  
34 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
35 designated uses, except that the following segment-specific criteria apply: phosphorus (unfiltered sample) 0.1 mg/L  
36 or less; the monthly geometric mean of E. coli bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or  
37 less.  
38 [20.6.4.407 NMAC - Rp 20 NMAC 6.1.2407, 10/12/2000; A, 5/23/2005; A, 12/1/2010]  
39  
40 **20.6.4.408 SAN JUAN RIVER BASIN: The main stem of the San Juan river from its confluence with**  
41 **the Animas river upstream to its confluence with Canyon Largo.**  
42 **A. Designated uses:** public water supply, industrial water supply, irrigation, livestock watering,  
43 wildlife habitat, primary contact, marginal coldwater aquatic life and warmwater aquatic life.  
44 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
45 designated uses, except that the following segment-specific criterion applies: temperature 32.2°C (90°F) or less.  
46 [20.6.4.408 NMAC - N, 5/23/2005; A, 12/1/2010]  
47  
48 **20.6.4.409 SAN JUAN RIVER BASIN: Lake Farmington.**  
49 **A. Designated uses:** public water supply, wildlife habitat, livestock watering, primary contact,  
50 coldwater aquatic life and warmwater aquatic life.  
51 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
52 designated uses, except that the following segment-specific criterion applies: temperature 25°C (77°F) or less.  
53 [20.6.4.409 NMAC - N, 12/1/2010]  
54  
55 **20.6.4.410 SAN JUAN RIVER BASIN: Jackson lake.**



- 1           **A. Designated uses:** coolwater aquatic life, irrigation, primary contact, livestock watering and  
2 wildlife habitat.
- 3           **B. Criteria:** The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
4 designated uses, except that the following segment-specific criteria apply: the monthly geometric mean of *E. coli*  
5 bacteria 206 cfu/100 mL or less, single sample 940 cfu/100 mL or less.  
6 [20.6.4.410 NMAC - N, 7/10/2012]  
7
- 8 **20.6.4.411 - 20.6.4.450: [RESERVED]**  
9
- 10 **20.6.4.451 LITTLE COLORADO RIVER BASIN: The Rio Nutria upstream of the Zuni pueblo**  
11 **boundary, Tampico draw, Agua Remora, Tampico springs.**
- 12           **A. Designated uses:** coolwater aquatic life, livestock watering, wildlife habitat and primary contact.  
13           **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
14 designated uses.  
15 [20.6.4.451 NMAC - N, 12/1/2010]  
16
- 17 **20.6.4.452 LITTLE COLORADO RIVER BASIN: Ramah lake.**
- 18           **A. Designated uses:** coldwater aquatic life, warmwater aquatic life, irrigation, livestock watering,  
19 wildlife habitat and primary contact.  
20           **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
21 designated uses, except that the following segment-specific criterion applies: temperature 25°C (77°F) or less.  
22 [20.6.4.452 NMAC - N, 12/1/2010]  
23
- 24 **20.6.4.453 LITTLE COLORADO RIVER BASIN: Quemado lake.**
- 25           **A. Designated uses:** coolwater aquatic life, primary contact, livestock watering and wildlife habitat.  
26           **B. Criteria:** The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
27 designated uses.  
28 [20.6.4.453 NMAC - N, 7/10/2012]  
29
- 30 **20.6.4.454 - 20.6.4.500 [RESERVED]**  
31
- 32 **20.6.4.501 GILA RIVER BASIN: The main stem of the Gila river from the New Mexico-Arizona line**  
33 **upstream to Redrock canyon and perennial reaches of streams in Hidalgo county.**
- 34           **A. Designated uses:** irrigation, marginal warmwater aquatic life, livestock watering, wildlife habitat  
35 and primary contact.  
36           **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
37 designated uses.  
38 [20.6.4.501 NMAC - Rp 20 NMAC 6.1.2501, 10/12/2000; A, 5/23/2005; A, 12/1/2010]  
39
- 40 **20.6.4.502 GILA RIVER BASIN: The main stem of the Gila river from Redrock canyon upstream to**  
41 **the confluence of the West Fork Gila river and East Fork Gila river and perennial reaches of tributaries to**  
42 **the Gila river downstream of Mogollon creek.**
- 43           **A. Designated uses:** industrial water supply, irrigation, livestock watering, wildlife habitat, marginal  
44 coldwater aquatic life, primary contact and warmwater aquatic life.  
45           **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
46 designated uses, except that the following segment-specific criterion applies: 28°C (82.4°F) or less.  
47 [20.6.4.502 NMAC - Rp 20 NMAC 6.1.2502, 10/12/2000; A, 5/23/2005; A, 12/1/2010; A, 3/2/2017]  
48
- 49 **20.6.4.503 GILA RIVER BASIN: All perennial tributaries to the Gila river upstream of and including**  
50 **Mogollon creek.**
- 51           **A. Designated uses:** domestic water supply, high quality coldwater aquatic life, irrigation, livestock  
52 watering, wildlife habitat and primary contact.  
53           **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
54 designated uses, except that the following segment-specific criteria apply: specific conductance of 400 µS/cm or less  
55 for all perennial tributaries except West Fork Gila and tributaries thereto, specific conductance of 300 µS/cm or less;

1 32.2°C (90°F) or less in the east fork of the Gila river and Sapillo creek downstream of Lake Roberts; the monthly  
2 geometric mean of E. coli bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.  
3 [20.6.4.503 NMAC - Rp 20 NMAC 6.1.2503, 10/12/2000; A, 5/23/2005; A, 12/1/2010; A, 3/2/2017]

4  
5 **20.6.4.504 GILA RIVER BASIN: Wall lake, Lake Roberts and Snow lake.**

6 **A. Designated uses:** coldwater aquatic life, irrigation, livestock watering, wildlife habitat and  
7 primary contact.

8 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
9 designated uses, except that the following segment-specific criterion applies: specific conductance 300 µS/cm or  
10 less.

11 [20.6.4.504 NMAC - Rp 20 NMAC 6.1.2504, 10/12/2000; A, 5/23/2005; A, 12/1/2010]

12 [NOTE: The segment covered by this section was divided effective 5/23/2005. The standards for the additional  
13 segment are under 20.6.4.806 NMAC.]

14  
15 **20.6.4.505 GILA RIVER BASIN: Bill Evans lake.**

16 **A. Designated uses:** coolwater aquatic life, primary contact, livestock watering and wildlife habitat.  
17 **B. Criteria:** The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
18 designated uses.

19 [20.6.4.505 NMAC - N, 7/10/2012]

20  
21 **20.6.4.506 - 20.6.4.600 [RESERVED]**

22  
23 **20.6.4.601 SAN FRANCISCO RIVER BASIN: The main stem of the San Francisco river from the New  
24 Mexico-Arizona line upstream to state highway 12 at Reserve and perennial reaches of Mule creek.**

25 **A. Designated uses:** irrigation, marginal warmwater and marginal coldwater aquatic life, livestock  
26 watering, wildlife habitat and primary contact.

27 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
28 designated uses.

29 [20.6.4.601 NMAC - Rp 20 NMAC 6.1.2601, 10/12/2000; A, 5/23/2005; A, 12/1/2010]

30  
31 **20.6.4.602 SAN FRANCISCO RIVER BASIN: The main stem of the San Francisco river from state  
32 highway 12 at Reserve upstream to the New Mexico-Arizona line.**

33 **A. Designated uses:** coldwater aquatic life, irrigation, livestock watering, wildlife habitat and  
34 primary contact.

35 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
36 designated uses, except that the following segment-specific criterion applies: temperature 25°C (77°F) or less.

37 [20.6.4.602 NMAC - Rp 20 NMAC 6.1.2602, 10/12/2000; A, 5/23/2005; A, 12/1/2010]

38  
39 **20.6.4.603 SAN FRANCISCO RIVER BASIN: All perennial reaches of tributaries to the San  
40 Francisco river above the confluence of Whitewater creek and including Whitewater creek.**

41 **A. Designated uses:** domestic water supply, fish culture, high quality coldwater aquatic life,  
42 irrigation, livestock watering, wildlife habitat and primary contact.

43 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
44 designated uses, except that the following segment-specific criteria apply: specific conductance 400 µS/cm or less;  
45 the monthly geometric mean of E. coli bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less; and  
46 temperature 25°C (77°F) or less in Tularosa creek.

47 [20.6.4.603 NMAC - Rp 20 NMAC 6.1.2603, 10/12/2000; A, 5/23/2005; A, 12/1/2010]

48  
49 **20.6.4.604 - 20.6.4.700 [RESERVED]**

50  
51 **20.6.4.701 DRY CIMARRON RIVER: Perennial portions of the Dry Cimarron river above Oak creek  
52 and perennial reaches of Oak creek.**

53 **A. Designated uses:** coldwater aquatic life, irrigation, livestock watering, wildlife habitat and  
54 primary contact.

55 **B. Criteria:**



1 (1) The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
2 designated uses, except that the following segment-specific criteria apply: temperature 25°C (77°F) or less, the  
3 monthly geometric mean of *E. coli* bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.

4 (2) TDS 1,200 mg/L or less, sulfate 600 mg/L or less and chloride 40 mg/L or less.

5 [20.6.4.701 NMAC - Rp 20 NMAC 6.1.2701, 10/12/2000; A, 5/23/2005 A, 12/1/2010]

6 [NOTE: The segment covered by this section was divided effective 5/23/2005. The standards for the additional  
7 segment are under 20.6.4.702 NMAC.]

8  
9 **20.6.4.702 DRY CIMARRON RIVER: Perennial portions of the Dry Cimarron river below Oak creek,  
10 and perennial portions of Long canyon and Carrizozo creeks.**

11 A. **Designated uses:** coolwater aquatic life, irrigation, livestock watering, wildlife habitat and  
12 primary contact.

13 B. **Criteria:**

14 (1) The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
15 designated uses, except that the following segment-specific criteria apply: the monthly geometric mean of *E. coli*  
16 bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.

17 (2) TDS 1,200 mg/L or less, sulfate 600 mg/L or less and chloride 40 mg/L or less.

18 [20.6.4.702 NMAC - N, 5/23/2005; A, 12/1/2010; A, 7/10/2012]

19  
20 **20.6.4.703 - 20.6.4.800 [RESERVED]**

21  
22 **20.6.4.801 CLOSED BASINS: Rio Tularosa upstream of the old U.S. highway 70 bridge crossing east  
23 of Tularosa and all perennial tributaries to the Tularosa basin except Three Rivers and Dog Canyon creek,  
24 and excluding waters on the Mescalero tribal lands.**

25 A. **Designated uses:** coldwater aquatic life, irrigation, livestock watering, wildlife habitat, public  
26 water supply and primary contact.

27 B. **Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
28 designated uses, except that the following segment-specific criteria apply: the monthly geometric mean of *E. coli*  
29 bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.

30 [20.6.4.801 NMAC - Rp 20 NMAC 6.1.2801, 10/12/2000; A, 5/23/2005; A, 12/1/2010; A, 2/13/2018]

31 [NOTE: This segment was divided effective 2/13/2018. The standards for Dog Canyon creek are under 20.6.4.810  
32 NMAC.]

33  
34 **20.6.4.802 CLOSED BASINS: Perennial reaches of Three Rivers.**

35 A. **Designated uses:** irrigation, domestic water supply, high quality coldwater aquatic life, primary  
36 contact, livestock watering and wildlife habitat.

37 B. **Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
38 designated uses, except that the following segment-specific criteria apply: specific conductance 500 µS/cm or less;  
39 the monthly geometric mean of *E. coli* bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.

40 [20.6.4.802 NMAC - Rp 20 NMAC 6.1.2802, 10/12/2000; A, 5/23/2005; A, 12/1/2010]

41  
42 **20.6.4.803 CLOSED BASINS: Perennial reaches of the Mimbres river downstream of the confluence  
43 with Allie canyon and all perennial reaches of tributaries thereto.**

44 A. **Designated uses:** Coolwater aquatic life, irrigation, livestock watering, wildlife habitat and  
45 primary contact.

46 B. **Criteria:** The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
47 designated uses, except that the following segment-specific criteria apply: the monthly geometric mean of *E. coli*  
48 bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less and temperature of 30°C (86°F) or less.

49 [20.6.4.803 NMAC - Rp 20 NMAC 6.1.2803, 10/12/2000; A, 5/23/2005; A, 12/1/2010; A, 3/2/2017]

50  
51 **20.6.4.804 CLOSED BASINS: Perennial reaches of the Mimbres river upstream of the confluence with  
52 Allie canyon to Cooney canyon, and all perennial reaches of East Fork Mimbres (McKnight canyon)  
53 downstream of the fish barrier, and all perennial reaches thereto.**

54 A. **Designated uses:** Irrigation, domestic water supply, coldwater aquatic life, livestock watering,  
55 wildlife habitat and primary contact.

1           **B. Criteria:** The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
2 designated uses, except that the following segment-specific criteria apply: the monthly geometric mean of E. coli  
3 bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.  
4 [20.6.4.804 NMAC - Rp 20 NMAC 6.1.2804, 10/12/2000; A, 5/23/2005; A, 12/1/2010; A, 3/2/2017; A, 2/28/2018]  
5 [NOTE: The segment covered by this section was divided effective 3/2/2017. The standards for the additional  
6 segment are covered under 20.6.4.807 NMAC.]  
7

8 **20.6.4.805 CLOSED BASINS: Perennial reaches of the Sacramento river (Sacramento-Salt Flat closed**  
9 **basin) and all perennial tributaries thereto.**

10           **A. Designated uses:** domestic water supply, livestock watering, wildlife habitat, marginal coldwater  
11 aquatic life and primary contact.

12           **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
13 designated uses.  
14 [20.6.4.805 NMAC - Rp 20 NMAC 6.1.2805, 10/12/2000; A, 5/23/2005; A, 12/1/2010]  
15

16 **20.6.4.806 CLOSED BASINS: Bear canyon reservoir.**

17           **A. Designated uses:** coldwater aquatic life, irrigation, livestock watering, wildlife habitat and  
18 primary contact.

19           **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
20 designated uses, except that the following segment-specific criterion applies: specific conductance 300 µS/cm or  
21 less.  
22 [20.6.4.806 NMAC - N, 5/23/2005; A, 12/1/2010]  
23

24 **20.6.4.807 CLOSED BASINS: Perennial reaches of the Mimbres river upstream of Cooney canyon and**  
25 **all perennial reaches thereto, including perennial reaches of East Fork Mimbres river (McKnight canyon)**  
26 **upstream of the fish barrier.**

27           **A. Designated uses:** Irrigation, domestic water supply, high quality coldwater aquatic life, livestock  
28 watering, wildlife habitat and primary contact.

29           **B. Criteria:** The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
30 designated uses, except that the following segment-specific criteria apply: specific conductance 300 µS/cm or less;  
31 the monthly geometric mean of E. coli bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.  
32 [20.6.4.807 NMAC - N, 3/2/2017]  
33

34 **20.6.4.808 CLOSED BASINS: Perennial and intermittent watercourses within Smelter Tailing Soils**  
35 **Investigation Unit lands at the Chino mines company, excluding those ephemeral waters listed in 20.6.4.809**  
36 **NMAC and including, but not limited to, the mainstem of Lampbright draw, beginning at the confluence of**  
37 **Lampbright Draw with Rustler canyon, all tributaries that originate west of Lampbright draw to the**  
38 **intersection of Lampbright draw with U.S. 180, and all tributaries of Whitewater creek that originate east of**  
39 **Whitewater creek from the confluence of Whitewater creek with Bayard canyon downstream to the**  
40 **intersection of Whitewater creek with U.S. 180.**

41           **A. Designated uses:** Warmwater aquatic life, livestock watering, wildlife habitat and primary  
42 contact.

43           **B. Criteria:** The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
44 designated uses, except that the following segment-specific criteria apply: the acute and chronic aquatic life criteria  
45 for copper set forth in Subsection I of 20.6.4.900 NMAC shall be determined by multiplying that criteria by the  
46 water effect ratio (“WER”) adjustment expressed by the following equation:

$$\text{WER} = \frac{[10^{0.588+(0.703 \times \log \text{DOC})+(0.395 \times \log \text{Alkalinity})}] \times \left(\frac{100}{\text{Hardness}}\right)^{0.9422}}{19.31}$$

47  
48 For purposes of this section, dissolved organic carbon (DOC) is expressed in units of milligrams carbon per liter or  
49 mg C/L; alkalinity is expressed in units of mg/L as CaCO<sub>3</sub>, and hardness is expressed in units of mg/L as CaCO<sub>3</sub>. In  
50 waters that contain alkalinity concentrations greater than 250 mg/L, a value of 250 mg/L shall be used in the  
51 equation. In waters that contain DOC concentrations greater than 16 mg C/L, a value of 16 mg C/L shall be used in  
52 the equation. In waters that contain hardness concentrations greater than 400 mg/L, a value of 400 mg/L shall be  
53 used in the equation. The alkalinity, hardness and DOC concentrations used to calculate the WER value are those  
54 measured in the subject water sample.

1 [20.6.4.808 NMAC - N, 3/2/2017]

2  
3 **20.6.4.809 CLOSED BASINS: Ephemeral watercourses within smelter tailing soils investigation unit**  
4 **lands at the Chino mines company, limited to Chino mines property subwatershed drainage A and tributaries**  
5 **thereof, Chino mines property subwatershed drainage B and tributaries thereof (excluding the northwest**  
6 **tributary containing Ash spring and the Chiricahua leopard frog critical habitat transect); Chino mines**  
7 **property subwatershed drainage C and tributaries thereof (excluding reaches containing Bolton spring, the**  
8 **Chiricahua leopard frog critical habitat transect and all reaches in subwatershed C that are upstream of the**  
9 **Chiricahua leopard frog critical habitat); subwatershed drainage D and tributaries thereof (drainages D-1,**  
10 **D-2 and D-3, excluding the southeast tributary in drainage D1 that contains Brown spring) and subwatershed**  
11 **drainage E and all tributaries thereof (drainages E-1, E-2 and E-3).**

12 **A. Designated uses:** Limited aquatic life, livestock watering, wildlife habitat and secondary contact.

13 **B. Criteria:** The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
14 designated uses, except that the following segment-specific criteria apply: the acute aquatic life criteria for copper  
15 set forth in Subsection I of 20.6.4.900 NMAC shall be determined by multiplying that criteria by the water effect  
16 ratio (“WER”) adjustment expressed by the following equation:

17 
$$WER = \frac{[10^{0.588+(0.703 \times \log \text{DOC})+(0.395 \times \log \text{Alkalinity})}] \times (\frac{100}{\text{Hardness}})^{0.9422}}{19.31}$$

18 For purposes of this section, dissolved organic carbon (DOC) is expressed in units of milligrams carbon per liter or  
19 mg C/L; alkalinity is expressed in units of mg/L as CaCO<sub>3</sub>, and hardness is expressed in units of mg/L as CaCO<sub>3</sub>. In  
20 waters that contain alkalinity concentrations greater than 250 mg/L, a value of 250 mg/L shall be used in the  
21 equation. In waters that contain DOC concentrations greater than 16 mg C/L, a value of 16 mg C/L shall be used in  
22 the equation. In waters that contain hardness concentrations greater than 400 mg/L, a value of 400 mg/L shall be  
23 used in the equation. The alkalinity, hardness and DOC concentrations used to calculate the WER value are those  
24 measured in the subject water sample.

25 [20.6.4.809 NMAC - N, 3/2/2017]

26  
27 **20.6.4.810 CLOSED BASINS: Perennial reaches of Dog Canyon creek.**

28 **A. Designated uses:** coolwater aquatic life, irrigation, livestock watering, wildlife habitat, public  
29 water supply, and primary contact.

30 **B. Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the  
31 designated uses, except that the following segment-specific criteria apply: the monthly geometric mean of E. coli  
32 bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.

33 [20.6.4.810 NMAC - N, 2/13/2018]

34  
35 **20.6.4.811 - 20.6.4.899 [RESERVED]**

36  
37 **20.6.4.900 CRITERIA APPLICABLE TO EXISTING, DESIGNATED OR ATTAINABLE USES**  
38 **UNLESS OTHERWISE SPECIFIED IN 20.6.4.97 THROUGH 20.6.4.899 NMAC:**

39 **A. Fish culture and water supply:** Fish culture, public water supply and industrial water supply are  
40 designated uses in particular classified waters of the state where these uses are actually being realized. However, no  
41 numeric criteria apply uniquely to these uses. Water quality adequate for these uses is ensured by the general criteria  
42 and numeric criteria for bacterial quality, pH and temperature.

43 **B. Domestic water supply:** Surface waters of the state designated for use as domestic water supplies  
44 shall not contain substances in concentrations that create a lifetime cancer risk of more than one cancer per 100,000  
45 exposed persons. Those criteria listed under domestic water supply in Subsection J of this section apply to this use.

46 **C. Irrigation and irrigation storage:** the following numeric criteria and those criteria listed under  
47 irrigation in Subsection J of this section apply to this use:

- 48 (1) dissolved selenium 0.13 mg/L  
49 (2) dissolved selenium in presence of >500 mg/L SO<sub>4</sub> 0.25 mg/L.

50 **D. Primary contact:** The monthly geometric mean of E. coli bacteria of 126 cfu/100 mL or  
51 MPN/100 ml and single sample of 410 cfu/100 mL or MPN/100 mL and pH within the range of 6.6 to 9.0 apply to  
52 this use. The results for *E. coli* may be reported as either colony forming units (CFU) or the most probable number  
53 (MPN) depending on the analytical method used.

1 **E. Secondary contact:** The monthly geometric mean of *E. coli* bacteria of 548 cfu/100 mL or  
2 MPN/100 mL and single sample of 2507 cfu/100 mL or MPN/100 mL apply to this use. The results for *E. coli* may  
3 be reported as either colony forming units (CFU) or the most probable number (MPN), depending on the analytical  
4 method used.

5 **F. Livestock watering:** the criteria listed in Subsection J of this section for livestock watering apply  
6 to this use.

7 **G. Wildlife habitat:** Wildlife habitat shall be free from any substances at concentrations that are  
8 toxic to or will adversely affect plants and animals that use these environments for feeding, drinking, habitat or  
9 propagation; can bioaccumulate; or might impair the community of animals in a watershed or the ecological  
10 integrity of surface waters of the state. The numeric criteria listed in Subsection J for wildlife habitat apply to this  
11 use.

12 **H. Aquatic life:** Surface waters of the state with a designated, existing or attainable use of aquatic  
13 life shall be free from any substances at concentrations that can impair the community of plants and animals in or  
14 the ecological integrity of surface waters of the state. Except as provided in Paragraph (7) of this subsection, the  
15 acute and chronic aquatic life criteria set out in Subsections I, J, K and L of this section and the human health-  
16 organism only criteria set out in Subsection J of this section are applicable to all aquatic life use subcategories. In  
17 addition, the specific criteria for aquatic life subcategories in the following paragraphs apply to waters classified  
18 under the respective designations.

19 (1) **High quality coldwater:** dissolved oxygen 6.0 mg/L or more, 4T3 temperature 20°C  
20 (68°F), maximum temperature 23°C (73°F), pH within the range of 6.6 to 8.8 and specific conductance a segment-  
21 specific limit between 300 µS/cm and 1,500 µS/cm depending on the natural background in the particular surface  
22 water of the state (the intent of this criterion is to prevent excessive increases in dissolved solids which would result  
23 in changes in community structure). Where a single segment-specific temperature criterion is indicated in  
24 20.6.4.101-899 NMAC, it is the maximum temperature and no 4T3 temperature applies.

25 (2) **Coldwater:** dissolved oxygen 6.0 mg/L or more, 6T3 temperature 20°C (68°F),  
26 maximum temperature 24°C (75°F) and pH within the range of 6.6 to 8.8. Where a single segment-specific  
27 temperature criterion is indicated in 20.6.4.101-899 NMAC, it is the maximum temperature and no 6T3 temperature  
28 applies.

29 (3) **Marginal coldwater:** dissolved oxygen 6 mg/L or more, 6T3 temperature 25°C (77°F),  
30 maximum temperature 29°C (84°F) and pH within the range from 6.6 to 9.0. Where a single segment-specific  
31 temperature criterion is indicated in 20.6.4.101-899 NMAC, it is the maximum temperature and no 6T3 temperature  
32 applies.

33 (4) **Coolwater:** dissolved oxygen 5.0 mg/L or more, maximum temperature 29°C (84°F)  
34 and pH within the range of 6.6 to 9.0.

35 (5) **Warmwater:** dissolved oxygen 5 mg/L or more, maximum temperature 32.2°C (90°F)  
36 and pH within the range of 6.6 to 9.0. Where a segment-specific temperature criterion is indicated in 20.6.4.101-899  
37 NMAC, it is the maximum temperature.

38 (6) **Marginal warmwater:** dissolved oxygen 5 mg/L or more, pH within the range of 6.6 to  
39 9.0 and maximum temperature 32.2°C (90°F). Where a segment-specific temperature criterion is indicated in  
40 20.6.4.101-899 NMAC, it is the maximum temperature.

41 (7) **Limited aquatic life:** The acute aquatic life criteria of Subsections I and J of this section  
42 apply to this subcategory. Chronic aquatic life criteria do not apply unless adopted on a segment-specific basis.  
43 Human health-organism only criteria apply only for persistent pollutants unless adopted on a segment-specific basis.

44 **I. Hardness-dependent acute and chronic aquatic life criteria for metals** are calculated using the  
45 following equations. The criteria are expressed as a function of dissolved hardness (as mg CaCO<sub>3</sub>/L). With the  
46 exception of aluminum, the equations are valid only for dissolved hardness concentrations of 0-400 mg/L. For  
47 dissolved hardness concentrations above 400 mg/L, the criteria for 400 mg/L apply. For aluminum the equations are  
48 valid only for dissolved hardness concentrations of 0-220 mg/L. For dissolved hardness concentrations above 220  
49 mg/L, the aluminum criteria for 220 mg/L apply.

50 (1) **Acute aquatic life criteria for metals:** The equation to calculate acute criteria in µg/L is  
51  $\exp(m_A[\ln(\text{hardness})] + b_A)(CF)$ . Except for aluminum, the criteria are based on analysis of dissolved metal. For  
52 aluminum, the criteria are based on analysis of total recoverable aluminum in a sample that is filtered to minimize  
53 mineral phases as specified by the department. The EPA has disapproved the hardness-based equation for total  
54 recoverable aluminum in waters where the pH is less than 6.5 in the receiving stream for federal purposes of the  
55 Clean Water Act. The equation parameters are as follows:

Metal	$m_A$	$b_A$	Conversion factor (CF)
-------	-------	-------	------------------------

Aluminum (Al)	1.3695	1.8308	
Cadmium (Cd)	0.8968	-3.5699	1.136672-[(ln hardness)(0.041838)]
Chromium (Cr) III	0.8190	3.7256	0.316
Copper (Cu)	0.9422	-1.700	0.960
Lead (Pb)	1.273	-1.460	1.46203-[(ln hardness)(0.145712)]
Manganese (Mn)	0.3331	6.4676	
Nickel (Ni)	0.8460	2.255	0.998
Silver (Ag)	1.72	-6.59	0.85
Zinc (Zn)	0.9094	0.9095	0.978

1 (2) **Chronic aquatic life criteria for metals:** The equation to calculate chronic criteria in  
2  $\mu\text{g/L}$  is  $\exp(m_c[\ln(\text{hardness})] + b_c)(CF)$ . Except for aluminum, the criteria are based on analysis of dissolved metal.  
3 For aluminum, the criteria are based on analysis of total recoverable aluminum in a sample that is filtered to  
4 minimize mineral phases as specified by the department. The EPA has disapproved the hardness-based equation for  
5 total recoverable aluminum in waters where the pH is less than 6.5 in the receiving stream for federal purposes of  
6 the Clean Water Act. The equation parameters are as follows:

Metal	$m_c$	$b_c$	Conversion factor (CF)
Aluminum (Al)	1.3695	0.9161	
Cadmium (Cd)	0.7647	-4.2180	1.101672-[(ln hardness)(0.041838)]
Chromium (Cr) III	0.8190	0.6848	0.860
Copper (Cu)	0.8545	-1.702	0.960
Lead (Pb)	1.273	-4.705	1.46203-[(ln hardness)(0.145712)]
Manganese (Mn)	0.3331	5.8743	
Nickel (Ni)	0.8460	0.0584	0.997
Zinc (Zn)	0.9094	0.6235	0.986

7 (3) Selected values of calculated acute and chronic criteria ( $\mu\text{g/L}$ ).

Hardness as CaCO <sub>3</sub> , dissolved (mg/L)		Al	Cd	Cr III	Cu	Pb	Mn	Ni	Ag	Zn
		25	Acute	512	0.51	180	4	14	1,881	140
	Chronic	205	0.17	24	3	1	1,040	16		34
30	Acute	658	0.59	210	4	17	1,999	170	0.4	54
	Chronic	263	0.19	28	3	1	1,105	19		41
40	Acute	975	0.76	270	6	24	2,200	220	0.7	70
	Chronic	391	0.23	35	4	1	1,216	24		53
50	Acute	1,324	0.91	320	7	30	2,370	260	1.0	85
	Chronic	530	0.28	42	5	1	1,309	29		65
60	Acute	1,699	1.07	370	8	37	2,519	300	1.3	101
	Chronic	681	0.31	49	6	1	1,391	34		76
70	Acute	2,099	1.22	430	10	44	2,651	350	1.7	116
	Chronic	841	0.35	55	7	2	1,465	38		88
80	Acute	2,520	1.37	470	11	51	2,772	390	2.2	131
	Chronic	1,010	0.39	62	7	2	1,531	43		99
90	Acute	2,961	1.51	520	12	58	2,883	430	2.7	145
	Chronic	1,186	0.42	68	8	2	1,593	48		110
100	Acute	3,421	1.65	570	13	65	2,986	470	3.2	160
	Chronic	1,370	0.45	74	9	3	1,650	52		121
200	Acute	8,838	2.98	1,010	26	140	3,761	840	11	301
	Chronic	3,541	0.75	130	16	5	2,078	90		228

Hardness as CaCO <sub>3</sub> , dissolved (mg/L)		Al	Cd	Cr III	Cu	Pb	Mn	Ni	Ag	Zn
220	Acute	10,071	3.23	1,087	28	151	3,882	912	13	328
	Chronic	4,035	0.80	141	18	6	2,145	101		248
300	Acute		4.21	1,400	38	210	4,305	1190	21	435
	Chronic		1.00	180	23	8	2,379	130		329
400 and above	Acute		5.38	1,770	50	280	4,738	1510	35	564
	Chronic		1.22	230	29	11	2,618	170		428

J. Use-specific numeric criteria.

(1) Table of numeric criteria: The following table sets forth the numeric criteria applicable to existing, designated and attainable uses. For metals, criteria represent the total sample fraction unless otherwise specified in the table. Additional criteria that are not compatible with this table are found in Subsections A through I, K and L of this section.

Pollutant	CAS Number	DWS	Irr	LW	WH	Aquatic Life			Type
						Acute	Chronic	HH-OO	
Aluminum, dissolved	7429-90-5		5,000						
Aluminum, total recoverable	7429-90-5					a	a		
Antimony, dissolved	7440-36-0	6						640	P
Arsenic, dissolved	7440-38-2	10	100	200		340	150	9.0	C,P
Asbestos	1332-21-4	7,000,000 fibers/L							
Barium, dissolved	7440-39-3	2,000							
Beryllium, dissolved	7440-41-7	4							
Boron, dissolved	7440-42-8		750	5,000					
Cadmium, dissolved	7440-43-9	5	10	50		a	a		
Chlorine residual	7782-50-5				11	19	11		
Chromium III, dissolved	16065-83-1					a	a		
Chromium VI, dissolved	18540-29-9					16	11		
Chromium, dissolved	7440-47-3	100	100	1,000					
Cobalt, dissolved	7440-48-4		50	1,000					
Copper, dissolved	7440-50-8	1300	200	500		a	a		
Cyanide, total recoverable	57-12-5	200			5.2	22.0	5.2	140	
Lead, dissolved	7439-92-1	15	5,000	100		a	a		
Manganese, dissolved	7439-96-5					a	a		
Mercury	7439-97-6	2		10	0.77				
Mercury, dissolved	7439-97-6					1.4	0.77		
Methylmercury	22967-92-6							0.3 mg/kg in fish tissue	P
Molybdenum, dissolved	7439-98-7		1,000						
Molybdenum, total recoverable	7439-98-7					7,920	1,895		
Nickel, dissolved	7440-02-0	700				a	a	4,600	P
Nitrate as N		10 mg/L							
Nitrite + Nitrate				132 mg/L					
Selenium, dissolved	7782-49-2	50	b	50				4,200	P

Pollutant	CAS Number	DWS	Irr	LW	WH	Aquatic Life			Type
						Acute	Chronic	HH-OO	
Selenium, total recoverable	7782-49-2				5.0	20.0	5.0		
Silver, dissolved	7440-22-4					a			
Thallium, dissolved	7440-28-0	2						0.47	P
Uranium, dissolved	7440-61-1	30							
Vanadium, dissolved	7440-62-2		100	100					
Zinc, dissolved	7440-66-6	10,500	2,000	25,000		a	a	26,000	P
Adjusted gross alpha		15 pCi/L		15 pCi/L					
Radium 226 + Radium 228		5 pCi/L		30.0 pCi/L					
Strontium 90		8 pCi/L							
Tritium		20,000 pCi/L		20,000 pCi/L					
Acenaphthene	83-32-9	2,100						990	
Acrolein	107-02-8	18						9	
Acrylonitrile	107-13-1	0.65						2.5	C
Aldrin	309-00-2	0.021				3.0		0.00050	C,P
Anthracene	120-12-7	10,500						40,000	
Benzene	71-43-2	5						510	C
Benzidine	92-87-5	0.0015						0.0020	C
Benzo(a)anthracene	56-55-3	0.048						0.18	C
Benzo(a)pyrene	50-32-8	0.2						0.18	C,P
Benzo(b)fluoranthene	205-99-2	0.048						0.18	C
Benzo(k)fluoranthene	207-08-9	0.048						0.18	C
alpha-BHC	319-84-6	0.056						0.049	C
beta-BHC	319-85-7	0.091						0.17	C
Gamma-BHC (Lindane)	58-89-9	0.20				0.95		1.8	
Bis(2-chloroethyl) ether	111-44-4	0.30						5.3	C
Bis(2-chloroisopropyl) ether	108-60-1	1,400						65,000	
Bis(2-ethylhexyl) phthalate	117817	6						22	C
Bromoform	75-25-2	44						1,400	C
Butylbenzyl phthalate	85-68-7	7,000						1,900	
Carbon tetrachloride	56-23-5	5						16	C
Chlordane	57-74-9	2				2.4	0.0043	0.0081	C,P
Chlorobenzene	108-90-7	100						1,600	
Chlorodibromomethane	124-48-1	4.2						130	C
Chloroform	67-66-3	57						4,700	C
2-Chloronaphthalene	91-58-7	2,800						1,600	
2-Chlorophenol	95-57-8	175						150	
Chrysene	218-01-9	0.048						0.18	C
Diazinon	333-41-5					0.17	0.17		
4,4'-DDT and derivatives		1.0			0.001	1.1	0.001	0.0022	C,P
Dibenzo(a,h)anthracene	53-70-3	0.048						0.18	C
Dibutyl phthalate	84-74-2	3,500						4,500	
1,2-Dichlorobenzene	95-50-1	600						1,300	
1,3-Dichlorobenzene	541-73-1	469						960	
1,4-Dichlorobenzene	106-46-7	75						190	

Pollutant	CAS Number	DWS	Irr	LW	WH	Aquatic Life			Type
						Acute	Chronic	HH-OO	
3,3'-Dichlorobenzidine	91-94-1	0.78						0.28	C
Dichlorobromomethane	75-27-4	5.6						170	C
1,2-Dichloroethane	107-06-2	5						370	C
1,1-Dichloroethylene	75-35-4	7						7,100	C
2,4-Dichlorophenol	120-83-2	105						290	
1,2-Dichloropropane	78-87-5	5.0						150	C
1,3-Dichloropropene	542-75-6	3.5						210	C
Dieldrin	60-57-1	0.022				0.24	0.056	0.00054	C,P
Diethyl phthalate	84-66-2	28,000						44,000	
Dimethyl phthalate	131-11-3	350,000						1,100,000	
2,4-Dimethylphenol	105-67-9	700						850	
2,4-Dinitrophenol	51-28-5	70						5,300	
2,4-Dinitrotoluene	121-14-2	1.1						34	C
Dioxin		3.0E-05						5.1E-08	C,P
1,2-Diphenylhydrazine	122-66-7	0.44						2.0	C
alpha-Endosulfan	959-98-8	62				0.22	0.056	89	
beta-Endosulfan	33213-65-9	62				0.22	0.056	89	
Endosulfan sulfate	1031-07-8	62						89	
Endrin	72-20-8	2				0.086	0.036	0.060	
Endrin aldehyde	7421-93-4	10.5						0.30	
Ethylbenzene	100-41-4	700						2,100	
Fluoranthene	206-44-0	1,400						140	
Fluorene	86-73-7	1,400						5,300	
Heptachlor	76-44-8	0.40				0.52	0.0038	0.00079	C
Heptachlor epoxide	1024-57-3	0.20				0.52	0.0038	0.00039	C
Hexachlorobenzene	118-74-1	1						0.0029	C,P
Hexachlorobutadiene	87-68-3	4.5						180	C
Hexachlorocyclopentadiene	77-47-4	50						1,100	
Hexachloroethane	67-72-1	25						33	C
Ideno(1,2,3-cd)pyrene	193-39-5	0.048						0.18	C
Isophorone	78-59-1	368						9,600	C
Methyl bromide	74-83-9	49						1,500	
2-Methyl-4,6-dinitrophenol	534-52-1	14						280	
Methylene chloride	75-09-2	5						5,900	C
Nitrobenzene	98-95-3	18						690	
N-Nitrosodimethylamine	62-75-9	0.0069						30	C
N-Nitrosodi-n-propylamine	621-64-7	0.050						5.1	C
N-Nitrosodiphenylamine	86-30-6	71						60	C
Nonylphenol	84852-15-3					28	6.6		
Polychlorinated Biphenyls (PCBs)	1336-36-3	0.50			0.014	2	0.014	0.00064	C,P
Pentachlorophenol	87-86-5	1.0				19	15	30	C
Phenol	108-95-2	10,500						860,000	
Pyrene	129-00-0	1,050						4,000	
1,1,2,2-Tetrachloroethane	79-34-5	1.8						40	C
Tetrachloroethylene	127-18-4	5						33	C,P



Pollutant	CAS Number	DWS	Irr	LW	WH	Aquatic Life			Type
						Acute	Chronic	HH-OO	
Toluene	108-88-3	1,000						15,000	
Toxaphene	8001-35-2	3				0.73	0.0002	0.0028	C
1,2-Trans-dichloroethylene	156-60-5	100						10,000	
1,2,4-Trichlorobenzene	120-82-1	70						70	
1,1,1-Trichloroethane	71-55-6	200							
1,1,2-Trichloroethane	79-00-5	5						160	C
Trichloroethylene	79-01-6	5						300	C
2,4,6-Trichlorophenol	88-06-2	32						24	C
Vinyl chloride	75-01-4	2						24	C

(2) Notes applicable to the table of numeric criteria in Paragraph (1) of this subsection.

(a) Where the letter "a" is indicated in a cell, the criterion is hardness-based and can be referenced in Subsection I of 20.6.4.900 NMAC.

(b) Where the letter "b" is indicated in a cell, the criterion can be referenced in Subsection C of 20.6.4.900 NMAC.

(c) Criteria are in µg/L unless otherwise indicated.

(d) Abbreviations are as follows: CAS - chemical abstracts service (see definition for "CAS number" in 20.6.4.7 NMAC); DWS - domestic water supply; Irr/Irr storage- irrigation or irrigation storage; LW - livestock watering; WH - wildlife habitat; HH-OO - human health-organism only; C - cancer-causing; P - persistent.

(e) The criteria are based on analysis of an unfiltered sample unless otherwise indicated. The acute and chronic aquatic life criteria for aluminum are based on analysis of total recoverable aluminum in a sample that is filtered to minimize mineral phases as specified by the department.

(f) The criteria listed under human health-organism only (HH-OO) are intended to protect human health when aquatic organisms are consumed from waters containing pollutants. These criteria do not protect the aquatic life itself; rather, they protect the health of humans who ingest fish or other aquatic organisms.

(g) The dioxin criteria apply to the sum of the dioxin toxicity equivalents expressed as 2,3,7,8-TCDD dioxin.

(h) The criteria for polychlorinated biphenyls (PCBs) apply to the sum of all congeners, to the sum of all homologs or to the sum of all aroclors.

K. Acute aquatic life criteria for total ammonia are dependent on pH and the presence or absence of salmonids. The criteria in mg/L as N based on analysis of unfiltered samples are as follows:

pH	Where Salmonids Present	Where Salmonids Absent
6.5 and below	32.6	48.8
6.6	31.3	46.8
6.7	29.8	44.6
6.8	28.1	42.0
6.9	26.2	39.1
7.0	24.1	36.1
7.1	22.0	32.8
7.2	19.7	29.5
7.3	17.5	26.2
7.4	15.4	23.0
7.5	13.3	19.9
7.6	11.4	17.0
7.7	9.65	14.4
7.8	8.11	12.1
7.9	6.77	10.1
8.0	5.62	8.40
8.1	4.64	6.95

pH	Where Salmonids Present	Where Salmonids Absent
8.2	3.83	5.72
8.3	3.15	4.71
8.4	2.59	3.88
8.5	2.14	3.20
8.6	1.77	2.65
8.7	1.47	2.20
8.8	1.23	1.84
8.9	1.04	1.56
9.0 and above	0.885	1.32

L. Chronic aquatic life criteria for total ammonia are dependent on pH, temperature and whether fish in early life stages are present or absent. The criteria are based on analysis of unfiltered samples and are calculated according to the equations in Paragraphs (1) and (2) of this subsection. For temperatures from below 0 to 14°C, the criteria for 14°C apply; for temperatures above 30°C, the criteria for 30°C apply. For pH values below 6.5, the criteria for 6.5 apply; for pH values above 9.0, the criteria for 9.0 apply.

(1) Chronic aquatic life criteria for total ammonia when fish early life stages are present:

(a) The equation to calculate chronic criteria in mg/L as N is:

$$((0.0577/(1 + 10^{7.688-pH})) + (2.487/(1 + 10^{pH-7.688})) \times \text{MIN}(2.85, 1.45 \times 10^{0.028 \times (25-T)})$$

(b) Selected values of calculated chronic criteria in mg/L as N:

pH	Temperature (°C)									
	14 and below	15	16	18	20	22	24	26	28	30 and above
6.5 and below	6.67	6.46	6.06	5.33	4.68	4.12	3.62	3.18	2.80	2.46
6.6	6.57	6.36	5.97	5.25	4.61	4.05	3.56	3.13	2.75	2.42
6.7	6.44	6.25	5.86	5.15	4.52	3.98	3.50	3.07	2.70	2.37
6.8	6.29	6.10	5.72	5.03	4.42	3.89	3.42	3.00	2.64	2.32
6.9	6.12	5.93	5.56	4.89	4.30	3.78	3.32	2.92	2.57	2.25
7.0	5.91	5.73	5.37	4.72	4.15	3.65	3.21	2.82	2.48	2.18
7.1	5.67	5.49	5.15	4.53	3.98	3.50	3.08	2.70	2.38	2.09
7.2	5.39	5.22	4.90	4.31	3.78	3.33	2.92	2.57	2.26	1.99
7.3	5.08	4.92	4.61	4.06	3.57	3.13	2.76	2.42	2.13	1.87
7.4	4.73	4.59	4.30	3.78	3.32	2.92	2.57	2.26	1.98	1.74
7.5	4.36	4.23	3.97	3.49	3.06	2.69	2.37	2.08	1.83	1.61
7.6	3.98	3.85	3.61	3.18	2.79	2.45	2.16	1.90	1.67	1.47
7.7	3.58	3.47	3.25	2.86	2.51	2.21	1.94	1.71	1.50	1.32
7.8	3.18	3.09	2.89	2.54	2.23	1.96	1.73	1.52	1.33	1.17
7.9	2.80	2.71	2.54	2.24	1.96	1.73	1.52	1.33	1.17	1.03
8.0	2.43	2.36	2.21	1.94	1.71	1.50	1.32	1.16	1.02	0.897
8.1	2.10	2.03	1.91	1.68	1.47	1.29	1.14	1.00	0.879	0.773
8.2	1.79	1.74	1.63	1.43	1.26	1.11	0.973	0.855	0.752	0.661
8.3	1.52	1.48	1.39	1.22	1.07	0.941	0.827	0.727	0.639	0.562
8.4	1.29	1.25	1.17	1.03	0.906	0.796	0.700	0.615	0.541	0.475
8.5	1.09	1.06	0.990	0.870	0.765	0.672	0.591	0.520	0.457	0.401
8.6	0.920	0.892	0.836	0.735	0.646	0.568	0.499	0.439	0.386	0.339
8.7	0.778	0.754	0.707	0.622	0.547	0.480	0.422	0.371	0.326	0.287
8.8	0.661	0.641	0.601	0.528	0.464	0.408	0.359	0.315	0.277	0.244
8.9	0.565	0.548	0.513	0.451	0.397	0.349	0.306	0.269	0.237	0.208
9.0 and above	0.486	0.471	0.442	0.389	0.342	0.300	0.264	0.232	0.204	0.179

(2) Chronic aquatic life criteria for total ammonia when fish early life stages are absent.

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(a) The equation to calculate chronic criteria in mg/L as N is:

$$((0.0577/(1 + 10^{7.688-pH})) + (2.487/(1 + 10^{pH-7.688})) \times 1.45 \times 10^{0.028 \times (25-MAX(T,7))})$$

(b) Selected values of calculated chronic criteria in mg/L as N:

pH	Temperature (°C)								
	7 and below	8	9	10	11	12	13	14	15 and above
6.5 and below	10.8	10.1	9.51	8.92	8.36	7.84	7.35	6.89	6.46
6.6	10.7	9.99	9.37	8.79	8.24	7.72	7.24	6.79	6.36
6.7	10.5	9.81	9.20	8.62	8.08	7.58	7.11	6.66	6.25
6.8	10.2	9.58	8.98	8.42	7.90	7.40	6.94	6.51	6.10
6.9	9.93	9.31	8.73	8.19	7.68	7.20	6.75	6.33	5.93
7.0	9.60	9.00	8.43	7.91	7.41	6.95	6.52	6.11	5.73
7.1	9.20	8.63	8.09	7.58	7.11	6.67	6.25	5.86	5.49
7.2	8.75	8.20	7.69	7.21	6.76	6.34	5.94	5.57	5.22
7.3	8.24	7.73	7.25	6.79	6.37	5.97	5.60	5.25	4.92
7.4	7.69	7.21	6.76	6.33	5.94	5.57	5.22	4.89	4.59
7.5	7.09	6.64	6.23	5.84	5.48	5.13	4.81	4.51	4.23
7.6	6.46	6.05	5.67	5.32	4.99	4.68	4.38	4.11	3.85
7.7	5.81	5.45	5.11	4.79	4.49	4.21	3.95	3.70	3.47
7.8	5.17	4.84	4.54	4.26	3.99	3.74	3.51	3.29	3.09
7.9	4.54	4.26	3.99	3.74	3.51	3.29	3.09	2.89	2.71
8.0	3.95	3.70	3.47	3.26	3.05	2.86	2.68	2.52	2.36
8.1	3.41	3.19	2.99	2.81	2.63	2.47	2.31	2.17	2.03
8.2	2.91	2.73	2.56	2.40	2.25	2.11	1.98	1.85	1.74
8.3	2.47	2.32	2.18	2.04	1.91	1.79	1.68	1.58	1.48
8.4	2.09	1.96	1.84	1.73	1.62	1.52	1.42	1.33	1.25
8.5	1.77	1.66	1.55	1.46	1.37	1.28	1.20	1.13	1.06
8.6	1.49	1.40	1.31	1.23	1.15	1.08	1.01	0.951	0.892
8.7	1.26	1.18	1.11	1.04	0.976	0.915	0.858	0.805	0.754
8.8	1.07	1.01	0.944	0.855	0.829	0.778	0.729	0.684	0.641
8.9	0.917	0.860	0.806	0.756	0.709	0.664	0.623	0.584	0.548
9.0 and above	0.790	0.740	0.694	0.651	0.610	0.572	0.536	0.503	0.471

At 15°C and above, the criterion for fish early life stages absent is the same as the criterion for fish early life stages present (refer to table in Paragraph (1) of this subsection).

6 [20.6.4.900 NMAC - Rp 20 NMAC 6.1.3100, 10/12/2000; A, 10/11/2002; A, 05/23/2005; A, 07/17/2005; A,  
7 12/1/2010; A, 3/2/2017]

8  
9 **20.6.4.901 PUBLICATION REFERENCES:** These documents are intended as guidance and are available  
10 for public review during regular business hours at the offices of the surface water quality bureau. Copies of these  
11 documents have also been filed with the New Mexico state records center in order to provide greater access to this  
12 information.

13 A. American public health association. 1992. *Standard Methods For The Examination Of Water*  
14 *And Wastewater, 18th Edition.* Washington, D.C. 1048 p.

15 B. American public health association. 1995. *Standard Methods For The Examination Of Water And*  
16 *Wastewater, 19th Edition.* Washington, D.C. 1090 p.

17 C. American public health association. 1998. *Standard Methods For The Examination Of Water And*  
18 *Wastewater, 20th Edition.* Washington, D.C. 1112 p.

19 D. United States geological survey. 1987. *Methods For Determination Of Inorganic Substances In*  
20 *Water And Fluvial Sediments, Techniques Of Water-Resource Investigations Of The United States Geological*  
21 *Survey.* Washington, D.C. 80 p.

- 1 E. United States geological survey. 1987. *Methods for the determination of organic substances in*  
 2 *water and fluvial sediments, techniques of water-resource investigations of the U.S. Geological survey.*  
 3 Washington, D.C. 80 p.
- 4 F. United States environmental protection agency. 1974. *Methods For Chemical Analysis Of Water*  
 5 *And Wastes.* National environmental research center, Cincinnati, Ohio. (EPA-625-/6-74-003). 298 p.
- 6 G. New Mexico water quality control commission. 2003. *(208) State Of New Mexico Water Quality*  
 7 *Management Plan.* Santa Fe, New Mexico. 85 p.
- 8 H. Colorado river basin salinity control forum. 2014. *2014 Review, Water Quality Standards For*  
 9 *Salinity, Colorado River System.* Phoenix, Arizona. 99 p.
- 10 I. United States environmental protection agency. 2002. *Methods For Measuring The Acute Toxicity*  
 11 *Of Effluents And Receiving Waters To Freshwater And Marine Organisms.* Office of research and development,  
 12 Washington, D.C. (5<sup>th</sup> Ed., EPA 821-R-02-012). 293 p. <http://www.epa.gov/ostWET/disk2/atx.pdf>
- 13 J. United States environmental protection agency. 2002. *Short-Term Methods For Estimating The*  
 14 *Chronic Toxicity Of Effluents And Receiving Waters To Freshwater Organisms.* Environmental monitoring systems  
 15 laboratory, Cincinnati, Ohio. ([4th Ed., EPA 821-R-02-01). 335 p.
- 16 K. Ambient-induced mixing, in United States environmental protection agency. 1991. *Technical*  
 17 *Support Document For Water Quality-Based Toxics Control.* Office of water, Washington, D.C. (EPA/505/2-90-  
 18 001). 2 p.
- 19 L. United States environmental protection agency. 1983. *Technical Support Manual: Waterbody*  
 20 *Surveys And Assessments For Conducting Use Attainability Analyses.* Office of water, regulations and standards,  
 21 Washington, D.C. 251 p. <http://www.epa.gov/OST/library/wqstandards/uaavol123.pdf>
- 22 M. United States environmental protection agency. 1984. *Technical Support Manual: Waterbody*  
 23 *Surveys And Assessments For Conducting Use Attainability Analyses, Volume Iii: Lake Systems.* Office of water,  
 24 regulations and standards, Washington, D.C. 208 p. <http://www.epa.gov/OST/library/wqstandards/uaavol123.pdf>  
 25 [20.6.4.901 NMAC - Rp 20 NMAC 6.1.4000, 10/12/2000; A, 05/23/2005; A, 12/1/2010; A, 3/2/2017]

26  
 27 **HISTORY of 20.6.4 NMAC:**

28 **Pre-NMAC History:**

29 Material in the part was derived from that previously filed with the commission of public records - state records  
 30 center and archives:

- 31 WQC 67-1, Water Quality Standards, filed 7-17-67, effective 8-18-67  
 32 WQC 67-1, Amendment Nos. 1-6, filed 3-21-68, effective 4-22-68  
 33 WQC 67-1, Amendment No. 7, filed 2-27-69, effective 3-30-69  
 34 WQC 67-1, Amendment No. 8, filed 7-14-69, effective 8-15-69  
 35 WQC 70-1, Water Quality Standards for Intrastate Waters and Tributaries to Interstate Streams, filed July 17, 1970;  
 36 WQC 67-1, Amendment Nos. 9 and 10, filed 2-12-71, effective 3-15-71  
 37 WQC 67-1, Amendment No. 11, filed 3-4-71, effective 4-5-71  
 38 WQC 73-1, New Mexico Water Quality Standards, filed 9-17-73, effective 10-23-73  
 39 WQC 73-1, Amendment Nos. 1 and 2, filed 10-3-75, effective 11-4-75  
 40 WQC 73-1, Amendment No. 3, filed 1-19-76, effective 2-14-76  
 41 WQC 77-2, Amended Water Quality Standards for Interstate and Intrastate Streams in New Mexico, filed 2-24-77,  
 42 effective 3-11-77  
 43 WQC 77-2, Amendment No. 1, filed 3-23-78, effective 4-24-78  
 44 WQC 77-2, Amendment No. 2, filed 6-12-79, effective 7-13-79  
 45 WQCC 80-1, Water Quality Standards for Interstate and Intrastate Streams in New Mexico, filed 8-28-80, effective  
 46 9-28-80  
 47 WQCC 81-1, Water Quality Standards for Interstate and Intrastate Streams in New Mexico, filed 5-5-81, effective 6-  
 48 4-81  
 49 WQCC 81-1, Amendment No. 1, filed 5-19-82, effective 6-18-82  
 50 WQCC 81-1, Amendment No. 2, filed 6-24-82, effective 7-26-82  
 51 WQCC 85-1, Water Quality Standards for Interstate and Intrastate Streams in New Mexico, filed 1-16-85, effective  
 52 2-15-85  
 53 WQCC 85-1, Amendment No. 1, filed 8-28-87, effective 9-28-87  
 54 WQCC 88-1, Water Quality Standards for Interstate and Intrastate Streams in New Mexico, filed 3-24-88, effective  
 55 4-25-88

- 1 WQCC 91-1, Water Quality Standards for Interstate and Intrastate Streams in New Mexico, filed 5-29-91, effective
- 2 6-29-91
- 3 WQCC 91-1, Amendment No. 1, filed 10-11-91, effective 11-12-91
- 4
- 5 **History of the Repealed Material:**
- 6 WQC 67-1, Water Quality Standards, - Superseded, 10-23-73
- 7 WQC 73-1, New Mexico Water Quality Standards, - Superseded, 3-11-77
- 8 WQC 77-2, Amended Water Quality Standards for Interstate and Intrastate Streams in New Mexico, - Superseded,
- 9 9-28-80
- 10 WQCC 80-1, Water Quality Standards for Interstate and Intrastate Streams in New Mexico, - Superseded, 6-4-81
- 11 WQCC 81-1, Water Quality Standards for Interstate and Intrastate Streams in New Mexico, - Superseded, 2-15-85
- 12 WQCC 85-1, Water Quality Standards for Interstate and Intrastate Streams in New Mexico, - Superseded, 4-25-88
- 13 WQCC 88-1, Water Quality Standards for Interstate and Intrastate Streams in New Mexico, - Superseded, 6-29-91
- 14 WQCC 91-1, Water Quality Standards for Interstate and Intrastate Streams in New Mexico, - Superseded, 1-23-95
- 15 20 NMAC 6.1, Standards for Interstate and Intrastate Streams, - Repealed, 2-23-00
- 16 20 NMAC 6.1, Standards for Interstate and Intrastate Surface Waters, - Repealed, 10/12/2000

2019

Nutrient Temporary Standards for: City of Raton  
Wastewater Treatment Plant NPDES Permit No.  
NM0020273 to Doggett Creek



**NMED ATTACHMENT 3**

New Mexico Environment Department  
Surface Water Quality Bureau  
10/1/2019



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## Background

Nutrients are one of the leading causes of water quality impairment in New Mexico waters. According to the state's 2018-2020 Integrated Report, nutrients are the second leading cause of impairment in New Mexico perennial rivers and streams and the fourth leading cause of impairment in lakes and reservoirs, impairing 1,140 miles and 5,750 acres, respectively. Nutrient pollution in waterbodies results in large daily swings of dissolved oxygen (DO), which can change aquatic community dynamics. In some cases, these changes can result in nuisance algal blooms that lead to fish kills and other harmful effects, such as harmful algal blooms, considerably reduced recreational opportunities, and taste and odor problems in drinking water.

## New Mexico's Narrative Nutrient Criterion and Nutrient Thresholds

Water quality standards regulations in 20.6.4 NMAC include a narrative criterion for distinguishing nutrient conditions that contribute to production of undesirable or nuisance aquatic life. The criterion states, "Plant nutrients from other than natural causes shall not be present in concentrations that will produce undesirable aquatic life or result in a dominance of nuisance species in surface waters of the state" (20.6.4.13.E NMAC). The state interprets this narrative criterion using numeric nutrient threshold values, which are based on reference conditions and applied to specific site classes in perennial, wadable streams, as shown in Table 1.

**Table 1. New Mexico Nutrient Thresholds for Each Site Class (Jessup 2015)**

	TN (mg/L)			TP (mg/L)		
	TN Flat	TN Moderate	TN Steep	TP High-Volcanic	TP Flat-Moderate	TP Steep
<b>Threshold</b>	0.69	0.42	0.30	0.105	0.061	0.030

Notes: mg/L = milligram per liter; TN = total nitrogen; TP = total phosphorus.

Facilities discharging to surface waters covered by the thresholds will likely need water quality-based effluent limits (WQBELs) for nutrients. Because of the limited available dilution in many receiving waters, some facilities will have WQBELs (whether based on total maximum daily loads or not) that require the threshold concentrations to be met "end-of-pipe." However, these required WQBELs might not be economically or technologically achievable for many permittees.

## New Mexico's Temporary Standards Regulation

In 2017, the New Mexico Water Quality Control Commission (Commission) approved the New Mexico water quality standards (WQS) regulation creating a framework for adopting temporary standards. In promulgating this regulation, the Commission sought to address situations where WQBELs are not achievable by creating a clear path to compliance that is achievable and affordable in the near-term and encourages improvements to water quality. The New Mexico temporary standards regulation is based on the U.S. Environmental Protection Agency (EPA) regulation on WQS variances at 40 *Code of Federal Regulations* (CFR) 131.14. EPA approved the New Mexico regulation as Clean Water Act (CWA) effective on August 11, 2017.

A temporary standard could be an appropriate tool for implementing New Mexico's WQS when a petitioner demonstrates that the underlying designated use and criterion, including numeric



interpretations of narrative criteria, are not attainable now or within a defined period of time but may be attainable in the future. A temporary standard may be appropriate when all of the following are met:

1. Existing or proposed discharge control technologies will comply with applicable technology-based effluent limitations, feasible technological controls and other management alternatives;
2. The underlying designated use and criterion, including numeric interpretations of narrative criteria, are not attainable now or within a defined period of time, but may be attainable in the longer term;
3. It is feasible to make incremental improvements in water quality during the proposed term of the temporary standard;
4. The temporary standard will not result in any lowering of currently attained ambient water quality, unless the temporary standard will be used for restoration activities (20.6.4.10.F(1)(b) NMAC, 40 CFR 131.14(b)(2)(i)(A)(2)).

As discussed above, New Mexico's temporary standards regulation at 20.6.4.10(F) NMAC is based on the EPA regulation on WQS variances at 40 CFR 131.14. The New Mexico regulation defines a temporary standard as "a time-limited designated use and criterion for a specific pollutant(s) or water quality parameter(s) that reflect the highest attainable condition (HAC) during the term of the temporary standard" (20.6.4.10.F.12 NMAC). For a temporary standard that applies to a specific discharger, the HAC, which may be considered synonymous with New Mexico's definition of "highest degree of protection feasible in the short-term," must be a quantifiable expression that is one of the following (40 CFR 131.14(b)(1)(ii)(A)):

1. The highest attainable interim criterion; or
2. The interim effluent condition that reflects the greatest pollutant reduction achievable; or
3. If no additional feasible pollutant control technology can be identified, the interim criterion or interim effluent condition that reflects the greatest pollutant reduction achievable with the pollutant control technologies installed at the time the state adopts the WQS variance (temporary standard), and the adoption and implementation of a pollutant minimization program (PMP)<sup>1</sup>.

By reflecting the HAC, a temporary standard provides a mechanism for making progress toward attaining a designated use and water quality criterion that are not currently attainable. Note also that if a temporary standard has a term longer than 5 years, the HAC must be re-evaluated at least once every five (5) years with the opportunity for public input (40 CFR 131.14(b)(1)(v)).

The New Mexico regulations state that "Any person may petition the commission to adopt a temporary standard applicable to all or part of a surface water of the state as provided for in this section and applicable subsections in 40 CFR 131.14" (20.6.4.10.F.1 NMAC). These regulations also specify that the petitioner for a temporary standard must demonstrate that attainment of the underlying designated use and criterion is not attainable in the short term based on one of the following seven factors:

1. Naturally occurring pollutant concentrations prevent the attainment of the use; or
2. Natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating State water conservation requirements to enable uses to be met; or

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<sup>1</sup> A PMP is a structured set of activities to improve processes and pollutant controls that will prevent and reduce pollutant loadings (40 CFR 131.3(p)).

3. Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place; or
4. Dams, diversions or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the water body to its original condition or to operate such modification in a way that would result in the attainment of the use; or
5. Physical conditions related to the natural features of the water body, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life protection uses; or
6. Controls more stringent than those required by sections 301(b) and 306 of the CWA would result in substantial and widespread economic and social impact; or
7. Due to the implementation of actions necessary to facilitate restoration such as through dam removal or other significant wetland or water body reconfiguration activities as demonstrated by the petition and supporting work plan requirements in Paragraphs (4) and (5) of Subsection F of 20.6.4.10 NMAC (in federal regulation at 40 CFR 131.14(b)(2)(i)(A)(2) "Actions necessary to facilitate lake, wetland, or stream restoration through dam removal or other significant reconfiguration activities preclude attainment of the designated use and criterion while the actions are being implemented.").

New Mexico's regulation outlines documentation requirements for a temporary standard petition submitted to the Water Quality Control Commission (WQCC) to demonstrate how the proposed temporary standard meets the requirements, including demonstrating that attainment of the underlying designated use and criterion is not feasible and that the proposed temporary standard represents the HAC.

## Purpose

The purpose of this proposal is to apply the State's framework established in 20.6.4 NMAC to the City of Raton Wastewater Treatment Plant (National Pollutant Discharge Elimination System [NPDES] permit no. NM0020273) (hereafter Raton WWTP) to request a temporary standard from the underlying water quality standards for plant nutrients (i.e., total phosphorus and total nitrogen). Once a temporary standard has been adopted by the WQCC and approved by EPA under CWA section 303(c), it is effective for CWA purposes and serves as the applicable WQS from which federal CWA permits must derive from and comply with as enforceable limits and conditions (20.6.4.12 NMAC).

Attainment of the underlying designated use and criterion is not feasible for the Raton WWTP, and the proposed temporary standard represents the highest attainable condition during the term of the temporary standard. All other designated uses and associated criteria not specified in this proposed temporary standard remain applicable for all CWA and New Mexico Water Quality Act (WQA) purposes and are required through NPDES permit no. NM0020273.

### **Discharger/Receiving Waters:**

The only discharger to be permitted under the terms and conditions of this proposed temporary standard is the Raton WWTP (NM0020273) within the City of Raton in Colfax County, New Mexico. The WWTP discharges to Doggett Creek which is a tributary to Raton Creek, Chicorica Creek, and the Canadian River. Doggett Creek (AU ID NM-2305.A\_255) is located in the Raton Creek 12-digit hydrologic unit code (HUC) 110800010104 in northeastern New Mexico. There are no other permitted discharges to Doggett Creek; however, the City of Raton Water Treatment Facility (NPDES #NM0029891) is permitted to discharge to Raton Creek approximately four miles upstream of its confluence with Doggett Creek.

## Site Background

Raton is the county seat of Colfax County and is located approximately six and a half miles south of Raton Pass on the Colorado-New Mexico border. Other nearby towns include Maxwell (25 miles), Cimarron (40 miles), Springer (40 miles), and Folsom (35 miles) in New Mexico and Trinidad (20 miles) in Colorado. According to the U.S. Census of 2000, the City covers eight square miles with 7,282 people, 3,035 households, and 1,981 families residing within the city's boundaries. Almost 31% of the households had children under the age of 18 living with them; 31% of the households were individuals with 14% of those households being individuals 65 years of age or older; and 35% of the households were non-families. The median income for a household in the City was \$27,028, the median income for a family was \$31,762, and the per capita income was \$14,223. About 15% of families and 17% of the population were below the poverty line in 2000. Since then, the population of Raton dropped to 6,885 in the 2010 Census and was estimated to have dropped to 6,066 by July 1, 2018. The adjusted median household income based on January 2017\$ is \$29,773.

## Watershed Description

Doggett Creek is part of the larger Canadian Headwaters watershed, which is bounded by the Sangre de Cristo Mountains to the west and the Great Plains to the east. From a point south-southeast of Maxwell, NM to its headwaters, the HUC drains approximately 1,725 square miles. Elevation ranges from 11,610 feet above sea level at Vermejo Peak to 5,640 feet at USGS Gage 07211500 near Taylor Springs, NM. Tributaries in this watershed include: Caliente Canyon Creek, York Canyon Creek, Leandro Creek, Vermejo River, VanBremmer Creek, Raton Creek, Chicorica Creek, Uña de Gato Creek, Blosser Arroyo, and Tinaja Creek. The upper portion of Leandro Creek in Valle Vidal Unit of the Carson National Forest is designated as an Outstanding National Resource Water (ONRW). However, Leandro Creek is a tributary to the Vermejo River, which enters the Canadian River south of Maxwell, NM, approximately 30 miles south of the Raton WWTP discharge, and is not expected to be influenced or impacted by this temporary standard.

The geology of the Canadian Headwaters watershed is characterized by sandstone, shale, mudstone, and claystone that are flanked by limestone or calcareous rocks in the west and mafic volcanic rocks in the east. Land cover in the New Mexico portion of watershed is 49% grassland, 31% evergreen forest, 15% shrub/scrub and 2% deciduous forest. Much of the land ownership is private with the exceptions of Maxwell National Wildlife Refuge and a small portion of the Valle Vidal in the headwaters of Leandro Creek. The average annual precipitation in Colfax County is 16.34 inches. Average annual snowfall in the watershed is 72 inches (or 7.2 inches of precipitation).

## Water Quality Standards and Designated Uses

Doggett Creek is classified as a perennial water in New Mexico's surface water quality standards<sup>2</sup> (20.6.4.99 NMAC) with designated uses of warmwater aquatic life, livestock watering, wildlife habitat and primary contact. Doggett Creek is listed on the 2018-2020 Integrated List<sup>3</sup> as impaired due to nutrients and *E. coli* bacteria. The nutrient impairment was first identified in 1998 with data from the 1980s and 1990s. Subsequent sampling results from 2006 and 2015-2016 confirmed the nutrient impairment. Doggett Creek was most recently sampled during NMED's 2015-2016 Canadian watershed

<sup>2</sup> <https://www.env.nm.gov/surface-water-quality/wqs/>

<sup>3</sup> <https://www.env.nm.gov/surface-water-quality/303d-305b/>

survey. Total nitrogen and total phosphorus thresholds were exceeded in 100% of the samples at the station below the Raton WWTP, with a documented diel dissolved oxygen (DO) swing of 13.41 mg/L and periodic DO concentrations below 5.0 mg/L for greater than 4 hours.

## Currently Attained Water Quality

Based on current effluent limitations in NPDES permit no. NM0020273 and the Raton Creek Watershed Total Maximum Daily Load Implementation Plan for the City of Raton WWTP (Appendix D), implementation of this temporary standard will not result in the lowering of existing water quality. The temporary standard includes an implementation schedule for improvements (Appendix C). The current effluent quality will be improved during the term of the temporary standard as described in this proposal. In addition, according to the NPDES permit, the City of Raton is required to conduct a Whole Effluent Toxicity (WET) Test once per year.

## Biological Evaluation of Threatened and Endangered Species

Since the unattainable water quality standard is an *aquatic life criterion*, NMED and EPA must ensure that granting the variance is not likely to jeopardize the continued existence of any threatened or endangered species listed under the Endangered Species Act or result in the destruction or adverse modification of such species' critical habitat (per OAR-340-041-0059(1)(b)(B)). Threatened and endangered species in the Raton Creek watershed include the New Mexican Meadow Jumping Mouse (*Zapus hudsonius luteus*), Canada Lynx (*Lynx canadensis*), North American Wolverine (*Gulo gulo luscus*), Mexican Spotted Owl (*Strix occidentalis lucida*), Piping Plover (*Charadrius melodus*), and Southwestern Willow Flycatcher (*Empidonax traillii extimus*). There are no critical habitats identified in this watershed (USFWS Information for Planning and Consultation, IPaC, <https://ecos.fws.gov/ipac/>).

It is not anticipated that granting this temporary standard will jeopardize threatened and endangered species or result in the destruction or adverse modification of critical habitat. Nor should the temporary standard jeopardize natural communities of conservation concern (e.g., emergent wetland, riverine wetland, prairie, glade, fen) because habitat will not be impacted, and water quality will improve.

## TEMPORARY STANDARD DEMONSTRATION

### Existing and Planned Controls and Current Performance

The Raton Wastewater Treatment Plant (WWTP) is an activated sludge system using an enhanced sequential batch reactor (SBR) (intermittent cycle extended aeration system or ICEAS). The facility operates in a biological nutrient removal (BNR) mode by alternating phases of aeration and anoxic/anaerobic cycles. The secondary effluent from the SBR process is decanted to an effluent equalization basin. The effluent from the equalization basin flows by gravity to either the reuse facility or to ultra-violet (UV) Disinfection. The effluent going through the UV Disinfection is discharged to Doggett Creek. The facility has a design flow of 0.9 million gallons per day (MGD). Its effluent discharge volume averages approximately 0.36 MGD with a maximum weekly average discharge of 0.62 MGD. NMED consulted with the Office of the State Engineer (OSE) to determine whether water rights may constrain treatment options for Raton. OSE confirmed that Raton WWTP does not have any return flow obligations.

Raton's current NPDES permit (NPDES permit no. NM0020273; issued July 1, 2015) has performance-based 30-day average effluent limits expressed in terms of both concentration and mass. These limits

are 10 mg/L and 46.7 lbs/day total nitrogen (TN) and 3.0 mg/L and 14.0 lbs/day total phosphorus (TP). Although these limits are performance-based, they were included in the NPDES permit to protect and maintain existing water quality and prevent further degradation of the receiving water. Discharge monitoring data for the period from January 2017 through September 2018 indicate a long-term average effluent TN concentration of approximately 7.3 mg/L and a long-term average TP concentration of approximately 2.37 mg/L.

Anticipating that its future NPDES permits will include effluent limits based on New Mexico's numeric nutrient thresholds, Raton is examining how the use of chemical precipitation (alum) would affect its treatment system and its effluent pollutant concentrations. Chemical precipitation is one potential treatment option for phosphorus removal. Raton is still at the pilot scale; therefore, the facility has not used chemical precipitation for the full waste stream.

### Technology-Based Effluent Limits for Nutrients

There are no technology-based requirements for nutrients applicable to publicly owned treatment works. Therefore, technology-based effluent limits are not sufficient to meet water quality standards.

### Water Quality-Based Effluent Limits for Nutrients

The Raton WWTP discharges to Doggett Creek, a tributary to Raton Creek, Chicorica Creek, and the Canadian River. New Mexico's narrative nutrient criterion applies to this receiving water, and NMED uses the threshold values for TN and TP in Table 1 to interpret this criterion. NMED has determined that the receiving water falls within the TN Flat class for total nitrogen and the TP Flat-Moderate class for total phosphorus. Thus, the following nutrient threshold concentrations would be used to interpret the narrative criterion and derive the WQBEL:

- TN = 0.69 mg/L
- TP = 0.061 mg/L

The nutrient threshold values are being interpreted as 30-day average values and, therefore, WQBELs may be appropriately expressed as average monthly limits. In the case of Raton, the receiving water has no allowance for mixing because the effluent composes the bulk of flow in Doggett Creek. Thus, the threshold values are applied as "end of pipe" WQBELs. In other words, the average monthly limits for TN and TP are equal to the TN and TP thresholds expressed above.

### Potential Technology Options to Attain the Applicable Water Quality Standard

Appropriate technology options were selected by considering:

- current wastewater treatment plant processes and configuration along with known upgrades being considered (advanced SBR; investigating chemical precipitation for TP removal),
- current effluent concentrations for TN and TP as well as any existing effluent limitations, and
- comparison of design flow and long-term effluent volume (average 30-day discharge is 0.36 million gallons per day (mgd); maximum weekly average discharge is 0.62 mgd; design flow is 0.9 mgd) – the maximum weekly average discharge was used for cost estimations.

With the exception of reverse osmosis (RO), all of the target effluent concentrations for the various treatment options are well above the levels needed to meet WQBELs that would achieve the threshold values. RO is the only technology that approaches the underlying numeric nutrient thresholds. However even with RO, attainment of the underlying nutrient thresholds (Table 1) is uncertain. It was assumed



that the RO system would be added to the end of the existing treatment process and that 100% of the effluent would be treated through the RO system. Because RO is the only option that would allow the facility to approach the underlying designated use and criterion, this option was further considered in the attainability analysis described below.

### Factor Precluding Attainment of the Applicable Water Quality Standard

The basis for this temporary standard request is 40 CFR § 131.10(g) Factor 6, “controls more stringent than those required by sections 301(b) and 306 of the Act would result in substantial and widespread economic and social impact,” as supported by the June 26, 2018 *Substantial and Widespread Economic and Social Impact and Highest Attainable Condition Analysis Report for Raton, New Mexico* (“the Report”) prepared by Tetra Tech and ECONorthwest for EPA and NMED, and included as Appendix A of this document.

Reverse osmosis, which could potentially attain the underlying designated use and criteria (i.e., nutrient thresholds), is not economically feasible to install and operate and would lead to substantial and widespread social and economic impacts throughout the community. EPA’s Interim Economic Guidance<sup>4</sup> describes substantial and widespread economic and social impacts as two separate analyses. For public-sector entities, substantial impacts refer to the financial impacts on the community, taking into consideration current socioeconomic conditions. Widespread impacts, on the other hand, refer to changes in the community’s socioeconomic conditions.

### Substantial Impact Analysis

Whether or not the community faces substantial impacts from additional pollution control options needed to meet the underlying designated use and TN and TP thresholds depends on both the cost of the additional pollution control and the general financial and economic health of the community. The Report estimated the cost of RO based on the average weekly effluent flow of 0.62 mgd, normalized to January 2017\$, and annualized capital costs using a discount rate of 5 percent and a term of 20 years. These costs were added to the annual operation and maintenance (O&M) cost estimates to determine total annual costs. The cost estimate for RO is shown in Table 2.

**Table 2. Estimated Costs for Reverse Osmosis (January 2017\$)**

Technology	Target Effluent Concentration	Capital Cost	O&M Cost	Annualized Costs <sup>1</sup>	Reference
Reverse Osmosis	< 1.0 mg/L TN < 0.01 mg/L TP	\$10,750,800	\$847,916	\$1,710,130	Falk et al. 2011

<sup>1</sup>Annualized costs are based on a discount rate, *i*, of 5%, and term, *n*, of 20 years.

Sewage authorities charge for services, and thus can recover pollution control costs through user fees. The most recent information on the population, number of households, and median household income (MHI) in Raton was collected and used to evaluate the potential impact to the community of installing additional pollution controls at the WWTP. The expected annual cost per household after installing RO would be \$822.06 assuming that 100% of the costs of the project are borne by households. This cost includes the current annual pollution control cost per household (\$230.16) plus the estimated annual incremental pollution control cost per household for RO (\$591.90).

<sup>4</sup> Available online at <https://www.epa.gov/wqs-tech/economic-guidance-water-quality-standards>.

EPA's Interim Economic Guidance describes two tests for determining whether the socioeconomic impact of requiring a pollution control measure would be *substantial*:

- Municipal Preliminary Screener (MPS)
- Secondary Test Indicators

The MPS estimates the total annual pollution control costs per household (existing costs plus those attributable to the proposed project) as a percentage of MHI:

$$\text{MPS} = \text{Average Total Pollution Control Cost per Household/MHI}$$

The analysis proceeds to the Secondary Test if:

- The total annual cost per household exceeds 2.0 percent of MHI—EPA's Interim Economic Guidance suggests the project is likely to result in a substantial economic impact.
- The total annual cost per household is between 1.0 and 2.0 percent of MHI—EPA's Interim Economic Guidance suggests the project may result in a substantial economic impact.

The existing annual sewer cost per household in Raton of \$230.16 is 0.8% of MHI (\$29,773). Requiring RO would increase the annual costs per household to \$822.06, which is 2.8% of MHI, suggesting that the additional treatment is likely to result in a substantial economic impact to the community, therefore the analysis proceeds to the Secondary Test.

The Secondary Test is designed to build upon the characterization of the financial burden identified in the MPS. The Secondary Test indicators for Raton are shown in Table 3.

**Table 3. Secondary Test Indicators**

Indicator	Value for Raton
<i>Debt Indicators</i>	
Bond Rating (if available)	Not available*
Overall Net Debt as a Percent of Full Market Value of Taxable Property	\$5,073,348
<i>Socioeconomic Indicators</i>	
Unemployment Rate	6.1%
Adjusted Median Household Income (January 2017)	\$29,773
<i>Financial Management Indicators</i>	
Property Tax Revenue as a Percent of Full Market Value of Taxable Property	\$637,160
Property Tax Collection Rate	99%

\*Raton does not have a bond rating.

Using the Secondary Test Indicators in Table 3, an average secondary test score of 2.0 was calculated, which indicates socioeconomic conditions that are at the low end of the mid-range category. The Substantial Impacts Matrix from EPA's Interim Guidance was used to determine if RO would result in substantial impacts. The MPS score is considered jointly with the secondary test score to determine the degree of impact. Evaluating the MPS and Secondary Test scores suggests that installation of RO would likely result in substantial economic impacts to the community (highlighted cell in Table 4).

**Table 4. Assessment of Substantial Impacts Matrix for Installing RO**

MPS: 2.8%			
Secondary Test Score: 2.0			
Secondary Test Score	MPS		
	< 1.0%	1.0%–2.0%	> 2.0%
Less than 1.5	?	X	X
Between 1.5 and 2.5	✓	?	X
Greater than 2.5	✓	✓	?

Key:

✓: Impact is not likely to be substantial

X: Impact is likely to be substantial

?: Impact is unclear

✗: Raton score

### Widespread Impact Analysis

The EPA considers widespread impacts to occur if the project will have significant adverse impacts on the local, surrounding community. There are several key factors suggestive of Raton's disadvantaged condition which would contribute to the widespread impact on the community. The widespread impact analysis considered several indicators, including:

- Estimated change in MHI;
- Estimated change in unemployment rate;
- Estimated change in overall net debt as a percent of full market value of taxable property;
- Estimated change in the percentage of households below the poverty line;
- Impact on commercial development potential; and,
- Impact on property values.

### Summary of Widespread Indicators for the City of Raton:

- The pollution control project (RO) needed for Raton to meet WQBELs based on New Mexico's numeric nutrient thresholds would increase the average household annual sewer rates from approximately \$230, or 0.8% of median annual household income, to approximately \$822, or 2.8% of median annual household income. The magnitude of the changes in the percent of MHI for pollution control costs associated with meeting the underlying designated use and criterion (RO) is significant, with sewer fees more than tripling.
- The community median annual household income (MHI) was approximately \$29,600 in 2016, which is substantially lower than the statewide median annual household income of approximately \$45,700. Raton's MHI is consistently substantially lower than national and state averages and has shown stagnant or declining conditions while state and national levels have increased slightly. In addition, wages for jobs in Raton are generally lower than wages in the state as a whole.
- Another factor suggesting that the substantial economic impacts associated with installing RO would be widespread is that the impacts would occur across the entire community. Almost all households and businesses in the community pay for wastewater treatment. The increase in wastewater treatment rates necessary to install RO would apply to all rate payers and thus to almost the entire community. A substantial community-wide increase in wastewater treatment rates would likely have broad negative effects on community financial health. Such broad negative effects on community financial health would likely alter the ways in which people live, work, play, relate to one another, and organize their activities.



Achieving WQBELs derived from the underlying designated use and criterion through treatment would necessitate the installation and operation of RO at the Raton WWTP and would lead to substantial and widespread economic and social impacts to the community.

All analyses can be found in the *Substantial and Widespread Impacts Report* in Appendix A.

## Feasibility of Other Potential Options for Achieving the Applicable Water Quality Standard

An alternate discharge location is not a feasible alternative because the downstream water (Raton Creek) is also impaired for nutrients and would not offer much, if any, dilution capacity. However, the City currently reuses a portion of effluent for non-potable reuse at a golf course during summer and fall months. The reuse varies on average between 40 to 50 percent of the influent flow. The City is collecting data to explore the option of a zero discharge/seasonal discharge permit. Monthly average of the influent and reclaim flow data for the periods extending from March to November 2017 and from March to September 2018 were analyzed. In 2017, forty-one percent (41%) of influent flow was directed to reclaim use. In 2018, fifty-five percent (55%) of the influent was directed to reclaim use.

### Seasonal Discharge / Zero Discharge Options

The City is evaluating 100% re-use of the WWTP flow during the summer/fall months followed by a seasonal effluent nutrient limit for discharge during the winter months. This approach would require the City to upgrade or add a polishing filter, increase the capacity of the reuse pumps, and increase the size of pipes to minimize pipe losses for 100% effluent re-use. However, during winter months, the WWTP would still need to discharge effluent to Doggett Creek because land application would be constrained due to freezing temperatures. Alternatively, as part of this temporary standard proposal, the City will identify and evaluate costs for sending the effluent to a water resource recovery facility in the winter for additional treatment, processing, and re-use in other capacities. This seasonal combination would result in zero discharge and eliminate the need for a NPDES permit for the WWTP but may not be economically or logistically feasible.

### Highest Attainable Effluent Condition (HAC)

A temporary standard is a time-limited designated use and criterion for a specific pollutant(s) or water quality parameter(s) that reflect the highest attainable condition during the term of the temporary standard. The permit limitations expressed during the term of this temporary standard represent the highest attainable condition (HAC) that can be achieved without causing substantial and widespread economic and social impact.

EPA considers the HAC to mean the condition that is both feasible to attain and is closest to the protection afforded by the designated use and criteria. New Mexico defines the HAC as the highest degree of protection feasible in the short term, and the condition that will be the basis for effluent limits during the term of the temporary standard. The HAC options described below are presented in the form of the *interim effluent condition reflecting the greatest pollutant reduction achievable*.

### Summary of Options Evaluated

Treatment options evaluated as candidates for establishing the HAC include optimization of Raton's existing treatment system and technologies (other than RO) that would provide additional reductions in the effluent concentrations of TN and TP. The cost per household was calculated for six potential combinations of treatment options for TN and TP shown in Table 5. The table shows the incremental

annual cost per household of each treatment combination option, total annual pollution control costs per household (including existing annual costs of \$230.16 per household), the resulting percentage of MHI for pollution control, and the corresponding increase in annual sewer bills for households in Raton.

There are several factors to consider when evaluating the range of options in Table 5 to determine the HAC for Raton. If the total annual cost per household (existing annual cost plus the incremental cost related to the proposed project) is well below 1.0 percent of MHI, EPA's Interim Economic Guidance suggests the project will likely not impose a substantial economic impact on the community. Typically, the analysis would not proceed further. However, if the total annual cost per household is fairly close to 1.0 percent of MHI, the project may impose a substantial economic impact on the community due to the community's unique circumstances. In such cases, the unique circumstances should be documented in order to determine the HAC.

**Table 5. Annual Pollution Control Cost Per Household (2017\$) of TN and TP Treatment Combination Options for Raton**

Cost Element	Option A Additional Optimization (TEC = 5.0 mg/L TN) and Chemical Precipitation (TEC = 0.5 mg/L TP)	Option B Denitrification Filters (TEC = 3.0 mg/L TN) and No additional TP treatment (TEC = 2.2 mg/L TP)	Option C Denitrification Filters (TEC = 3.0 mg/L TN) and Chemical Precipitation (TEC = 0.5 mg/L TP)	Option D Optimize Cycle Times (TEC = 7.0 mg/L TN) and Chemical Precipitation Plus Filtration (0.1 mg/L TP)	Option E Additional Optimization (TEC = 5.0 mg/L TN) and Chemical Precipitation Plus Filtration (0.1 mg/L TP)	Option F Denitrification Filters (TEC = 3.0 mg/L TN) and Chemical Precipitation Plus Filtration (0.1 mg/L TP)
Capital Cost	\$681,360	\$1,336,200	\$1,557,540	\$2,252,160	\$2,712,180	\$3,588,360
Annual O&M Cost	\$150,439	\$249,115	\$330,001	\$472,784	\$542,337	\$721,899
Total Annualized Cost	\$205,113	\$356,335	\$454,982	\$653,503	\$759,969	\$1,009,838
Incremental Annual Cost Per Household <sup>1</sup>	\$70.97	\$123.30	\$157.43	\$226.13	\$262.97	\$349.42
Existing Annual Pollution Control Costs Per Household	\$230.16	\$230.16	\$230.16	\$230.16	\$230.16	\$230.16
Total Annual Pollution Control Costs Per Household <sup>2</sup>	\$301.13	\$353.46	\$387.59	\$456.29	\$493.13	\$579.58
% of MHI for Pollution Control <sup>3</sup>	1.01	1.19	1.30	1.53	1.66	1.94
% Increase in Annual Sewer Bill	31	54	68	98	114	152
NMED Interpretation of Results	Impact Unclear	Impact Unclear	Substantial	Substantial	Substantial	Substantial

<sup>1</sup> 2,890 households

<sup>2</sup> Annualized at 5% over 20 years.

<sup>3</sup> Based on adjusted (January 2017\$) MHI of \$29,773.

Other relevant financial or demographic information should be considered that illustrates the unique or atypical circumstances faced by Raton to evaluate its financial capability. Raton's MHI of approximately \$29,600 per year in 2016 was below both state (\$45,700/year) and national (\$55,300/year) medians for the same year and has been declining since 2014. In addition, the city's population and thus the WWTP's revenue base is declining, so that remaining residents will shoulder a higher proportion of the cost burden for WWTP operation every year (i.e., total annual cost per household will increase as population decreases). If the population continues to decline as projected, the percentage of MHI that a given upgrade represents in 2018 will increase over time. The remaining life of the plant's equipment is estimated to be 20 years, and significant cost efficiencies may be gained by incorporating nutrient removal technology as equipment is upgraded as opposed to improving old equipment and processes that will be replaced within a few years. Raton also has indicated in discussions that it has other ongoing and upcoming significant debt obligations related to necessary drinking water and sewer infrastructure upgrades further impeding their financial capability. Accordingly, it was concluded that the costs to implement Options D, E and F would likely cause substantial impacts to the community. Since the widespread indicators do not change depending on the technology option being considered, it was also concluded that the substantial impacts from Options D, E and F would also be widespread throughout the community. Furthermore, Option B was eliminated from consideration because there was no additional treatment required for total phosphorus.

Total residential share of costs between 1.0% and 1.9% of median household income (MHI) are categorized in EPA's Financial Capability Assessment Guidance as having a "medium" burden for the Residential Indicator (RI). Raton's consultant provided a technical memorandum (Appendix B) that further evaluates the feasibility of Options A and C. Several conclusions were drawn.

First, effluent phosphorus concentration is dependent on the amount of particulate phosphorus in the total suspended solids (TSS). Typically, the effluent particulate phosphorus in the TSS varies from one to three percent. This percentage is shifted towards the high end for a WWTP without enhanced phosphorus removal, such as the Raton WWTP. Since the ICEAS process does not have a clarifier and the solids separation is limited to the efficiency of the settle/decant phases of the SBR cycle, a target effluent condition of 0.5 mg/L of total phosphorus may not be regularly attained. Therefore, the target effluent condition (i.e., highest attainable condition), was changed to 1.0 mg/L TP to be consistent with treatment variability.

Second, the required treatment plant improvements necessary to attain TN concentrations of 5 mg/L or less and TP concentrations of 1 mg/L or less require capital equipment expenditures and ongoing operating expenditures. Due to certain process limitations associated with the SBR equipment, it is apparent that the operations expenditures end up comprising the majority of the annual amortized costs, and hence, contributing more to the calculated percentage of MHI increases.

Finally, a comparison of MHI impacts outlined in the Section 4 of the technical memorandum shows that Option C cost impacts are over 5 times more expensive than Option A, resulting in MHI percentage impacts ranging from 1.13 to 1.58 percent, indicating a likely significant impact to the community. Since the widespread indicators do not change depending on the technology option being considered, it was also concluded that the substantial impacts from Option C would also be widespread.

Therefore, based on the widespread and substantial analyses for the six technology options, the ability to make incremental improvements to water quality, and the desire to minimize impacts to the community and ensure an affordable, realistic, and manageable plan, a modified version of Option A

was identified as the highest attainable condition for Raton WWTP (NPDES permit no. NM0020273) and is represented by the target effluent concentrations (TECs) presented in Table 6.

**Table 6. Highest Attainable Conditions**

Pollutant Parameter	Highest Attainable Effluent Condition (mg/L) <sup>1</sup>
Total Nitrogen (TN)	5.0, long-term average; 8.0, 30-day average
Total Phosphorus (TP)	1.0, long-term average; 1.6, 30-day average

1 See Appendix E for conversion from long-term average to 30-day average.

As discussed above, the modified Option A TECs for total nitrogen and total phosphorus are 5.0 mg/L and 1.0 mg/L, respectively. Those TECs represent expected long-term average performance. Consistent with the same principles used to derive NPDES average monthly limits from long-term averages, the long-term average TECs here are converted to highest attainable 30-day interim effluent conditions. Using Table 5-2 from EPA's Technical Support Document for Water Quality-based Toxics Control, a multiplier of 1.6, based on a default coefficient of variation of 0.6, the 95th percentile probability basis, and two samples per month (Appendix E), converts the long-term average TECs to the values provided in Table 6. It is assumed EPA Region 6 will use these 30-day interim effluent condition values as average monthly limit values in the NPDES permit. Where necessary, the state authorizes the use of permit compliance schedules to provide time to meet any WQBEL derived from the highest attainable condition for this temporary standard, consistent with 40 CFR Part 122.47.

## Stakeholder Outreach & Public Participation

Initial public participation ahead of the New Mexico Water Quality Control Commission (WQCC) hearing followed public participation processes detailed in the Water Quality Management Plan – Continuing Planning Process (WQMP-CPP<sup>5</sup>). Temporary standard requests require the same opportunity for public review and comment as a formal rule making.

During permit renewal, NPDES permit no. NM0020273, which will reflect the conditions and requirements of the approved temporary standard, will be public noticed. Pursuant to federal regulations at 40 CFR 124.10(c), the EPA provides notice of draft NPDES permits to the applicant; various local, state, federal, tribal and pueblo government agencies; and other interested parties, and it allows at least 30 days of public comment. During each subsequent permit renewal, the revised permit issued under the terms and conditions of the approved temporary standard will be noticed for a 30-day public review and comment period.

The temporary standard also will be located in 20.6.4 NMAC and is subject to additional public review during all subsequent triennial reviews until expiration of the temporary standard.

<sup>5</sup> <https://www.env.nm.gov/surface-water-quality/wqmp-cpp/>

## Re-Evaluation of Temporary Standard

Pursuant to 20.6.4.10(F) NMAC, all temporary standards are subject to a required review during each succeeding review of water quality standards. Furthermore, the term for this temporary standard exceeds five years, therefore, a re-evaluation of the HAC and the financial need for the temporary standard will occur no less than once every five years from the effective date of the temporary standard. The re-evaluation will use all existing and readily available information in accordance with 40 CFR 131.14(b)(1)(v). If additional requirements or a new, more stringent HAC are identified, the permit will be issued with those additional requirements or new higher attainable condition. During the re-evaluation, NMED will also reassess the financial capability of the City of Raton by re-evaluating the municipal preliminary screener (MPS) and secondary test scores for Raton with updated information, as available. If new information determines that the substantial and widespread social and economic impacts are no longer indicated, NMED will work with the City of Raton to determine feasible improvements and an implementation schedule for the City to meet the underlying water quality standards for total nitrogen and total phosphorus.

The State will accommodate public input on the re-evaluation through the public participation process during the triennial review, or through the public notice and comment period for the draft NPDES permit renewal as described in the section above. NMED will submit the initial results of the re-evaluation to the WQCC. In addition, pursuant to 20.6.4.10(F) NMAC, the discharger will provide a written report to the WQCC documenting the progress of proposed actions, pursuant to the reporting schedule stipulated in the approved temporary standard. The purpose of the review is to determine progress consistent with the original conditions of the petition for the duration of the temporary standard. If the discharger cannot demonstrate that sufficient progress has been made the WQCC may revoke approval of the temporary standard or provide additional conditions to the approval of the temporary standard.

After public participation and WQCC review and approval, the State considers the re-evaluation to be “complete.” NMED will then submit the re-evaluation to EPA within 30 days of completion. If NMED, or the discharger, does not complete their review at the frequency specified, or does not submit the re-evaluation to EPA within 30 days of completion, the temporary standard will no longer be the applicable water quality standard until NMED and the discharger complete and submit the re-evaluation to EPA.

## Proposed Actions and Timelines

The term of this proposed temporary standard is 20 years. This term is only as long as necessary to achieve the highest attainable condition and is consistent with the documentation submitted by the state to justify the term of the temporary standard. NMED has determined the implementation schedule submitted by the City of Raton (Appendix C) and presented in Table 7 to be a reasonable and justified schedule for this temporary standard and will allow the City time to plan and distribute budgets, fees, and expenditures to lessen the impact to the City’s utility budget, and promote community support and encourage success of this proposal. The 20-year timeline provides for planning, pilot tests, funding efforts, and construction while minimizing the impact to city and utility budgets as well as to ratepayers during a weakened economy. The schedule proposes both operational optimization and modification of the existing treatment facility in two phases (Phase 1: Coagulation for phosphorus removal and Phase 2: Aeration control upgrades for nitrogen removal), which are dependent on several factors including:

- The overall utility budget, including other priorities, and depressed economic condition in Raton;
- Time needed to complete and approve final designs;



- Time needed to successfully secure financing;
- Successful bidding and construction processes within budget;
- Staff training for complete facility optimization of new and existing processes; and
- Evaluation of progress necessary to comply with the temporary standard.

In Phase 1, the City will incorporate chemical addition into its treatment scheme. Pilot testing of coagulant addition for phosphorus removal will determine the type of coagulant to be used. It is anticipated that initial testing will be with aluminum sulfate since it is the coagulant that Raton utilizes for drinking water treatment. Based on the coagulant selected, the existing solids handling system might require additional attention to determine its ability to handle the increased chemical sludge, including the impact to the effective treatment volume of the aeration basins. Any potential modifications to the sludge handling system and aeration basins due to increased chemical sludge will be added to Phase 2 to determine the overall cost. The potential process changes in addition to the time required to plan for the Phase 2 budget prevents concurrent undertaking of Phase 1 and Phase 2.

Phase 2 involves aeration control upgrades for nitrogen removal and refinement of chemical addition for phosphorus removal, as identified in Phase 1. In general, Phase 2 upgrades include the following:

- Replace the existing ICEAS system (SBR) programmable logic controller (PLC) and upgrade to Xylem's proposed current Biologic Nutrient Removal (BNR) PLC control logic, NURO Controller
- Install ammonia, nitrate, temperature, and DO sensors and transmitters to provide the necessary data and allow the new NURO control logic to optimize the existing process for nitrification and denitrification, while preventing excess blower run times during low loads.
- Reduce the number of "Air Off-Cycles" in the SBR process to enhance the nitrification process. The justification behind reducing the total amount of off-cycle time is that the denitrification process is faster as compared to nitrification process and the decant cycle time will also contribute to the available denitrification time.
- Update the controller logic to operate the aeration blowers based on the dissolved oxygen (DO) input from the SBR basins. Changes to the aeration cycles in response to demand, might require improvements to/retrofits to the existing aeration blowers.
- The addition of variable-frequency drives (VFDs) to the aeration blowers will enable the NURO controller to maintain DO setpoints in the SBR basins. The Xylem BioWin modeling indicates that oxygen carryover from the aeration ON periods to the aeration OFF periods will occur inhibiting denitrification.
- If the aeration blower motors are not suitable for VFDs, either the motor or the entire blower will require replacement.
- Installation of a combination ammonium/nitrate probe located approximately two thirds of the distance down the length of the SBR basin (toward the decanter end).
- Installation of an online phosphate probe to allow continuous online monitoring of phosphate in the SBR basins.
- External alkalinity addition, if required
- External carbon addition will likely be required to provide the necessary carbon required during the denitrification process. The supplemental carbon should be introduced at the beginning of the last Air OFF period for a given total cycle.
- Installation of a coagulation feed system for chemical removal of phosphorus.

Implementation of the temporary standard and associated tasks requires both capital and operational expenses from Raton's utility budget. The schedule proposes to re-evaluate the progress during each

review of water quality standards and no less than once every five years from the effective date of the temporary standard. The City will keep NMED updated as the design and funding portions of each project phase progresses.

**Table 7. Proposed Actions and Implementation Schedule**

Task	Target Completion Date
NPDES Permit Application/Renewal <ul style="list-style-type: none"> <li>- Continued Optimization Efforts of Existing System</li> <li>- PER for SBR Upgrades to Achieve Nutrient Removal Goal</li> <li>- Pilot Testing of Coagulation</li> <li>- Zero Discharge Feasibility Study</li> </ul>	January 2020 – January 2023
<ul style="list-style-type: none"> <li>- Design for Phase 1 (coagulation for phosphorus removal)</li> <li>- Funding Applications</li> <li>- Zero Discharge Feasibility Study - continued</li> </ul>	January 2023 – January 2025
NPDES Permit Application/Renewal <ul style="list-style-type: none"> <li>- Evaluate Nutrient Temporary Standard Progress incl. Zero Discharge</li> <li>- Complete Final Phase 1 Design</li> <li>- Bidding &amp; Contract Award</li> <li>- Construction of Phase 1</li> <li>- Construction Completion &amp; Start Up</li> </ul>	January 2025 – January 2029
<ul style="list-style-type: none"> <li>- Optimization of New Processes</li> <li>- Evaluate Process Changes</li> <li>- Review &amp; Evaluate PER Goals/Objectives and Plans</li> </ul>	January 2029 – January 2030
NPDES Permit Application/Renewal <ul style="list-style-type: none"> <li>- Evaluate Nutrient Temporary Standard Progress</li> <li>- Design Phase 2 (aeration control upgrade for nitrogen removal)</li> </ul>	January 2030 – January 2031
<ul style="list-style-type: none"> <li>- Pursue Funding</li> <li>- Complete Final Phase 2 Design</li> </ul>	January 2031 – January 2032
<ul style="list-style-type: none"> <li>- Bidding &amp; Contract Award</li> <li>- Construction of Phase 2</li> <li>- Construction Completion &amp; Start Up</li> </ul>	January 2032 – January 2035
NPDES Permit Application/Renewal <ul style="list-style-type: none"> <li>- Evaluate Nutrient Temporary Standard Progress</li> <li>- Optimization of New Processes</li> <li>- Evaluate Process Changes</li> <li>- Review &amp; Evaluate PER Goals/Objectives and Plans</li> </ul>	January 2035 – January 2037
<ul style="list-style-type: none"> <li>- Continued Optimization</li> <li>- Evaluate Nutrient Temporary Standard Progress</li> </ul> End of Temporary Standard and End of Facility Life	January 2037 – January 2040

## Proposed Regulation Language in 20.6.4 NMAC

A temporary standard is a time-limited designated use and criterion that reflects the highest attainable condition during the term specified in this temporary standard. If approved by the EPA, this temporary standard will be the applicable water quality standard in effect for the purposes of developing CWA Section 301(b)(1)(C) NPDES permit limits. The temporary standard may also be used for purposes of CWA Section 401 certifications. Where necessary, the State authorizes the use of permit compliance schedules to provide time to meet any WQBEL derived from the highest attainable condition for this temporary standard, consistent with 40 CFR Part 122.47. The underlying designated use and associated

criteria remain applicable for all other CWA purposes, and all other uses and associated criteria not specified in this temporary standard remain applicable for all CWA purposes.

Currently, the receiving water, Doggett Creek, is an unclassified perennial stream under 20.6.4.99 NMAC. To implement this temporary standard, it will be necessary to add a new water quality standards segment. NMED recommends the following underlined language be added to the standards:

**20.6.4.318 CANADIAN RIVER BASIN: Doggett creek.**

**A. Designated uses:** Warmwater aquatic life, livestock watering, wildlife habitat and primary contact.

**B. Criteria:** The use-specific criteria in 20.6.4.900 NMAC are applicable to the designated uses, except that the following site-specific criteria apply: the monthly geometric mean of E. coli bacteria 206 cfu/100 mL or less, single sample 940 cfu/100 mL or less.

**C. Discharger-specific temporary standard:**

**(1) Discharger:** City of Raton wastewater treatment plant

**(2) NPDES permit number:** NM0020273, Outfall 001

**(3) Receiving waterbody:** Doggett creek, 20.6.4.318 NMAC

**(4) Discharge latitude/longitude:** 36° 52' 13.91" N / 104° 25' 39.18" W

**(5) Pollutant(s):** nutrients; total nitrogen and total phosphorus

**(6) Factor of issuance:** substantial and widespread economic and social impacts (40 CFR 131.10(g)(6))

**(7) Highest attainable condition:** interim effluent condition of 8.0 mg/L total nitrogen and 1.6 mg/L total phosphorus as 30-day averages. The highest attainable condition shall be either the highest attainable condition identified at the time of the adoption, or any higher attainable condition later identified during any reevaluation, whichever is more stringent (40 CFR 131.14(b)(1)(iii)).

**(8) Effective date of temporary standard:** XX-XX-XXXX. This temporary standard becomes effective for Clean Water Act purposes on the date of EPA approval.

**(9) Expiration date of temporary standard:** no later than 20 years from the effective date.

**(10) Reevaluation period:** at each succeeding review of water quality standards and at least once every five years from the effective date of the temporary standard (20.6.4.10.F(8) NMAC, 40 CFR 131.14(b)(1)(v)). If the discharger cannot demonstrate that sufficient progress has been made the commission may revoke approval of the temporary standard or provide additional conditions to the approval of the temporary standard. If the reevaluation is not completed at the frequency specified or the Department does not submit the reevaluation to EPA within 30 days of completion, the underlying designated use and criterion will be the applicable water quality standard for Clean Water Act purposes until the Department completes and submits the reevaluation to EPA. Public input on the reevaluation will be invited during NPDES permit renewals or triennial reviews, as applicable, in accordance with the State's most current approved water quality management plan and continuing planning process.

**(11) Timetable of proposed actions.** Tasks and target completion dates.

**(a) Nutrient optimization of existing system, preliminary engineering report for sequencing batch reactor upgrades, pilot testing of coagulation for phosphorus removal, initiate zero discharge feasibility study. Target completion date, January 2023.**

**(b) Design for phase 1 (coagulation for phosphorus removal), funding applications, complete zero discharge feasibility study. Target completion date, January 2025.**



(c) Reevaluation of temporary standard including zero discharge feasibility, progress report. January 2025.

(d) NPDES permit renewal application, final design completion for phase 1, bidding and contract award, construction of phase 1, construction completion and start up. Target completion date, January 2029.

(e) Optimization of facility, evaluation of process changes, review and evaluate engineering report goals, objectives and plans. Target completion date, January 2030.

(f) Reevaluation of temporary standard, progress report. January 2030.

(g) NPDES permit renewal application, design phase 2 (aeration control upgrade for nitrogen removal). Target completion date, January 2031.

(h) Funding applications, final design completion for phase 2. Target completion date January 2032.

(i) Bidding and contract award, construction of phase 2, construction completion and start up. Target completion date, January 2035.

(j) Reevaluation of temporary standard, progress report. January 2035.

(k) NPDES permit renewal application, optimization of facility, evaluation of process changes, review and evaluate engineering report goals, objectives and plans. Target completion date, January 2037.

(l) Continued operational optimization, reevaluation of temporary standard, progress report. January 2040.

#### **Appendices**

Appendix A:	Raton Temporary Standard Final Report
Appendix B:	City of Raton and FEI Engineer Technical Memorandum
Appendix C:	City of Raton/Raton Water Works Nutrient Removal Schedule
Appendix D:	Total Maximum Daily Load (TMDL) Implementation Plan for Raton WWTP
Appendix E:	Calculation of the Highest Attainable Interim Effluent Conditions