STATE OF NEW MEXICO
WATER QUALITY CONTROL COMMISSION

In the Matter of:	)	
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PROPOSED AMENDMENTS TO STANDARDS FOR INTERSTATE AND INTRASTATE WATERS, 20.6.4 NMAC	)	**No. WQCC 14-05 (R)**
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PROPOSED STATEMENT OF REASONS AND FINAL ORDER

This matter comes before the New Mexico Water Quality Control Commission ("WQCC" or "Commission") upon a petition filed by the New Mexico Environment Department ("NMED" or "Department") proposing amendments to the State of New Mexico's Standards for Interstate and Intrastate Surface Waters ("Standards"), which are codified as Title 20, Chapter 6, Part 4 of the New Mexico Administrative Code (20.6.4 NMAC), commonly referred to as the "Triennial Review."

NMED's Petition to Amend Surface Water Quality Standards ("SWQS") was filed with the Administrator on June 25, 2014. On October 20, 2014, NMED filed an Amended Petition to Revise the SWQS and on September 4, 2015, NMED filed a Notice of Changes to its Petition (together with the originally filed petition, NMED's Petition).

Additionally, in accordance with the Scheduling Order and the Procedural Order issued in this matter on July 10, 2014, on September 30, 2014, Freeport-McMoRan Chino Mines Company ("Chino") filed a petition with the Commission to amend the SWQS. The proposed amendment proposed to add site-specific criteria for copper for certain surface waters located within the Mimbres River Closed Basin (hydrologic unit code HUC8-13030202) near the towns of Bayard and Hurley, New Mexico and also located within an

area known as the Chino Mines Site Smelter Tailings Soil Investigation Unit ("STSIU" waters).

On July 8, 2014, the Commission voted to hold a triennial review of these matters and designated Butch Tongate as the Hearing Officer for the proceeding. On November 25, 2014, the WQCC designated Christopher T. Saucedo as the Hearing Officer for the Triennial Review. On April 16, 2015, the WQCC designated Morris J. Chavez as a substitute Hearing Officer. The hearing on these matters began on October 13, 2015 in Santa Fe, New Mexico and concluded on October 16, 2015. The public was afforded an adequate opportunity to participate throughout the hearing.

LEGAL AUTHORITY

1. Under the New Mexico Water Quality Act ("WQA"), the WQCC is responsible for adopting water quality standards and for all other purposes of the Clean Water Act ("CWA"). Section 303(c) of the CWA requires each State to hold public hearings from time to time, but at least every three years, for the purpose of reviewing and, as appropriate, modifying and adopting water quality standards. New or revised standards must be submitted by the State to the U.S. Environmental Protection Agency ("EPA") for approval.[1] Under the WQA, any person (including NMED) may at any time petition the WQCC to adopt, amend or repeal a water quality standard. NMSA 1978, § 74-6-6.B. The WQCC must hold a public hearing in order to adopt new or amended standards. NMSA 1978, §§ 74-6-3.E, -6.A.

[1] New Mexico's last "triennial review" commenced in August 2008 and concluded with EPA's approval in April 2011 of nearly all of the WQCC's amendments.

2. Section 74-6-4.D of the WQA provides that:

> The WQCC shall adopt water quality standards for surface and ground water of the state subject to the Water Quality Act. The standards shall include narrative standards and, as appropriate, the designated uses of the waters and the water quality criteria necessary to protect such uses. The standards shall at a minimum protect the public health or welfare, enhance the quality of water and serve the purposes of the Water Quality Act.
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> NMSA 1978, § 74-6-4.D.

3. CWA regulations provide similar direction: "States adopt water quality standards to protect public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act." 40 CFR § 131.2. Serving the purposes of the CWA means that "water quality standards should, wherever attainable, provide water quality for the protection and propagation of fish, shellfish and wildlife, recreation in and on the water, and agricultural, industrial, and other purposes including navigation." *Id.* A water quality standard "defines the goals for a water body, or portion thereof, by designating the use or uses to be made of the water and by setting criteria necessary to protect the uses." *Id.* The designated uses in New Mexico's Standards, set forth in 20.6.4.7 NMAC, are:

- domestic water supply
- livestock watering
- irrigation
- aquatic life (coldwater, coolwater, warmwater and four other subcategories)
- primary and secondary contact
- fish culture
- wildlife habitat
- public water supply

4. The Standards also establish water quality criteria that will protect the designated uses of a water body. These criteria must be based on robust scientific rationale and must contain sufficient parameters or constituents to protect the designated use. 40

CFR § 131.11(a). The Standards contain narrative criteria that apply to all designated uses. 20.6.4.13 NMAC. The Standards also identify numeric criteria that are specific to particular designated uses 20.6.4.900 NMAC.[2]

5. In addition to setting water quality goals, standards also serve "as the regulatory basis for the establishment of water-quality-based treatment controls and strategies beyond technology-based levels of treatment required by sections 301(b) and 306 of the [Clean Water] Act". 40 CFR §131.2.

6. In preparing the proposed amendments, NMED followed all state and federal requirements for the content and justification of revisions to water quality standards. In particular, the proposed amendments of water quality standards must be based on:

> ...credible scientific data and other evidence appropriate under the Water Quality Act. ... [T]he commission shall give weight it deems appropriate to all facts and circumstances, including the use and value of the water for water supplies, propagation of fish and wildlife, recreational purposes and agricultural, industrial and other purposes.
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> NMSA 1978, § 74-6-4.D.

7. Federal regulation requires that designated uses reflect the uses actually being attained. 40 CFR § 131.10(i). EPA's Water Quality Standards Handbook explains the requirement as follows: "If a water body is designated for a use that requires less

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[2] According to EPA regulations, water quality standards must also contain an antidegradation policy. 40 CFR § 131.6(d). New Mexico's antidegradation policy is articulated at 20.6.4.8.A NMAC. These amendments make no changes to the antidegradation policy.

stringent criteria than a use that is being attained, the State must revise the use on that water body to reflect the use that is being attained."

8. The Standards and federal regulation prohibit the removal of designated uses if they are "existing uses." 20.6.4.15.A(2) NMAC; 40 CFR § 131.10(h). An existing use is "a use actually attained in a surface water of the state on or after November 28, 1975, whether or not it is a designated use." 20.6.4.7.E(3) NMAC. Accordingly, NMED presents evidence that the designated uses proposed for removal, such as the high quality coldwater aquatic life use on the certain ephemeral segments, are not an existing use.

9. The Standards also mandate protection of existing uses. The general and use-specific criteria apply to existing uses [20.6.4.13; 20.6.4.900 NMAC] and the antidegradation policy requires that the level of water quality necessary to protect existing uses must be maintained. 20.6.4.8.A(1) NMAC. These amendments properly recognize the existing uses for various waters in the Canadian and Pecos River basins, and in the Rio Grande.

10. The Standards and federal regulation prohibit the removal of a designated use that is a CWA Section 101(a)(2) use unless a Use Attainability Analysis ("UAA") demonstrates that attaining the use is not feasible. 20.6.4.15.A(1) NMAC; 40 CFR § 131.10(j). CWA Section 101(a)(2) establishes as a national goal the achievement of a level of water quality that "provides for the protection and propagation of fish, shellfish and wildlife, and provides for recreation in and on the water." The corresponding designated uses in New Mexico are the primary contact use, the wildlife habitat use, and all aquatic life use subcategories except the limited aquatic life use. For these amendments to various New Mexico Waters Waters in the Canadian, Gila, Lower Colorado, Mimbres, Pecos and

San Juan River basins and the Rio Grande, NMED has completed the required UAA, and the results demonstrate that attaining the current designated use is not feasible. SWQB Exhibits 31, 42, 48, 50 and 65.

DEVELOPMENT OF THE TRIENNIAL REVIEW

11. The Bureau published the announcement of a "Scoping Phase" and the intent to prepare the Triennial Review on April 3, 2013, and invited public input for thirty (30) days to identify issues of concern and to propose revisions for consideration in the standards ending on May 15, 2013. SWQB Exhibits 4, 8. Bureau staff was also available to meet with stakeholder groups, as requested, for informal discussions regarding their issues of concern.

12. A public meeting was held in Farmington, New Mexico on Tuesday, December 17, 2013 to present and discuss the draft Use Attainability Analysis ("UAA") related to the Animas River. SWQB Exhibit 46.

13. On April 1, 2014, the Bureau published a "Public Discussion Draft" of the proposed amendments and invited public comment for thirty (30) days. SWQB Exhibit 7. After receiving requests for an extension of the comment period, the NMED Division Director, via the SWQB, authorized an additional thirty (30)-day comment period finally ending May 30, 2014. SWQB Exhibit 9. A public meeting was held at the Silver City Town Hall Annex, Silver City, New Mexico on July 10, 2014, where the Mimbres UAA was distributed. SWQB Exhibit 57. The Bureau petitioned the Commission during its July 8, 2014 regular public meeting to conduct the Triennial Review of New Mexico's Water Quality Standards, 20.6.4 NMAC. Along with the petition, the SWQB presented its

proposed amendments and narrative explanation, scheduling order and request for hearing. The Commission granted the request for hearing.

14. Legal notice for the hearing was published in the New Mexico Register in both Spanish and English, and in three newspapers of general circulation in the state (Albuquerque Journal, Santa Fe New Mexican, Las Cruces Sun). NMSA 1978, § 74-6-6.C. SWQB Exhibit 11. Notice of the hearing was sent to the Commission's mailing list and the SWQB's mailing list. *Id.* Notice was also published on the SWQB website. SWQB Exhibit 12.

15. A Procedural Order was issued by the WQCC on July 10, 2014. On November 25, 2014 the WQCC designated a hearing officer. On January 30, 2015 the Hearing Officer issued an Order modifying the Scheduling Order. On August 7, 2015 the Hearing Officer issued a Procedural Order, and on September 28, 2015 the final Scheduling Order.

16. Throughout 2015, NMED met with Amigos Bravos, the U.S. Environmental Protection Agency (EPA), Los Alamos National Security, LLC., the New Mexico Department of Game and Fish, San Juan Water Commission, Freeport-McMoRan Chino Mines Company ("Chino Mines"), Chevron Mining, Inc., the New Mexico Municipal Environmental Quality Association and Peabody Energy to resolve issues related to the Department's proposals and proposed amendments. These discussions resulted in significant changes to 20.6.4.10 NMAC (Temporary Standards) and 20.6.4.16 NMAC (Piscicide Proposal). NMED's Notice of Changes to New Mexico Environment Department's Petition (September 4, 2015).

17. A public hearing was held in Santa Fe, New Mexico from October 13, 2015 through October 16, 2015. The WQCC heard technical testimony from NMED, Chino Mines, Amigos Bravos, San Juan, and Chevron; LANS and Peabody Energy entered appearances in this matter and submitted written technical testimony, but did not present technical testimony at the public hearing. Public comment was heard from many interested parties.

18. The Commission allowed all interested persons a reasonable opportunity to submit data, views, and arguments, and to examine witnesses. The record containing pleadings, written testimony, exhibits, the hearing transcript, public comments, and hearing officer orders has been submitted to the Commission for review in compiling this Statement of Reasons. NMED's final proposed changes to the Standards, including edits post public hearing, are included as Attachment A.

19. NMED has made four changes post public hearing. An explanation for each of the four changes is contained herein and is summarized here: **Subparagraph 20.6.4.10.F (1)(b):** The Department proposes to remove the first instance of the word "further" in Subparagraph 20.6.4.10.F (1)(b) because it is redundant and use of "degradation" instead of "further degradation" aligns with language already in 20.6.4.8 NMAC; **Paragraph 20.6.4.10.F (2):** The Department proposes to add "or antidegradation requirements under 20.6.4.8 NMAC" as stated in rebuttal testimony presented during the hearings that a temporary water quality standard is subject to the antidegradation review policy already adopted in 20.6.4.8 NMAC; Hrg. Trans. Vol.2, p.192:14-193:15; **Paragraph 20.6.4.10.F (7):** The Department proposes that "appropriate public participation" be replaced with "a public hearing before the commission" to clarify that

adopting a temporary standard requires a public hearing; and finally, **Subsection 20.6.4.12.H NMAC:** The term "NPDES" in the Department's proposed Subsection 20.6.4.12.H is replaced with "Clean Water Act" so that a temporary standard is not limited to inclusion in the National Pollutant Discharge Elimination System ("NPDES") permits issued under CWA Section 402, but may also be included in other CWA permits such as for dredge and fill activities issued under CWA Section 404.

20. Based upon the evidence and argument in the record, the following Statement of Reasons sets forth how the Commission considered and weighed the evidence presented and considered legal arguments in this matter with respect to adoption of changes to the New Mexico's Water Quality Standards at 20.6.4 NMAC.

STATEMENT OF REASONS

After a full deliberation the WQCC hereby submits the following Statement of Reasons in support of their decision:

21. The Department has identified certain typographical, grammar, and formatting errors in the Department's Petition of September 4, 2015. These non-substantive changes have been addressed in the Proposed Final Rule submitted by the Department.

22. The Commission finds that these changes proposed by the Parties to typographical, grammar, and formatting errors in the Department's Petition of September 4, 2015 are reflected in NMED's Proposed Final Rule, attached as **Attachment A**.

23. The Commission finds that these changes to typographical, grammar, and formatting errors are undisputed and herby adopts such changes as reflected in the attached Department's Proposed Final Rule.

I. Temporary Standards Proposal - 20.6.4.10.F NMAC

24. NMED proposed a new Subsection 20.6.4.10.F establishing a procedure to petition the WQCC to adopt a temporary water quality criterion.

F. Temporary Standards.

(1) Any person may petition the commission to adopt a temporary standard applicable to all or part of a surface water of the state as provided for in this section and applicable Subsections in 40 CFR Part 131.14. The commission may adopt a proposed temporary standard if the petitioner demonstrates that:

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

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

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

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

(2) A temporary standard shall apply to specific pollutant(s), and to specific water body segment(s). The adoption of a temporary standard does not exempt dischargers from complying with all other applicable water quality standards, control technologies or antidegradation requirements under 20.6.4.8 NMAC.

(3) Designated uses shall not be modified on a temporary basis. Designated use attainment as reported in the CWA Section 305(b)/303(d) Integrated Report shall be based on the original standard and not on a temporary standard.

(4) A petition for a temporary standard shall:

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

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

(c) demonstrate that the proposed temporary standard meets the requirements in this Subsection;

(d) present a work plan with timetable of proposed actions for achieving compliance with the original standard in accordance with Paragraph (5);

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

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

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

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

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

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

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

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

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

25. NMED supported, through the testimony of Ms. Kristine Pintado of the SWQB, that a temporary standard is a time-limited and less stringent water quality criterion for a specific pollutant adopted for a water body for a limited time while the original or underlying criterion for that water body remains in place. This differs from changing the use(s) or criteria for a water body in that a temporary standard maintains the original standards as the goal instead of removing or requiring a use or criterion that represents a lesser goal. *See* Hearing Transcript ("Hrg. Trans.") Vol. 1, 42:10-21.

26. Ms. Pintado testified that the state has adopted a number of tools allowing regulatory flexibilities when it is appropriate to revise criteria, such as provisions for site-specific criteria or uses and refining designated uses. However, when the original water quality goals are suitable and should not be changed, downgrading a use or developing a site specific criterion is not appropriate and may not be allowable. A legal mechanism is

necessary by which a less stringent criterion is applied for a limited time while working to attain the original, underlying criterion. The temporary standards proposals are harmonious with the federal regulations and the Commission's authorities under the WQA. *See* Hrg. Trans. Vol. 1, 42:24-44:11.

27. Ms. Pintado explained that language was added in 20.6.4.12.H NMAC to make it :

> a policy of the commission to allow a temporary standard approved and adopted pursuant to Subsection F of 20.6.4.10 NMAC to be included in the applicable Clean Water Act permit as enforceable limits and conditions. The temporary standard and schedule of actions may be included at the earliest practicable time, and shall specify milestone dates so as to measure progress towards meeting the original standard.

Ms. Pintado's prefiled direct testimony and rebuttal testimony support the adoption of this language. SWQB Exhibit 13. SWQB Rebuttal Exhibit 7.

28. The temporary standard is an interim water quality criterion that is only applied for a limited duration while incremental improvements are made to achieve the original water quality standards ("WQS"). Hrg. Trans. Vol. 1, 42:3-16.

29. The temporary standard encourages maintenance of the original criterion as the ultimate goal instead of removing or putting in place a criterion that represents a lesser goal. Hrg. Trans. Vol 1, 42:14-21.

30. The temporary standard may apply to a specified water body, or portion thereof, and to a specified criterion or pollutant. All other applicable WQS will apply (e.g., any other criteria adopted to protect the designated use). A temporary WQS applies to a particular designated use and associated criterion for a specified period as justified by the petitioner, with requirements as approved by the WQCC and the EPA. SWQB Exhibit 13; Hrg. Trans. Vol 1, 42:22-43:6.

31. In order to ensure polluters work towards meeting the original WQS, the petition for a temporary standard will contain a work plan with controls or other limitations tightening over time, which shows progress towards achieving the original criterion. SWQB Exhibit 13; Hrg. Trans. Vol 1, 46:7-13.

32. The temporary standard is subject to state and federal requirements, subject to hearing and public comment and once adopted by the WQCC will not be effective unless approved by the EPA (40 C.F.R. § 131.21(c)). SWQB Exhibit 13; Hrg. Trans. Vol 1, 46:14-24.

33. The State's WQS (20.6.4 NMAC) and the federal regulations (40 C.F.R. §§ 14 131.6(a), (c), 131.10, and 131.11) require designation of beneficial uses and criteria to support those uses be specified for a water body. Therefore, the temporary standard must identify the criterion to be in place for the term of the temporary standard. SWQB Exhibit 13. SWQB Rebuttal Exhibit 7.

34. Ms. Pintado explained that because temporary standards are changes to the WQS, they are subject to review at least every three years or during the next Triennial Review and if there is any new information indicating that the modified 101(a) use is attainable for water bodies in which a temporary downgrade has been approved (if the temporary standard does not retain a Section 101(a) use), then the temporary standard should be revised accordingly (40 C.F.R. § 131.20(a)). Hrg. Trans. Vol. 1, 46:2-24.

35. Ms. Pintado responded to questions of the Commission concerning what would happen if in the subsequent Triennial Review of the temporary standard indicates that a more stringent criterion is attainable, by stating that then the temporary standard and WQS should be revised accordingly. If, however, it is demonstrated to the WQCC during

the Triennial Review that the original WQS remains unattainable, and the WQCC determines that additional time is warranted, then the necessary revisions should be made to the temporary standard, and resubmitted to EPA for review. SWQB Exhibit 13. Hrg. Trans. Vol. 1, 46:2-48:5; Hrg. Trans. Vol 2, 195:8-197:15.

36. Ms. Pintado testified that to be enforceable, the temporary standard and requirements may also be placed into a NPDES discharge permit by the EPA and NMED's proposal includes the addition of a new subsection 20.6.4.12.H NMAC to allow the EPA to incorporate and enforce the temporary standard into the permit. SWQB Exhibit 13; SJWC D-4; Hrg. Trans. Vol. 1, 46:2-48:5; Hrg. Trans. Vol. 2, 196:1-197:19.

37. Ms. Pintado clarified for the Commission that any temporary standard is reviewed during the triennial review, and that for any temporary standard that extends beyond five years, EPA requires a reevaluation to ensure that the timeframe is justified. Hrg. Trans. Vol 2, 206:3-18.

38. The need for a temporary standard is apparent in the state's application of the general narrative nutrient criteria in 20.6.4.13.E NMAC, considering that aquatic ecosystems are very sensitive to nutrient pollutant levels, which when exceeded can result in excessive algae growth, impairments for dissolved oxygen, toxic algae blooms and loss of aquatic life. The control and removal of nutrients in wastewater to protect such levels requires the most advanced treatment currently available, and in some cases is beyond the capabilities of currently known technology. SWQB Exhibits 13, 17, 18.

39. Other regulatory alternatives for flexibility within the context of the water quality standards, such as compliance schedules allowed under 20.6.4.12.G NMAC, have been evaluated for such scenarios and a provision in the WQS that allows for adoption of

a temporary standard is the most appropriate course of action for these types of situations. Hrg. Trans. Vol. 1, 50:12-51:6.

40. An approach is needed that allows for incremental progress as pollution control technologies improve in effectiveness, become more available and are less costly. The NMED has proposed allowing an applicant to propose an interim or temporary standard for a water body that satisfies the accountability necessary for such flexibility, and demonstrates progress to improve overall water quality. SWQB Exhibit 13. Hrg. Trans. Vol. 1, 50:12-51:6.

41. NMED has amended its proposal in F(7) to expressly provide that the public process include a public hearing before the Commission. As outlined in proposed 20.6.4.10.F NMAC, a petition for a temporary standard must satisfy the WQCC's public notice, hearing and appellate procedures before adoption. The EPA must approve the state's adoption of the temporary standard before it can be implemented. Once approved and implemented, the temporary standard is subject to review at least every three years and progress must be demonstrated. If sufficient progress is not shown, the temporary standard may be revoked or additional requirements added by the WQCC. Finally, a temporary standard is enforceable as included in a permit issued by the EPA. SWQB Exhibit 13. Hrg. Trans. Vol. 1, 47:22-48:5.

42. Prior to filing direct testimony NMED added language to the proposed rule to address suggestions by the San Juan Water Commission. Hrg. Trans. Vol. 1, 49:1-51:6.

43. After initially opposing the proposed temporary standard language, the San Juan Water Commission at hearing supported NMED's proposed language on Temporary Standards. Hrg. Trans. Vol. 2, 417:20-418:11. Hrg. Trans. Vol. 3, 446:4-6.

44. Although Amigos Bravos prefers the EPA's variance language instead of the temporary standard language proposed by NMED, at hearing Amigos Bravos testified they understood that there is significant interest in the temporary standards provision in New Mexico, thus their only intent was to provide recommendations about how the provision be structured. Hrg. Trans. Vol 3, 640:17-20.

45. Ms. Pintado clarified, under cross-examination, that a temporary standard does not change any permit condition, antidegradation policy, or permit review requirements. Hrg. Trans. Vol. 1, 127:24-128:5.

46. Based on the weight of the evidence, the Commission finds NMED's proposal to amend the Water Quality Standards adding a procedure to petition the Commission to adopt a temporary water quality criterion is well-taken and agrees with NMED's proposal to adopt the procedures for adopting temporary standards in a new subsections 20.6.4.10.F and 20.6.4.12.H NMAC.

II. Piscicide Proposal - 20.6.4.16 NMAC

47. NMED proposed changes to the legal framework within which piscicides may be used in water bodies.

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

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

(1) petitioner's name and address;

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

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

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

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

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

(7) results of pre-treatment survey;

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

(9) documentation of notice requesting public comment on the proposed use within a 30-day period, including information as described in Paragraphs (1), (2) and (6) of this Subsection, provided to:

(a) local political subdivisions;

(b) local water planning entities;

(c) local conservancy and irrigation districts; and

(d) local media outlets, except that the petitioner shall only be required to publish notice in a newspaper of circulation in the locality affected by the proposed use.

(10) copies of public comments received in response to the publication of notice and the petitioner's responses to public comments received;

(11) post-treatment assessment monitoring protocol; and

(12) any other information required by the commission.

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

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

~~(1) local political subdivisions;~~

~~(2) local water planning entities;~~

~~(3) local conservancy and irrigation districts; and~~

~~(4) local media outlets, except that the petitioner shall only be required to publish notice in a newspaper of circulation in the locality affected by the proposed use.]~~

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

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

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

(1) Its composition is such as to warrant the proposed claims for it;

(2) Its labeling and other material submitted for registration comply with the requirements of FIFRA and NMPCA;

(3) It will perform its intended function without unreasonable adverse effects on the environment; and

(4) When used in accordance with all FIFRA label requirements it will not generally cause unreasonable adverse effects on the environment.

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

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

[~~F.~~]G. Any person whose application is covered by a NPDES permit shall provide written notice to local entities as described in Subsection A of 20.6.4.16 NMAC and implement post-treatment assessment monitoring within the application area as described in Subsection (F).

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

48. NMED worked with the New Mexico Department of Game and Fish ("NMDGF") to propose the updates to 20.6.4.16 NMAC. The updates were necessary because the NPDES permit process created a redundancy by requiring a federal review of piscicide use in addition to the requirements of 20.6.4.16 NMAC and because the WQCC did not have the discretion of holding either a public meeting or public hearing for those applications not covered under the federal permit. SWQB Exhibits 13, 29.

49. NMED supported through evidence in the filing of direct testimony the history of the piscicide rule. The piscicide application provision currently under 20.6.4.16 NMAC was first developed during the 1998-99 State of New Mexico Triennial Review to allow the application of piscicides for species management and restoration, such as conducted by NMDGF, and proposed as a modification to the general standards for toxic pollutants. The language was adopted by the WQCC, and submitted for federal review under the CWA Section 303(c). SWQB Exhibit 27, p. 4.

50. During the 2003-05 Triennial Review the language was revised to streamline processes and eliminate the need for multiple hearings for application of a single chemical. The provision was applicable to all planned uses and required mandatory

reviews, public notices, a WQCC hearing and approval. The provision was also moved into a new section under 20.6.4.16 NMAC, for the planned use of a piscicide. The language in the water quality standards has been unchanged since that time. SWQB Exhibit 13.

51. In January 2009, a federal court ruling determined that certain pesticide applications, including piscicides, were subject to the EPA's NPDES permit regulations. The EPA subsequently issued a new nationwide Pesticide General Permit ("PGP") rule to cover pesticide applications in states including piscicide application activities such as those conducted by the NMDGF. The Federal Register notice containing the final PGP rule can be found in SWQB Exhibit 28. *See* SWQB Exhibit 30.

52. As proposed at hearing, if the planned use of a piscicide is covered under a NPDES permit, the proposed piscicide use would require no additional WQCC review, but will require post-treatment assessment monitoring and additional public notice to local entities. If the NPDES permit coverage is not available (e.g., Congress acts on proposed legislation to remove the NPDES requirement for pesticides), then the WQCC will review the project. In this case, whether a hearing is held to review the project is discretionary, rather than a mandate. SWQB Exhibit 13.

53. Mr. Kirk Patten, on behalf of the New Mexico Department of Game and Fish, testified in full support of the changes to the piscicide rule as proposed by the Department. Hrg. Trans. Vol. 1, 72:9-14. *See* SWQB Exhibit 29.

54. NMED worked with Amigos Bravos in advance of its proposed rule submitted on September 4, 20015 and on the day of the hearing Amigos Bravos withdrew its objection and proposed changes to NMED's proposal. *See* Amigos Bravos Notice of Withdrawal of Objection Regarding Piscicide Issues, Supplemental Proposed Changes and

Exhibit Concerning Temporary Standards, and Supplemental Exhibits Pertinent to Aluminum Criteria.

55. Based on the weight of the evidence, the Commission finds NMED's proposal to amend the Water Quality Standards regarding the use of piscicides is well-taken and agrees with NMED's proposal to modify the process contained in the WQS regarding the use of piscicides.

III. Ephemeral Waters - 20.6.4.97 NMAC

56. NMED proposed that the term "unclassified" be removed from Section 97.

57. NMED proposed a total of 29 streams in the Canadian, Little Colorado, Pecos, San Juan and Rio Grande river basins, and in the Mimbres and Tularosa closed basins, be determined as ephemeral under 20.6.4.97.C NMAC, pursuant to 20.6.4.15.C and .D NMAC, with the attainable uses designated as limited aquatic life use and secondary contact. SWQB Exhibits 13, 31, 39, 42, 46, 48. Hrg.Trans. Vol. 1, 51:7-63:7.

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.

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

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

C. Waters:

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

(a) Cunningham gulch from Santa Fe county road 55 upstream 1.4 miles to a point upstream of the LAC Minerals mine, identified as Ortiz Mine on USGS topographic maps;

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

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

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

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

(f) an unnamed tributary from the AMAFCA Rio Grande south channel upstream of the crossing of New Mexico highway 47 upstream to I-25;

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

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

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

(j) an unnamed tributary from San Mateo creek upstream 1.5 miles to the Roca Honda mine facility outfall in NPDES permit number;

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

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

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

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

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

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

(c) Grindstone canyon upstream of Grindstone Reservoir.

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

(a) Bracket canyon upstream of the Vermejo river;

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

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

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

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

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

(b) an unnamed tributary of Defiance draw from McKinley County Road 1 upstream to New Mexico Highway 264.

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

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

(b) in the Mimbres river closed basin:

(i) San Vicente arroyo from the Mimbres river upstream to Maudes canyon;

(ii) Chino Mines property subwatershed drainage A and tributaries thereof;

(iii) Chino Mines property subwatershed drainage B and tributaries thereof (excluding the northwest tributary containing Ash spring);

(iv) Chino Mines property subwatershed drainage C and tributaries thereof (excluding reaches containing Bolton spring, the Chiricahua Leopard Frog critical habitat transect, and all reaches in Subwatershed C that are upstream of the Chiricahua Leopard Frog critical habitat);

(v) Chino Mines property subwatershed drainage D and tributaries thereof (drainages D-1, D-2 and D-3, excluding the southeast tributary in drainage D1 that contains Brown spring); and,

(vi) Chino Mines property subwatershed drainage E and tributaries thereof (drainages E-1, E-2 and E-3).

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

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

IV. Twenty Ephemeral Stream Segments

58. NMED proposed that twenty stream segments associated with thirteen NPDES permitted facilities located throughout New Mexico should be re-classified under Section 20.6.4.97 NMAC as ephemeral waters, specifically in 20.6.4.97.C(1) NMAC, 20.6.4.97.C(2)(a) NMAC, 20.6.4.97.C(3) NMAC, 20.6.4.97.C(4) and 20.6.4.97.C(5) NMAC, with the attainable uses designated as limited aquatic life use and secondary contact. For the limited aquatic life use, the acute aquatic life criteria of 20.6.4.900.I and .J NMAC apply. These designated uses and criteria are appropriate based on the hydrology and will not under or over protect the twenty ephemeral stream segments. SWQB Exhibits 39, 42.

59. The CWA Section 101(a)(2) and 20.6.4.6 NMAC state that, wherever attainable, water quality shall provide for the protection and propagation of fish, shellfish and wildlife, and for recreation in and on the water. Together with the federal regulation under 40 C.F.R. § 131.10(j), these regulations effectively establish the "rebuttable presumption" that designated CWA Section 101(a)(2) uses are attainable unless demonstrated otherwise under the provisions of 20.6.4.15 NMAC and 40 C.F.R. § 131.10(g). SWQB Exhibit 1. SWQB Rebuttal Exhibit 1. Hrg. Trans. Vol. 1, 30:9-32:5.

60. In accordance with the state water quality standards under 20.6.4.15.A NMAC and the federal regulations under 40 C.F.R. § 131.10(j), to remove a Section 101(a)(2) designated use requires a UAA analysis. According to 40 C.F.R. § 131.10(g), the State may remove a designated use that is not an existing use, as defined in 20.6.4.7.E (3) NMAC and in 40 CFR § 131.3. The State may also establish subcategories of a use if the state can demonstrate that attaining the designated use is not feasible because one or more

factors in 40 CFR § 131.10(g) (1) – (6). Specific to this proposal is 40 C.F.R. § 131.10(g) (2) in which the "natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the use, unless these discharges without violating State water conservation requirements to enable uses to be met." SWQB Exhibit 13, 39, 46.

61. Based on the weight of the evidence, the Commission finds NMED's proposal to re-classify these twenty stream segments associated with thirteen NPDES permitted facilities located throughout New Mexico is well-taken and agrees with NMED's proposal.

V. Five Chino Mines Drainages as Ephemeral

62. The CWA section 101(a)(2) and section 20.6.4.6 NMAC require that, wherever attainable, water quality must provide for the protection and propagation of fish, shellfish, and wildlife, and for recreation in and on the water. Federal regulations also require protection for attainable" uses, where an "attainable" use is one that is feasible to achieve through practical measures. 40 C.F.R. § 131.10. The EPA interprets federal regulations as establishing a "rebuttable presumption" that fishable/swimmable uses are attainable in all waters unless a Use Attainability Analysis, or UAA, demonstrates otherwise. Specifically, according to established EPA interpretation, 40 C.F.R. 131.2 requires states to adopt standards that serve the purposes of the Clean Water Act, and, where attainable, these standards must support the fishable/swimmable goals. Hrg. Trans. Vol. 1, 30:14-30:18. *See also generally* 40 CFR 131.2. Consequently, in order to remove any fishable/swimmable designation, this Commission must have evidence, through a valid UAA, that the fishable/swimmable uses are not attainable and less stringent uses are scientifically supported. Hrg. Trans. Vol. 1, 30:1-30:5.

63. Revisions of section 20.6.4.15 NMAC, adopted by the Commission in 2009, clarified that UAAs are necessary in order to remove a Section 101(a)(2) designated use, and developed a specific process known as the Hydrology Protocol, or HP, for conducting UAAs in this state. These amendments were approved and adopted by the Commission effective December 1, 2010 and approved by the EPA on April 12, 2011. The process for implementing the HP was approved as an appendix to the SWQB's Water Quality Management Plan/Continuing Planning Process on May 10, 2011, and by the EPA on December 23, 2011.

64. Utilizing the HP process, Chino Mines conducted a UAA pursuant to 20.6.4.15.C and D NMAC. This UAA was performed to determine the attainable water quality standards for unclassified streams in five subwatersheds located south of the Chino Open Pit Mine and east of the City of Bayard in Grant County, New Mexico, specifically as proposed in 20.6.4.97.C(6)(b)(ii)-(vi) NMAC. A map of the five subwatersheds showing the streams proposed for reclassification as ephemeral, evaluation sites and other features are included in Figure 4 of the UAA report in SWQB Exhibit 31. SWQB Exhibit 13. Hrg. Trans. Vol. 1, 51:7-53:9.

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

for the purpose of remedial actions for the Chino Mines investigation area. SWQB Exhibit 13.

66. The HP results and the draft UAA was published for a 30-day review period from January 15, 2013 through February 14, 2014. The UAA report was revised based on public comments received during this period and the final UAA report was published on October 2014. Hrg. Trans. Vol. 1, 52. In accordance with section 20.6.4.15.D NMAC, the report, along with all comments and the SWQB's response to comments was submitted to the EPA for technical approval on June 28, 2013. Chino subsequently revised its report to address concerns received by the EPA, and the revised report was provided to NMED for review on October 23, 2014. Chino also submitted an additional response to comments document that addresses issues raised by the EPA about reclamation activities that are outside the scope of the HP application. SWQB EX. 36. Ms. Pintado's testimony specifies that NMED has reviewed both the revised report and response to comments and has concluded that these documents provide "sufficient clarification and information to address the EPA's concerns." SWQB EX. 13 at 46.

67. Ms. Pintado also testified that Chino complied with all applicable procedures in regard to the implementation of the Hydrology Protocol. SWQB EX. 13 at 41-43. As a result, the SWQB concluded that Chino's UAA report and HP results "demonstrated that the attainable uses for these streams were documented in accordance with the HP, that the streams are naturally ephemeral and should be subject to designated uses and criteria in § 20.6.4.97 NMAC." SWQB EX. 13 at 43-44. The SWQB also determined that "[a]ttainment of the CWA Section 101(a)(2) uses for these ephemeral waters is not feasible due to the factor identified in 40 C.F.R. § 131.10(g)(2): 'Natural,

ephemeral, intermittent, or low flow conditions or water levels prevent the attainment of the use..." SWQB EX. 13 at 44.Ms. Pintado supported the UAA conclusion that the assessed stream segments are naturally ephemeral, and that the designated uses and criteria applicable to 20.6.4.97 NMAC are the appropriate and attainable uses. Therefore, the NMED recommended 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. Further, if adopted into the Water Quality Standards under 20.6.4.97 NMAC, the NMED testified that it will submit supporting documentation to the EPA for final approval under Section 303(c) of the CWA. SWQB Exhibit 13. Hrg. Trans. Vol. 1, 53:3-6.

68. NMED's petition of the HP for STSIU waters during the hearing process was unopposed.

69. Freeport-McMoRan testified in support of the UAA. *See* Hrg. Trans. Vol. 2, 305:22-357:24.

70. Based on the weight of the evidence, the Commission finds NMED's proposal to amend the Water Quality Standards regarding the reclassification of these five stream segments in the Mimbres River closed basin as ephemeral is well-taken and adopts NMED's proposal to include the five drainages listed as ephemeral under 20.6.4.97 NMAC. As such, the Commission requests the SWQB to submit supporting documentation to EPA for final approval under Section 303(c) of the CWA.

VI. Four Ephemeral Stream Segments in the Pecos River Basin, Tularosa Valley Closed Basin and Mimbres Closed Basin.

71. NMED proposed that four streams in the Pecos River basin, in the Tularosa Valley closed basin and the Mimbres closed basin be determined as ephemeral under

20.6.4.97.C(2)(b) NMAC, 20.6.4.97.C(2)(c) NMAC, 20.6.4.97.C(6)(a) NMAC and C(6)(a) and 20.6.4.97.C(b)(i) NMAC.

72. The basis for the proposed change to list four streams determined as ephemeral under 20.6.4.97 NMAC is the Hydrology Protocol ("HP")-based UAA in SWQB Exhibit 48.

73. The SWQB conducted an HP-based UAA for six streams historically observed as possibly ephemeral: Aqua Chiquita Creek from the Rio Peñasco to McEwan Canyon, Grindstone Canyon above Grindstone Reservoir, San Andres Canyon, San Vicente Arroyo from the Mimbres River to Maudes Canyon, Scott Able Canyon and the Sacramento River below Scott Able Canyon. The UAA in SWQB Exhibit 48 provides a list of these waters in Table 1, and a location map in Figure 1. Results of each evaluated reach are documented in Appendices A-F of the UAA in SWQB Exhibit 48; signed field evaluation cover sheets are in SWQB Exhibit 49. Hrg. Trns. Vol. 1, 56:4-58:23.

74. Mr. Kougioulis testified in support of the conclusions reached by Ms. Deborah Sarabia that the four stream segments in the Pecos River basin and in the Tularosa and Mimbres closed basins included in Bureau Exhibit 46, Proposal A, are ephemeral. Hrg. Trans. Vol. 1, 62:16-63:4.

75. No party opposed the change to ephemeral for the four stream segments in the Pecos River basin and in the Tularosa and Mimbres closed basins included in Bureau Exhibit 46, Proposal A.

76. Based on the weight of the evidence, the Commission finds NMED's proposal to amend the Water Quality Standards regarding the reclassification of these four

stream segments in the Pecos River basin, in the Tularosa Valley closed basin and the Mimbres River closed basin as ephemeral is well-taken and should be adopted as proposed.

VII. Intermittent Waters in 20.6.4.98 NMAC and Perennial Waters in 20.6.4.99 NMAC

77. NMED proposed 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 20.6.4.7.S NMAC. In previous Triennial Reviews and interim revisions, the NMED 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 .899 NMAC. SWQB Exhibit 13.

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

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

Subsections B and C of 20.6.4.900 – No changes proposed.

D. Primary Contact: the monthly geometric mean of E. coli bacteria of 126 cfu/100 mL or MPN/100 ml and single sample of 410 cfu/100 mL or MPN/100 mL and pH within the range of 6.6 to 9.0 apply to this use. 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.

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

Subsection F through Subsection H, Subparagraphs (1)-(2) of 20.6.4.900 NMAC - No changes proposed.

(3) Marginal Coldwater: dissolved oxygen 6.0 mg/L or more, 6T3 temperature 25°C (77°F), maximum temperature 29°C (84°F) and pH within the range from 6.6 to 9.0. Where a single segment-specific temperature criterion is indicated in 20.6.4.101-899 NMAC, it is the maximum temperature and no 6T3 temperature applies.

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

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

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

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

I. Hardness-dependent acute and chronic aquatic life criteria for metals are calculated using the following equations. The criteria are expressed as a function of dissolved hardness (as mg $CaCO_3$/L). With the exception of aluminum, the equations are valid only for dissolved hardness concentrations of 0-400 mg/L. For dissolved 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 µg/L is $\exp(m_A[\ln(\text{hardness})] + b_A)(CF)$. 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 hardness)(0.041838)]
Chromium (Cr) III	0.8190	3.7256	0.316
Copper (Cu)	0.9422	-1.700	0.960
Lead (Pb)	1.273	-1.460	1.46203-[(ln hardness)(0.145712)]
Manganese (Mn)	0.3331	6.4676	
Nickel (Ni)	0.8460	2.255	0.998
Silver (Ag)	1.72	-6.59	0.85
Zinc (Zn)	0.9094	0.9095	0.978

(2) Chronic aquatic life criteria for metals. The equation to calculate chronic criteria in µg/L is $\exp(m_C[\ln(\text{hardness})] + b_C)(CF)$. 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	0.9161	
Cadmium (Cd)	0.7647	-4.2180	1.101672-[(ln hardness)(0.041838)]
Chromium (Cr) III	0.8190	0.6848	0.860
Copper (Cu)	0.8545	-1.702	0.960
Lead (Pb)	1.273	-4.705	1.46203-[(ln hardness)(0.145712)]
Manganese (Mn)	0.3331	5.8743	
Nickel (Ni)	0.8460	0.0584	0.997
Zinc (Zn)	0.9094	0.6235	0.986

(3) Selected values of calculated acute and chronic criteria (µg/L).

Hardness as $CaCO_3$, 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

Hardness as $CaCO_3$, dissolved (mg/L)		Al	Cd	Cr III	Cu	Pb	Mn	Ni	Ag	Zn
220	Acute	10,071	3.23	1,087	28	151	3,882	912	13	328
	Chronic	4,035	0.80	141	18	6	2,145	101		248
300	Acute	~~[10,071]~~	4.21	1,400	38	210	4,305	1190	21	435
	Chronic	~~[4,035]~~	1.00	180	23	8	2,379	130		329
400 and above	Acute	~~[10,071]~~	5.38	1,770	50	280	4,738	1510	35	564
	Chronic	~~[4,035]~~	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-OO - human health-organism only; C - cancer-causing; P - persistent.~~

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

([~~2~~]1) **Table of Numeric Criteria:** The following table sets forth the numeric criteria applicable to existing, designated and attainable uses. For metals, criteria represent the total sample fraction unless otherwise specified in the table. Additional criteria that are not compatible with this table are found in Subsections A through I, K and L of this section.

Pollutant	CAS Number	DWS	Irr/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
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		

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

Pollutant	CAS Number	DWS	Irr/Irr Storage	LW	WH	Aquatic Life			Type
						Acute	Chronic	HH-OO	
Acrolein	107-02-8	18						9	
Acrylonitrile	107-13-1	0.65						2.5	C
Aldrin	309-00-2	0.021				3.0		0.00050	C,P
Anthracene	120-12-7	10,500						40,000	
Benzene	71-43-2	5						510	C
Benzidine	92-87-5	0.0015						0.0020	C
Benzoaanthracene	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
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	

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

Pollutant	CAS Number	DWS	Irr/Irr Storage	LW	WH	Aquatic Life			Type
						Acute	Chronic	HH-OO	
alpha-Endosulfan	959-98-8	62				0.22	0.056	89	
beta-Endosulfan	33213-65-9	62				0.22	0.056	89	
Endosulfan sulfate	1031-07-8	62						89	
Endrin	72-20-8	2				0.086	0.036	0.060	
Endrin aldehyde	7421-93-4	10.5						0.30	
Ethylbenzene	100-41-4	700						2,100	
Fluoranthene	206-44-0	1,400						140	
Fluorene	86-73-7	1,400						5,300	
Heptachlor	76-44-8	0.40				0.52	0.0038	0.00079	C
Heptachlor epoxide	1024-57-3	0.20				0.52	0.0038	0.00039	C
Hexachlorobenzene	118-74-1	1						0.0029	C,P
Hexachlorobutadiene	87-68-3	4.5						180	C
Hexachlorocyclopen-tadiene	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		

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

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

(f) The criteria listed under human health-organism only (HH-OO) are intended to protect human health when aquatic organisms are consumed from waters containing pollutants. These criteria

do not protect the aquatic life itself; rather, they protect the health of humans who ingest fish or other aquatic organisms.

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

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

78. Mr. Kougioulis' testimony explained that in accordance with the state water quality standards under 20.6.4.15.A NMAC and the federal regulations under 40 CFR § 131.10(j), to remove a CWA § 101(a)(2) designated use, or to adopt a subcategory of a CWA § 101(a)(2) use requiring less stringent criteria requires a UAA analysis. Further he explained the basis for and application of the hydrology protocol to a UAA. Hrg. Trans. Vol. 1, 59:6- 61:15; SWQB Exhibits 39, 42-45.

79. The NMED applied the HP and conducted a UAA to determine the most protective attainable aquatic life and contact uses for twenty stream segments associated with the thirteen NPDES permitted facilities located throughout New Mexico. Originally, eighteen stream segments were delineated but due to the stream length and geographic features of the Mulatto Canyon stream segment, further delineation was necessary resulting in two additional stream segments, ultimately increasing the total proposed ephemeral stream segments from eighteen to twenty. SWQB Exhibits 39, 41. Hrg. Trans. Vol. 1, 62:8-15.

80. The HP UAA concluded that the assessed stream segments are naturally ephemeral, and that the designated uses applicable to 20.6.4.97 NMAC are the appropriate and attainable uses. Attainment of the CWA §101(a)(2) uses for these ephemeral waters is not feasible due to the factors identified in 40 CFR §131.10(g)(2): natural, ephemeral, intermittent, or low flow conditions or water

levels prevent the attainment of the use. SWQB Exhibit 39. Hrg. Trans. Vol. 1, 62:8-15.

81. Mr. Kougioulis testified in support of NMEDs proposal that the 20 stream segments associated with the 13 NPDES-permitted facilities be listed as ephemeral. Hrg. Trans. Vol. 1, 62:8-15.

82. No party opposed the change in designation for the 20 stream segments to be listed as ephemeral.

83. Based on the weight of the evidence, the WQCC agrees with NMED's proposal to include the 20 segments listed as ephemeral and adopts the 20 stream segments as ephemeral.

VIII. Changes to 20.6.4.101 to .317 NMAC

84. The Department proposed changes in certain sections of 20.6.4.101 through.317 NMAC to correct minor grammatical errors, add hydrologic terms in descriptions, note a name change for Kewa Pueblo, recognize the Southern Ute Indian Tribe boundary and because it is an existing use, add public water supply as a designated use to Springer Lake. SWQB Exhibit 13.

85. The Department also supported, through the testimony of Ms. Pintado and Ms. Lemon, that there are also nine segments to be upgraded from secondary to primary to contact recreation uses and criteria. SWQB Exhibit 13. SWQB Rebuttal Exhibits 1, 2. Hrg. Trans. Vol. 1, 31:13-35:3.

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.

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

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

20.6.4.102 RIO GRANDE BASIN: The main stem of the Rio Grande from one mile [~~below~~] downstream of Percha dam upstream to Caballo dam.

A. **Designated Uses:** irrigation, 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, except that the following segment-specific criteria apply: the monthly geometric mean of E. coli bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.

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

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

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

A. **Designated Uses:** irrigation, livestock watering, wildlife habitat, marginal coldwater aquatic life, [~~secondary~~] 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.

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

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

20.6.4.104 NMAC – 20.6.4.109 NMAC – No changes proposed.

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

A. **Designated Uses:** irrigation, livestock watering, wildlife habitat, primary contact, coldwater aquatic life 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, except that the following segment-specific criteria apply: pH within the range of 6.6 to 9.0 and temperature 25°C (77°F) or less.

[20.6.4.110 NMAC - Rp 20 NMAC 6.1.2108, 10-12-00; A, 05-23-05; A, 12-01-10; A, XX-XX-XX]

20.6.4.111 NMAC – 20.6.4.115 NMAC – No changes proposed.

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

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

B. Criteria: 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 31°C (87.8°F) or less.
[20.6.4.116 NMAC - Rp 20 NMAC 6.1.2113, 10-12-00; A, 05-23-05; A, 12-01-10; A, XX-XX-XX]

20.6.4.117 NMAC – 20.6.4.123 NMAC – No changes proposed.

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

A. Designated Uses: limited aquatic life, wildlife habitat, livestock watering and [~~secondary~~] primary contact.

B. Criteria: the use-specific criteria set forth in 20.6.4.900 NMAC are applicable to the designated uses, except that the following segment-specific criteria apply: pH within the range of 2.0 to 9.0, maximum temperature 30°C (86°F), and the chronic aquatic life criteria of Subsections I and J of 20.6.4.900 NMAC.
[20.6.4.124 NMAC - N, 05-23-05; A, 12-01-10; A, XX-XX-XX]

20.6.4.125 NMAC – 20.6.4.203 NMAC – No changes proposed.

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

A. Designated Uses: irrigation, livestock watering, wildlife habitat, [~~secondary~~] 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.
[20.6.4.204 NMAC - Rp 20 NMAC 6.1.2204, 10-12-00; A, 05-23-05; A, 12-01-10; A, XX-XX-XX]
[**NOTE:** The segment covered by this section was divided effective 05-23-05. The 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.
[20.6.4.206 NMAC - Rp 20 NMAC 6.1.2206, 10-12-00; A, 05-23-05; A, 12-01-10; A, XX-XX-XX]

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

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

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 8,000 mg/L or less, sulfate 2,500 mg/L or less and chloride 4,000 mg/L or less.

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

20.6.4.208 NMAC – 20.6.4.212 NMAC – No changes proposed.

20.6.4.213 PECOS RIVER BASIN - McAllister lake.

A. Designated Uses: coldwater aquatic life, [~~secondary~~] primary contact, livestock watering and wildlife habitat.

B. Criteria: 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 25°C (77°F) or less.

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

20.6.4.214 NMAC– 20.6.4.218 NMAC – No changes proposed.

20.6.4.219 PECOS RIVER BASIN - Avalon reservoir.

A. Designated Uses: irrigation storage, livestock watering, wildlife habitat, [~~secondary~~] 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.

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

20.6.4.220 NMAC – 20.6.4.304 NMAC – No changes proposed.

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

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.

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

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

[**NOTE:** This segment was divided effective 12-01-10. The standards for [~~Lake Maloya and~~] Lake Alice and Lake Maloya are under 20.6.4.311 and 20.6.4.312 NMAC, respectively.]

20.6.4.306 NMAC – 20.6.4.307 NMAC – No changes proposed.

20.6.4.308 CANADIAN RIVER BASIN - Charette lakes.

A. Designated Uses: coldwater aquatic life, warmwater aquatic life,[~~secondary~~] primary contact, livestock watering and wildlife habitat.

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

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

20.6.4.309 – 20.6.4.316 – No changes proposed.

20.6.4.317 CANADIAN RIVER BASIN - Springer lake.

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

B. Criteria: The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the designated uses.
[20.6.4.317 NMAC - N, 07-10-12; A, XX-XX-XX]

86. As noted in the Department's prefiled and verbal testimony this is necessary because secondary contact does not meet the CWA §101(a)(2) goals. The primary contact changes proposed are consistent with the Water Quality Standards and with the latest EPA recommendations to meet CWA §101(a) goals. Most importantly, the DEPARTMENT found evidence that primary contact recreation uses are existing, or at least attainable given the significant amount of other water-based recreation occurring. SWQB Exhibit 13. SWQB Rebuttal Exhibits 1, 2. Hrg. Trans. Vol. 1, 33:13-35:20; Vol. 4, 940:12-946:7.

87. The proposed minor changes to the segment descriptions in 20.6.4.101 and .102 NMAC would replace the word "below" with the words "downstream of" to be consistent with terms more commonly applied to stream terminology, and also used in the other segment descriptions throughout the water quality standards. SWQB Exhibit 13.

88. The Department proposes to upgrade 20.6.4.103 NMAC from the secondary contact use to primary contact use, with the associated criteria assigned to that use in Subsection D of 20.6.4.900 NMAC. The federal WQS regulations under 40 C.F.R. § 131.20 require that:

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

89. For 20.6.4.103 NMAC and several other sections discussed below, the DEPARTMENT has no record of a UAA approved by the WQCC and the EPA to support

secondary contact use, which EPA considers to not meet the 101(a)(2) use. SWQB Exhibit 13. SWQB Rebuttal Exhibits 1, 2. Hrg. Trans. Vol. 1, 31:13-32:5.

90. Also, the latest EPA guidance for recreational contact and CWA Section 101(a) goals finalized during 2012 (77 FR71191) provides new recommendations for recreational criteria based on several recent health studies and new science. These recommended recreation criteria levels for *E. coli* include a 30-day geometric mean ("GM") of 126 cfu/100 mL and a maximum Statistical Threshold Value ("STV") of 410 cfu/100 mL for primary contact recreation uses. SWQB Exhibits 13, 37.

91. These newly recommended criteria levels are the same as those currently assigned in the water quality standards to the primary contact use under 20.6.4.900.D NMAC; however, they do not allow for the levels of contact in the same manner as the 1986 EPA guidance previously adopted by the State. SWQB Exhibits 13, 37, 38.

92. Finally, even though swimming in this area is considered "at your own risk" and depends on the fluctuating river level, this portion of the Rio Grande is accessible and primary contact recreation is observed. Therefore, primary contact recreation is an existing use as defined under subparagraph 20.6.4.7 (E)(3) NMAC, and the designated use for secondary contact is recommended upgraded to the primary contact use with the applicable criteria set forth in 20.6.4.900.D NMAC. SWQB Exhibit 13. SWQB Rebuttal Exhibits 1, 2. Hrg. Trans. Vol. 1, 33:5-35:3.

93. In 2009, the Pueblo formerly known as Santa Domingo officially changed its name to Kewa Pueblo; therefore, this change is proposed to be incorporated into the segment description for Section 20.6.4.110 NMAC. SWQB Exhibit 13.

94. The Department proposes replacing the word "below" with the hydrologic

term "downstream of" in the segment description for 20.6.4.116 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 20.6.4.900.D NMAC. The Department has no evidence that this use is not attainable and information indicates that primary contact use is an existing use as defined under 20.6.4.7.E (3) NMAC. This segment includes Rio Ojo Caliente, the Ohkay Owingeh surface water quality standards downstream are assigned the primary contact recreation use, and the Rio Grande at the confluence is also designated as primary contact recreation. To maintain existing uses and to be consistent with the latest EPA recommendations for recreational contact and CWA Section 101(a) goals, the designated use for secondary contact is upgraded to the primary contact use and criteria. SWQB Exhibit 13. SWQB Rebuttal Exhibits 1, 2. Hrg Trans. Vol. 1, 33:5-35.3.

95. The changes to language in the segment description for Section 20.6.4.124 NMAC is proposed to more accurately describe the reach in hydrologic terms from the downstream confluence upstream to its headwaters. Also, 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 20.6.4.900.D NMAC. The Department has no evidence that this use is not attainable and information indicates that primary contact use is an existing use as defined under 20.6.4.7.E (3) NMAC and attainable in some reaches. SWQB Exhibit 13. SWQB Rebuttal Exhibits 1, 2. Hrg Trans. Vol. 1, 33:15-35.3.

96. For reasons discussed under 20.6.4.103 NMAC, Section 20.6.4.204 NMAC is recommended to be upgraded to the primary contact recreation use with the associated

criteria assigned to that use in 20.6.4.900.D NMAC. The Department has no evidence that this use is not attainable and primary contact use is an existing use as defined under Subparagraph 20.6.4.7.E (3) NMAC. SWQB Exhibit 13. SWQB Rebuttal Exhibits 1, 2. Hrg Trans. Vol. 1, 33:15-35.3.

97. The word "below" is replaced with the hydrologic term "downstream of" in the segment description for 20.6.4.206 NMAC. Also, 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 20.6.4.900.D NMAC. The Department has no evidence that primary contact is not attainable, and it is necessary to protect downstream uses in Brantley Reservoir. SWQB Exhibit 13. SWQB Rebuttal Exhibits 1, 2. Hrg. Trans. Vol. 1, 33:15-35.3.

98. For reasons discussed under 20.6.4.103 NMAC, 20.6.4.207 NMAC is recommended to be upgraded to the primary contact recreation use with the associated criteria assigned to that use in 20.6.4.900.D NMAC. The Department has no evidence that this use is not attainable and information indicates that primary contact use is an existing use as defined under 20.6.4.7.E (3) NMAC. SWQB Exhibit 13. SWQB Rebuttal Exhibits 1, 2. Hrg. Trans. Vol. 1, 33:15-35.3.

99. As discussed under 20.6.4.103 NMAC, 20.6.4.213 NMAC is recommended to be upgraded to the primary contact recreation use with the associated criteria assigned to that use in 20.6.4.900.D NMAC. The Department has no evidence that this use is not attainable and information indicates that primary contact use is likely an existing use as defined under 20.6.4.7.E (3) NMAC. 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. SWQB Exhibit 13. SWQB Rebuttal Exhibits 1, 2. Hrg. Trans. Vol. 1, 33:15-35.3.

100. For reasons discussed under 20.6.4.103 NMAC, 20.6.4.219 NMAC is recommended to be upgraded to the primary contact recreation use with the associated criteria assigned to that use in 20.6.4.900.D NMAC. The Department has no evidence that this use is not attainable. Kayaking, water sports and scuba for game fishing are activities allowed and described on the Avalon reservoir park website[3]. These activities involve considerable risk of ingesting the water. These activities also indicate that primary contact use is an existing use as defined under 20.6.4.7.E (3) NMAC. SWQB Exhibit 13. SWQB Rebuttal Exhibits 1, 2. Hrg. Trans. Vol. 1, 33:15-35.3.

101. The appropriate segments are assigned to Lake Alice and Lake Maloya, correcting a grammatical error in the note for 20.6.4.305 NMAC. SWQB Exhibit 13.

102. For reasons discussed under 20.6.4.103 NMAC, 20.6.4.308 is recommended to be amended to the primary contact recreation use with the associated criteria assigned to that use in 20.6.4.900.D NMAC. The Department has no evidence that this use is not attainable. Also, Charette Lake is a state park with access for swimming, or other activities associated with primary contact activities. This information indicates that primary contact use is an existing use as defined under 20.6.4.7.E (3) NMAC, and is likely attainable. SWQB Exhibit 13. SWQB Rebuttal Exhibits 1, 2. Hrg. Trans. Vol. 1, 33:15-35.3.

103. Springer Lake in 20.6.4.317 NMAC is a public water supply for Colfax County (Water System Number NM3526604); therefore, this designated use is an existing

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[3] http://www.recreation.gov/recreationalAreaDetails.do?contractCode=NRSO&recAreaId=87

use that is proposed be added to the water body segment description. SWQB Exhibit 13.

104. Secondary contact does not meet the §101(a)(2) goal and as such, per 40 CFR §131.20(a), the State is required to review these waters during the Triennial Review to determine if the §101(a)(2) goal remains unattainable. In conducting this review, the Department found no evidence of a UAA to support the designation of a secondary contact use or evidence that primary contact use is unattainable in these waters. All evidence found indicated that the primary contact recreation was an existing use, or at the very least attainable given the significant amount of other water-based recreation occurring. SWQB Rebuttal Exhibits 1, 2. Hrg. Trans. Vol. 1, 33:15-35.3.

105. As noted by EPA in its review of the 2005 Triennial Review, secondary contact is not consistent with §101(a)(2) goals and rejected assigning the ephemeral designation by default because a UAA is required in order to do so. SWQB Rebuttal Exhibits 1, 2. Hrg. Trans. Vol. 1, 31:13-32.17; Vol. 4, 940:12-946:7.

106. The NMED petition contained testimony and evidence that primary contact is occurring and is attainable. In accordance with the legal authority outlined in this document and as testified by NMED in the prefiled testimony and at hearing, the State is required to periodically review waters that do not meet §101(a)(2) goals. If there is evidence that these goals can be met in such waters, then uses consistent with CWA goals must be so designated. SWQB Exhibit 13, SWQB Rebuttal Exhibits 1, 2. Hrg. Trans. Vol. 1, 33:5-35:3.

107. Secondary contact does not meet the §101(a)(2) goal and as such, per 40 CFR §131.20(a), the State is required to review these waters during the Triennial Review to determine if the §101(a)(2) goal remains unattainable. SWQB Exhibit 13. Hrg. Trans.

Vol. 1, 31:13-32:5.

108. In conducting this review, the Department found no evidence of a UAA to support the designation of a secondary contact use or evidence that primary contact use is unattainable in these waters. All evidence found indicated that the primary contact recreation was an existing use, or at the very least attainable given the significant amount of other water-based recreation occurring. SWQB Exhibit 13, SWQB Rebuttal Exhibits 1, 2. Hrg. Trans. Vol. 1, 33:5-35:3; Vol. 4, 940:12-946:7.

109. Based on the weight of the evidence, the Commission finds NMED's proposal to amend the Water Quality Standards to designate primary contact uses in certain segments is well-taken and agrees with NMED's proposal to maintain CWA 101(a)(2) goals and update segment descriptions for 20.6.4.101 - 20.6.4.103 NMAC, 20.6.4.110 NMAC, 20.6.4.116 NMAC, 20.6.4.124 NMAC, 20.6.4.204 NMAC, 20.6.4.206 NMAC, 20.6.4.207 NMAC, 20.6.4.213 NMAC, 20.6.4.219 NMAC, 20.6.4.305 NMAC, 20.6.4.308 NMAC and 20.6.4.317 NMAC.

IX. Aquatic Life Uses in the Animas River - 20.6.4.403 and 20.6.4.404 NMAC

110. NMED proposed to change the designated aquatic life uses for the Animas River in New Mexico to coolwater. The proposed 13 changes for the Animas River are supported by a UAA prepared by the NMED. SWQB Exhibits 52-56.

20.6.4.403 SAN JUAN RIVER BASIN - The Animas river from its confluence with the San Juan river upstream to Estes Arroyo.

A. Designated Uses: public water supply, industrial water supply, irrigation, livestock watering, wildlife habitat, [~~marginal coldwater~~] coolwater aquatic life, and 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 [~~.~~], except that the following segment-specific criterion applies: temperature 29°C (84.2°F) or less.

[20.6.4.403 NMAC - Rp 20 NMAC 6.1.2403, 10-12-00; A, 05-23-05; A, 12-01-10; A, XX-XX-XX]

20.6.4.404 SAN JUAN RIVER BASIN - The Animas river from Estes Arroyo upstream to the [~~New Mexico-Colorado line~~] Southern Ute Indian tribal boundary.

A. Designated Uses: [~~coldwater~~]coolwater aquatic life, irrigation, livestock watering, wildlife habitat, public water supply, industrial water supply and primary contact.

B. Criteria: 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: phosphorus (unfiltered sample) 0.1 mg/L or less.

[20.6.4.404 NMAC - Rp 20 NMAC 6.1.2404, 10-12-00; A, 05-23-05; A, 12-01-10; A, XX-XX-XX]

111. The Animas River in New Mexico is currently classified in water quality standards segments 20.6.4.403 and 20.6.4.404 NMAC. Segment 403 contains the lower Animas River from the confluence with the San Juan River upstream to Estes Arroyo in the city of Aztec. This segment currently has two designated aquatic life uses, marginal coldwater and warmwater. Segment 404 contains the upper Animas River from Estes Arroyo upstream to the Southern Ute tribal boundary at the New Mexico state line. This segment has the coldwater designated aquatic life use. Each segment consists of a single assessment unit (AU). A map of the Animas River watershed is provided in Figure 1 of the UAA (SWQB Exhibit 52). SWQB Exhibit 46. Hrg. Trans. Vol. 1, 67:11-68:22.

112. Both of the Animas River AUs are impaired for temperature. A total maximum daily load ("TMDL") study was prepared for the lower Animas River AU to address the temperature impairment. However, the designated coldwater aquatic life use for the upper Animas River AU was considered by NMED as unattainable due to natural conditions, therefore NMED conducted a UAA to determine the appropriate attainable aquatic life use. The UAA demonstrated that coolwater aquatic life is the most protective attainable aquatic life use for the both segments of the Animas River in New Mexico. The coldwater and marginal coldwater aquatic life uses in both segments were determined to be not attainable

because of the natural water temperatures resulting from ambient air temperatures. SWQB Exhibit 46. Hrg. Trans. Vol. 1, 67:11-68:22.

113. Dr. Dail explained how the UAA demonstrates that the natural characteristics of the Animas River in New Mexico support aquatic life habitat that is intermediate between coldwater and warmwater. The UAA concludes that coolwater is the most protective aquatic life use attainable for the lower Animas River (from the confluence with the San Juan River upstream to Estes Arroyo) and that coolwater with a segment-specific maximum temperature criterion of 29°C is the most protective aquatic life use attainable for the upper Animas River (Estes Arroyo to the Southern Ute tribal boundary). The lower Animas River has two designated aquatic life uses: marginal coldwater and warmwater. Although both marginal coldwater and coolwater have a maximum temperature criterion of 29°C, these uses describe different habitats. Marginal coldwater refers to habitat that would be coldwater were it not otherwise limited by certain conditions. Coolwater describes habitat that is naturally intermediate between cold and warm. SWQB Exhibit 46. Hrg. Trans. Vol. 1, 67:11-68:22.

114. Dr. Dail supported the Department's findings that the coldwater and marginal coldwater aquatic life uses are not attainable and based on the existing aquatic life described in the UAA, coolwater is the best description of the attainable use for segments 403 and 404. SWQB Exhibit 20, 46.

115. Based on the evidence in the record, , the WQCC finds NMED's proposal to change the designated aquatic life uses for the Animas River in New Mexico to coolwater is well-taken and adopts NMED's proposal to change the

aquatic life uses in the Animas River in segments 20.6.4.403 and 20.6.4.404 NMAC.

X. Changes to Segment Descriptions - 20.6.4.502 and 20.6.4.503 NMAC

116. NMED proposed editorial changes for use of the correct hydrologic terms in the descriptions for segments in 20.6.4.502 and 503 NMAC of the Gila River Basin, and changes to correctly identify and describe a river segment within Segment 503. The correction to Segment 503 also results in a change to the segment-specific standard for specific conductance ("SC"). Hrg. Trans. Vol. 1, 66:1- 67:9; SWQB Exhibits 57, 59, 60.

> **20.6.4.502 GILA RIVER BASIN - The main stem of the Gila river from Redrock canyon upstream to the confluence of the West Fork Gila river and East Fork Gila river and perennial reaches of tributaries to the Gila river [~~below~~] downstream of Mogollon creek.**
>
> **A. Designated Uses:** industrial water supply, irrigation, livestock watering, wildlife habitat, marginal coldwater aquatic life, 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, except that the following segment-specific criterion applies: 28°C (82.4°F) or less.
> [20.6.4.502 NMAC - Rp 20 NMAC 6.1.2502, 10-12-00; A, 05-23-05; A, 12-01-10]
>
> **20.6.4.503 GILA RIVER BASIN - All perennial tributaries to the Gila river [~~above~~] upstream of and including Mogollon creek.**
> **A. Designated Uses:** domestic water supply, high quality coldwater aquatic life, irrigation,livestock watering, wildlife habitat and primary contact.
> **B. Criteria:** 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 criteria apply: specific conductance of 400 µS/cm or less for all perennial tributaries except West Fork Gila and tributaries thereto, specific conductance of 300 µS/cm or less; [~~main stem of the Gila river above Gila hot springs and 400 µS/cm or less for other reaches;~~] 32.2°C (90°F) or less in the east fork of the Gila river and Sapillo creek [~~below~~] downstream of Lake Roberts; the monthly geometric mean of E. coli bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.
> [20.6.4.503 NMAC - Rp 20 NMAC 6.1.2503, 10-12-00; A, 05-23-05; A, 12-01-10; A, XX-XX-XX]

117. The first proposed changes to the segment descriptions in 20.6.4.502 and 503 NMAC are to replace the words 'above' and 'below' with the hydrological terms 'upstream of' and 'downstream of', respectively. This includes replacing the word 'below'

in 20.6.4.503.B NMAC. The second change is to Subsection B of 20.6.4.503 NMAC and associated specific conductance ("SC") criteria. A perennial reach of the West Fork Gila River is misidentified in Subsection B. Correcting this error changes the assignment of the current SC criteria in this segment. Therefore, the SC assigned to tributaries of water bodies in this segment was also evaluated. SWQB Exhibit 57. Hrg. Trans. Vol. 1, 66:10-67:9.

118. The segment in 20.6.4.503 NMAC ("Segment 503") in the Gila River Basin is currently assigned the high quality coldwater aquatic life use with segment-specific SC criteria of 300µS/cm applied to "the main stem of the Gila river above Gila hot springs." The SC criteria of 400 µS/cm is applied to all other reaches, yet according to the USGS map, the water body designated as "the main stem Gila river above Gila hot springs" which is above the confluence of the West Fork and East Fork Gila is the West Fork Gila River. SWQB Exhibit 57. Hrg. Trans. Vol. 1, 66:10-67:9.

119. In correcting this error the NMED evaluated whether to apply one SC criteria to the West Fork Gila, or two different SC criteria, one upstream and one downstream of the influence of the Gila Hot Springs, as is currently in Segment 503. In the WQS, SC limits are assigned to the high quality cold water aquatic life use ("HQCW") and these limits are segment-specific depending on the natural background in the particular surface water. Due of the different specific conductance criteria, NMED investigated the water quality data to see if the lower specific conductance associated with the west fork of the Gila could meet the most stringent specific conductance criteria and then apply that to the entire length of the West Fork Gila. SWQB Exhibit 57. Hrg. Trans. Vol. 1, 66:10-67:9.

120. Dr. Dail explained that to be consistent with USGS maps and local geographic knowledge; the segment description should be revised as presented in the proposal for 20.6.4.502 and .503 NMAC. SWQB Exhibits 57, 59-64; Hrg. Trans. Vol. 1, 66:10-67:9; Based on the evidence, the WQCC finds NMED's proposal to change these terms is well-taken and adopts NMED's proposal to change the segment descriptions in 20.6.4.502 and 503 NMAC.

XI. Mimbres River Segment Re-designation - 20.6.4.803, 20.6.4.804 and 20.6.4.807 NMAC

121. NMED proposed to re-designate certain segments of the Mimbres River due to the current designated Aquatic Life Use being unattainable for the entire reach. Hrg. Trans. Vol. 1, 68:2- 22.

20.6.4.803 CLOSED BASINS - Perennial reaches of the Mimbres River downstream of the confluence with [~~Willow Springs~~] Allie canyon and all perennial reaches of tributaries thereto.

A. Designated Uses: [~~coldwater~~] coolwater aquatic life, irrigation, livestock watering, wildlife habitat and primary contact.

B. Criteria: 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 criteria apply: the monthly geometric mean of E. coli bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less and temperature of 30°C (86°F) or less.

[20.6.4.803 NMAC - Rp 20 NMAC 6.1.2803, 10-12-00; A, 05-23-05; A, 12-01-10; A, XX-XX-XX]

20.6.4.804 CLOSED BASINS - Perennial reaches of the Mimbres River upstream of the confluence with [~~Willow Springs~~] Allie canyon to Cooney canyon, and all perennial reaches of East Fork Mimbres (McKnight Canyon) downstream of the fish barrier, and all perennial reaches thereto.

A. Designated Uses: irrigation, domestic water supply, coldwater aquatic life, livestock watering, wildlife habitat and primary contact.

B. Criteria: 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 criteria apply: [~~specific conductance 300 µS/cm or less;~~] the monthly geometric mean of E. coli bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.

[20.6.4.804 NMAC - Rp 20 NMAC 6.1.2804, 10-12-00; A, 05-23-05; A, 12-01-10; A, XX-XX-XX]

[NOTE: The segment covered by this section was divided effective XX-XX-XX. The standards for the additional segment are covered under 20.6.4.807 NMAC.]

20.6.4.807 CLOSED BASINS - Perennial reaches of the Mimbres river upstream of Cooney Canyon and all perennial reaches thereto, including perennial reaches of East Fork Mimbres river (McKnight Canyon) upstream of the fish barrier.

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

B. Criteria: 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 criteria apply: specific conductance 300

µS/cm or less; the monthly geometric mean of E. coli bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.
[20.6.4.807 NMAC – A, XX-XX-XX]

122. The Department conducted a UAA for the Mimbres River, which concludes that the designated aquatic life use ("ALU") is not attainable for the entire reach, and recommends a segment from Cooney Canyon to the headwaters of the Mimbres River, including all perennial tributaries from the 23d ecoregion (Subalpine Forests), should remain designated as High Quality Coldwater ALU. A new segment extending from Allie Canyon to Cooney canyon (the "Middle Mimbres") should be re-designated as Coldwater ALU, and a segment from Allie Canyon to the mouth of the Mimbres should be re-designated as Coolwater ALU with a segment-specific temperature criterion of 30°C (SWQB Exhibit 65, Figure 5). While survey year 2009 exhibited a lower flow as compared to the 30 year mean, interannual variation in flows, and both the 2003 and 2009 temperature dataset suggest that the 29°C criteria associated with coolwater ALU will not be attainable and a segment-specific criteria of 30°C is more appropriate. SWQB Exhibit 57. Hrg. Trns. Vol. 1, 68:2-22.

123. Dr. Dail testified that since his direct testimony had been pre-filed EPA Region 6 had provided NMED with a technical approval letter for the Mimbres UAA finding it to be sound and complete as of May of 2015. Hrg. Trans. Vol. 1, 70:17- 71:3.

124. Dr. Dail supported the Department's proposed changes to Segments 803 and 804. Hrg. Trans. Vol. 1, 71:4-10.

125. Based on the weight of the evidence, the WQCC finds NMED's proposal to re-designate segments in the Mimbres River is well-taken and the WQCC adopts NMED's proposal to change the designated aquatic life uses in certain segments of the Mimbres River.

XII. Changes to 20.6.4.900 and .901 NMAC

126. NMED proposed changes to 20.6.4.900 and .901 NMAC in order to correct minor grammatical errors, add clarity, remove redundancy and update the WQS references. They are also necessary to reflect the application of the aluminum criteria by the EPA.

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

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

Subsections B and C of 20.6.4.900 – No changes proposed.

D. Primary Contact: the monthly geometric mean of E. coli bacteria of 126 cfu/100 mL or MPN/100 ml and single sample of 410 cfu/100 mL or MPN/100 mL and pH within the range of 6.6 to 9.0 apply to this use. 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.

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

Subsection F through Subsection H, Subparagraphs (1)-(2) of 20.6.4.900 NMAC - No changes proposed.

(3) Marginal Coldwater: dissolved oxygen 6.0 mg/L or more, 6T3 temperature 25°C (77°F), maximum temperature 29°C (84°F) and pH within the range from 6.6 to 9.0. Where a single segment-specific temperature criterion is indicated in 20.6.4.101-899 NMAC, it is the maximum temperature and no 6T3 temperature applies.

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

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

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

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

I. Hardness-dependent acute and chronic aquatic life criteria for metals are calculated using the following equations. The criteria are expressed as a function of dissolved hardness (as mg $CaCO_3$/L). With the exception of aluminum, the equations are valid only for dissolved hardness concentrations of 0-400 mg/L. For dissolved 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 µg/L is $\exp(m_A[\ln(\text{hardness})] + b_A)(CF)$. 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 hardness)(0.041838)]
Chromium (Cr) III	0.8190	3.7256	0.316
Copper (Cu)	0.9422	-1.700	0.960
Lead (Pb)	1.273	-1.460	1.46203-[(ln hardness)(0.145712)]
Manganese (Mn)	0.3331	6.4676	
Nickel (Ni)	0.8460	2.255	0.998
Silver (Ag)	1.72	-6.59	0.85
Zinc (Zn)	0.9094	0.9095	0.978

(2) **Chronic aquatic life criteria for metals.** The equation to calculate chronic criteria in µg/L is $\exp(m_C[\ln(\text{hardness})] + b_C)(CF)$. 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	0.9161	
Cadmium (Cd)	0.7647	-4.2180	1.101672-[(ln hardness)(0.041838)]
Chromium (Cr) III	0.8190	0.6848	0.860
Copper (Cu)	0.8545	-1.702	0.960
Lead (Pb)	1.273	-4.705	1.46203-[(ln hardness)(0.145712)]
Manganese (Mn)	0.3331	5.8743	
Nickel (Ni)	0.8460	0.0584	0.997
Zinc (Zn)	0.9094	0.6235	0.986

(3) Selected values of calculated acute and chronic criteria (µg/L).

Hardness as $CaCO_3$, 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

Hardness as $CaCO_3$, dissolved (mg/L)		Al	Cd	Cr III	Cu	Pb	Mn	Ni	Ag	Zn
	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	3.23	1,087	28	151	3,882	912	13	328
	Chronic	4,035	0.80	141	18	6	2,145	101		248
300	Acute	~~[10,071]~~	4.21	1,400	38	210	4,305	1190	21	435
	Chronic	~~[4,035]~~	1.00	180	23	8	2,379	130		329
400 and above	Acute	~~[10,071]~~	5.38	1,770	50	280	4,738	1510	35	564

Hardness as $CaCO_3$, dissolved (mg/L)		Al	Cd	Cr III	Cu	Pb	Mn	Ni	Ag	Zn
	Chronic	~~[4,035]~~	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-OO - human health-organism only; C - cancer-causing; P - persistent.~~

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

([~~2~~]1) Table of Numeric Criteria: The following table sets forth the numeric criteria applicable to existing, designated and attainable uses. For metals, criteria represent the total sample fraction unless otherwise specified in the table. Additional criteria that are not compatible with this table are found in Subsections A through I, K and L of this section.

Pollutant	CAS Number	DWS	Irr/Irr Storage	LW	WH	Aquatic Life			Type
						Acute	Chronic	HH-OO	
Aluminum, dissolved	7429-90-5		5,000						

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

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

Pollutant	CAS Number	DWS	Irr/Irr Storage	LW	WH	Aquatic Life			Type
						Acute	Chronic	HH-OO	
Anthracene	120-12-7	10,500						40,000	
Benzene	71-43-2	5						510	C
Benzidine	92-87-5	0.0015						0.0020	C
Benzoaanthracene	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
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		

Pollutant	CAS Number	DWS	Irr/Irr Storage	LW	WH	Aquatic Life			Type
						Acute	Chronic	HH-OO	
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	
Endosulfan sulfate	1031-07-8	62						89	

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

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

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

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

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

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

20.6.4.900.K of NMAC - no changes proposed.

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 [0]14°C apply; for temperatures above 30°C, the criteria for 30°C apply. For pH values below 6.5, the criteria for 6.5 apply; for pH values above 9.0, the criteria for 9.0 apply.

(1) Chronic aquatic life criteria for total ammonia when fish early life stages are present.

(a) The equation to calculate chronic criteria in mg/L as N is:
$((0.0577/(1 + 10^{7.688-pH})) + (2.487/(1 + 10^{pH-7.688}))) \times MIN (2.85, 1.45 \times 10^{0.028 \times (25-T)})$

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

pH	Temperature (°C)										
	[0 and below]	14 and below	15	16	18	20	22	24	26	28	30 and above
6.5 and below	[6.67]	6.67	6.46	6.06	5.33	4.68	4.12	3.62	3.18	2.80	2.46
6.6	[6.57]	6.57	6.36	5.97	5.25	4.61	4.05	3.56	3.13	2.75	2.42
6.7	[6.44]	6.44	6.25	5.86	5.15	4.52	3.98	3.50	3.07	2.70	2.37
6.8	[6.29]	6.29	6.10	5.72	5.03	4.42	3.89	3.42	3.00	2.64	2.32
6.9	[6.12]	6.12	5.93	5.56	4.89	4.30	3.78	3.32	2.92	2.57	2.25
7.0	[5.91]	5.91	5.73	5.37	4.72	4.15	3.65	3.21	2.82	2.48	2.18
7.1	[5.67]	5.67	5.49	5.15	4.53	3.98	3.50	3.08	2.70	2.38	2.09
7.2	[5.39]	5.39	5.22	4.90	4.31	3.78	3.33	2.92	2.57	2.26	1.99
7.3	[5.08]	5.08	4.92	4.61	4.06	3.57	3.13	2.76	2.42	2.13	1.87
7.4	[4.73]	4.73	4.59	4.30	3.78	3.32	2.92	2.57	2.26	1.98	1.74
7.5	[4.36]	4.36	4.23	3.97	3.49	3.06	2.69	2.37	2.08	1.83	1.61
7.6	[3.98]	3.98	3.85	3.61	3.18	2.79	2.45	2.16	1.90	1.67	1.47

pH	Temperature (°C)										
	[θ ~~and below~~]	14 and below	15	16	18	20	22	24	26	28	30 and above
7.7	[~~3.58~~]	3.58	3.47	3.25	2.86	2.51	2.21	1.94	1.71	1.50	1.32
7.8	[~~3.18~~]	3.18	3.09	2.89	2.54	2.23	1.96	1.73	1.52	1.33	1.17
7.9	[~~2.80~~]	2.80	2.71	2.54	2.24	1.96	1.73	1.52	1.33	1.17	1.03
8.0	[~~2.43~~]	2.43	2.36	2.21	1.94	1.71	1.50	1.32	1.16	1.02	0.897
8.1	[~~2.10~~]	2.10	2.03	1.91	1.68	1.47	1.29	1.14	1.00	0.879	0.773
8.2	[~~1.79~~]	1.79	1.74	1.63	1.43	1.26	1.11	0.973	0.855	0.752	0.661
8.3	[~~1.52~~]	1.52	1.48	1.39	1.22	1.07	0.941	0.827	0.727	0.639	0.562
8.4	[~~1.29~~]	1.29	1.25	1.17	1.03	0.906	0.796	0.700	0.615	0.541	0.475
8.5	[~~1.09~~]	1.09	1.06	0.990	0.870	0.765	0.672	0.591	0.520	0.457	0.401
8.6	[~~0.920~~]	0.920	0.892	0.836	0.735	0.646	0.568	0.499	0.439	0.386	0.339
8.7	[~~0.778~~]	0.778	0.754	0.707	0.622	0.547	0.480	0.422	0.371	0.326	0.287
8.8	[~~0.661~~]	0.661	0.641	0.601	0.528	0.464	0.408	0.359	0.315	0.277	0.244
8.9	[~~0.565~~]	0.565	0.548	0.513	0.451	0.397	0.349	0.306	0.269	0.237	0.208
9.0 and above	[~~0.486~~]	0.486	0.471	0.442	0.389	0.342	0.300	0.264	0.232	0.204	0.179

(2) Chronic aquatic life criteria for total ammonia when fish early life stages are absent.

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

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

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

pH	Temperature (°C)									
	[~~7 and below~~]	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.

Subsections B – G of 20.6.4.901 NMAC – No changes proposed.

H. Colorado river basin salinity control forum. [~~2002~~] 2014. *[~~2002~~]2014 Review, water quality standards for salinity, Colorado river system.* Phoenix, Arizona. 99 p.

Subsections I – L of 20.6.4.901 NMAC – No changes proposed.

M. United States environmental protection agency. 1984. *Technical support manual: waterbody surveys and assessments for conducting use attainability analyses, volume III: lake systems.* Office of water, regulations and standards, Washington, D.C. 208 p. http://www.epa.gov/OST/library/wqstandards/uaavol123.pdf
[20.6.4.901 NMAC - Rp 20 NMAC 6.1.4000, 10-12-00; A, 05-23-05; A, 12-01-10; A, XX-XX-XX]

127. NMED proposed the correction of a minor typographical error that requires inserting a space between the word "Culture" and the word "and" in the heading of 20.6.4.900 NMAC. SWQB Exhibit 13.

128. The WQS are revised to reflect the use of updated and more-cost effective and time efficient methods for monitoring, assessment and reporting bacteria as specified in 20.6.4.900.D and .E NMAC. The use of methods in which counts are expressed as MPN/100 ml was approved by EPA for testing ambient waters in 2003[4] and for wastewater and sewage sludge in 2007[5]. The NMED is currently using an approved EPA method for sampling and analyzing bacteria levels in ambient water and which reports results in MPN/100 ml and the currently recommended EPA recreational or bacteria criteria for E. coli allows for the use of results reported in MPN. This also relates to changes in 20.6.4.7 NMAC. SWQB Exhibits 13, 37.

129. The dissolved oxygen criteria in 20.6.4.900.H (3), (5) and (6) NMAC are revised only to show decimal places (to the hundredths place) to be

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[4] *U.S. Federal Register* - 40 CFR Part 136 Vol. 68, No. 139; July 21, 2003.

[5] *U.S. Federal Register* - 40 CFR Parts 136 and 503, Vol. 72, No. 157; March 26, 2007.

consistent with dissolved oxygen criteria for the other aquatic life designated uses in the WQS. SWQB Exhibit 13.

130. In 20.6.4.900.I (1) and (2) NMAC, to resolve inconsistencies in EPA's recommendations, for federal actions in waters with a pH less than 6.5, the EPA will implement the aluminum criteria for CWA purposes. SWQB Exhibit 13. Hrg. Trans. Vol. 1, 22:13-14; 144:1-152:16; Vol. 2, 269:22-274:13; Vol. 4, 811:6-23.

131. The table of calculated values for acute and chronic hardness-based criteria in 20.6.4.900.I (3) NMAC is revised to add the subscript "3" to the chemical nomenclature for hardness (in first column on the left), and to include the missing calculated values for the metals Cd, Cr III, Cu, Pb, Nm, Ni, Ag and Zn at hardness of 220 mg/L $CaCO_3$. Also, in accordance with 20.6.4.900.I NMAC, the hardness equations for aluminum are only valid up to dissolved hardness (as mg $CaCO_3$/L) of 220 mg/L. Therefore, the calculated values for aluminum criteria at dissolved hardness above 220 mg/L are deleted from the table. SWQB Exhibit 13. Hrg. Trans. Vol. 2, 274:14-276:5.

132. The explanatory notes in 20.6.4.900.J (1) NMAC and the table in 20.6.4.900.J (2) NMAC are transposed so the table precedes the explanatory notes, and the subparagraphs are renumbered accordingly. It is less distracting to readers if long explanatory notes come after the table that the notes refer to. Language is added to the renumbered 20.6.4.900.J (1) NMAC to clarify that criteria for metals listed in the table are based on the total sample fraction unless otherwise specified (e.g., dissolved). To be consistent with the new definition for "Irrigation Storage"

proposed in Section 7, 20.6.4.7.I (5) NMAC, the irrigation storage designated use ("Irr Storage") is added to the table column headings in the Table of Numeric Criteria. The final change to this table corrects a typographical error with the addition of a hyphen to the Chemical Abstracts Service ("CAS") registry number for the pollutant Bis(2-ethylhexyl) phthalate. SWQB Exhibit 13.

133. The first column in both tables of Subparagraphs 20.6.4.900.L (1) (b) and (2 (b) repeat the same calculated values, which is not necessary. Therefore, column heading for the adjacent column in each table is changed to include the values resulting from temperature calculations in both columns, so the first column should be deleted. SWQB Exhibit 13.

134. The reference in 20.6.4.901.H NMAC is updated to reflect the date of the most recent version of the Colorado River Basin Salinity Control Forum Review Report ("Report"), which was approved in October, 2014. The Report is updated on a triennial basis and the current Report does not recommended any changes to the implementation of water quality standards for salinity in 20.6.4.54 NMAC. SWQB Exhibit 13.

135. Based on the weight of the evidence, the WQCC finds NMED's proposal to correct minor grammatical errors, add clarity, remove redundancy and update the WQS references, and to reflect the application of the aluminum criteria by the EPA in 20.6.4.900 and .901 NMAC are well-taken and adopts NMED's proposal to change these definitions.

XIII. Changes to Definitions in 20.6.4.7 NMAC

136. NMED proposed changes to 20.6.4.7 NMAC, which includes addition of definitions for Most Probable Number ("MPN"), pH, closed basin and irrigation storage. Also, the definition for colony forming units ("cfu") is changed to allow for the use of Most Probable Number ("MPN").

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.

(h) "NTU" means nephelometric turbidity unit;

(i) "pCi/L" means picocuries per liter.

(j) "pH" means the measure of the acidity or alkalinity and is expressed in standard units (su).

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

C. Terms beginning with the letter "C".

(1) "CAS number" means an assigned number by chemical abstract service (CAS) to identify a substance. CAS numbers index information published in chemical abstracts by the American chemical society.

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

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

(4) "Closed basin" is a basin where topography prevents the surface outflow of water and water escapes by evapotranspiration or percolation.

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

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

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

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

20.6.4.7.D NMAC – 20.6.4.7.H (2) NMAC No changes proposed.

I. Terms beginning with the letter "I".

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

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

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

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

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

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

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

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

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

X. Terms beginning with the letters "X" through "Z". [RESERVED]

[20.6.4.7 NMAC - Rp 20 NMAC 6.1.1007, 10-12-00; A, 7-19-01; A, 05-23-05; A, 07-17-05; A, 08-01-07; A, 12-01-10; A, 01-14-11, A, XX-XX-XX]

137. Ms. Pintado explained that the definition for cfu is amended to clarify the NMED's support of results based on alternate enumeration methods for the detection of enterococci and E. coli in ambient waters, and in wastewater and sludge as approved by EPA (68 FR 43272, July 21, 2003 and 72 FR 14220, March 26, 2007). This change to the definition was not previously shown as an amendment in the petition, and is included now as a correction. By including the alternate enumeration in the definition for cfu, the Department also clarifies that the approved method may be used in reporting results for the 52 classified segments with segment specific E. coli criteria expressed in colony-forming units ("cfu") per 100 milliliters ("mL") or cfu/100 mL, without adding the language to each segment in the WQS. The abbreviation and units for most probable number ("MPN") is also added to the definitions section of the WQS in 20.6.4.7.A(3)(g) NMAC, to be

consistent with the previous recommendations. The affected Subparagraph numbers are changed accordingly. The Department is also proposing the addition of similar language in 20.6.4.900.D and .E NMAC, to allow for the use of this enumeration method for *E. coli*. A memo detailing the reasons for the Department's recommendation on the use of alternate enumeration methods is SWQB Exhibit 15. SWQB Exhibit 13.

138. A definition for pH and the unit of measure for pH, standard units, is recommended to be included in 20.6.4.7.A(3)(j) NMAC. The term pH is mentioned throughout the water quality standards, but neither pH nor its unit of measure (su) is defined. The NMED proposed to add a definition for "closed basin" in 20.6.4.7.C(4) NMAC. Surface waters are described in closed basins within 20.6.4.801-806 NMAC, but the term "closed basin" is not defined in the water quality standards. The definition is based on a classification scheme used by the USGS. SWQB Exhibit 13.

139. Most reservoirs classified in the water quality standards include the designated use "irrigation storage" but irrigation storage is not separately defined, so is recommended to be added in 20.6.4.7.I(j)(5) NMAC. SWQB Exhibit 13.

140. The structure change (e.g., renumbering of subparagraphs, etc.) resulting from these proposals is in accordance with the style and format for the New Mexico Administrative Code. SWQB Exhibit 13.

141. Based on the weight of the evidence, the WQCC finds NMED's proposal to change these definitions is well-taken and adopts NMED's proposal to change these definitions.

XIV. Chino's Petition in accordance with 20.6.4.10(D) NMAC to add site-specific criteria for copper for certain surface waters located within the Mimbres Closed River Basin within the Chino Mines Smelter Tailings and Soil Investigation Unit ("STSIU").

142. Pursuant to 20.6.4.10(D) NMAC, Chino's Petition requests adoption of site-specific criteria for copper for certain surface waters located within the Mimbres Closed River Basin within the Chino Mines Smelter Tailings and Soil Investigation Unit ("STSIU") as follows:

20.6.4. 809 CLOSED BASINS - Ephemeral watercourses within Smelter Tailing Soils Investigation Unit lands at the Chino Mines Company, limited to Chino Mines property subwatershed drainage A and tributaries thereof, Chino Mines property subwatershed drainage B and tributaries thereof (excluding the northwest tributary containing Ash spring and the Chiricahua Leopard Frog critical habitat transect); Chino Mines property subwatershed d rainage C and tributaries thereof (excluding reaches containing Bolton s pring, the Chiricahua Leopard Frog critical habitat transect and all reaches in subwatershed C that are upstream of the Chiricahua Leopard Frog critical habitat); subwatershed drainage D and tributaries thereof (drainages D-1, D-2 and D-3, excluding the southeast tributary in drainage D1 that contains Brown spring) and subwatershed drainage E and all tributaries thereof (drainages E-1, E-2 and E-3).

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

B. **Criteria:** 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 criteria apply: the acute aquatic life criteria for copper set forth in Subsection I of Section 900 shall be determined by multiplying that criteria by the Water Effect Ratio ("WER") adjustment expressed by the following equation:

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

For purposes of this section, DOC is dissolved organic carbon, expressed in units of milligrams carbon per liter or mg C/L; alkalinity is expressed in units of mg/L as $CaCO_3$, and hardness is expressed in units of mg/L as $CaCO_3$. In waters that contain alkalinity concentrations greater than 250 mg/L, a value of 250 mg/L shall be used in the equation. In waters that contain DOC concentrations greater than 16 mg C/L, a value of 16 mg C/L shall be used in the equation. In waters that contain hardness concentrations greater than 400 mg/L, a value of 400 mg/L shall be used in the equation. The alkalinity, hardness and DOC concentrations used to calculate the WER value are those measured in the subject water sample.

[~~20.6.4.807~~]20.6.4.810 – 20.6.4.899: [RESERVED]

143. Chino's petition for site-specific aquatic life criteria for copper is proposed to apply only to certain surface waters located in the Mimbres River Closed Basin and also within an area known as the Chino Mines Site STSIU as described above and as shown on the map attached to Chino's Petition and adopted into the record as CHINO EX. A.

144. The portions of the waters identified in Chino's Petition are located within an area known as the Chino STSIU and are the subject of investigation under an Administrative Order on Consent between Chino and the New Mexico Environment Department ("NMED") dated December 23, 1994 ("AOC").[6] CHINO EX. B. The investigation identified elevated copper in soils as the primary contaminant of concern in this area, some of which may be from a combination of historic smelter emissions and blowing copper mill tailings. Hrg. Trans. Vol. 2, 306. Surface-water sampling conducted as part of the investigation indicated exceedances of the current hardness-based aquatic life criteria for copper in drainages located in this area. Under the AOC, NMED has conducted an ecological risk assessment with respect to copper in the soils and has issued "pre-Feasibility Study Remedial Action Criteria" ("pre-FS RAC") with respect to the

[6] Chino clarifies that the waters subject to its Petition have not been the subject of a determination that they constitute "waters of the United States." The Commission at this time does not take a position with respect to such clarification.

soils and surface waters, including potential impacts on aquatic life in the ephemeral and non-ephemeral surface waters. CHINO EX. B. The pre-FS RAC for surface waters requires compliance with the State of New Mexico Standards for Interstate and Intrastate Surface Waters, 20.6.4 NMAC, for risk to aquatic life in the drainages of the STSIU including all approaches and tools listed in the Code which provide options for site-specific application. CHINO EX. B.

145. The STSIU site has mountainous terrain, especially in the northeastern quadrant where the majority of the sampling took place. The drainages are numerous, small, and ephemeral as they have mainly flashy flow in response to monsoonal moisture during the July to September monsoonal season. There are also some isolated bedrock pools. Hrg. Trans. Vol. 2, 347:1-347:10.

146. In connection with the AOC investigation, Chino proposed to evaluate potential site-specific criteria for copper for surface waters in the STSIU. All of the surface waters which are the subject of Chino's petition are "unclassified" waters subject to use designations under sections 20.6.4.97, .98 or .99 NMAC. Those waters subject to section 20.6.4.98 NMAC (intermittent waters) will have the relevant designated use of "marginal aquatic life", and those waters subject to section 20.6.4.99 NMAC (perennial waters) will have the relevant designated use of "warmwater aquatic life." Some of the waters to which the site-specific copper criteria adjustment proposed in Chino's petition would apply are proposed to be treated as "ephemeral" under SWQB's proposed amendments to section 20.6.4.97 NMAC, as set forth in more detail herein. If the Commission adopts SWQB's proposed amendments to section 20.6.4.97 NMAC, then the waters covered by that amendment will have the designated use of "limited aquatic life." The applicable use designations under sections 20.6.4.97, .98 and .99 NMAC are

not affected by Chino's petition. The proposed site-specific WER adjustment, however, is intended to apply regardless of the particular aquatic life use designation under sections 20.6.4.97, .98 or .99 NMAC.

147. Chino's Petition, as stated in its NOI and at the hearing, contains two versions of proposed rule language, adopted into the record as CHINO Exhibit H and CHINO EX. I. Hrg. Trans. Vol. 2, 400:24-400:25. Chino provided two options in order to provide NMED with greater flexibility in selecting preferred rule language. Pursuant to discussions and agreement with NMED, Chino conditionally accepted NMED's preferred language in CHINO EX. I. The reason for Chino's *conditional* approval of the language in CHINO EX. I is that CHINO EX. I tracks the approval of the HP in NMED's petition, which is dependent on Commission approval of the HP.

148. As stated herein, the Commission adopts the HP for the STSIU waters as proposed in NMED's petition for section 20.6.4.97, and thus changes to CHINO EX. I are not necessary prior to adoption of Chino's Petition. Hrg. Trans. Vol. 2, 300-301.

149. In response to objections by Amigos Bravos regarding the sufficiency of inclusion in Chino's Petition of its public participation process, Chino provided surrebuttal evidence and testimony bregarding the sufficiency of the public participation criteria for the adoption of site-specific toxicity criteria for copper in the STSIU.

150. Dr. Dail expressly testified that Chino's petition was sufficient and, additionally, that Chino's community involvement process was also sufficient. Hrg. Trans. Vol.2, 316-338. NMED Rebuttal EX. 14.

151. The Commission finds that Chino's pre-petition public involvement actions, Chino's testimony and documentation in the record regarding its efforts to include the

public regarding its Petition, and NMED's testimony regarding the sufficiency of Chino's Petition are sufficient to meet the requirements of 20.6.4.10D(3)(c) NMAC.

152. In support of its petition, Chino presented two technical witnesses, Mr. Barry Fulton and Dr. Joseph Meyer. CHINO EX. E, G. Hrg. Trans. Vol.2, Tr. 401. Dr. Joseph Meyer and Mr. Fulton were directly responsible for both performing the toxicity study on STSIU waters and developing the formula for copper toxicity used in CHINO EX. I in accordance with EPA guidance on the development of site-specific criteria. CHINO EX. E, I.

153. During the scientific investigation, the STSIU study area was divided into nine sub-watersheds that provided a wide range of water chemistries, including everything from low water hardness to high water hardness, low alkalinity to high alkalinity, and low dissolved organic carbon to high dissolved organic carbon concentrations. Hrg. Trans. Vol.2, 347:11-347:17. The work plan for the toxicity study was submitted for comment to NMED and the EPA Region 6 in 2011; subsequently, field sampling and laboratory testing was conducted by Dr. Meyer and Mr. Fulton. Hrg. Trans. Vol.2, 307:23-307:25. The objective of the study was to develop site-specific copper toxicity criteria for STSIU surface waters based on the concept of bioavailability, consistent with EPA guidelines. Hrg. Trans. Vol.2, 307:18-307:21. The study used 12 sampling locations that were mostly ephemeral flow drainages primarily in the northeastern quadrant of the site. Hrg. Trans. Vol.2, 307:22-307:25. The reason why water sampling could not have taken place in the lower elevation southern quadrants was due to the fact that Dr. Meyer and Mr. Fulton were unable to locate any water flowing in that area during the study period. Hrg. Trans. Vol.2,348:1-348:2. Dr. Meyer and Mr. Fulton collected the water where it could be found

during the monsoonal season, which attests to the flashy nature of the flow within the STSIU area. Hrg. Trans. Vol.2, 348:3-348:5.

154. The scientific study performed by Dr. Meyer and Mr. Fulton support the adoption of site-specific copper toxicity criteria for the STSIU. The scientific model resulting from the study, which is represented in Chino's CHINO EX. I, works at any time of the year with any water chemistry in the STSIU and with any range of aquatic organisms that may be found in the STSIU; the model is not limited in usefulness to the time the samples were originally collected. Hrg. Trans. Vol.2, 348:15-348:20. The toxicity study calculated an effect ratio, which is a concept that compares metal toxicity in purely hardness-based laboratory water with site water containing dissolved organic carbon and other water chemistry parameters not present in laboratory water. Hrg. Trans. Vol.2, 348-49.

155. In the study, samples were collected in August and September of 2011, and then laboratory waters were analyzed side by side with the site waters. Specifically, the toxicity portion of the study measured comparative mortality of aquatic organisms that resulted from exposure to copper in site and laboratory water. The study had two rounds of sampling. In the first sampling round, water was collected from all 12 sites, while in the second round, which occurred later in the monsoonal period, water was collected from 6 sites — a subset of the original 12. The samples were split between an analytical chemistry lab and the toxicity analysis so that the toxicity results could be linked to water chemistry. Hrg. Trans. Vol.2, 348:6-348:15.

156. Per EPA guidelines for such studies, two aquatic species, an aquatic invertebrate and a fish, were exposed to varying copper concentrations in both site water and laboratory water. Although these particular species are not necessarily found in the

STSIU, the species are sensitive to water toxicity, and the EPA considers them a good generic substitute for the sensitivity of organisms that may live in the field. Hrg. Trans. Vol.2, 349:13-349:18.

157. The results of the toxicity study suggest sufficient support exists for the proposition that certain chemical properties in the site waters — including, without limitation, the dissolved organic carbon, or DOC — have a protective effect on aquatic life that reduces the toxicity of the site waters as compared to laboratory waters, which track hardness alone. The STSIU toxicity study found sufficient differences in toxicity to support site-specific criteria proposed by Chino in CHINO EX. I. Hrg. Trans. Vol.2, 351-54.

158. The current water quality criteria in New Mexico are based on hardness alone; however, according to the STSIU study, hardness alone is not a sufficiently accurate predictor of toxicity because it does not take into account alkalinity and dissolved organic carbon, or DOC. Hrg. Trans. Vol.2, 345, 351-54. A model that does take into account DOC and alkalinity in addition to hardness, which form the basis of Chino's proposal in CHINO EX. I, would be a far more accurate predictor of toxicity. Hrg. Trans. Vol.2, 351-54. Moreover, when site-specific criteria are derived in accordance with the process used in the STSIU scientific study, the intended level of protection for aquatic life is not diminished, which is in accordance with the EPA Water Quality Standards Handbook. Hrg. Trans. Vol.2, 244:1-244:5. Therefore, Chino's proposal in CHINO EX. I meets EPA Guidelines for development of site-specific toxicity criteria, and its adoption will not result in diminished protection for aquatic organisms. Hrg. Trans. Vol.2, 244:1-244:5; 351-54.

159. The Commission may adopt site-specific numeric criteria applicable to all or a part of a surface water of the state based upon relevant site-specific conditions under 20.6.4.10(D)(1) NMAC. The relevant site-specific conditions include "physical or chemical characteristics at a site such as pH or hardness alter the biological availability and/or toxicity of the chemical." § 20.6.4.10(D)(1)(b) NMAC. Site-specific criteria must fully protect the designated use to which they apply. § 20.6.4.10(D)(2) NMAC. A derivation of site-specific criteria shall rely on a scientifically defensible method, such as one of those listed in section 20.6.4.10(D)(4)(a)-(e) NMAC.

160. Under the relevant criteria specified in section 20.6.4.900 NMAC, numerical aquatic life criteria for copper are derived using a formula that considers the hardness of the water. However, according to the uncontroverted technical testimony of Chino's expert witnesses, a variety of other physical and non-hardness chemical characteristics of the water and the metal can influence metal bioavailability and toxicity to aquatic organisms. These parameters include suspended and dissolved solids, pH, alkalinity, organic carbon compounds, ionic strength and other characteristics, which can have equal or greater effects on copper toxicity than hardness alone. *See, e.g.,* U.S. EPA Water Quality Standards Handbook, EPA-823-B-94-005a, 2nd ed., August 1994. The formula proposed in Chino's CHINO EX. I includes such factors and, therefore, it represents the more predictive and accurate toxicity equation.

161. The live testimony of Dr. Meyer and Mr. Fulton, together with their pre-submitted written direct testimony, the Revised Site-Specific Copper Toxicity Report, CHINO EX. B; and the peer-reviewed article, CHINO EX. C, constitute substantial evidence in support of adoption of Chino's proposal as outlined in CHINO EX. I. Dr.

Dail expressly testified that Chino's petition was sufficient. Tr. 316-338. *See also* NMED Rebuttal EX. 14. No substantial evidence exists in the record to deny Chino's proposal, which is based on sound scientific principles. Based on the weight of the evidence, the Commission finds Chino's proposal requesting adoption of site-specific criteria for copper for certain surface waters located within the Mimbres Closed River Basin within the Chino Mines Smelter Tailings and Soil Investigation Unit is well-taken. Therefore, the Commission finds that the record fully supports the adoption of CHINO EX. I of Chino's Petition.

FINAL ORDER

Having considered the administrative record in its entirety, public testimony, and all technical testimony presented; and being otherwise fully advised regarding this matter; by an affirmative vote of _____ to _____, the proposed amendments to the Standards were approved by the WQCC. Title 20, Chapter 6, Part 4 of the New Mexico Administrative Code (20.6.4 NMAC) are to be amended as indicated in Attachment A, with any appropriate corrections of formatting or other changes necessary to file these regulations with the New Mexico State Records Center. The regulatory change as described in this Order is hereby adopted, to be effective 30 days after filing with the State Records Center.

_____

RYAN FLYNN

CHAIRMAN – Water Quality Control Commission

Dated: _____

NOTICE OF PROCEDURE FOR APPEALLATE REVIEW

Any aggrieved party may seek appellate review in the Court of Appeals, pursuant to NMSA 1978, §74-6-7 and Rules of Appellate Procedure, 12-601 NMRA. Direct appeals from orders shall be taken by filing a notice of appeal with the appellate court clerk within thirty (30) days from the date of the Order.

Attachment A

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.

[~~(g)~~](h) "NTU" means nephelometric turbidity unit;

[~~(h)~~](i) "pCi/L" means picocuries per liter.

[~~(i)~~](j) "pH" means the measure of the acidity or alkalinity and is expressed in standard units (su).

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

C. Terms beginning with the letter "C".

(1) "CAS number" means an assigned number by chemical abstract service (CAS) to identify a substance. CAS numbers index information published in chemical abstracts by the American chemical society.

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

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

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

[~~(4)~~](5) **"Coldwater"** in reference to an aquatic life use means a surface water of the state where the water temperature and other characteristics are suitable for the support or propagation or both of coldwater aquatic life.

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

[~~(6)~~](7) **"Commission"** means the New Mexico water quality control commission.

[~~(7)~~](8) **"Criteria"** are elements of state water quality standards, expressed as constituent concentrations, levels or narrative statements, representing a quality of water that supports a use. When criteria are met, water quality will protect the designated use.

20.6.4.7.D NMAC – 20.6.4.7.H (2) NMAC No changes proposed.

I. Terms beginning with the letter "I".

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

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

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

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

(5) **"Irrigation"** [~~**or "irrigation storage"**~~] means application of water to land areas to supply the water needs of beneficial plants.

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

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

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

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

X. Terms beginning with the letters "X" through "Z". [RESERVED]

[20.6.4.7 NMAC - Rp 20 NMAC 6.1.1007, 10-12-00; A, 7-19-01; A, 05-23-05; A, 07-17-05; A, 08-01-07; A, 12-01-10; A, 01-14-11, A, XX-XX-XX]

20.6.4.8 NMAC – 20.6.4.9 NMAC – No changes proposed

20.6.4.10 REVIEW OF STANDARDS; NEED FOR ADDITIONAL STUDIES:

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

20.6.4.10.B NMAC – 20.6.4.10.E NMAC – No changes proposed

F. Temporary Standards.

(1) Any person may petition the commission to adopt a temporary standard applicable to all or part of a surface water of the state as provided for in this section and applicable Subsections in 40 CFR Part 131.14. The commission may adopt a proposed temporary standard if the petitioner demonstrates that:

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

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

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

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

(2) A temporary standard shall apply to specific pollutant(s), and to specific water body segment(s). The adoption of a temporary standard does not exempt dischargers from complying with all other applicable water quality standards, control technologies or antidegradation requirements under 20.6.4.8 NMAC.

(3) Designated uses shall not be modified on a temporary basis. Designated use attainment as reported in the CWA Section 305(b)/303(d) Integrated Report shall be based on the original standard and not on a temporary standard.

(4) A petition for a temporary standard shall:

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

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

(c) demonstrate that the proposed temporary standard meets the requirements in this Subsection;

(d) present a work plan with timetable of proposed actions for achieving compliance with the original standard in accordance with Paragraph (5);

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

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

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

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

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

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

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

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

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

20.6.4.11 NMAC - No changes proposed.

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

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

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

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

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

20.6.4.13 NMAC through 20.6.4.15 NMAC - No changes proposed.

20.6.4.16 PLANNED USE OF A PISCICIDE: The use of a piscicide registered under the Federal Insecticide, Fungicide, and Rodenticide Act ("FIFRA"), 7 U.S.C. Section 136 *et seq.*, and under the New Mexico Pesticide Control Act ("NMPCA"), Section 76-4-1 *et seq.* NMSA 1978 (1973) in a surface water of the state, shall not be a violation of Subsection F of 20.6.4.13 NMAC when such use is covered by a federal National Pollutant Discharge Elimination System (NPDES) permit or has been approved by the commission under procedures provided in this section. The use of a piscicide which is covered by a NPDES permit shall require no further review by the commission and the person whose application is covered by the NPDES permit shall meet the additional notification and monitoring requirements outlined in Subsection G of 20.6.4.16 NMAC. The commission may approve the reasonable use of a piscicide under this section if the proposed use is not covered by a NPDES permit to further a

Clean Water Act objective to restore and maintain the physical or biological integrity of surface waters of the state, including restoration of native species.

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

(1) petitioner's name and address;

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

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

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

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

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

(7) results of pre-treatment survey;

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

(9) documentation of notice requesting public comment on the proposed use within a 30-day period, including information as described in Paragraphs (1), (2) and (6) of this Subsection, provided to:

(a) local political subdivisions;

(b) local water planning entities;

(c) local conservancy and irrigation districts; and

(d) local media outlets, except that the petitioner shall only be required to publish notice in a newspaper of circulation in the locality affected by the proposed use.

(10) copies of public comments received in response to the publication of notice and the petitioner's responses to public comments received;

(11) post-treatment assessment monitoring protocol; and

(12) any other information required by the commission.

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

~~[C. The commission shall review the petition and the department's recommendation and shall within 90 days of receipt of the department's recommendation hold a public hearing in the locality affected by the proposed use in~~

~~accordance with Adjudicatory Procedures, 20.1.3 NMAC. In addition to the public notice requirements in Adjudicatory Procedures, 20.1.3 NMAC, the petitioner shall provide written notice to:~~

~~(1) local political subdivisions;~~

~~(2) local water planning entities;~~

~~(3) local conservancy and irrigation districts; and~~

~~(4) local media outlets, except that the petitioner shall only be required to publish notice in a newspaper of circulation in the locality affected by the proposed use.~~]

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

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

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

(1) Its composition is such as to warrant the proposed claims for it;

(2) Its labeling and other material submitted for registration comply with the requirements of FIFRA and NMPCA;

(3) It will perform its intended function without unreasonable adverse effects on the environment; and

(4) When used in accordance with all FIFRA label requirements it will not generally cause unreasonable adverse effects on the environment.

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

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

[~~F.~~]G. Any person whose application is covered by a NPDES permit shall provide written notice to local entities as described in Subsection A of 20.6.4.16 NMAC and implement post-treatment assessment monitoring within the application area as described in Subsection (F).

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

20.6.4.17 – 20.6.4.49: [RESERVED]

20.6.4.50 – 20.6.4.96 NMAC – No changes proposed.

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.

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

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

C. Waters:

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

(a) Cunningham gulch from Santa Fe county road 55 upstream 1.4 miles to a point upstream of the LAC Minerals mine, identified as Ortiz Mine on USGS topographic maps;

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

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

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

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

(f) an unnamed tributary from the AMAFCA Rio Grande south channel upstream of the crossing of New Mexico highway 47 upstream to I-25;

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

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

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

(j) an unnamed tributary from San Mateo creek upstream 1.5 miles to the Roca Honda mine facility outfall in NPDES permit number;

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

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

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

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

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

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

(c) Grindstone canyon upstream of Grindstone Reservoir.

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

(a) Bracket canyon upstream of the Vermejo river;

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

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

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

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

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

(b) an unnamed tributary of Defiance draw from McKinley County Road 1 upstream to New Mexico Highway 264.

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

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

(b) in the Mimbres river closed basin:

(i) San Vicente arroyo from the Mimbres river upstream to Maudes canyon;

(ii) Chino Mines property subwatershed drainage A and tributaries thereof;

(iii) Chino Mines property subwatershed drainage B and tributaries thereof (excluding the northwest tributary containing Ash spring);

(iv) Chino Mines property subwatershed drainage C and tributaries thereof (excluding reaches containing Bolton spring, the Chiricahua Leopard Frog critical habitat transect, and all reaches in Subwatershed C that are upstream of the Chiricahua Leopard Frog critical habitat);

(v) Chino Mines property subwatershed drainage D and tributaries thereof (drainages D-1, D-2 and D-3, excluding the southeast tributary in drainage D1 that contains Brown spring); and,

(vi) Chino Mines property subwatershed drainage E and tributaries thereof (drainages E-1, E-2 and E-3).

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

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

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.

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

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

20.6.4.99 PERENNIAL WATERS: All perennial [~~unclassified~~] surface waters of the state except those classified in 20.6.4.100 thru 899.

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

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

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

20.6.4.100: [RESERVED]

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.

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

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

20.6.4.102 RIO GRANDE BASIN: The main stem of the Rio Grande from one mile [~~below~~] downstream of Percha dam upstream to Caballo dam.

A. **Designated Uses:** irrigation, 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, except that the following segment-specific criteria apply: the monthly geometric mean of E. coli bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.

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

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

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

A. **Designated Uses:** irrigation, livestock watering, wildlife habitat, marginal coldwater aquatic life, [~~secondary~~] 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.

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

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

20.6.4.104 NMAC – 20.6.4.109 NMAC – No changes proposed.

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

A. **Designated Uses:** irrigation, livestock watering, wildlife habitat, primary contact, coldwater aquatic life 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, except that the following segment-specific criteria apply: pH within the range of 6.6 to 9.0 and temperature 25°C (77°F) or less.

[20.6.4.110 NMAC - Rp 20 NMAC 6.1.2108, 10-12-00; A, 05-23-05; A, 12-01-10; A, XX-XX-XX]

20.6.4.111 NMAC – 20.6.4.115 NMAC – No changes proposed.

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

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

B. **Criteria:** 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 31°C (87.8°F) or less.

[20.6.4.116 NMAC - Rp 20 NMAC 6.1.2113, 10-12-00; A, 05-23-05; A, 12-01-10; A, XX-XX-XX]

20.6.4.117 NMAC – 20.6.4.123 NMAC – No changes proposed.

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

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

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

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

20.6.4.125 NMAC – 20.6.4.203 NMAC – No changes proposed.

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

A. **Designated Uses:** irrigation, livestock watering, wildlife habitat, [~~secondary~~] 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.

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

[**NOTE:** The segment covered by this section was divided effective 05-23-05. The 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.

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

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

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

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 8,000 mg/L or less, sulfate 2,500 mg/L or less and chloride 4,000 mg/L or less.

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

20.6.4.208 NMAC – 20.6.4.212 NMAC – No changes proposed.

20.6.4.213 PECOS RIVER BASIN - McAllister lake.

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

B. **Criteria:** 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 25°C (77°F) or less.

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

20.6.4.214 NMAC– 20.6.4.218 NMAC – No changes proposed.

20.6.4.219 PECOS RIVER BASIN - Avalon reservoir.

A. **Designated Uses:** irrigation storage, livestock watering, wildlife habitat, [~~secondary~~] 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.

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

20.6.4.220 NMAC – 20.6.4.304 NMAC – No changes proposed.

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

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.

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

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

[**NOTE:** This segment was divided effective 12-01-10. The standards for [~~Lake Maloya and~~] Lake Alice and Lake Maloya are under 20.6.4.311 and 20.6.4.312 NMAC, respectively.]

20.6.4.306 NMAC – 20.6.4.307 NMAC – No changes proposed.

20.6.4.308 CANADIAN RIVER BASIN - Charette lakes.

A. Designated Uses: coldwater aquatic life, warmwater aquatic life,[~~secondary~~] primary contact, livestock watering and wildlife habitat.

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

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

20.6.4.309 – 20.6.4.316 – No changes proposed.

20.6.4.317 CANADIAN RIVER BASIN - Springer lake.

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

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

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

20.6.4.318 NMAC - 20.6.4.400: [RESERVED]

20.6.4.401 – 20.6.4.402 – No changes proposed.

20.6.4.403 SAN JUAN RIVER BASIN - The Animas river from its confluence with the San Juan river upstream to Estes Arroyo.

A. Designated Uses: public water supply, industrial water supply, irrigation, livestock watering, wildlife habitat, [~~marginal coldwater~~] coolwater aquatic life, and 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 [~~.~~], except that the following segment-specific criterion applies: temperature 29°C (84.2°F) or less.

[20.6.4.403 NMAC - Rp 20 NMAC 6.1.2403, 10-12-00; A, 05-23-05; A, 12-01-10; A, XX-XX-XX]

20.6.4.404 SAN JUAN RIVER BASIN - The Animas river from Estes Arroyo upstream to the [~~New Mexico-Colorado line~~] Southern Ute Indian tribal boundary.

A. Designated Uses: [~~coldwater~~]coolwater aquatic life, irrigation, livestock watering, wildlife habitat, public water supply, industrial water supply and primary contact.

B. Criteria: 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: phosphorus (unfiltered sample) 0.1 mg/L or less.

[20.6.4.404 NMAC - Rp 20 NMAC 6.1.2404, 10-12-00; A, 05-23-05; A, 12-01-10; A, XX-XX-XX]

20.6.4.405 – 20.6.4.501 – No changes proposed.

20.6.4.502 GILA RIVER BASIN - The main stem of the Gila river from Redrock canyon upstream to the confluence of the West Fork Gila river and East Fork Gila river and perennial reaches of tributaries to the Gila river [~~below~~] downstream of Mogollon creek.

A. Designated Uses: industrial water supply, irrigation, livestock watering, wildlife habitat, marginal coldwater aquatic life, 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, except that the following segment-specific criterion applies: 28°C (82.4°F) or less.

[20.6.4.502 NMAC - Rp 20 NMAC 6.1.2502, 10-12-00; A, 05-23-05; A, 12-01-10]

20.6.4.503 GILA RIVER BASIN - All perennial tributaries to the Gila river [~~above~~] upstream of and including Mogollon creek.

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

B. Criteria: 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 criteria apply: specific conductance of 400 µS/cm or less for all perennial tributaries except West Fork Gila and tributaries thereto, specific conductance of 300 µS/cm or less; [~~main stem of the Gila river above Gila hot springs and 400 µS/cm or less for other reaches;~~] 32.2°C (90°F) or less in the east fork of the Gila river and Sapillo creek [~~below~~] downstream of Lake Roberts; the monthly geometric mean of E. coli bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.

[20.6.4.503 NMAC - Rp 20 NMAC 6.1.2503, 10-12-00; A, 05-23-05; A, 12-01-10; A, XX-XX-XX]

20.6.4.504 – 20.6.4.802 – No changes proposed.

20.6.4.803 CLOSED BASINS - Perennial reaches of the Mimbres River downstream of the confluence with [~~Willow Springs~~] Allie canyon and all perennial reaches of tributaries thereto.

A. **Designated Uses:** [~~coldwater~~] coolwater aquatic life, irrigation, livestock watering, wildlife habitat and primary contact.

B. **Criteria:** 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 criteria apply: the monthly geometric mean of E. coli bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less and temperature of 30°C (86°F) or less.

[20.6.4.803 NMAC - Rp 20 NMAC 6.1.2803, 10-12-00; A, 05-23-05; A, 12-01-10; A, XX-XX-XX]

20.6.4.804 CLOSED BASINS - Perennial reaches of the Mimbres River upstream of the confluence with [~~Willow Springs~~] Allie canyon to Cooney canyon, and all perennial reaches of East Fork Mimbres (McKnight Canyon) downstream of the fish barrier, and all perennial reaches thereto.

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

B. **Criteria:** 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 criteria apply: [~~specific conductance 300 µS/cm or less;~~] the monthly geometric mean of E. coli bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.

[20.6.4.804 NMAC - Rp 20 NMAC 6.1.2804, 10-12-00; A, 05-23-05; A, 12-01-10; A, XX-XX-XX]

[NOTE: The segment covered by this section was divided effective XX-XX-XX. The standards for the additional segment are covered under 20.6.4.807 NMAC.]

20.6.4.807 CLOSED BASINS - Perennial reaches of the Mimbres river upstream of Cooney Canyon and all perennial reaches thereto, including perennial reaches of East Fork Mimbres river (McKnight Canyon) upstream of the fish barrier.

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

B. Criteria: 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 criteria apply: specific conductance 300 µS/cm or less; the monthly geometric mean of E. coli bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.

[20.6.4.807 NMAC – A, XX-XX-XX]

20.6.4.7.808 CLOSED BASINS – Perennial and intermittent watercourses within Smelter Tailing Soils Investigation Unit lands at the Chino Mines Company, excluding those ephemeral waters listed in section 809 and including but not limited to the mainstem of Lampbright draw, beginning at the confluence of Lampbright Draw with Rustler canyon, all tributaries that originate west of Lampbright draw to the intersection of Lampbright draw with U.S. 180, and all tributaries of Whitewater creek that originate east of Whitewater creek from the confluence of Whitewater creek with Bayard canyon downstream to the intersection of Whitewater creek with U.S. 180.

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

B. **Criteria:** 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 criteria apply: the acute and chronic aquatic life criteria for copper set forth in Subsection I of Section 900 shall be determined by multiplying that criteria by the Water Effect Ratio ("WER") adjustment expressed by the following equation:

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

For purposes of this section, DOC is dissolved organic carbon, expressed in units of milligrams carbon per liter or mg C/L; alkalinity is expressed in units of mg/L as $CaCO_3$, and hardness is expressed in units of mg/L as $CaCO_3$. In waters that contain alkalinity concentrations greater than 250 mg/L, a value of 250 mg/L shall be used in the equation. In waters that contain DOC concentrations greater than 16 mg C/L, a value of 16 mg C/L shall be used in the equation. In waters that contain hardness concentrations greater than 400 mg/L, a value of 400 mg/L shall be used in the equation. The alkalinity, hardness and DOC concentrations used to calculate the WER value are those measured in the subject water sample.

20.6.4. 809 CLOSED BASINS - Ephemeral watercourses within Smelter Tailing Soils Investigation Unit lands at the Chino Mines Company, limited to Chino Mines property subwatershed drainage A and tributaries thereof, Chino Mines property subwatershed drainage B and tributaries thereof (excluding the northwest tributary containing Ash spring and the Chiricahua Leopard Frog critical habitat transect); Chino Mines property subwatershed d rainage C and tributaries thereof (excluding reaches containing Bolton s pring, the Chiricahua Leopard Frog critical habitat transect and all reaches in subwatershed C that are upstream of the Chiricahua Leopard Frog critical habitat); subwatershed drainage D and tributaries thereof (drainages D-1, D-2 and D-3, excluding the southeast tributary in drainage D1 that contains Brown spring) and subwatershed drainage E and all tributaries thereof (drainages E-1, E-2 and E-3).

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

B. **Criteria:** 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 criteria apply: the acute aquatic life criteria for copper set forth in Subsection I of Section 900 shall be determined by multiplying that criteria by the Water Effect Ratio ("WER") adjustment expressed by the following equation:

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

For purposes of this section, DOC is dissolved organic carbon, expressed in units of milligrams carbon per liter or mg C/L; alkalinity is expressed in units of mg/L as $CaCO_3$, and hardness is expressed in units of mg/L as $CaCO_3$. In waters that contain alkalinity concentrations greater than 250 mg/L, a value of 250 mg/L shall be used in the equation. In waters that contain DOC concentrations greater than 16 mg C/L, a value of 16 mg C/L shall be used in the equation. In waters that contain hardness concentrations greater than 400 mg/L, a value of 400 mg/L shall be used in the equation. The alkalinity, hardness and DOC concentrations used to calculate the WER value are those measured in the subject water sample.

[~~20.6.4.807~~]20.6.4.810 – 20.6.4.899: [RESERVED]

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

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

Subsections B and C of 20.6.4.900 – No changes proposed.

D. Primary Contact: the monthly geometric mean of E. coli bacteria of 126 cfu/100 mL or MPN/100 ml and single sample of 410 cfu/100 mL or MPN/100 mL and pH within the range of 6.6 to 9.0 apply to this use. 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.

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

Subsection F through Subsection H, Subparagraphs (1)-(2) of 20.6.4.900 NMAC - No changes proposed.

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

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

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

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

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

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

I. Hardness-dependent acute and chronic aquatic life criteria for metals are calculated using the following equations. The criteria are expressed as a function of dissolved hardness (as mg $CaCO_3$/L). With the exception of aluminum, the equations are valid only for dissolved hardness concentrations of 0-400 mg/L. For dissolved 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 µg/L is $\exp(m_A[\ln(\text{hardness})] + b_A)(CF)$. 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 hardness)(0.041838)]
Chromium (Cr) III	0.8190	3.7256	0.316
Copper (Cu)	0.9422	-1.700	0.960
Lead (Pb)	1.273	-1.460	1.46203-[(ln hardness)(0.145712)]
Manganese (Mn)	0.3331	6.4676	

Nickel (Ni)	0.8460	2.255	0.998
Silver (Ag)	1.72	-6.59	0.85
Zinc (Zn)	0.9094	0.9095	0.978

(2) **Chronic aquatic life criteria for metals.** The equation to calculate chronic criteria in µg/L is $\exp(m_C[\ln(\text{hardness})] + b_C)(CF)$. 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	0.9161	
Cadmium (Cd)	0.7647	-4.2180	1.101672-[(ln hardness)(0.041838)]
Chromium (Cr) III	0.8190	0.6848	0.860
Copper (Cu)	0.8545	-1.702	0.960
Lead (Pb)	1.273	-4.705	1.46203-[(ln hardness)(0.145712)]
Manganese (Mn)	0.3331	5.8743	
Nickel (Ni)	0.8460	0.0584	0.997
Zinc (Zn)	0.9094	0.6235	0.986

(3) Selected values of calculated acute and chronic criteria (µg/L).

Hardness as $CaCO_3$, 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

Hardness as $CaCO_3$, dissolved (mg/L)		Al	Cd	Cr III	Cu	Pb	Mn	Ni	Ag	Zn
220	Acute	10,071	3.23	1,087	28	151	3,882	912	13	328
	Chronic	4,035	0.80	141	18	6	2,145	101		248
300	Acute	~~[10,071]~~	4.21	1,400	38	210	4,305	1190	21	435
	Chronic	~~[4,035]~~	1.00	180	23	8	2,379	130		329
400 and above	Acute	~~[10,071]~~	5.38	1,770	50	280	4,738	1510	35	564
	Chronic	~~[4,035]~~	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-OO - human health-organism only; C - cancer-causing; P - persistent.~~

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

([~~2~~1]) **Table of Numeric Criteria:** The following table sets forth the numeric criteria applicable to existing, designated and attainable uses. For metals, criteria represent the total sample fraction unless otherwise specified in the table. Additional criteria that are not compatible with this table are found in Subsections A through I, K and L of this section.

Pollutant	CAS Number	DWS	Irr/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
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	

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

Pollutant	CAS Number	DWS	Irr/Irr Storage	LW	WH	Aquatic Life			Type
						Acute	Chronic	HH-OO	
Acenaphthene	83-32-9	2,100						990	
Acrolein	107-02-8	18						9	
Acrylonitrile	107-13-1	0.65						2.5	C
Aldrin	309-00-2	0.021				3.0		0.00050	C,P
Anthracene	120-12-7	10,500						40,000	
Benzene	71-43-2	5						510	C
Benzidine	92-87-5	0.0015						0.0020	C
Benzoaanthracene	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
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	

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

Pollutant	CAS Number	DWS	Irr/Irr Storage	LW	WH	Aquatic Life			Type
						Acute	Chronic	HH-OO	
beta-Endosulfan	33213-65-9	62				0.22	0.056	89	
Endosulfan sulfate	1031-07-8	62						89	
Endrin	72-20-8	2				0.086	0.036	0.060	
Endrin aldehyde	7421-93-4	10.5						0.30	
Ethylbenzene	100-41-4	700						2,100	
Fluoranthene	206-44-0	1,400						140	
Fluorene	86-73-7	1,400						5,300	
Heptachlor	76-44-8	0.40				0.52	0.0038	0.00079	C
Heptachlor epoxide	1024-57-3	0.20				0.52	0.0038	0.00039	C
Hexachlorobenzene	118-74-1	1						0.0029	C,P
Hexachlorobutadiene	87-68-3	4.5						180	C
Hexachlorocyclopen-tadiene	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 Byphenyls (PCBs)	1336-36-3	0.50			0.014	2	0.014	0.00064	C,P

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

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

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

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

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

20.6.4.900.K of NMAC - no changes proposed.

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 [0]14°C apply; for temperatures above 30°C, the criteria for 30°C apply. For pH values below 6.5, the criteria for 6.5 apply; for pH values above 9.0, the criteria for 9.0 apply.

(1) Chronic aquatic life criteria for total ammonia when fish early life stages are present.

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

$$((0.0577/(1 + 10^{7.688-pH})) + (2.487/(1 + 10^{pH-7.688}))) \times MIN\ (2.85, 1.45 \times 10^{0.028 \times (25-T)})$$

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

pH	Temperature (°C)										
	[0 and below]	14 and below	15	16	18	20	22	24	26	28	30 and above
6.5 and below	[6.67]	6.67	6.46	6.06	5.33	4.68	4.12	3.62	3.18	2.80	2.46
6.6	[6.57]	6.57	6.36	5.97	5.25	4.61	4.05	3.56	3.13	2.75	2.42
6.7	[6.44]	6.44	6.25	5.86	5.15	4.52	3.98	3.50	3.07	2.70	2.37
6.8	[6.29]	6.29	6.10	5.72	5.03	4.42	3.89	3.42	3.00	2.64	2.32
6.9	[6.12]	6.12	5.93	5.56	4.89	4.30	3.78	3.32	2.92	2.57	2.25

pH	Temperature (°C)										
	[~~0 and below~~]	14 and below	15	16	18	20	22	24	26	28	30 and above
7.0	[~~5.91~~]	5.91	5.73	5.37	4.72	4.15	3.65	3.21	2.82	2.48	2.18
7.1	[~~5.67~~]	5.67	5.49	5.15	4.53	3.98	3.50	3.08	2.70	2.38	2.09
7.2	[~~5.39~~]	5.39	5.22	4.90	4.31	3.78	3.33	2.92	2.57	2.26	1.99
7.3	[~~5.08~~]	5.08	4.92	4.61	4.06	3.57	3.13	2.76	2.42	2.13	1.87
7.4	[~~4.73~~]	4.73	4.59	4.30	3.78	3.32	2.92	2.57	2.26	1.98	1.74
7.5	[~~4.36~~]	4.36	4.23	3.97	3.49	3.06	2.69	2.37	2.08	1.83	1.61
7.6	[~~3.98~~]	3.98	3.85	3.61	3.18	2.79	2.45	2.16	1.90	1.67	1.47
7.7	[~~3.58~~]	3.58	3.47	3.25	2.86	2.51	2.21	1.94	1.71	1.50	1.32
7.8	[~~3.18~~]	3.18	3.09	2.89	2.54	2.23	1.96	1.73	1.52	1.33	1.17
7.9	[~~2.80~~]	2.80	2.71	2.54	2.24	1.96	1.73	1.52	1.33	1.17	1.03
8.0	[~~2.43~~]	2.43	2.36	2.21	1.94	1.71	1.50	1.32	1.16	1.02	0.897
8.1	[~~2.10~~]	2.10	2.03	1.91	1.68	1.47	1.29	1.14	1.00	0.879	0.773
8.2	[~~1.79~~]	1.79	1.74	1.63	1.43	1.26	1.11	0.973	0.855	0.752	0.661
8.3	[~~1.52~~]	1.52	1.48	1.39	1.22	1.07	0.941	0.827	0.727	0.639	0.562
8.4	[~~1.29~~]	1.29	1.25	1.17	1.03	0.906	0.796	0.700	0.615	0.541	0.475
8.5	[~~1.09~~]	1.09	1.06	0.990	0.870	0.765	0.672	0.591	0.520	0.457	0.401
8.6	[~~0.920~~]	0.920	0.892	0.836	0.735	0.646	0.568	0.499	0.439	0.386	0.339
8.7	[~~0.778~~]	0.778	0.754	0.707	0.622	0.547	0.480	0.422	0.371	0.326	0.287
8.8	[~~0.661~~]	0.661	0.641	0.601	0.528	0.464	0.408	0.359	0.315	0.277	0.244
8.9	[~~0.565~~]	0.565	0.548	0.513	0.451	0.397	0.349	0.306	0.269	0.237	0.208

pH	Temperature (°C)										
	[~~0~~ ~~and~~ ~~below~~]	14 and below	15	16	18	20	22	24	26	28	30 and above
9.0 and above	[~~0.486~~]	0.486	0.471	0.442	0.389	0.342	0.300	0.264	0.232	0.204	0.179

(2) Chronic aquatic life criteria for total ammonia when fish early life stages are absent.

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

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

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

pH	Temperature (°C)									
	~~[7 and below]~~	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

pH	Temperature (°C)									
	~~[7 and below]~~	7 and below	8	9	10	11	12	13	14	15 and above
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.

Subsections B – G of 20.6.4.901 NMAC – No changes proposed.

H. Colorado river basin salinity control forum. [~~2002~~] 2014. *[~~2002~~]2014 Review, water quality standards for salinity, Colorado river system.* Phoenix, Arizona. 99 p.

Subsections I – L of 20.6.4.901 NMAC – No changes proposed.

M. United States environmental protection agency. 1984. *Technical support manual: waterbody surveys and assessments for conducting use attainability analyses, volume III: lake systems.* Office of water, regulations and standards, Washington, D.C. 208 p. http://www.epa.gov/OST/library/wqstandards/uaavol123.pdf

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

CERTIFICATE OF SERVICE

I hereby certify that a copy of the **Proposed Statement of Reasons and Final Order** was sent to the following parties via email on March 16, 2016:

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