

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

**IN THE MATTER OF PETITION TO AMEND  
SURFACE WATER QUALITY STANDARDS  
20.6.4 NMAC  
New Mexico Environment Department,  
Petitioner.**

**WQCC 14-05 (R)**

**DIRECT TESTIMONY OF KRISTINE PINTADO**

**I. INTRODUCTION**

My name is Kristine Pintado and I am currently employed as the Water Quality Standards Coordinator with the New Mexico Environment Department ("NMED"), Resource Protection Division, Surface Water Quality Bureau ("SWQB").

I have a Bachelor's Degree in Dairy Science and a Master's Degree in Plant Pathology from Louisiana State University. I have worked for two and a half years in my current position, where my duties include the development of proposals to update the surface water quality standards. Previously, I worked for 19 years in the Louisiana Department of Environmental Quality ("Louisiana DEQ") as an Environmental Scientist in surface water quality management and pollution control programs implementing Clean Water Act ("CWA") requirements. My experience includes developing and adopting revisions to Water Quality Standards ("WQS") in New Mexico and Louisiana, and developing water discharge permits in accordance with state and federal rules and policies for industrial and municipal facilities for the Louisiana DEQ.

1 My professional resume is included as SWQB Exhibit 14. My testimony will  
2 begin with discussion on some minor, but practical, changes to the definitions in Section  
3 7 of 20.6.4 New Mexico Administrative Code ("NMAC"), which includes addition of  
4 definitions for Most Probable Number ("MPN"), pH, closed basin and irrigation storage.  
5 Also, the definition for colony forming units ("cfu") is changed to allow for the use of  
6 Most Probable Number ("MPN"). Following this, I will discuss two of the more  
7 substantial amendments proposed by the Department for the Triennial Revisions.

8 The first significant proposal is for the addition of a new Subsection F of  
9 20.6.4.10 NMAC. This provision would allow for temporary standards to be adopted into  
10 the WQS. Following that discussion is testimony on the second more substantial change  
11 which is to Section 20.6.4.16 NMAC. This provision for planned piscicide applications is  
12 updated to reflect that in many cases these applications now require U.S. Environmental  
13 Protection Agency ("EPA") National Pollutant Discharge Elimination System  
14 ("NPDES") Pesticide General Permit ("PGP") coverage, and allows the Water Quality  
15 Control Commission ("WQCC") the discretion of whether to hold a public hearing or  
16 meeting for those planned applications which are not covered under the EPA's PGP.

17 My testimony will continue with recommendations to list five waters determined  
18 as ephemeral under 20.6.4.97 NMAC pursuant to Subsections C and D of 20.6.4.15  
19 NMAC, and then followed by changes to the descriptions for intermittent or perennial  
20 waters under Sections 20.6.4.98 and 20.6.4.99 NMAC, for certain segments in Sections  
21 20.6.4.101 NMAC through 20.6.4.317 NMAC and in Section 20.6.4.900 NMAC.

**II. PROPOSALS – Section 7 of 20.6.4 NMAC**

**A. Proposed Amendments to 20.6.4.7 NMAC**

The following are the proposed changes to 20.6.4.7 NMAC:

**20.6.4.7 DEFINITIONS:** Terms defined in the New Mexico Water

Quality Act, but not defined in this part will have the meaning given in the Water

Quality Act.

**A. Terms beginning with numerals or the letter “A,” and abbreviations for units.**

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

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

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

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

**20.6.4.7.A(3)(b) NMAC through 20.6.4.7.A(3)(f) NMAC – No changes proposed.**

(g) “MPN” means most probable number per 100 milliliters.

1                    **(gh)** “NTU” means nephelometric turbidity unit;

2                    **(hi)** “pCi/L” means picocuries per liter.

3                    **(j)** “pH” means the measure of the acidity or alkalinity and is  
4 expressed in standard units (su).

5                    **20.6.4.7.A(4) NMAC through 20.6.4.7.B(4) NMAC – No changes proposed.**

6                    **C. Terms beginning with the letter “C”.**

7                    **(1)** “CAS number” means an assigned number by chemical abstract  
8 service (CAS) to identify a substance. CAS numbers index information published in  
9 chemical abstracts by the American chemical society.

10                   **(2)** “Chronic toxicity” means toxicity involving a stimulus that  
11 lingers or continues for a relatively long period relative to the life span of an  
12 organism. Chronic effects include, but are not limited to, lethality, growth  
13 impairment, behavioral modifications, disease and reduced reproduction.

14                   **(3)** “Classified water of the state” means a surface water of the state,  
15 or reach of a surface water of the state, for which the commission has adopted a  
16 segment description and has designated a use or uses and applicable water quality  
17 criteria in 20.6.4.101 through 20.6.4.899 NMAC.

18                   **(4)** “Closed basin” is a basin where topography prevents the surface  
19 outflow of water and water escapes by evapotranspiration or percolation.

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

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

8                   (67) “**Commission**” means the New Mexico water quality control  
9 commission.

10                  (78) “**Criteria**” are elements of state water quality standards,  
11 expressed as constituent concentrations, levels or narrative statements, representing a  
12 quality of water that supports a use. When criteria are met, water quality will protect  
13 the designated use.

14  
15 **20.6.4.7.D NMAC – 20.6.4.7.H (2) NMAC No changes proposed.**  
16

17 **I. Terms beginning with the letter “I”.**

18                  (1) “**Industrial water supply**” means the use or storage of water by a  
19 facility for process operations unless the water is supplied by a public water system.  
20 Industrial water supply does not include irrigation or other agricultural uses.

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

4                   (3) **“Interstate waters”** means all surface waters of the state that cross  
5 or form a part of the border between states.

6                   (4) **“Intrastate waters”** means all surface waters of the state that are  
7 not interstate waters.

8                   (5) **“Irrigation” or “irrigation storage”** means application of water  
9 to land areas to supply the water needs of beneficial plants.

10                  (6) “Irrigation storage” means storage of water to supply the needs of  
11 beneficial plants.

12                  J.     **Terms beginning with the letter “J”. [RESERVED]**

13                  K.     **Terms beginning with the letter “K”. [RESERVED]**

14  
15                  **20.6.4.7.L NMAC through 20.6.4.W(5) NMAC- No changes proposed.**

16  
17                  **X. Terms beginning with the letters “X” through “Z”. [RESERVED]**  
18 [20.6.4.7 NMAC - Rp 20 NMAC 6.1.1007, 10-12-00; A, 7-19-01; A, 05-23-05; A,  
19 07-17-05; A, 08-01-07; A, 12-01-10; A, 01-14-11, A, XX-XX-XX]

1        **B. BASIS FOR PROPOSALS – Section 7 of 20.6.4 NMAC**

2            The definition for cfu is amended to clarify the SWQB's support of results  
3        based on alternate enumeration methods for the detection of enterococci and *E. coli* in  
4        ambient waters, and in wastewater and sludge as approved by EPA (68 FR 43272, July  
5        21, 2003 and 72 FR 14220, March 26, 2007). This change to the definition was not  
6        previously shown as an amendment in the petition, and is included now as a correction.  
7        By including the alternate enumeration in the definition for cfu, the Department also  
8        clarifies in an efficient manner that the approved method may be used in reporting  
9        results for the 52 classified segments with segment specific *E. coli* criteria expressed in  
10       colony-forming units ("cfu") per 100 milliliters ("mL") or cfu/100 mL, without adding  
11       the language to each segment in the WQS. The abbreviation and units for most  
12       probable number ("MPN") is also added to the definitions section of the WQS in  
13       Subparagraph 20.6.4.7.A (3)(g) NMAC, to be consistent with the previous  
14       recommendations. The affected Subparagraph numbers are changed accordingly. The  
15       Department is also proposing the addition of similar language in Subsections D and E of  
16       20.6.4.900 NMAC, to allow for the use of this enumeration method for *E. coli*. A memo  
17       detailing the reasons for the Department's recommendation on the use of alternate  
18       enumeration methods is attached as SWQB Exhibit 15.

19            A definition for pH and the unit of measure for pH, standard units, is  
20        recommended to be included in 20.6.4.7.A (3)(j) NMAC. The term pH is mentioned  
21        throughout the water quality standards, but neither pH nor its unit of measure (su) is  
22        defined.

1 The SWQB proposes to add a definition for “closed basin” in 20.6.4.7.C (4)  
2 NMAC. Surface waters are described in closed basins within Sections 20.6.4.801-806  
3 NMAC, but the term “closed basin” is not defined in the water quality standards. The  
4 definition is based on a classification scheme used by the U.S. Geological Survey  
5 (“USGS”)<sup>1</sup>.

6 Most reservoirs classified in the water quality standards include the designated  
7 use “irrigation storage” but irrigation storage is not separately defined, so is  
8 recommended to be added in 20.6.4.7.I (j) (5) NMAC.

9 The structure change (e.g., renumbering of subparagraphs, etc.) resulting from  
10 these proposals is in accordance with the style and format for the New Mexico  
11 Administrative Code.

12  
13 **III. PROPOSALS –20.6.4.10.F NMAC Temporary Standards and Section H of**  
14 **20.6.4.12 NMAC Compliance with Water Quality Standards**

15 **A. BACKGROUND AND PURPOSE**

16 The SWQB is proposing a new provision in 20.6.4.10 NMAC of the WQS that  
17 allows the WQCC to adopt temporary standards. In this provision, the temporary standard  
18 is an interim water quality criterion that is only applied for a limited duration while  
19 incremental improvements are made to achieve the original WQS. The temporary

---

<sup>1</sup> Winograd, I.J., and Thordarson, William, 1975, Hydrogeologic and hydrochemical framework, south-central Great Basin, Nevada-California, with special reference to the Nevada Test Site: U.S. Geological Survey Professional Paper 712-C, 126 p.



1 standard encourages maintenance of the original criterion as a goal instead of removing  
2 or putting in place a criterion that represents a lesser goal. The temporary WQS may  
3 apply to a specified water body, or portion thereof, and to a specified criterion or  
4 pollutant. All other applicable WQS will apply (e.g., any other criteria adopted to protect  
5 the designated use). A temporary WQS applies to a particular designated use with  
6 associated pollutant(s) criteria for a specified period as justified by the petitioner, with  
7 requirements as approved by the WQCC and the EPA.

8 Contrary to what others may state, the temporary WQS will not be a “free pass”  
9 for polluters. The petition for a temporary WQS will, of necessity, contain a work plan  
10 with controls or other limitations tightening over time, which shows progress towards  
11 achieving the original criterion. The temporary WQS is subject to state and federal  
12 requirements, subject to hearing and public comment and once adopted by the WQCC  
13 will not be effective unless approved by the EPA (40 C.F.R. § 131.21(c)).

14 The State’s WQS (20.6.4 NMAC) and the federal regulations (40 C.F.R. §§  
15 131.6(a), (c), 131.10, and 131.11) require designation of beneficial uses and criteria to  
16 support those uses be specified for a water body. Therefore, temporary WQS must  
17 identify the criterion to be in place for the term of the temporary standard. Because  
18 temporary standards are changes to the WQS, they are subject to review at least every  
19 three years or during the next Triennial Review. If there is any new information  
20 indicating that the modified 101(a) use is attainable for water bodies in which a  
21 downgrade has been approved (if the temporary WQS does not retain a Section 101(a)  
22 use), and if so, revise the WQS accordingly (40 C.F.R. § 131.20(a)). If the subsequent

1 Triennial Review of the temporary WQS indicates that a more stringent criterion is  
2 attainable, then the temporary standard and WQS should be revised accordingly. If,  
3 however, it is demonstrated to the WQCC during the Triennial Review that the original  
4 WQS remains unattainable, and the WQCC determines that additional time is warranted,  
5 then the necessary revisions should be made to the temporary WQS, and resubmitted to  
6 EPA for review. The EPA recognizes that in some circumstances it may be warranted to  
7 approve a temporary WQS that extends beyond a three year period. Such circumstances  
8 will be based on the initial demonstration made by the petitioner, and the justification of  
9 the proposed timeframe.

10 A temporary WQS should also identify interim milestones to be met in the  
11 associated timeline in order to ensure that reasonable progress is made toward meeting  
12 the original WQS (EPA Water Quality Standards Handbook, Second Edition, 1994).  
13 Interim progress reviews of the temporary WQS should demonstrate that steps are being  
14 followed in accordance with the temporary WQS (e.g., work plan), as approved by the  
15 WQCC and EPA. If approved conditions are not being met or if sufficient progress is not  
16 being made toward meeting the original and underlying WQS, a temporary criterion may  
17 be revoked by the WQCC. At that time the original criterion becomes effective. To be  
18 enforceable, the temporary WQS and requirements may also be placed into a NPDES  
19 discharge permit by the EPA. Therefore, the proposal includes the addition of a new  
20 subsection H to 20.6.4.12 NMAC to allow the EPA to incorporate and enforce the  
21 temporary standard into the permit.

1 The EPA expects states to address each of these items in their submittal for a  
2 temporary standard, and each is discussed in greater detail below as part of the proposed  
3 provision<sup>2</sup>.

4 **B. PROPOSED AMENDMENT**

5 The following are the proposed changes to 20.6.4.10 NMAC and 20.6.4.12  
6 NMAC:

7 **20.6.4.10 REVIEW OF STANDARDS; NEED FOR ADDITIONAL STUDIES:**

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

12 **20.6.4.10.B NMAC – 20.6.4.10.E NMAC – no changes proposed**

13 **F. Temporary Standards.**

14 (1) Any person may petition the commission to adopt a temporary  
15 standard applicable to all or part of a surface water of the state as provided for in this  
16 section. The commission may adopt a proposed temporary standard if the petitioner  
17 demonstrates that:

---

<sup>2</sup> For further background information please refer to EPA's Advanced Notice of Proposed Rulemaking (63 FR No. 129, July 7, 1998); EPA's Water Quality Standards Handbook Section 5-3 (1994); Memorandum from EPA's Office of Water, "Variances in Water Quality Standards," March 15, 1985; 48 FR 51400, 51403 (Nov. 8, 1983); and Decision of the General Counsel No. 58, In Re Bethlehem Steel Corporation, March 29, 1977.

1                   (a) attainment of the associated designated use may not be feasible  
2                   in the short term due to one or more of the factors listed in 40 CFR 131.10(g) as  
3                   demonstrated by the petition and supporting work plan requirements in paragraphs (4),  
4                   (5) and (6) below;

5                   (b) the proposed temporary standard represents the highest degree  
6                   of protection feasible in the short term, limits the further degradation of water quality to  
7                   the minimum necessary to achieve the original standard by the expiration date of the  
8                   temporary standard, and adoption will not cause the further impairment or loss of an  
9                   existing use;

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

14                  (d) for restoration activities, nonpoint source or other control  
15                  technologies shall limit downstream impacts, and if applicable, existing or proposed  
16                  discharge control technologies shall be in place consistent with subparagraph (c).

17                  (2) A temporary standard shall apply to specific pollutant(s), and to  
18                  specific water body segment(s). The adoption of a temporary standard does not exempt  
19                  dischargers from complying with all other applicable water quality standards or control  
20                  technologies.

1                   (3) Designated uses shall not be modified on a temporary basis.

2                   Designated use attainment as reported in the CWA Section 305(b)/303(d) Integrated

3                   Report shall be based on the original standard and not on a temporary standard.

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

5                               (a) identify the currently applicable standard(s), the proposed  
6                               temporary standard and the surface water(s) of the state to which the temporary  
7                               standard would apply;

8                               (b) demonstrate that the proposed temporary standard meets the  
9                               requirements in this Subsection;

10                              (c) present a work plan and timetable for achieving compliance with  
11                              the original standard;

12                              (d) include any other information necessary to support the petition.

13                   (5) As a condition of a petition for a temporary standard, in addition to  
14                   meeting the requirements in this Subsection, the petitioner shall prepare a supporting  
15                   work plan in accordance with subparagraph (6) to conduct the analysis required in this  
16                   Subsection, and submit the work plan to the department for review and comment. Upon  
17                   revision of the work plan based on input from the department, the petitioner shall  
18                   conduct the analyses in accordance with the work plan. The department or the petitioner  
19                   may petition the commission to adopt a temporary standard if the conclusions of the  
20                   analysis support such action.

1           (6) The work plan to support a temporary standard petition shall identify  
2           the factor(s) listed in 40 CFR 131.10(g) affecting attainment of the standard that will be  
3           analyzed and the timeline for specific actions to be taken to achieve the uses attainable  
4           over the term of the temporary standard, including baseline water quality, and any  
5           investigations, projects, facility modifications, monitoring, or other measures necessary  
6           to achieve compliance with the original standard. The work plan shall include  
7           provisions for review of progress in accordance with subparagraph (9), public notice  
8           and consultation with appropriate state and federal agencies.

9           (7) The commission may condition the approval of a temporary standard  
10           by requiring additional monitoring, relevant analyses, the completion of specified  
11           projects, submittal of information, or any other actions.

12           (8) Temporary standards may be implemented only after appropriate  
13           public participation, commission approval and adoption pursuant to this Subsection for  
14           all state purposes, and EPA Clean Water Act Section 303 (c) approval for any federal  
15           action.

16           (9) All temporary standards are subject to a required review during each  
17           succeeding review of water quality standards conducted in accordance with Subsection  
18           A of 20.6.4.10 NMAC. The purpose of the review is to determine progress consistent  
19           with the original conditions of the petition for the duration of the temporary standard. If  
20           sufficient progress has not been made the commission may revoke approval of the

1 temporary standard or provide additional conditions to the approval of the temporary  
2 standard.

3 (10) The commission may consider a petition to extend a temporary  
4 standard. The effective period of a temporary standard shall be extended only if  
5 demonstrated to the department that the factors precluding attainment of the underlying  
6 standard still apply, that the petitioner is meeting the conditions required for approval of  
7 the temporary standard, and that reasonable progress towards meeting the underlying  
8 standard is being achieved.

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

12 (12) Temporary standards shall be identified in 20.6.4.97 – 899 NMAC as  
13 appropriate for the surface water affected.

14 [20.6.4.10 NMAC - Rp 20 NMAC 6.1.1102, 10-12-00; Rn, 20.6.4.9 NMAC, 05-23-05;  
15 A, 05-23-05; A, 12-01-10; A, XX-XX-XX]

16 **20.6.4.11 NMAC - No changes proposed.**

17 **20.6.4.12 COMPLIANCE WITH WATER QUALITY STANDARDS:** The  
18 following provisions apply to determining compliance for enforcement purposes; they  
19 do not apply for purposes of determining attainment of uses. The department has

1 developed assessment protocols for the purpose of determining attainment of uses that  
2 are available for review from the department's surface water quality bureau.

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

5 **20.6.4.12.B NMAC through 20.6.4.12.G NMAC - No changes proposed.**

6 H. It shall be a policy of the commission to allow a temporary standard  
7 approved and adopted pursuant to Subsection F of 20.6.4.10 NMAC to be included in  
8 the applicable NPDES permit as enforceable limits and conditions. The temporary  
9 standard and schedule of actions may be included at the earliest practicable time, and  
10 shall specify milestone dates so as to measure progress towards meeting the original  
11 standard.

12 [20.6.4.12 NMAC - Rp 20 NMAC 6.1.1104, 10-12-00; A, 10-11-02; Rn, 20.6.4.11  
13 NMAC, 05-23-05; A, 05-23-05; A, 12-01-10; A, XX-XX-XX]

14  
15 **C. BASIS FOR PROPOSAL**  
16

17 The proposed new provision in 20.6.4.10.F NMAC allows for a temporary  
18 standard that provides for interim adjustments to criteria without downgrading the  
19 original designated use. As compared to other processes in the state's WQS, such as the  
20 site-specific criteria process described in the water quality standards under 20.6.4.10.D  
21 NMAC which changes the criteria, or the use attainability analysis ("UAA") process in



1 20.6.4.15 NMAC which changes the designated use, the central principle of the  
2 temporary standard is that the underlying designated use and criteria are not changed,  
3 modified or replaced. The designated CWA use remains in place while providing a  
4 defined period of time to document and evaluate improvements aimed towards achieving  
5 the original water quality standard.

6 The EPA provides the basis for its support of temporary WQS in its Water  
7 Quality Standards Handbook (Second Edition, 1994). They reiterated this position in the  
8 1998 Advanced Notice of Proposed Rulemaking ("ANPRM") (63 FR No. 129, July 7,  
9 1998) and in more recently proposed changes to the federal water quality standards  
10 regulations (78 FR No. 171, September 4, 2013). The legal basis for granting a  
11 temporary WQS is that the state has fulfilled the substantive regulatory requirements for  
12 a use attainability demonstration under one or more of the 40 C.F.R. § 131.10(g) factors.<sup>3</sup>

13 The federal WQS regulations allow states and tribes to adopt procedures  
14 providing for regulatory flexibilities when implementing WQS programs. The federal  
15 regulations at 40 C.F.R. § 131.13 state that:

16 "States may, at their discretion, include in their State standards, policies generally  
17 affecting their application and implementation, such as mixing zones, low flows  
18 and variances. Such policies are subject to EPA review and approval."  
19 40 C.F.R. § 131.13. (SWQB Exhibit 16).

20  
21 Therefore, states can adopt procedures or rules for development of site-specific  
22 criteria, revision of designated uses, provisions for mixing zones, permit compliance

---

<sup>3</sup> The complete history for the EPA's position is found in Section 5.3 of EPA's Water Quality Standards Handbook, 1994.

1 schedules or enactment of temporary or interim standards. New Mexico has previously  
2 adopted several of these federally approved tools into the WQS (Subsections (B) and (G)  
3 of 20.6.4.11 NMAC; subsections (A) through (D) of 20.6.4.15 NMAC).

4       The need for a temporary standard is apparent in the state's application of the  
5 general narrative nutrient criteria in subsection E of 20.6.4.13 NMAC. Aquatic  
6 ecosystems are very sensitive to nutrient pollutant concentrations, which can result in  
7 excessive algae growth, impairments for dissolved oxygen, toxic algae blooms and loss  
8 of aquatic life. The EPA has published recommended ecoregion levels of nutrients, or  
9 levels of total nitrogen and total phosphorus, for rivers and streams, lakes and wetlands  
10 across the country (SWQB Exhibit 17). The state applies an approach to evaluate  
11 compliance with the narrative criteria in its CWA Sections 305(b)/303(d) assessment  
12 process that combines ecoregion nutrient thresholds, developed using the EPA study and  
13 additional state data, with response indicators such as low dissolved oxygen levels and  
14 high levels of algae growth as indicated by periphyton chlorophyll a levels. SWQB  
15 Exhibit 18. However, while nutrient levels based on least-impacted, natural streams are  
16 scientifically well-based and environmentally protective these levels are also very low.  
17 The control and removal of nutrients in wastewater to protect such levels requires the  
18 most advanced treatment currently available, and in some cases is beyond the capabilities  
19 of currently known technology. Based on recent experiences in western states such as  
20 Utah, Montana and Colorado, it is also reasonable to expect that immediate  
21 implementation of nutrient controls to such levels is likely to cause significant economic  
22 impacts in New Mexico. Under such a scenario, the state currently has no provision in

1 the standards to allow flexibility while progress is being made toward achieving the water  
2 quality based effluent limits (“WQBELs”) required in permits or Total Maximum Daily  
3 Loads (“TMDLs”) for nutrient controls, or for other new and more stringent water quality  
4 standards as a result of recent recommendations from the EPA, such as for ammonia or  
5 selenium. Other regulatory alternatives for flexibility within the context of the water  
6 quality standards, such as compliance schedules allowed under subsection G in 20.6.4.12  
7 NMAC, have been evaluated for such scenarios and a provision in the WQS that allows  
8 for adoption of a temporary WQS is the most appropriate course of action for these types  
9 of situations.

10 An approach is needed that allows for incremental progress as pollution control  
11 technologies improve in effectiveness, become more available and are less costly. The  
12 SWQB is proposing to adopt a provision allowing an applicant to propose an interim or  
13 temporary water quality standard for a water body that satisfies the accountability  
14 necessary for such flexibility, and demonstrates progress to improve overall water  
15 quality. As stated by the EPA:

16 “[t]he intent of a variance or temporary standard is to preserve the use and  
17 temporarily modify applicable criteria to detail how incremental progress will be  
18 made in ultimately meeting that use. This provision should make it clear that  
19 proposals and work plans developed in support of a temporary standard as  
20 detailed in subsequent paragraphs clearly describe the basis for a temporary  
21 standard supported by documentation that shows meeting the current standard is  
22 unattainable based on one or more of the factors outlined in 40 CFR 131.10(g).”  
23 SWQB Exhibit 19, pp. 2-3.  
24

25 Accordingly, for a petitioner to justify a temporary standard that is adopted by the  
26 State for an interim period, the federal WQS regulations under 40 CFR § 131.10(g)

1 requires “factor demonstration” as the basis. For example, a petitioner may reasonably  
2 apply for a temporary nutrient standard under the factor in 40 CFR § 131.10(g)(6) where:

3 “Controls more stringent than those required by sections 301(b) and 306 of the  
4 Act would result in substantial and widespread economic and social impact.”  
5 SWQB Exhibit 20.

6  
7 For a demonstration of this factor there is also guidance cited in the standards at  
8 20.6.4.15.B (3) NMAC, which is EPA’s “Interim Economic Guidance for Water Quality  
9 Standards – Workbook, March 1995.

10 The structure of the proposed temporary standard provision can be broken into  
11 five relevant parts. The first part, under Subparagraphs (1) (a) - (d), provides the  
12 requirements for a petition to be adopted by the WQCC. The second part in Subsections  
13 (2) and (3) provides clarification that only the proposed criteria will change and not the  
14 designated uses, and how this will be applied. The third part provides details on petition  
15 work plan requirements in Subsections (4) through (6). The fourth part provides  
16 clarification on WQCC and EPA approval in Subsections (7) and (8). The final part in  
17 Subsections (9) through (12) provides details on the required review, extension requests  
18 and expiration. The proposed language in each section, along with the corresponding  
19 rationale for each, is also summarized in Tables 1 and 2 in SWQB Exhibit 21.

20 As proposed under 20.6.4.10.F(1) NMAC, “[a]ny person may petition the  
21 commission to adopt a temporary standard applicable to all or part of a surface water of  
22 the state as provided for in this section...” This reflects guidance from the EPA in which:

23 “A Temporary Standard may be granted for a water body (or portion thereof), as  
24 defined in the standards.”

25 SWQB Exhibit 22.

1           The EPA requires a temporary standard provision to be consistent with the  
2 substantive requirements of 40 C.F.R. Part 131. The EPA policy and guidance in the  
3 ANPRM, pages 36,760-36,761 (SWQB Exhibit 22) and more recently proposed federal  
4 WQS regulations revisions in 78 FR No. 171, September 4, 2013, on page 54,545  
5 (SWQB Exhibit 23) require a demonstration based on one or more of the factors in 40  
6 C.F.R. § 131.10(g)(1) – (6) (SWQB Exhibit 20). Therefore, the factor demonstration  
7 required under 20.6.4.10.F(1)(a) of the proposed amendment is the key basis for a  
8 temporary standard petition.

9           Subparagraph F(1)(b) of 20.6.4.10 NMAC requires a temporary standard that  
10 provides the highest protection practicable so the original standard is achieved as soon as  
11 possible during the interim time period, but does not cause further impairment of uses or  
12 the loss of an existing use. This requirement is necessary to keep progress moving  
13 towards improving water quality. The “minimum time necessary” is as justified by the  
14 petitioner in the factor demonstration and work plan, and the provision does not specify a  
15 time period.

16           In accordance with subparagraph F(1)(c) of this part, point sources must comply  
17 with feasible discharge control technologies and management strategies; point sources  
18 must also implement reasonable best management practices, such as for storm water  
19 runoff management or pollution prevention practices. Under F(1)(d) of 20.6.4.10  
20 NMAC, downstream impacts from restoration activities shall be limited. This language  
21 allows flexibility for restoration activities and according to the EPA also to:

1 “...differentiate between instances where a temporary standard is appropriate for  
2 a discharger and parameter specific situations and those where a project may be  
3 broader in scope, such as a restoration or remediation project that may or may not  
4 include a defined point source.”

5 SWQB Exhibit 19, page 3. As described in subparagraph F(2) a temporary standard  
6 applies to a specific pollutant and water body segment(s); compliance with all other  
7 applicable control technologies and water quality standards is required.

8 Because the original designated use do not change, subparagraph F(3) of the part  
9 requires that while the temporary standard is in place, use attainment under Section  
10 305(b) of the CWA is determined by an assessment of the original standards.

11 Proposed subparagraphs F(4)(a) – (d) of 20.6.4.10 outline key elements that must  
12 be in the petition, including: 1) the original standard; 2) the particular water body; 3) the  
13 proposed temporary standard in place for the interim period; 4) the demonstration  
14 required under the provision; 5) a work plan with timetables for complying with the  
15 original standard; and 6) any other necessary information. The timeline and milestone  
16 components will be used for evaluation of progress in the subsequent reviews required  
17 under subparagraph F(9).

18 Subparagraph F(5) of the proposed amendments requires that the work plan is  
19 subject to review and comment by the Department. As the analyses and petition is  
20 ultimately subject to the required EPA oversight and approval under 40 C.F.R. § 131.21  
21 (SWQB Exhibit 24), it is more effective to determine whether a petition for a temporary  
22 standard is well justified and supported by the work plan, and make necessary changes

1 before the analyses are conducted in support of a petition. In this proposal, however, the  
2 work plan does not require the Department's approval.

3 The work plan requisites in subparagraph F(6) include actions needed to maintain  
4 attainable uses over the term of the temporary standard and a timeline to comply with the  
5 original standard. Such milestones and measures for specific actions are needed to gage  
6 progress during the term of the temporary standard. The work plan must also provide for  
7 appropriate public notice and consultation with other agencies. The baseline water  
8 quality data and monitoring described in this subparagraph also aligns with subparagraph  
9 F(1)(b) of 20.6.4.10 NMAC as a means to monitor for, and show safeguards against,  
10 further impacts and protection of existing uses during the interim period.

11 Actions or measures necessary to achieve compliance with the original standard  
12 are also specific to each case. For example, for a petition under the 40 C.F.R. §  
13 131.10(g)(6) factor, along with a demonstration of substantial and widespread economic  
14 cost and social impact, it is appropriate to include a periodic review of alternative  
15 treatment or control options under development for wastewater treatment. A pilot study  
16 or treatability study may be necessary, and if so, it will be included in the work plan.  
17 Thus, under subparagraph F(7) of 20.6.4.10 NMAC the WQCC may condition approval  
18 by adding other requirements that are determined to be necessary.

19 In accordance with the proposed subparagraph F(8) of 20.6.4.10 NMAC and  
20 federal requirements under Section 303(c) of the CWA and 40 C.F.R. § 131.21, a  
21 temporary standard is implemented only after adoption by the WQCC and approval by  
22 EPA. Also consistent with the federal requirements in 40 C.F.R. § 131.20 (SWQB

1 Exhibit 25), and subsection A of 20.6.4.10 NMAC, subparagraph F(9) of this part  
2 requires a review, at minimum, every three years or within subsequent Triennial Reviews  
3 to determine if progress is consistent with the original petition, work plan and any other  
4 approved conditions for the temporary standard. The WQCC may revoke a temporary  
5 standard or add conditions to approval based upon the outcome of these subsequent  
6 reviews.

7 A temporary standard may be extended beyond the initial timeframe approved by  
8 the WQCC and EPA only if it is demonstrated to the WQCC that the factor  
9 demonstration or justification still applies, the approved conditions are being met and  
10 reasonable progress is being made to achieve compliance with the original standard  
11 (Subparagraph F(10) of 20.6.4.10 NMAC). A temporary standard expires as specified in  
12 the approval (i.e., approval by the WQCC and the EPA), at which time the original  
13 standard is applicable. A temporary standard will be identified in the standards under the  
14 appropriate water body descriptions (Subparagraph F (12) of 20.6.4.10 NMAC).

15 The federal regulations under 40 C.F.R. § 122.44(d)(1)(i), for State WQS  
16 requirements in permit limits, standards or other permit conditions applicable to the  
17 NPDES program requires:

18 “..any requirements in addition to or more stringent than promulgated effluent  
19 limitations guidelines or standards under CWA Sections 301, 304, 306, 307, 318  
20 and 405 necessary to achieve water quality standards under CWA 303, and limits  
21 must control all pollutants or pollutant parameters which the EPA determines are  
22 or may be discharged at a level to have the ‘reasonable potential’ to cause or  
23 contribute to an excursion of the water quality standards, including the narrative  
24 criteria.”  
25



1 SWQB Exhibit 26, highlighted section on p. 2. As the EPA is the NPDES permitting  
2 authority in New Mexico, subsection H is added to 20.6.4.12 NMAC to allow the use of  
3 an approved temporary standard in drafting or modifying NPDES permits; and in that  
4 case, to include the temporary standard and associated requirements as enforceable limits  
5 and conditions in the permit. Failure to comply with the conditions in the permit could  
6 result in termination of the temporary standard. This approach is supported by the EPA  
7 (SWQB Exhibit 19, page 3).

8  
9 **D. PUBLIC PARTICIPATION**

10 As described in previous testimony (SWQB Exhibit 1), the SWQB has, prior to  
11 this proposal, solicited and received comments in preparation for the Triennial Review.  
12 The SWQB received formal comments about the temporary standard proposal from a  
13 variety of contributors including the EPA, watershed/river conservation groups,  
14 municipalities, water districts, industrial/trade groups, private entities and citizens.  
15 SWQB staff also met with stakeholder groups, as requested, for informal discussions  
16 regarding their concerns.

17 Additions or changes to the water quality standards to the temporary standard  
18 provision proposed here were made in consideration of public comments received during  
19 the review period of the Bureau's Triennial Review Public Discussion Draft. The  
20 significant changes include: 1) removing the UAA requirement; 2) removing language  
21 limiting the provision to impaired waters listed on the state's CWA §305(b)/303(d) list; 3)  
22 clarifying a 40 C.F.R. § 131.10(g) factor demonstration is required as part of the work

1 plan; 4) the duration is as justified in the petition and reviewed during the subsequent  
2 Triennial, instead of expiration at the next Triennial Review; 5) addition of language for  
3 restoration activities; 6) clarifying the required work plan needed to support a petition  
4 must be submitted with the petition; and, 7) addition of details about what should be  
5 included in a work plan. Also, to support the implementation of an approved temporary  
6 WQS, a new Subsection was added to allow the EPA to place the temporary WQS and  
7 requirements in the associated NPDES permit. All comments and responses are  
8 contained within the document, "2013 Triennial Review Public Discussion Draft  
9 Comments and Surface Water Quality Bureau Responses" in SWQB Exhibit 9.

#### 11 **E. CONCLUSION**

12 In summary, this provision allows for a temporary criterion to be adopted for a  
13 limited time as justified by the petitioner and approved by the WQCC and EPA. It is a  
14 tool that recognizes the significant uncertainties linked to technological and financial  
15 limitations in meeting a new or more stringent WQS. It provides for the time needed to  
16 make progress towards meeting WQS. The provision requires a temporary WQS based  
17 on protecting the highest attainable use practicable, while preventing further impairment  
18 and demonstrating progress towards achieving the original WQS criterion.

19 The temporary WQS provision allows for alternatives to permanently  
20 downgrading criteria. As outlined in proposed 20.6.4.10.F NMAC a petition for a  
21 temporary WQS must satisfy the WQCC's public notice, hearing and appellate  
22 procedures before adoption. The EPA must approve the state's adoption of the temporary

1 criterion before it can be implemented. Once approved and implemented, the temporary  
2 criterion is subject to review at least every three years and progress must be  
3 demonstrated. If sufficient progress is not shown, the temporary criterion may be revoked  
4 or additional requirements added by the WQCC. Finally, a temporary criterion is  
5 enforceable as included in a permit issued by the EPA.

6 The provision provides a well-documented approach for the adoption of a  
7 temporary criterion to allow continued progress towards attainment of the original  
8 criterion that supports and protects the designated use.

9  
10 **IV. PROPOSAL – SECTION 20.6.4.16 PLANNED USE OF A PISCICIDE**

11 **A. BACKGROUND AND PURPOSE**

12 The piscicide application provision currently under 20.6.4.16 NMAC was first  
13 developed during the 1998-99 State of New Mexico Triennial Revisions to allow the  
14 application of piscicides for species management and restoration, such as conducted by  
15 the New Mexico Department of Game and Fish (“NMDGF”), and proposed as a  
16 modification to the general standards for toxic pollutants. The language was adopted by  
17 the WQCC, and submitted for federal review under the CWA Section 303(c). The EPA  
18 stated in the 2001 record of decision (“ROD”) for the 1998-99 State of New Mexico  
19 Triennial Revisions that:

20 “[t]he State made extensive modifications to this section to provide a mechanism  
21 for the use of piscicides. This modification is seen as part of the State’s efforts to  
22 remove non-native species that may be adversely affecting native and threatened  
23 and endangered species. The overall intent is to improve the biological integrity  
24 of the State’s waters.”

1 SWQB Exhibit 27, page 4. During the 2003-05 Triennial Revisions, the language  
2 was revised to streamline processes and eliminate the need for multiple hearings for  
3 application of a single chemical. The provision was applicable to all planned uses and  
4 required mandatory reviews, public notices, a WQCC hearing and approval. The  
5 provision was also moved into a new section under 20.6.4.16 NMAC, for the planned use  
6 of a piscicide. The language in the water quality standards has been unchanged since that  
7 time.

8 In January 2009, a federal court ruling determined that certain pesticide  
9 applications, including piscicides, were subject to the EPA's NPDES permit regulations.  
10 The EPA subsequently issued a new nationwide Pesticide General Permit ("PGP") rule to  
11 cover pesticide applications in states including piscicide application activities such as  
12 those conducted by the NMDGF. The Federal Register ("FR") notice containing the final  
13 PGP rule can be found in the SWQB Exhibit 28. Consequently, in addition to meeting  
14 the requirements in the State's rules under 20.6.4.16 NMAC, certain piscicide  
15 applicators, including NMDGF, are now required to also have a federal permit and may  
16 apply for coverage under the federal PGP. According to the NMDGF memo found in  
17 SWQB Exhibit 29:

18 "Since 2012, NMDGF has obtained coverage under the nationwide general permit  
19 and obtained approval from the WQCC to conduct piscicide applications in the  
20 Rio Costilla basin. The new NPDES permit process creates a new redundancy by  
21 requiring a federal review of piscicide use in addition to the requirements of  
22 20.6.4.16 NMAC."  
23

24 Therefore, an update to 20.6.4.16 NMAC is proposed for those piscicide  
25 applications already covered under the EPA NPDES permit or PGP, and to allow the

1 WQCC the discretion of holding either a public meeting or public hearing for those  
2 applications not covered under the federal permit.

3  
4 **B. PROPOSED AMENDMENT**

5 The following is the proposed language of 20.6.4.16 NMAC:

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

20 A. Any person seeking commission approval of the use of a piscicide not  
21 covered by a NPDES permit shall file a written petition concurrently with the

1 commission and the surface water bureau of the department. The petition shall

2 contain, at a minimum, the following information:

3 (1) petitioner's name and address;

4 (2) identity of the piscicide and the period of time (not to exceed five  
5 years) or number of applications for which approval is requested;

6 (3) documentation of registration under FIFRA and NMPCA and  
7 certification that the petitioner intends to use the piscicide according to the label  
8 directions, for its intended function;

9 (4) target and potential non-target species in the treated waters and  
10 adjacent riparian area, including threatened or endangered species;

11 (5) potential environmental consequences to the treated waters and the  
12 adjacent riparian area, and protocols for limiting such impacts;

13 (6) surface water of the state proposed for treatment;

14 (7) results of pre-treatment survey;

15 (8) evaluation of available alternatives and justification for selecting  
16 piscicide use;

17 (9) post-treatment assessment monitoring protocol; and

18 (10) any other information required by the commission.

19 **B.** Within thirty days of receipt of the petition, the department shall review  
20 the petition and file a recommendation with the commission to grant, grant with  
21 conditions or deny the petition. The recommendation shall include reasons, and a  
22 copy shall be sent to the petitioner by certified mail.

1           C.     The commission shall review the petition and the department's  
2     recommendation and ~~shall~~ within 90 days of receipt of the department's  
3     recommendation may hold a public hearing in the locality affected by the proposed  
4     use in accordance with Adjudicatory Procedures, 20.1.3 NMAC. In addition to the  
5     public notice requirements in Adjudicatory Procedures, 20.1.3 NMAC, the petitioner  
6     shall provide written notice to:

- 7                   (1)    local political subdivisions;  
8                   (2)    local water planning entities;  
9                   (3)    local conservancy and irrigation districts; and  
10                  (4)    local media outlets, except that the petitioner shall only be required  
11     to publish notice in a newspaper of circulation in the locality affected by the proposed  
12     use.

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

- 18                   (1)    Its composition is such as to warrant the proposed claims for it;  
19                   (2)    Its labeling and other material submitted for registration comply  
20     with the requirements of FIFRA and NMPCA;  
21                   (3)    It will perform its intended function without unreasonable adverse  
22     effects on the environment; and  
23                   (4)    When used in accordance with all FIFRA label requirements it will  
24     not generally cause unreasonable adverse effects on the environment.

1                   (5) “Unreasonable adverse effects on the environment” has the  
2 meaning provided in FIFRA, 7 U.S.C. Section 136(bb): “any unreasonable risk to  
3 man or the environment, taking into account the economic, social, and environmental  
4 costs and benefits of the use of any pesticide.”

5           E.     After a public hearing or commission meeting, if no hearing is held, the  
6 commission may grant the petition in whole or in part, may grant the petition subject  
7 to conditions, or may deny the petition. In granting any petition in whole or part or  
8 subject to conditions, the commission shall require the petitioner to implement post-  
9 treatment assessment monitoring and provide notice to the public in the immediate  
10 and near downstream vicinity of the application prior to and during the application.

11           F.     Any person whose application is covered by a NPDES permit shall  
12 provide written notice to local entities as described in 20.6.4.16 subsections C (1) to  
13 (4) and subsection (E) and implement post-treatment assessment monitoring within  
14 the application area.

15           [20.6.4.16 NMAC - Rn, Paragraph (6) of Subsection F of 20.6.4.12 NMAC, 05-23-  
16 05; A, 05-23-05; A, XX-XX-XX]

17           **C. BASIS FOR PROPOSAL**

18           All known piscicide applications to surface waters of New Mexico have been  
19 conducted by either federal or state natural resource agencies including the U.S. Forest  
20 Service (“USFS”), the U.S. Fish and Wildlife Service (“USFWS”), or the NMDGF. In  
21 the case of the NMDGF, these applications rely on federal funding and are implemented  
22 to remove unwanted species from various waters in New Mexico. Historically, piscicide



1 use focused on enhancement of sport fisheries, primarily in reservoirs; recent use has  
2 been limited to native fish restoration or protection efforts. The most commonly used  
3 piscicide is rotenone, of which there are several formulations currently registered by the  
4 EPA. When conducted in accordance with the federal and state requirements, the SWQB  
5 and the EPA consider these actions important tools in the support of the biological  
6 integrity described in the WQS under 20.6.4.13 (M) NMAC. According to the NMDGF:

7 “[t]he WQCC has held approximately seven hearings and repeatedly hears the  
8 same testimony with little new information regarding human or environmental  
9 health concerns. Consistent expert testimony indicates the products and their  
10 use are safe and effective for achieving fishery management and conservation  
11 goals in New Mexico.”  
12

13 SWQB Exhibit 29. In addition to the State requirements under 20.6.4.16 NMAC  
14 and the federal regulations, the planned use of a piscicide in New Mexico on federal  
15 lands, conducted with federal funding, also requires compliance with the National  
16 Environmental Policy Act of 1969 (“NEPA”) and, where applicable, the Endangered  
17 Species Act of 1974 (“ESA”). In many cases, compliance with reviews under both Acts  
18 is necessary. Under the ESA, the focus is on the effects of the proposed action on  
19 threatened and endangered species with review limited to the applicant agency or the  
20 agency’s designated applicator, and the USFWS. Review under the NEPA, however,  
21 includes public comment periods, public review of environmental documents and  
22 public involvement in the decision making process. The public involvement process  
23 required by the NEPA requires public awareness and participation in project  
24 development and implementation similar to the procedures set out in 20.6.4.16 NMAC.

1 These requirements are also summarized in the NMDGF memo listed as SWQB Exhibit  
2 29.

3 The NMDGF is eligible for, and currently has coverage under, the nationwide  
4 PGP. To avoid duplication in fulfilling both state and federal requirements and to  
5 streamline the piscicide use process the SWQB was approached by the NMDGF to  
6 update the piscicide provision for those covered under the federal permit as part of the  
7 current Triennial Revision process. The EPA's initial recommendations for the Triennial  
8 Review also supported updates to the provision in 20.6.4.16 NMAC in light of the  
9 NPDES requirements stating:

10 "[g]iven the Sixth Circuit's decision, NMDGF is eligible for and covered under  
11 EPA's NPDES PGP, making some of the requirements in 20.6.4.16 NMAC  
12 redundant. As a result, the Region recommends that the SWQB consider revisions  
13 to that provision to include an exemption for those portions now covered under  
14 EPA's NPDES PGP and address those requirements in the state's rules that don't  
15 appear to be covered under the PGP."

16 SWQB Exhibit 5, p. 7. The SWQB has also compared the State's requirements  
17 under 20.6.4.16 NMAC to those of the EPA's PGP; the comparison is summarized in  
18 SWQB Exhibit 30. Coverage under the federal permit duplicates all requirements under  
19 the State's rule except for two significant state requirements, one for public notification  
20 and the other for post treatment monitoring. These two requirements are addressed in the  
21 proposed amendments by adding a new subsection F to 20.6.4.16 NMAC.

1 Revisions to 20.6.4.16 NMAC propose no additional reviews for the planned use  
2 of a piscicide covered under the federal NPDES or PGP, as adequate review is already  
3 provided through the NPDES or PGP processes. Subsection A of 20.6.4.16 NMAC  
4 provides for a piscicide application if the NPDES permit requirement is not available or  
5 is removed by Congressional action, in which case the requirements in this part would  
6 apply. There are no changes proposed for subsection B of 20.6.4.16 NMAC.

7 Replacing the word “shall” with the word “may” in subsection C of 20.6.4.16  
8 NMAC gives the WQCC the option to hold a hearing to review the proposed project if  
9 the piscicide application is not covered under the nationwide NPDES permit.

10 Revisions to subsections D and E of this part are proposed to allow the WQCC  
11 discretion to review the piscicide application during a hearing, or if no hearing is held,  
12 during a WQCC meeting. No other changes are proposed for 20.6.4.16 (D) and (E)  
13 NMAC.

14 As mentioned previously, the state requirements that are not duplicated under the  
15 federal permit are added in a new subsection F of 20.6.4.16 NMAC. In this subsection, it  
16 is made clear that piscicide applications covered by the federal permit must also provide  
17 for the written local notification, media coverage and newspaper notices in 20.6.4.16 C(1)  
18 – (4) NMAC, and for the post treatment assessment monitoring and local notifications in  
19 the immediate and downstream vicinity described in 20.6.4.16 (E) NMAC.

1           **D. PUBLIC PARTICIPATION**

2           Public participation for the Triennial Review was described in detail in previous  
3           testimony (SWQB Exhibit 1). Additionally, changes to the piscicide provision were  
4           prepared in collaboration with the NMDGF. Comments and responses about these  
5           amendments are found in SWQB Exhibit 9, Comments 36-41.

6  
7           **E. CONCLUSION**

8           The SWQB, in collaboration with the NMDGF, proposes to amend 20.6.4.16  
9           NMAC to streamline the piscicide use process for more efficient use of governmental  
10          resources and to enhance fishery management and conservation activities in New  
11          Mexico. Federal law requires public disclosure of piscicide applications on federal  
12          land under the requirements of NEPA, the review of effects on threatened and  
13          endangered species under ESA, and the regulation of piscicides under the CWA through  
14          the EPA's NPDES permit program and the FIFRA.

15          If the planned use of a piscicide is covered under a NPDES permit, the  
16          proposed piscicide use would require no additional WQCC review, but will require  
17          post-treatment assessment monitoring and additional public notice to local entities. If  
18          the NPDES permit coverage is not available (e.g., Congress acts on proposed  
19          legislation to remove the NPDES requirement for pesticides), then the WQCC will  
20          review the project. In this case, whether a hearing is held to review the project would  
21          be discretionary, rather than a mandate.

**V. PROPOSAL – Section 20.6.4.97 NMAC Ephemeral Waters**

The SWQB is petitioning the WQCC to list five streams in the Mimbres River closed basin determined as ephemeral under subsection C of 20.6.4.97 NMAC, pursuant to subsections C and D of 20.6.4.15 NMAC. Once approved by the WQCC and adopted as standards, the SWQB will submit the revised water quality standards (as published in the New Mexico Register) to EPA for formal review and final approval action under Section 303(c) of the CWA. The SWQB is also proposing removal of the term “unclassified” in 20.6.4.98 NMAC and 20.6.4.99 NMAC. The term “surface” is added to be consistent with the term “surface water(s) of the state” which is defined in subsection S of 20.6.4.7 NMAC. In previous Triennial Reviews and interim revisions, the SWQB has clarified the presumption of CWA Section 101(a)(2) uses for all surface water of the state, including those not classified or specifically described in segments under 20.6.4.101 through 20.6.4.109 NMAC.

**A. PROPOSAL**

The following are the proposed amendments and changes to this part.

**20.6.4.97 EPHEMERAL WATERS** - Ephemeral ~~unclassified~~ surface waters of the state as identified below and additional ephemeral waters as identified on the department’s water quality standards website pursuant to Subsection C of 20.6.4.15 NMAC.

1           **A.     Designated Uses:** livestock watering, wildlife habitat, limited aquatic life  
2           and secondary contact.

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

5           **C.     Waters: ...**

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

7           (b) in the Mimbres river closed basin:

8           (ii) Chino mines property Subwatershed Drainage A and tributaries  
9           thereof;

10          (iii) Chino Mines property Subwatershed Drainage B and  
11          tributaries thereof (excluding the northwest tributary containing Ash Spring);

12          (iv) Chino Mines property Subwatershed Drainage C and tributaries  
13          thereof (excluding reaches containing Bolton spring, the Chiracahua Leopard Frog  
14          critical habitat transect, and all reaches in Subwatershed C that are upstream of the  
15          Chiracahua Leopard Frog critical habitat);

16          (v) Chino Mines property Subwatershed Drainage D and tributaries  
17          thereof (Drainages D-1, D-2 and D-3, excluding the southeast tributary in drainage  
18          D1 that contains Brown Spring); and,

19          (vi) Chino Mines property Subwatershed Drainage E and tributaries  
20          thereof (Drainages E-1, E-2 and E-3).

1 [20.6.4.97 NMAC - N, 05-23-05; A, 12-01-10; A, XX-XX-XX]

2 ~~[NOTE: Effective 12-01-10, no waters are yet approved for listing in Subsection C of~~  
3 ~~this section.]~~

4 **B. BASIS FOR PROPOSAL**

5 The CWA Section 101(a)(2) and 20.6.4.6 NMAC state that, wherever attainable,  
6 water quality shall provide for the protection and propagation of fish, shellfish and  
7 wildlife, and for recreation in and on the water. Together with the federal regulation  
8 under 40 C.F.R. § 131.10(j), these regulations effectively establish the “rebuttable  
9 presumption” that designated CWA Section 101(a)(2) uses are attainable unless  
10 demonstrated otherwise under the provisions of 20.6.4.15 NMAC and 40 C.F.R. §  
11 131.10(g). In accordance with the state water quality standards under subsection A of  
12 20.6.4.15 NMAC and the federal regulations under 40 C.F.R. § 131.10(j), to remove a  
13 Section 101(a)(2) designated use requires a UAA analysis. According to 40 C.F.R. §  
14 131.10(g), the State may remove a designated use that is not an existing use, as defined in  
15 subparagraph 20.6.4.7.E (3) NMAC and in 40 CFR § 131.3. The State may also establish  
16 subcategories of a use if the state can demonstrate that attaining the designated use is not  
17 feasible because one or more factors in 40 CFR § 131.10(g) (1) – (6). Specific to this  
18 proposal is 40 C.F.R. § 131.10(g) (2) in which the “natural, ephemeral, intermittent or  
19 low flow conditions or water levels prevent the attainment of the use, unless these  
20 conditions may be compensated for by the discharge of sufficient volume of effluent

1 discharges without violating State water conservation requirements to enable uses to be  
2 met.”

3 The Freeport McMoRan Chino Mines Company (“Chino Mines”) applied the  
4 SWQB’s HP and conducted a UAA pursuant to subsections C and D of 20.6.4.15  
5 NMAC. This UAA was performed to determine the attainable water quality standards for  
6 unclassified streams in five subwatersheds located south of the Chino Open Pit Mine and  
7 east of the City of Bayard in Grant County, New Mexico. A map of the five  
8 subwatersheds showing the streams proposed for reclassification as ephemeral, HP  
9 evaluation sites and other features is included in Figure 4 of the UAA report in SWQB  
10 Exhibit 31.

11 These five subwatersheds are located within the Smelter/Tailings Soil  
12 Investigation Unit (“STSIU”) which is under a 1994 Administrative Order on Consent  
13 (“AOC”) between the NMED and Chino Mines. Impacts to the STSIU from historical  
14 releases during mining operations (tailings and air emissions) are being addressed under  
15 the AOC and in some areas, through reclamation. Under the AOC, pre-Feasibility Study  
16 (“FS”) Remedial Action Criteria (“RAC”) for surface waters in the STSIU cite the WQS  
17 in 20.6.4 NMAC, including all tools and approaches provided by the code, as applicable  
18 for the purpose of remedial actions for the Chino Mines investigation area.

19 The UAA concluded that the assessed stream segments are naturally ephemeral,  
20 and that the designated uses and criteria applicable to 20.6.4.97 NMAC are the  
21 appropriate and attainable uses. Therefore, the SWQB proposes these five stream  
22 segments, as described in the proposal, be reclassified in 20.6.4.97 NMAC as ephemeral



1 waters of the state. Also, the addition of the words, “Chino Mines property” is added to  
2 the descriptions for Drainages D and E to correct a clerical error in the petition (SWQB  
3 Exhibit 2) and for consistency.

4 **C. HP USE AND UAA EXAMINATION**

5 Pursuant to subsection C of 20.6.4.15 NMAC, Chino Mines submitted a draft  
6 work plan for a UAA study entitled, “*Application of the Hydrology Protocol to Smelter*  
7 *Tailings Soils Investigation Unit (STSIU) Drainages to the Department*” during May  
8 2011. SWQB Exhibit 32. The SWQB provided comments on the proposed work plan  
9 which was provisionally approved pending Chino Mines implementing the SWQB’s  
10 recommendations during June 2011. SWQB Exhibit 33. Chino Mines conducted the  
11 application of the HP and submitted a draft report with preliminary results in February  
12 2012 for the SWQB’s review. The SWQB reviewed the results and requested additional  
13 information that was provided by Chino Mines and determined by the SWQB to be  
14 satisfactory. SWQB Exhibit 34. Additionally, field reconnaissance was conducted in  
15 September and November, 2012, and in March, 2013, by staff of NMED’s Ground Water  
16 Quality Bureau (“GWQB”) and NMED’s Silver City field office. The EPA was also  
17 included on all correspondences and provided with copies of interim reports and field  
18 notes.

19 The HP is designed to document the hydrological, geomorphic, and biological  
20 indicators of the persistence of water, or the persistent lack of water. The application of  
21 the HP to the five stream reaches was conducted in accordance with the HP guidance.  
22 The study applied the Level 1 evaluation that includes office procedures and field

1 application of the HP. Office analyses were conducted during the fall of 2011, and field  
2 work conducted from June 12-15, 2011. In response to SWQB comments additional  
3 office based analysis was also conducted during the fall of 2012.

4 To identify candidate streams for a Level 1 HP evaluation, stream segment  
5 reaches in the study were selected based on geographic location, historic observations of  
6 prolonged dryness in the literature, and lack of aquatic habitat. Aerial photographs,  
7 maps, drainage profiles, and information from previous site investigations were assessed  
8 prior to field work to aid in sample reach selection. Chino Mines worked with SWQB  
9 staff to identify a total of 21 sample reaches located in nine subwatersheds based on the  
10 physical and geographic information gathered as described above, including previous  
11 observations made by Chino Mines and SWQB staff throughout the STSIU area during  
12 previous site investigations. This information is also presented in the HP UAA report;  
13 aerial photographs and drainage profiles for each subwatershed assessed are listed in  
14 Appendices A through G of the UAA report in SWQB Exhibit 31.

15 Also in accordance with the HP, climate and meteorological data was reviewed to  
16 document that conditions during the study period were appropriate to apply the HP.  
17 Extreme drought conditions were not prevailing in the area nor were there recent  
18 precipitation events that would potentially bias the outcome of the HP assessment. As  
19 required in the HP, drought conditions were assessed through the use of the 12-month  
20 Standardized Precipitation Index ("SPI"), which summarizes drought conditions based on  
21 the previous 12 month period. If extreme drought conditions are present, as characterized  
22 by an SPI of -1.5 or less, HP guidance is to delay field work until the SPI value no longer

1 indicates extreme drought conditions. For these HP Level I evaluations, the SPI was  
2 within recommendations for application of the HP, as shown in the two graphics  
3 presented in Figure 1 of SWQB Exhibit 31.

4 Chino Mines conducted a Level 1 HP evaluation for the 21 reaches identified in  
5 the work plan. Three additional reaches were added in the field for a total of 24 locations  
6 assessed in this study. Table 1 of SWQB Exhibit 31 shows the total number of reaches  
7 that were surveyed.

8 Data gathered during Level 1 evaluations should, in most cases, provide enough  
9 information to give a clear indication of the hydrological status of ephemeral streams.  
10 The required information collected under the Level 1 evaluation was recorded on a  
11 “Cover Sheet” and “Hydrology Determination Field Sheet” (“Field Sheet”) for each of 24  
12 study reaches for the five ephemeral stream segments A through E (and listed in the  
13 proposal) shown in the UAA (SWQB Exhibit 31).

14 Results of the Level 1 field evaluations (scoring) are summarized in Table 2 of the  
15 UAA report in SWQB Exhibit 31. Details are provided in Appendices A through E of the  
16 report, which include the HP Cover Sheets, the HP field forms, aerial photographs, and  
17 photo-documentation for the drainages evaluated. Additionally, because the majority of  
18 the reaches were scored as ephemeral after evaluating the first six HP indicators, the  
19 subsequent subsections in the report provide discussions of those indicators, as observed  
20 throughout the study drainages.

21 The SWQB concluded that the UAA report, the HP Level 1 Field Sheets and  
22 results demonstrated that the attainable uses for these streams were documented in

1 accordance with the HP, that the streams are naturally ephemeral and should be subject to  
2 designated uses and criteria in 20.6.4.97 NMAC. Attainment of the CWA Section  
3 101(a)(2) uses for these ephemeral waters is not feasible due to the factor identified in 40  
4 C.F.R. § 131.10(g)(2): “Natural, ephemeral, intermittent, or low flow conditions or water  
5 levels prevent the attainment of the use...”  
6

7 **D. PUBLIC PARTICIPATION**

8 The SWQB posted the draft HP UAA report for a 30-day public review on  
9 January 15, 2013, which ended on February 14, 2013. Comments were received from the  
10 NMDGF, the GWQB, the Gila Resources Information Project (“GRIP”), and three  
11 citizens. In response to the public comments, and based on the SWQB’s  
12 recommendations, Chino Mines revised the HP UAA report by excluding reaches  
13 between Bolton and Ash Springs in subwatershed C designated in the federal regulations  
14 as Chiracahua Leopard Frog critical habitat, and also tributaries associated with potential  
15 frog habitat in Brown Springs, subwatershed D, Drainage D1. The report along with all  
16 comments and the SWQB’s response to comments was submitted to the EPA for  
17 technical approval on June 28, 2013 (per Subsection D of 20.6.4.15 NMAC).  
18

19 **E. EPA TECHNICAL REVIEW**

20 The EPA Region 6 provided its technical review and comment on the Chino  
21 Mines UAA on June 26, 2014 (SWQB Exhibit 35). The EPA’s letter and technical  
22 support document (“TSD”) outlined several issues to be addressed before the Chino

1 Mines UAA will be technically approvable. The most significant comments from the  
2 EPA were whether the UAA report addresses the past history of the site adequately; the  
3 EPA also requested more detail be included. The SWQB found that the EPA's comments  
4 also included several incorrect statements about the report. For example, during its  
5 review, the EPA applied a different drought index which is not recommended in the HP;  
6 this led the EPA to a different conclusion about whether the study was conducted during  
7 the proper time to apply the HP. The SWQB recognizes there are many other sources for  
8 drought information available, but they are not equivalent, the EPA did not make the  
9 appropriate comparison. Also, the EPA's TSD includes the statement that all sites in the  
10 STSIU drainages assessed were not ephemeral, which is obviously not the case.

11 The EPA comments were also focused on reclamation and remediation activities  
12 that are being addressed separately, by the New Mexico Office of Natural Resources  
13 Trustee ("ONRT").<sup>4</sup> As mentioned previously, the SWQB and GWQB provided  
14 considerable input in the development and approval of the Chino Mines UAA work plan  
15 and HP field studies, including field site visits conducted by the GWQB and SWQB  
16 regional office staff. The study sites were selected to represent the attainable and natural  
17 hydrological conditions for application of the HP. Site selection is a critical component  
18 of the HP, and this was satisfactorily addressed during the development of the work plan.  
19 The EPA's emphasis on past mining and reclamation activities under the AOC are not  
20 relevant to the review of the UAA report. The UAA specifically assesses whether the

---

<sup>4</sup> Final Groundwater Restoration Plan for the Chino, Cobre, and Tyrone Mine Facilities 2012.

1 natural hydrology limits attainable aquatic life uses in these five STSIU drainages.  
2 Potential water quality impacts to aquatic life in the STSIU drainages are being addressed  
3 under separate site investigations and regulatory programs.

4 After considering the EPA's technical review, the SWQB and GWQB discussed  
5 the results with Chino Mines on August 21, 2014 and agreed it was appropriate to revise  
6 the report to address the EPA's concerns about the application of the HP. A revised  
7 UAA report was submitted to the SWQB and GWQB for review on October 23, 2014  
8 (SWQB Exhibit 31). Chino Mines submitted an additional response to comments  
9 document ("RTC") that addresses issues raised by the EPA about the reclamation  
10 activities that are outside the scope of the HP application. The RTC appends to the  
11 revised report and is included as SWQB Exhibit 36. The SWQB and GWQB have  
12 reviewed both of these documents and concluded the revised report and RTC presents  
13 sufficient clarification and information to address the EPA's concerns.

14  
15 **F. CONCLUSIONS**

16 In accordance with the UAA process, the SWQB finds that for the five ephemeral  
17 stream segments listed in the proposal:

- 18 • The recreational use that is currently being achieved is that of secondary  
19 contact;
- 20 • The aquatic life use currently being achieved is limited aquatic life;
- 21 • The aquatic life use of marginal warmwater is not attainable due to naturally  
22 ephemeral conditions; and

- The highest attainable aquatic life use is limited aquatic life.

Therefore, these stream segments should be subject to 20.6.4.97 NMAC as ephemeral waters, with the attainable uses designated as limited aquatic life use and secondary contact.

The SWQB recommends the WQCC's approval of the revised UAA report and proposed amendments to include the five drainages as ephemeral under 20.6.4.97 NMAC. If adopted into the Water Quality Standards under 20.6.4.97 NMAC, the SWQB will submit supporting documentation to EPA for final approval under Section 303(c) of the CWA.

## **VI. PROPOSALS – SECTIONS 20.6.4.98 NMAC AND 20.6.4.99 NMAC**

### **A. PROPOSED AMENDMENTS**

The following are the proposed amendments to 20.6.4.98 and .99 NMAC:

**20.6.4.98 INTERMITTENT WATERS - All non-perennial ~~unclassified-surface~~ waters of the state, except those ephemeral waters included under 20.6.4.97 NMAC or classified in 20.6.4.100 thru 899.**

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

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

5           [20.6.4.98 NMAC - N, 05-23-05; A, 12-01-10; A, XX-XX-XX]]

6           **20.6.4.99 PERENNIAL WATERS - All perennial ~~unclassified~~ surface waters of**  
7           **the state except those classified in 20.6.4.100 thru 899.**

8           **A.     Designated Uses:** warmwater aquatic life, livestock watering, wildlife  
9           habitat and primary contact.

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

14           [20.6.4.99 NMAC - N, 05-23-05; A, 12-01-10; A, XX-XX-XX]]

15           **B. BASIS FOR PROPOSALS**

16           The SWQB is proposing removal of the term “unclassified” in 20.6.4.98 and  
17           20.6.4.99 NMAC. The term “surface” is added to be consistent with the term “surface  
18           water(s) of the state” which is defined in Subsection S of 20.6.4.7 NMAC. In previous  
19           Triennial Reviews and interim revisions, the SWQB has clarified the presumption of



CWA Section 101(a)(2) uses for all surface water of the state, including those not classified or described in segments under Sections 20.6.4.101 through .899 NMAC.

**VII. PROPOSALS – Sections 20.6.4.101NMAC – 20.6.4.899 NMAC**

The following are proposed amendments and additions to 20.6.4.101 through .899 NMAC:

**A. PROPOSED AMENDMENTS**

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

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

**B. Criteria:**

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

(2) At mean monthly flows above 350 cfs, the monthly average concentration for: TDS 2,000 mg/L or less, sulfate 500 mg/L or less and chloride 400 mg/L or less.

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

4           [20.6.4.101 NMAC - Rp 20 NMAC 6.1.2101, 10-12-00; A, 12-15-01; A, 05-23-05;  
5           A, 12-01-10; A, XX-XX-XX]]

6  
7           **20.6.4.102     RIO GRANDE BASIN - The main stem of the Rio Grande from**  
8           **one mile ~~below~~ downstream of Percha dam upstream to Caballo dam.**

9           **A.     Designated Uses:** irrigation, livestock watering, wildlife habitat, primary  
10          contact and warmwater aquatic life.

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

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

18          [20.6.4.102 NMAC - Rp 20 NMAC 6.1.2102, 10-12-00; A, 05-23-05; A, 12-01-10;  
19          A, XX-XX-XX]]

1       **20.6.4.103   RIO GRANDE BASIN - The main stem of the Rio Grande from the**  
2       **headwaters of Caballo reservoir upstream to Elephant Butte dam and perennial**  
3       **reaches of tributaries to the Rio Grande in Sierra and Socorro counties,**  
4       **excluding waters on tribal lands.**

5           **A.     Designated Uses:** irrigation, livestock watering, wildlife habitat, marginal  
6       coldwater aquatic life, ~~secondary~~ primary contact and warmwater aquatic life.

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

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

11      [20.6.4.103 NMAC - Rp 20 NMAC 6.1.2103, 10-12-00; A, 05-23-05; A, 12-01-10;  
12      A, XX-XX-XX]]

14                   **20.6.4.104 NMAC – 20.6.4.109 NMAC – No changes proposed.**

16       **20.6.4.110   RIO GRANDE BASIN - The main stem of the Rio Grande from**  
17       **Angostura diversion works upstream to Cochiti dam, excluding the reaches on**  
18       **San Felipe, ~~Santo Domingo~~Kewa and Cochiti pueblos.**

19           **A.     Designated Uses:** irrigation, livestock watering, wildlife habitat, primary  
20       contact, coldwater aquatic life and warmwater aquatic life.

1           **B.     Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC  
2           are applicable to the designated uses, except that the following segment-specific  
3           criteria apply: pH within the range of 6.6 to 9.0 and temperature 25°C (77°F) or less.  
4           [20.6.4.110 NMAC - Rp 20 NMAC 6.1.2108, 10-12-00; A, 05-23-05; A, 12-01-10;  
5           A, XX-XX-XX]]

6  
7                   **20.6.4.111 NMAC – 20.6.4.115 NMAC – No changes proposed.**

8  
9           **20.6.4.116     RIO GRANDE BASIN** - The Rio Chama from its mouth on the Rio  
10          Grande upstream to Abiquiu reservoir, perennial reaches of the Rio Tusas, perennial  
11          reaches of the Rio Ojo Caliente, perennial reaches of Abiquiu creek and perennial  
12          reaches of El Rito creek ~~below~~ downstream of the town of El Rito.

13          **A.     Designated Uses:** irrigation, livestock watering, wildlife habitat,  
14          coldwater aquatic life, warmwater aquatic life and ~~secondary~~ primary contact.

15          **B.     Criteria:** the use-specific numeric criteria set forth in 20.6.4.900 NMAC  
16          are applicable to the designated uses, except that the following segment-specific  
17          criterion applies: temperature 31°C (87.8°F) or less.  
18          [20.6.4.116 NMAC - Rp 20 NMAC 6.1.2113, 10-12-00; A, 05-23-05; A, 12-01-10;  
19          A, XX-XX-XX]]

20  
21                   **20.6.4.117 NMAC – 20.6.4.123 NMAC – No changes proposed.**

1       **20.6.4.124   RIO GRANDE BASIN - Perennial reaches of Sulphur creek from**  
2       **~~its headwaters to its confluence with Redondo creek~~ upstream to its headwaters.**

3           **A.     Designated Uses:** limited aquatic life, wildlife habitat, livestock watering  
4       and ~~secondary~~ primary contact.

5           **B.     Criteria:** the use-specific criteria set forth in 20.6.4.900 NMAC are  
6       applicable to the designated uses, except that the following segment-specific criteria  
7       apply: pH within the range of 2.0 to 9.0, maximum temperature 30°C (86°F), and the  
8       chronic aquatic life criteria of Subsections I and J of 20.6.4.900 NMAC.

9       [20.6.4.124 NMAC - N, 05-23-05; A, 12-01-10; A, XX-XX-XX]  
10

11                   **20.6.4.125 NMAC – 20.6.4.203 NMAC – No changes proposed.**  
12

13       **20.6.4.204   PECOS RIVER BASIN - The main stem of the Pecos river from**  
14       **the headwaters of Avalon reservoir upstream to Brantley dam.**

15           **A.     Designated Uses:** irrigation, livestock watering, wildlife habitat,  
16       ~~secondary~~ primary contact and warmwater aquatic life.

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

19       [20.6.4.204 NMAC - Rp 20 NMAC 6.1.2204, 10-12-00; A, 05-23-05; A, 12-01-10;  
20       A, XX-XX-XX]

21       [**NOTE:** The segment covered by this section was divided effective 05-23-05. The  
22       standards for Avalon Reservoir are under 20.6.4.219 NMAC.]

**20.6.4.205 PECOS RIVER BASIN - Brantley reservoir.**

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

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

[20.6.4.205 NMAC - Rp 20 NMAC 6.1.2205, 10-12-00; A, 05-23-05; A, 12-01-10]

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

**A. Designated Uses:** irrigation, livestock watering, wildlife habitat, ~~secondary~~ primary contact and warmwater aquatic life.

**B. Criteria:**

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

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

1 [20.6.4.206 NMAC - Rp 20 NMAC 6.1.2206, 10-12-00; A, 05-23-05; A, 12-01-10;

2 A, XX-XX-XX]

3  
4 **20.6.4.207 PECOS RIVER BASIN - The main stem of the Pecos river from**  
5 **Salt creek (near Acme) upstream to Sumner dam.**

6 **A. Designated Uses:** irrigation, marginal warmwater aquatic life, livestock  
7 watering, wildlife habitat and ~~secondary~~ primary contact.

8 **B. Criteria:**

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

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

13 [20.6.4.207 NMAC - Rp 20 NMAC 6.1.2207, 10-12-00; A, 05-23-05; A, 12-01-10;

14 A, XX-XX-XX]

15  
16 **20.6.4.208 NMAC – 20.6.4.212 NMAC – No changes proposed.**

17  
18 **20.6.4.213 PECOS RIVER BASIN - McAllister lake.**

19 **A. Designated Uses:** coldwater aquatic life, ~~secondary~~ primary contact,  
20 livestock watering and wildlife habitat.

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

4 [20.6.4.213 NMAC - Rp 20 NMAC 6.1.2211.3, 10-12-00; A, 05-23-05; A, 12-01-10;  
5 A, XX-XX-XX]

6                   **20.6.4.214 NMAC– 20.6.4.218 NMAC – No changes proposed.**

7  
8           **20.6.4.219 PECOS RIVER BASIN - Avalon reservoir.**

9           **A. Designated Uses:** irrigation storage, livestock watering, wildlife habitat,  
10 ~~secondary~~ primary contact and warmwater aquatic life.

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

13 [20.6.4.219 NMAC - N, 05-23-05; A, 12-01-10; A, XX-XX-XX]  
14

15                   **20.6.4.220 NMAC – 20.6.4.304 NMAC – No changes proposed.**

16  
17           **20.6.4.305 CANADIAN RIVER BASIN - The main stem of the Canadian river**  
18 **from the headwaters of Conchas reservoir upstream to the New Mexico-**  
19 **Colorado line, perennial reaches of the Conchas river, the Mora river**  
20 **downstream from the USGS gaging station near Shoemaker, the Vermejo river**  
21 **downstream from Rail canyon and perennial reaches of Raton, Chicorica**  
22 **(except Lake Maloya and Lake Alice) and Uña de Gato creeks.**



1           **A.     Designated Uses:** irrigation, marginal warmwater aquatic life, livestock  
2 watering, wildlife habitat and primary contact.

3           **B.     Criteria:**

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

6                   (2)   TDS 3,500 mg/L or less at flows above 10 cfs.

7 [20.6.4.305 NMAC - Rp 20 NMAC 6.1.2305, 10-12-00; A, 05-23-05; A, 12-01-10;

8 A, XX-XX-XX]

9 [NOTE: This segment was divided effective 12-01-10. The standards for ~~Lake~~

10 ~~Maloya and Lake Alice~~ and Lake Maloya are under 20.6.4.311 and 20.6.4.312

11 NMAC, respectively.]

12                   **20.6.4.306 NMAC – 20.6.4.307 NMAC – No changes proposed.**

13  
14  
15 **20.6.4.308   CANADIAN RIVER BASIN - Charette lakes.**

16           **A.     Designated Uses:** coldwater aquatic life, warmwater aquatic life,  
17 ~~secondary~~ primary contact, livestock watering and wildlife habitat.

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

20 [20.6.4.308 NMAC - Rp 20 NMAC 6.1.2305.5, 10-12-00; A, 05-23-05; A, 12-01-10;

21 A, XX-XX-XX]

1       **20.6.4.309 – 20.6.4.316 – No changes proposed.**

3       **20.6.4.317 CANADIAN RIVER BASIN - Springer lake.**

4           **A.     Designated Uses:** coolwater aquatic life, irrigation, primary contact,  
5 livestock watering, ~~and~~ wildlife habitat, and public water supply.

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

8       [20.6.4.317 NMAC - N, 07-10-12; A, XX-XX-XX]

10       **20.6.4.318 NMAC - 20.6.4.400 NMAC [RESERVED]**

12       **20.6.4.900 CRITERIA APPLICABLE TO EXISTING, DESIGNATED OR**  
13 **ATTAINABLE USES UNLESS OTHERWISE SPECIFIED IN 20.6.4.97**  
14 **THROUGH 20.6.4.899 NMAC.**

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

21       **Subsection B, 20.6.4.900 –Subsection C, 20.6.4.900 – No changes proposed.**

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

6           **E.     Secondary Contact:** the monthly geometric mean of *E. coli* bacteria of  
7           548 cfu/100 mL or MPN/100 mL and single sample of 2507 cfu/100 mL or MPN/100  
8           mL apply to this use. The results for *E. coli* may be reported as either cfu (colony  
9           forming units) or the most probable number (MPN), depending on the analytical  
10          method used.

11  
12          **Subsection F through Subsection H, Subparagraph (1) of 20.6.4.900 NMAC - No**  
13          **changes proposed.**

14  
15               **(2)   Coldwater:** dissolved oxygen 6.0 mg/L or more, 6T3 temperature  
16               20°C (68°F), maximum temperature 24°C (75°F) and pH within the range of 6.6 to  
17               8.8. Where a single segment-specific temperature criterion is indicated in 20.6.4.101-  
18               899 NMAC, it is the maximum temperature and no 6T3 temperature applies.

19               **(3)   Marginal Coldwater:** dissolved oxygen 6.0 mg/L or more, 6T3  
20               temperature 25°C (77°F), maximum temperature 29°C (84°F) and pH within the  
21               range from 6.6 to 9.0. Where a single segment-specific temperature criterion is

1 indicated in 20.6.4.101-899 NMAC, it is the maximum temperature and no 6T3  
2 temperature applies.

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

5 (5) **Warmwater:** dissolved oxygen 5.0 mg/L or more, maximum  
6 temperature 32.2°C (90°F) and pH within the range of 6.6 to 9.0. Where a segment-  
7 specific temperature criterion is indicated in 20.6.4.101-899 NMAC, it is the  
8 maximum temperature.

9 (6) **Marginal Warmwater:** dissolved oxygen 5.0 mg/L or more, pH  
10 within the range of 6.6 to 9.0 and maximum temperature 32.2°C (90°F). Where a  
11 segment-specific temperature criterion is indicated in 20.6.4.101-899 NMAC, it is the  
12 maximum temperature.

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

18 I. Hardness-dependent acute and chronic aquatic life criteria for metals are  
19 calculated using the following equations. The criteria are expressed as a function of  
20 dissolved hardness (as mg CaCO<sub>3</sub>/L). With the exception of aluminum, the equations  
21 are valid only for dissolved hardness concentrations of 0-400 mg/L. For dissolved  
22 hardness concentrations above 400 mg/L, the criteria for 400 mg/L apply. For

aluminum the equations are valid only for dissolved hardness concentrations of 0-220 mg/L. For dissolved hardness concentrations above 220 mg/L, the aluminum criteria for 220 mg/L apply.

(1) **Acute aquatic life criteria for metals.** The equation to calculate acute criteria in  $\mu\text{g/L}$  is  $\exp(m_A[\ln(\text{hardness})] + b_A)(\text{CF})$ . Except for aluminum, the criteria are based on analysis of dissolved metal. For aluminum, the criteria are based on analysis of total recoverable aluminum in a sample that is filtered to minimize mineral phases as specified by the department.

The EPA has disapproved the hardness-based equation for total recoverable aluminum in waters where the pH is less than 6.5 in the receiving stream for federal purposes of the 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	$1.136672 - [(\ln \text{hardness})(0.041838)]$
Chromium (Cr) III	0.8190	3.7256	0.316
Copper (Cu)	0.9422	-1.700	0.960
Lead (Pb)	1.273	-1.460	$1.46203 - [(\ln \text{hardness})(0.145712)]$
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

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

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	$1.101672 - [(\ln \text{hardness})(0.041838)]$
Chromium (Cr) III	0.8190	0.6848	0.860
Copper (Cu)	0.8545	-1.702	0.960
Lead (Pb)	1.273	-4.705	$1.46203 - [(\ln \text{hardness})(0.145712)]$
Manganese (Mn)	0.3331	5.8743	
Nickel (Ni)	0.8460	0.0584	0.997
Zinc (Zn)	0.9094	0.6235	0.986

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

Direct Testimony of Kristine Pintado  
WQCC 14-05 (R)

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	0.3	45
	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
220	Acute	10,071	<u>3.23</u>	<u>1,087</u>	<u>28</u>	<u>151</u>	<u>3,882</u>	<u>912</u>	<u>13</u>	<u>328</u>

Direct Testimony of Kristine Pintado  
WQCC 14-05 (R)

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

**J. Use-Specific Numeric criteria.**

~~(1) Notes applicable to the table of numeric criteria in Paragraph (2) 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—irrigation; LW—livestock watering; WH—wildlife habitat; HH—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. For aluminum, where the pH is 6.5 or less in the receiving water after mixing, the acute and chronic dissolved criteria in the table will apply.

————— (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) applies to the sum of all congeners, to the sum of all homologs or to the sum of all areolers.

**(21) 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/Irr Storage	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

Direct Testimony of Kristine Pintado  
WQCC 14-05 (R)

Pollutant	CAS Number	DWS	Irr/Irr Storage	LW	WH	Aquatic Life			Type
						Acute	Chronic	HH-OO	
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
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

Direct Testimony of Kristine Pintado  
WQCC 14-05 (R)

Pollutant	CAS Number	DWS	Irr/Irr Storage	LW	WH	Aquatic Life			Type
						Acute	Chronic	HH-OO	
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
Benzdine	92-87-5	0.0015						0.0020	C
Benzoanthracene	56-55-3	0.048						0.18	C
Benzoapyrene	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	117-81-7	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

Direct Testimony of Kristine Pintado  
WQCC 14-05 (R)

Pollutant	CAS Number	DWS	Irr/Irr Storage	LW	WH	Aquatic Life			Type
						Acute	Chronic	HH-OO	
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	
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	

Direct Testimony of Kristine Pintado  
WQCC 14-05 (R)

Pollutant	CAS Number	DWS	Irr/Irr Storage	LW	WH	Aquatic Life			Type
						Acute	Chronic	HH-OO	
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/Irr Storage	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

(12) Notes applicable to the table of numeric criteria in Paragraph (21) 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.

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

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

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

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

13                **K.**      Acute aquatic life criteria for total ammonia are dependent on pH and the  
14                presence or absence of salmonids. The criteria in mg/L as N based on analysis of  
15                unfiltered samples are as follows:

<b>pH</b>	<b>Where Salmonids Present</b>	<b>Where Salmonids Absent</b>
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

pH	Where Salmonids Present	Where Salmonids Absent
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
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 014°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:



1

pH	Temperature (°C)										
	0 and below	14 and below	15	16	18	20	22	24	26	28	30 and above
6.5 and below	<del>6.67</del>	6.67	6.46	6.06	5.33	4.68	4.12	3.62	3.18	2.80	2.46
6.6	<del>6.57</del>	6.57	6.36	5.97	5.25	4.61	4.05	3.56	3.13	2.75	2.42
6.7	<del>6.44</del>	6.44	6.25	5.86	5.15	4.52	3.98	3.50	3.07	2.70	2.37
6.8	<del>6.29</del>	6.29	6.10	5.72	5.03	4.42	3.89	3.42	3.00	2.64	2.32
6.9	<del>6.12</del>	6.12	5.93	5.56	4.89	4.30	3.78	3.32	2.92	2.57	2.25
7.0	<del>5.91</del>	5.91	5.73	5.37	4.72	4.15	3.65	3.21	2.82	2.48	2.18
7.1	<del>5.67</del>	5.67	5.49	5.15	4.53	3.98	3.50	3.08	2.70	2.38	2.09
7.2	<del>5.39</del>	5.39	5.22	4.90	4.31	3.78	3.33	2.92	2.57	2.26	1.99
7.3	<del>5.08</del>	5.08	4.92	4.61	4.06	3.57	3.13	2.76	2.42	2.13	1.87
7.4	<del>4.73</del>	4.73	4.59	4.30	3.78	3.32	2.92	2.57	2.26	1.98	1.74
7.5	<del>4.36</del>	4.36	4.23	3.97	3.49	3.06	2.69	2.37	2.08	1.83	1.61
7.6	<del>3.98</del>	3.98	3.85	3.61	3.18	2.79	2.45	2.16	1.90	1.67	1.47
7.7	<del>3.58</del>	3.58	3.47	3.25	2.86	2.51	2.21	1.94	1.71	1.50	1.32
7.8	<del>3.18</del>	3.18	3.09	2.89	2.54	2.23	1.96	1.73	1.52	1.33	1.17
7.9	<del>2.80</del>	2.80	2.71	2.54	2.24	1.96	1.73	1.52	1.33	1.17	1.03
8.0	<del>2.43</del>	2.43	2.36	2.21	1.94	1.71	1.50	1.32	1.16	1.02	0.897
8.1	<del>2.10</del>	2.10	2.03	1.91	1.68	1.47	1.29	1.14	1.00	0.879	0.773
8.2	<del>1.79</del>	1.79	1.74	1.63	1.43	1.26	1.11	0.973	0.855	0.752	0.661
8.3	<del>1.52</del>	1.52	1.48	1.39	1.22	1.07	0.941	0.827	0.727	0.639	0.562
8.4	<del>1.29</del>	1.29	1.25	1.17	1.03	0.906	0.796	0.700	0.615	0.541	0.475
8.5	<del>1.09</del>	1.09	1.06	0.990	0.870	0.765	0.672	0.591	0.520	0.457	0.401
8.6	<del>0.920</del>	0.920	0.892	0.836	0.735	0.646	0.568	0.499	0.439	0.386	0.339
8.7	<del>0.778</del>	0.778	0.754	0.707	0.622	0.547	0.480	0.422	0.371	0.326	0.287
8.8	<del>0.661</del>	0.661	0.641	0.601	0.528	0.464	0.408	0.359	0.315	0.277	0.244
8.9	<del>0.565</del>	0.565	0.548	0.513	0.451	0.397	0.349	0.306	0.269	0.237	0.208
9.0 and above	<del>0.486</del>	0.486	0.471	0.442	0.389	0.342	0.300	0.264	0.232	0.204	0.179

2

3

**(2) Chronic aquatic life criteria for total ammonia when fish early life**

4

**stages are absent.**

5

**(a)** The equation to calculate chronic criteria in mg/L as N is:

Direct Testimony of Kristine Pintado  
WQCC 14-05 (R)

$$((0.0577/(1 + 10^{7.688-\text{pH}})) + (2.487/(1 + 10^{\text{pH}-7.688}))) \times 1.45 \times 10^{0.028 \times (25-\text{MAX}(T,7))}$$

(b) Selected values of calculated chronic criteria in mg/L as N:

pH	Temperature (°C)									
	7 and below	7 and below	8	9	10	11	12	13	14	15 and above
6.5 and below	10.8	10.8	10.1	9.51	8.92	8.36	7.84	7.35	6.89	6.46
6.6	10.7	10.7	9.99	9.37	8.79	8.24	7.72	7.24	6.79	6.36
6.7	10.5	10.5	9.81	9.20	8.62	8.08	7.58	7.11	6.66	6.25
6.8	10.2	10.2	9.58	8.98	8.42	7.90	7.40	6.94	6.51	6.10
6.9	9.93	9.93	9.31	8.73	8.19	7.68	7.20	6.75	6.33	5.93
7.0	9.60	9.60	9.00	8.43	7.91	7.41	6.95	6.52	6.11	5.73
7.1	9.20	9.20	8.63	8.09	7.58	7.11	6.67	6.25	5.86	5.49
7.2	8.75	8.75	8.20	7.69	7.21	6.76	6.34	5.94	5.57	5.22
7.3	8.24	8.24	7.73	7.25	6.79	6.37	5.97	5.60	5.25	4.92
7.4	7.69	7.69	7.21	6.76	6.33	5.94	5.57	5.22	4.89	4.59
7.5	7.09	7.09	6.64	6.23	5.84	5.48	5.13	4.81	4.51	4.23
7.6	6.46	6.46	6.05	5.67	5.32	4.99	4.68	4.38	4.11	3.85
7.7	5.81	5.81	5.45	5.11	4.79	4.49	4.21	3.95	3.70	3.47
7.8	5.17	5.17	4.84	4.54	4.26	3.99	3.74	3.51	3.29	3.09
7.9	4.54	4.54	4.26	3.99	3.74	3.51	3.29	3.09	2.89	2.71
8.0	3.95	3.95	3.70	3.47	3.26	3.05	2.86	2.68	2.52	2.36
8.1	3.41	3.41	3.19	2.99	2.81	2.63	2.47	2.31	2.17	2.03
8.2	2.91	2.91	2.73	2.56	2.40	2.25	2.11	1.98	1.85	1.74
8.3	2.47	2.47	2.32	2.18	2.04	1.91	1.79	1.68	1.58	1.48
8.4	2.09	2.09	1.96	1.84	1.73	1.62	1.52	1.42	1.33	1.25
8.5	1.77	1.77	1.66	1.55	1.46	1.37	1.28	1.20	1.13	1.06
8.6	1.49	1.49	1.40	1.31	1.23	1.15	1.08	1.01	0.951	0.892
8.7	1.26	1.26	1.18	1.11	1.04	0.976	0.915	0.858	0.805	0.754
8.8	1.07	1.07	1.01	0.944	0.855	0.829	0.778	0.729	0.684	0.641
8.9	0.917	0.917	0.860	0.806	0.756	0.709	0.664	0.623	0.584	0.548
9.0 and above	0.790	0.790	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).										

[20.6.4.900 NMAC - Rp 20 NMAC 6.1.3100, 10-12-00; A, 10-11-02; A, 05-23-05;  
A, 07-17-05; A, 12-01-10; A, XX-XX-XX]

**20.6.4.901 PUBLICATION REFERENCES:** These documents are intended as guidance and are available for public review during regular business hours at the offices of the surface water quality bureau. Copies of these documents have also been filed with the New Mexico state records center in order to provide greater access to this information.

A. American public health association. 1992. *Standard methods for the examination of water and wastewater, 18th Edition*. Washington, D.C. 1048 p.

B. American public health association. 1995. *Standard methods for the examination of water and wastewater, 19th Edition*. Washington, D.C. 1090 p.

C. American public health association. 1998. *Standard methods for the examination of water and wastewater, 20th Edition*. Washington, D.C. 1112 p.

D. United States geological survey. 1987. *Methods for determination of inorganic substances in water and fluvial sediments, techniques of water-resource investigations of the United States geological survey*. Washington, D.C. 80 p.

E. United States geological survey. 1987. *Methods for the determination of organic substances in water and fluvial sediments, techniques of water-resource investigations of the U.S. geological survey*. Washington, D.C. 80 p.

F. United States environmental protection agency. 1974. *Methods for chemical analysis of water and wastes*. National environmental research center, Cincinnati, Ohio. (EPA-625-/6-74-003). 298 p.

1           **G.**     New Mexico water quality control commission. 2003. *(208) state of New*  
2           *Mexico water quality management plan*. Santa Fe, New Mexico. 85 p.

3           **H.**     Colorado river basin salinity control forum. 2002~~14~~. *2002~~14~~ Review,*  
4           *water quality standards for salinity, Colorado river system*. Phoenix, Arizona. 99 p.

5           **I.**     United States environmental protection agency. 2002. *Methods for*  
6           *measuring the acute toxicity of effluents and receiving waters to freshwater and*  
7           *marine organisms*. Office of research and development, Washington, D.C. (5<sup>th</sup> Ed.,  
8           EPA 821-R-02-012). 293 p. <http://www.epa.gov/ostWET/disk2/atx.pdf>

9           **J.**     United States environmental protection agency. 2002. *Short-term*  
10          *methods for estimating the chronic toxicity of effluents and receiving waters to*  
11          *freshwater organisms*. Environmental monitoring systems laboratory, Cincinnati,  
12          Ohio. ([4th Ed., EPA 821-R-02-01). 335 p.

13          **K.**     Ambient-induced mixing, in United States environmental protection  
14          agency. 1991. *Technical support document for water quality-based toxics control*.  
15          Office of water, Washington, D.C. (EPA/505/2-90-001). 2 p.

16          **L.**     United States environmental protection agency. 1983. *Technical support*  
17          *manual: waterbody surveys and assessments for conducting use attainability*  
18          *analyses*. Office of water, regulations and standards, Washington, D.C. 251 p.  
19          <http://www.epa.gov/OST/library/wqstandards/uaavol123.pdf>

20          **M.**     United States environmental protection agency. 1984. *Technical support*  
21          *manual: waterbody surveys and assessments for conducting use attainability*  
22          *analyses, volume III: lake systems*. Office of water, regulations and standards,

1 Washington, D.C. 208 p.

2 <http://www.epa.gov/OST/library/wqstandards/uaavol123.pdf>

3 [20.6.4.901 NMAC - Rp 20 NMAC 6.1.4000, 10-12-00; A, 05-23-05; A, 12-01-10;

4 A, XX-XX-XX]

5  
6 **B. BASES FOR PROPOSALS**

7 **1. Sections 20.6.4.101 and .102 NMAC**

8 The proposed minor changes to the segment descriptions in 20.6.4.101 and .102  
9 NMAC would replace the word “below” with the words “downstream of” to be  
10 consistent with terms more commonly applied to stream terminology, and also used in the  
11 other segment descriptions throughout the water quality standards.

12  
13 **2. Section 20.6.4.103 NMAC**

14 20.6.4.103 NMAC is proposed to be amended to primary contact recreation use  
15 with the associated criteria assigned to that use in Subsection D of 20.6.4.900 NMAC.  
16 The federal WQS regulations under 40 C.F.R. § 131.20 require that:

17 “[t]he State shall from time to time, but at least once every three years, hold  
18 public hearings for the purpose of reviewing applicable water quality standards  
19 and, as appropriate, modifying and adopting standards. Any water body segment  
20 with water quality standards that do not include the uses specified in section  
21 101(a) (2) of the Act shall be re-examined every three years to determine if any  
22 new information has become available. If such new information indicates that the  
23 uses specified in section 101(a) (2) of the Act are attainable, the State shall revise  
24 its standards accordingly.”  
25

1 For this segment and several others discussed later in this testimony, the SWQB  
2 has no record of a UAA approved by the WQCC and the EPA to support secondary  
3 contact use, which EPA considers to not meet the 101(a)(2) use. Also, the latest EPA  
4 guidance for recreational contact and CWA Section 101(a) goals finalized during 2012  
5 (77 FR71191) provides new recommendations for recreational criteria based on several  
6 recent health studies and new science. SWQB Exhibit 37. These recommended  
7 recreation criteria levels for *E. coli* include a 30-day geometric mean ("GM") of 126  
8 cfu/100 mL and a maximum Statistical Threshold Value ("STV") of 410 cfu/100 mL for  
9 primary contact recreation uses. These criteria levels are the same as those currently  
10 assigned in the State's water quality standards to the primary contact use under  
11 Subsection D of 20.6.4.900 NMAC. However, the new EPA recommendations do not  
12 address secondary contact recreation criteria and do not allow for the levels of contact in  
13 the same manner as the previous guidance (EPA, 1986). SWQB Exhibit 38

14 Finally, even though swimming in this area is considered "at your own risk" and  
15 depends on the fluctuating river level, this portion of the Rio Grande is accessible and  
16 primary contact recreation has been observed. Therefore, primary contact recreation is  
17 likely an existing use as defined under subparagraph 20.6.4.7 (E)(3) NMAC, and the  
18 designated use for secondary contact is upgraded to the primary contact use with the  
19 applicable criteria set forth in subsection D of 20.6.4.900 NMAC.

1           **3. Section 20.6.4.110 NMAC**

2           In 2009, the Pueblo formerly known as Santa Domingo officially changed its  
3           name to Kewa Pueblo; therefore, this change is proposed to be incorporated into the  
4           segment description for Section 20.6.4.110 NMAC.

6           **4. Section 20.6.4.116 NMAC**

7           The word 'below' is replaced with the hydrologic term 'downstream of' in the  
8           segment description for 20.6.4.116 NMAC. For reasons discussed under 20.6.4.103  
9           NMAC, this section is recommended to be upgraded to the primary contact recreation use  
10          with the associated criteria assigned to that use in subsection D of 20.6.4.900 NMAC .

11          The SWQB has no evidence that this use is not attainable and information indicates that  
12          primary contact use may be an existing use as defined under 20.6.4.7.E (3) NMAC and  
13          likely attainable. To be consistent with the latest EPA recommendations for recreational  
14          contact and CWA Section 101(a) goals, the designated use for secondary contact is  
15          upgraded to the primary contact use and criteria. Finally, this segment includes Rio Ojo  
16          Caliente; the Ohkay Owingeh surface water quality standards downstream are assigned  
17          the primary contact recreation use, and the Rio Grande at the confluence is also  
18          designated as primary contact recreation.

20          **5. Section 20.6.4.124 NMAC**

21          The language in the segment description for Section 20.6.4.124 NMAC is  
22          changed to more accurately describe the reach in hydrologic terms from the downstream

1 confluence upstream to its headwaters. Also, for reasons discussed under 20.6.4.103  
2 NMAC, this section is recommended to be upgraded to the primary contact recreation use  
3 with the associated criteria assigned to that use in subsection D of 20.6.4.900 NMAC.  
4 The SWQB has no evidence that this use is not attainable and information indicates that  
5 primary contact use may be an existing use as defined under 20.6.4.7.E (3) NMAC and  
6 attainable in some reaches.

7  
8 **6. Section 20.6.4.204 NMAC**

9 For reasons discussed under 20.6.4.103 NMAC, this section is recommended to  
10 be upgraded to the primary contact recreation use with the associated criteria assigned to  
11 that use in Subsection D of 20.6.4.900 NMAC. The SWQB has no evidence that this use  
12 is not attainable and information indicates that primary contact use may be an existing  
13 use as defined under Subparagraph 20.6.4.7.E (3) NMAC and is likely attainable.

14  
15 **7. Section 20.6.4.206 NMAC**

16 The word “below” is replaced with the hydrologic term ‘downstream of’ in the  
17 segment description. Also, for reasons discussed under 20.6.4.103 NMAC, this section is  
18 recommended to be upgraded to the primary contact recreation use with the associated  
19 criteria assigned to that use in Subsection D of 20.6.4.900 NMAC. The SWQB has no  
20 evidence that this use is not attainable and information indicates that primary contact use  
21 may be an existing use as defined under 20.6.4.7.E (3) NMAC and is likely attainable.



**8. Section 20.6.4.207 NMAC**

For reasons discussed under 20.6.4.103 NMAC, this section is recommended to be upgraded to the primary contact recreation use with the associated criteria assigned to that use in subsection D of 20.6.4.900 NMAC. The SWQB has no evidence that this use is not attainable and information indicates that primary contact use may be an existing use as defined under 20.6.4.7.E (3) NMAC and is likely attainable.

**9. Section 20.6.4.213 NMAC**

For reasons discussed under 20.6.4.103 NMAC, this section is recommended to be upgraded to the primary contact recreation use with the associated criteria assigned to that use in subsection D of 20.6.4.900 NMAC. The SWQB has no evidence that this use is not attainable and information indicates that primary contact use may be an existing use as defined under 20.6.4.7.E (3) NMAC and is likely attainable. Also, the lake is a state park and national wildlife refuge. The area is open for boating, fishing and camping activities in the spring, summer and fall.

**10. Section 20.6.4.219 NMAC**

For reasons discussed under 20.6.4.103 NMAC, this section is recommended to be upgraded to the primary contact recreation use with the associated criteria assigned to that use in subsection D of 20.6.4.900 NMAC. The SWQB has no evidence that this use is not attainable. Kayaking, water sports and scuba for game fishing are activities

1 allowed and described on the Avalon reservoir park website<sup>5</sup>. These activities involve  
2 considerable risk of ingesting the water. This information indicates that primary contact  
3 use is an existing use as defined under 20.6.4.7.E (3) NMAC, and is likely attainable.

4  
5 **11. Section 20.6.4.305 NMAC**

6 The appropriate segments are assigned to Lake Alice and Lake Maloya, correcting  
7 a grammatical error in the note for Section 20.6.4.305 NMAC.

8  
9 **12. Section 20.6.4.308 NMAC**

10 For reasons discussed under 20.6.4.103 NMAC, this section is recommended to  
11 be amended to the primary contact recreation use with the associated criteria assigned to  
12 that use in subsection D of 20.6.4.900 NMAC. The SWQB has no evidence that this use  
13 is not attainable. Also, Charette Lake is a state park with access for swimming or other  
14 activities associated with primary contact activities. This information indicates that  
15 primary contact use is an existing use as defined under Subparagraph 20.6.4.7.E (3)  
16 NMAC, and is likely attainable.

17  
18  
19  
20  

---

<sup>5</sup> <http://www.recreation.gov/recreationalAreaDetails.do?contractCode=NRSO&recAreaId=87>

1           **13. Section 20.6.4.317 NMAC**

2           Springer Lake is a public water supply for Colfax County (Water System Number  
3           NM3526604); this designated use is an existing use that is proposed be added to the  
4           water body segment description.

5  
6           **14. Section 20.6.4.900**

7                   **a) Subsection A of 20.6.4.900 NMAC**

8           The SWQB proposes the correction of a minor typographical error that requires inserting  
9           a space between the word 'Culture' and the word 'and.'

10                   **b) Subsections D and E of 20.6.4.900 NMAC**

11           The use of more cost-effective and time efficient methods in which counts are  
12           expressed as MPN/100 ml was approved by EPA for testing ambient waters in 2003<sup>6</sup> and  
13           for wastewater and sewage sludge in 2007<sup>7</sup>. The SWQB is currently using an approved  
14           EPA method for sampling and analyzing bacteria levels in ambient water and which  
15           reports results in MPN/100 ml. The currently recommended EPA recreational or bacteria  
16           criteria for E. coli also allows for the use of results reported in MPN (SWQB Exhibit 37).  
17           Therefore, the WQS are revised to reflect the use of updated methods for monitoring,  
18           assessment and reporting. This proposal also relates to changes in 20.6.4.7 NMAC.

---

<sup>6</sup> *U.S. Federal Register* - 40 CFR Part 136 Vol. 68, No. 139; July 21, 2003.

<sup>7</sup> *U.S. Federal Register* - 40 CFR Parts 136 and 503, Vol. 72, No. 157; March 26, 2007.

**c) Subparagraphs 20.6.4.900.H (3), (5) and (6) NMAC**

The dissolved oxygen criteria are revised only to show decimal places (to the hundredths place) to be consistent with dissolved oxygen criteria for the other aquatic life designated uses in the WQS.

**d) Subparagraphs 20.6.4.900.I (1) and (2) NMAC**

After the 2009 Triennial Review, the EPA approved the hardness-based chronic and acute equations for aluminum only for those waters where pH is equal to or greater than 6.5, but disapproved the equations in waters where the pH is less than 6.5. In order to resolve the EPA's disapproval for the 2013 Triennial Review, the Public Discussion Draft included language to clarify implementation of the EPA's recommendations on applicability of the aluminum criteria for low pH waters. The SWQB also proposed retaining the original CWA Section 304(a) criteria in the Table of Numeric Criteria 20.6.4.900.J (2) NMAC) for both acute and chronic aluminum criteria for low pH waters. However, the EPA did not agree this approach would resolve the disapproval. The approach suggested by the EPA to resolve the disapproval appears to apply the criteria for aluminum in a different way than recommended in the EPA's 304(a) criteria document, and also deviates from use of the acute criteria of 750 ug/L (as dissolved) previously adopted by the State and approved by the EPA. The SWQB finds the EPA's further recommendation is not well justified and ambiguous about what criteria should apply in low pH waters. Therefore, the proposal reflects that for federal actions in waters with a pH less than 6.5, the EPA will implement the aluminum criteria for CWA

1 purposes. See also the amended changes to the 2013 Triennial Review proposals filed by  
2 the Department on October 20, 2014.

3  
4 **e) Subparagraph 20.6.4.900.I (3) NMAC**

5 The table of calculated values for acute and chronic hardness-based criteria in  
6 20.6.4.900.I (3) NMAC is revised to add the subscript '3' to the chemical nomenclature  
7 for hardness (in first column on the left), and to include the missing calculated values for  
8 the metals Cd, Cr III, Cu, Pb, Nm, Ni, Ag and Zn at hardness of 220 mg/L CaCO<sub>3</sub>.

9 Also, in accordance with subsection I of 20.6.4.900 NMAC, the hardness  
10 equations for aluminum are only valid up to dissolved hardness (as mg CaCO<sub>3</sub>/L) of 220  
11 mg/L. Therefore, the calculated values for aluminum criteria at dissolved hardness above  
12 220 mg/L are deleted from the table.

13  
14 **f) Subparagraphs 20.6.4.900. J (1) and (2) NMAC**

15 There are several minor but practical changes to these subparagraphs. First, the  
16 explanatory notes in Subparagraph 20.6.4.900.J (1) NMAC and the table in Subparagraph  
17 20.6.4.900.J (2) NMAC are transposed so the table precedes the explanatory notes, and  
18 the subparagraphs are renumbered accordingly. It is less distracting to readers if long  
19 explanatory notes come after the table that the notes refer to. Second, language is added  
20 to the renumbered (and relocated) 20.6.4.900.J (1) NMAC to clarify that criteria for  
21 metals listed in the table are based on the total sample fraction unless otherwise specified  
22 (e.g., dissolved). Third, to be consistent with the new definition for "Irrigation Storage"

1 proposed in Section 7, 20.6.4.7.I (5) NMAC, the irrigation storage designated use (“Irr  
2 Storage”) is added to the table column headings in the Table of Numeric Criteria. The  
3 final change to this table corrects a typographical error with the addition of a hyphen to  
4 the Chemical Abstracts Service (“CAS”) registry number for the pollutant Bis(2-  
5 ethylhexyl) phthalate.

6  
7 **g) Subparagraphs 20.6.4.900.L (1) (b) and (2) (b)**

8 The first column in both tables of these subparagraphs repeats the same calculated  
9 values, which is not necessary. The column heading for the adjacent column in each table  
10 is changed to include the values resulting from temperature calculations in both columns,  
11 so the first column should be deleted.

12  
13 **h) Subsection 20.6.4.901.H**

14 The reference in Subsection H of 20.6.4.901 NMAC is updated to reflect the date  
15 of the most recent version of the Colorado River Basin Salinity Control Forum Review  
16 Report (“Report”), which was approved in October, 2014. The Report is updated on a  
17 triennial basis and the current Report does not recommended any changes to the  
18 implementation of water quality standards for salinity in 20.6.4.54 NMAC. See also the  
19 amended changes to the 2013 Triennial Review proposals filed by the Department on  
20 October 20, 2014.

1       **C. PUBLIC PARTICIPATION**

2           Public participation for the Triennial Review was described in detail in previous  
3 testimony (SWQB Exhibit 1). Public comments and the SWQB's responses about these  
4 and other amendments are found in SWQB Exhibits 8 and 9.

5       **D. CONCLUSIONS**

6           The accurate hydrologic terminology should be reflected in the descriptions of the  
7 water body segments discussed above in 20.6.4.101 through 20.6.4.317 NMAC, and it is  
8 appropriate to recognize the name change for Kewa Pueblo (i.e., in Section 20.6.4.110  
9 NMAC). The addition of the public water supply use to Springer Lake in 20.6.4.317  
10 NMAC is necessary, as it is an existing use as defined under subsection E of 20.6.4.7  
11 NMAC.

12          It is also necessary to upgrade the nine segments listed in the proposal to  
13 secondary primary contact recreation uses and criteria. The assignment of the primary  
14 contact designated use conforms with the requirement in 40 C.F.R. § 131.6 of the federal  
15 water quality standards regulation to designate uses consistent with the provisions of  
16 Sections 101(a)(2) and 303(c)(2) of the CWA. It is also consistent with the federal WQS  
17 regulations in 40 C.F.R. § 131.20 to incorporate the newest EPA recommendations for  
18 recreational contact uses and criteria to support CWA Section 101(a)(2) uses, as part of  
19 the Triennial Review. SWQB Exhibit 37

20          Under 40 C.F.R. § 131.10 (j), the State is required to conduct a UAA when  
21 designating uses and criteria that are not consistent with CWA Section 101(a)(2) which,  
22 "... provides for the protection and propagation of fish, shellfish, and wildlife and

1 provides for recreation in and on the water.” The WQS regulations also effectively  
2 establish a "rebuttable presumption" that the CWA Section 101(a)(2) uses are attainable  
3 and therefore must be assigned to a water body, unless a state or Tribe affirmatively  
4 demonstrates, with appropriate documentation, that such uses are not attainable. To rebut  
5 the presumption, a state or Tribe must rely on a UAA.<sup>8</sup>

6 There are no UAAs to support secondary recreation contact uses and criteria for  
7 the nine segments discussed previously, and the upgrades to primary contact recreation  
8 uses and criteria for those remaining water segments in the WQS with secondary contact  
9 recreation uses and criteria are consistent with the federal regulations and with the CWA  
10 Section 101(a)(2) goals.

11 In some instances, revising the designation from secondary to primary contact for  
12 compatibility with downstream waters is also consistent with 40 C.F.R. § 131.10(b). In  
13 other cases, activities associated with primary contact recreation have been observed by  
14 SWQB staff or are noted on websites for particular water bodies (i.e., Avalon Lake);  
15 therefore, primary contact recreation is an existing use, and must be maintained whether  
16 designated or not. 40 CFR § 131.10(g).

17 According to the federal regulations, the state is not required to conduct UAAs for  
18 recreation when primary contact recreational uses consistent with the CWA are being  
19 designated for waters of the State. 40 C.F.R. §131.10(k). However, it may be  
20 appropriate evaluate water bodies for revisions to primary contact recreation uses or

---

<sup>8</sup> Water Quality Standards Academy Training Module, available at:  
<http://water.epa.gov/learn/training/standardsacademy/mod2/page4.cfm>.



1 bacteriological criteria. Such evaluations are subject to the UAA requirements under the  
2 state WQS and the federal WQS regulations (e.g., 20.6.4.15 NMAC and 40 C.F.R. §  
3 131.10).

4 The changes to 20.6.4.900 and .901 NMAC are recommended in order to correct  
5 minor grammatical errors, add clarity, remove redundancy and update the WQS  
6 references. They are also necessary to reflect the application of the aluminum criteria by  
7 the EPA.