UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1201 ELM
DALLAS, TX 75202-2733

December 22, 2020

Jennifer Fullam
Standards, Planning & Reporting Team Leader
Surface Water Quality Bureau
New Mexico Environment Department
1190 S. St. Francis Dr.
Santa Fe, NM 87505

Re: New Mexico Environment Department 2020 Triennial Review

Dear Ms. Fullam:

In response to the New Mexico Environment Department (NMED) announcement and extended public comment period on proposed revisions to the New Mexico *Standards for Interstate and Intrastate Surface Waters*, 20.6.4 New Mexico Administrative Code (NMAC), the Environmental Protection Agency (EPA) Region 6 would like provide comments and recommendations as part of the state's 2020 triennial review process.

The NMED's proposal includes both substantive and non-substantive revisions to New Mexico's water quality standards. The EPA has provided comments and recommendations on the substantive revisions where appropriate. The substantive revisions included definitions that influence implementation, regulatory segment and designated use determinations, and a number of new and revised criteria. The comments and recommendations provided in the enclosed document are intended to address these and other complex issues that may need to be addressed in incremental stages through the state's water quality standards and associated implementation over time. We would like to encourage discussions about these recommendations and suggestions as part the current and future water quality standards program-related planning. Where non-substantive revisions occur, typically grammatical, renumbering or other minor changes that do not alter the context or meaning of a provision, comments are typically necessary.

It should be noted that the recommendations and suggestions provided here are preliminary and do not represent a finding under §303(c) of the Clean Water Act or Standards Regulation (40 CFR 131). Any decisions on new and revised water quality standards will be made by the EPA Region 6 following their adoption by the New Mexico Water Quality Control Commission and submission to the Region.

The EPA would also like to take this opportunity to commend the NMED and the Surface Water Quality Board's efforts in the continuing development of New Mexico's water quality standards program. I look forward to continuing work with you and your staff on the protection of New Mexico's water resources. If you have any questions, please contact me or Russell Nelson at nelson.russell@epa.gov or (214) 665-6646.

Sincerely,

Richard A. Wooster

Richard Wooster
Chief
Water Quality Protection Section

Enclosure

cc: Shelly Lemon, Chief, Surface Water Quality Bureau, New Mexico Environment Department (via email to Shelly.Lemon@state.nm.us)

Kris Barrios, Program Manager - Monitoring, Assessment, and Standards Section, New Mexico Environment Department, (via email to Kristopher.Barrios@state.nm.us)

EPA COMMENTS ON THE NEW MEXICO ENVIRONMENT DEPARTMENT'S

PROPOSED TRIENNIAL REVISIONS TO THE STANDARDS FOR INTERSTATE AND INTRASTATE SURFACE WATERS (20.6.4 NMAC)

The following detail the Environmental Protection Agency's (EPA) comments and recommendations on the New Mexico Environment Department's (NMED) proposed revisions to the state's Standards for Interstate and Intrastate Surface Waters (20.6.4 NMAC). It should be noted that the comments and recommendations provided here or in any enclosures are preliminary and do not represent a finding under Section 303(c) of the Clean Water Act (CWA) or the Standards Regulation (40 CFR 131). Any decisions on new and revised water quality standards will be made by the EPA following their adoption and submission to Region 6 for review by the New Mexico Water Quality Control Commission (WQCC or Commission).

General Comments

As cited in new proposed language at NMAC 20.6.4.10(A), § 303(c)(1) of the CWA requires that "the Governor of a State or the State water pollution control agency of such State shall from time to time (but at least once each three year period beginning with October 18, 1972) hold public hearings for the purpose of reviewing applicable water quality standards and, as appropriate, modifying and adopting standards." The CWA requirement means that for a state's review to be considered a triennial review, the state must open the entirety of a state's water quality standard(s) (WQS) and solicit comments on the entire document.

For future triennial reviews, the EPA recommends that the NMED ensure a hearing that is open to the general public for the purpose of reviewing New Mexico's WQS is held three years from the date of the state's prior hearing to review its WQS to meet the requirement in § 303(c)(1) of the CWA. The purpose of this review is to, at a minimum, identify WQS changes necessary to meet the requirements of the CWA. This includes the requirement in 40 CFR § 131.20(a) to re-examining any waterbody segment with designated uses less than the CWA § 101(a)(2) uses to determine if those designations are still appropriate.

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

20.6.4.6 OBJECTIVE:
D. In accordance with Executive Order on Addressing Climate Change and Energy Waste Prevention (2019-003), these standards serve to address the inherent threats to water quality due to climate change by setting water quality goals and fostering resiliency.
[20.6.4.6 NMAC - Rp 20 NMAC 6.1.1006, 10/12/2000; A, 5/23/2005; A, XX/XX/XXXX]

The EPA supports NMED's commitment to addressing threats to water quality consistent with the statewide climate strategy outlined in the Governor's Executive Order referenced in this provision.

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) "4Q3" means the critical low flow as determined by the minimum average flow over four consecutive days that occurs with a frequency of once in three years.

As described in Chapter 5 of the EPA's WQS Handbook, referring to the Technical Support Document for Water Quality Based Controls (1991) and Appendix D of the TSD, the EPA describes and recommends two methods for calculating acceptable critical low-flow values: the traditional hydrologically based method developed by the United States Geological Survey (USGS) and a biologically based method developed by the EPA. The hydrologically based critical low-flow value determined statistically using probability and extreme values for acute and chronic criteria (1Q10 and 7Q10), and the biologically based critical low flow is determined empirically using the specific duration and frequency associated with the criterion (1B3 and 4B3). The Handbook notes that when a criterion specifies a four-day average concentration that should not be exceeded more than once every three years, this condition should not be interpreted as implying that a 4Q3 low flow is appropriate for use as the hydrologically based critical low-flow value for assessing impacts on the receiving water.

[~~(7)~~](8) "Attainable Use**"** means a use that is achievable by the imposition of effluent limits required under sections 301(b) and 306 of the federal Clean Water Act and implementation of cost-effective and reasonable best management practices for nonpoint source control. An attainable use may or may not be as stringent as the designated use.

The revisions to this definition remain generally consistent with Chapter 2 of the EPA's Water Quality Standards Handbook and has no comment on these revisions.

B. Terms beginning with the letter "B".

(1) "Baseflow" refers to the sustained flow volume of a stream or river. In natural systems, baseflow is comprised from regional groundwater inflow and local shallow subsurface inflow that is temporarily stored in the watershed during snowmelt and rain events and slowly released to the stream or river over time. In effluent dominated systems, baseflow is comprised predominantly from effluent with little to no subsurface contributions. Baseflow in both scenarios is critical for sustaining flow in streams and rivers over seasonal and longer timeframes.

This definition appears intended to define baseflow conditions specific not only for ephemeral streams, but more specifically to support the definition for effluent dominated streams. Given that as this definition itself states, baseflow may be comprised of regional groundwater inflow and local shallow subsurface inflow that is temporarily stored in the watershed and slowly released to the stream or river over time, the definition becomes inconsistent by stating that in effluent dominated systems, baseflow is comprised predominantly from effluent with little to no subsurface contributions. Baseflow in both scenarios is critical for sustaining flow in streams and rivers over seasonal and longer timeframes. The EPA recommends that "with little to no subsurface contributions" be rephrased to "with limited subsurface contributions."

C. Terms beginning with the letter "C".

(4) "Climate change" refers to any significant change in the measures of climate lasting for an extended period of time and includes major changes in temperature, precipitation, wind patterns or other effects, that occur over several decades or longer.

The EPA has no comment on this definition.

(7) "Contaminants of emerging concern" refers to water contaminants, including pharmaceuticals and personal care products, that may cause ecological or human health impacts at low concentrations. Contaminants of emerging concern are generally chemical compounds, that although suspected to potentially have impacts, do not have regulatory standards, are not routinely monitored for and the concentrations to which negative impacts are observed have not been fully studied.

The EPA has no comment on this revision.

E. Terms beginning with the letter "E".

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

(2) "Effluent dominated" refers to a tributary that has, over a 12-month average, more than three-quarters of its baseflow attributed to discharges from a permitted effluent discharge. Waters that are effluent dominated are of significant value to providing aquatic life habitat but are not intended for primary contact.

The EPA recommends replacing the reference to "tributary" to "water." EPA recommends deleting or revising the last sentence of this proposed new definition. EPA considers the same standards for water quality applicable to effluent-dominated waters as to non-effluent-dominated waters, including primary contact recreation and other designated uses from CWA section 101(a)(2), unless a use attainability analysis supports a use downgrade consistent with one of the six factors at 40 CFR 131.10(g).

H. Terms beginning with the letter "H".

(1) "Hardness" means the measure of calcium and magnesium salts in water expressed as dissolved calcium carbonate (CaCO3) unless otherwise noted.

The EPA has no comment on the inclusion of this definition.

(2) "Harmonic mean flow" is the number of daily flow measurements divided by the sum of the reciprocals of the flows; that is, it is the reciprocal of the arithmetic mean of reciprocal daily flow measurements consistent with the equations in Paragraph (1) of Subsection B of 20.6.4.11 NMAC.

The EPA has no comment on the inclusion of this definition.

L. Terms beginning with the letter "L".

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

Deleting the reference to "ephemeral or intermittent water" leaves the definition less specific but does not alter the meaning. The EPA recommends considering using the phrase "…changes, e.g. flow, high turbidity…"

M. Terms beginning with the letter "M".

(1) "Marginal coldwater" in reference to an aquatic life use means that natural [~~intermittent or low flows, or other natural habitat~~] conditions severely limit maintenance of a coldwater aquatic life population during at least some portion of the year or historical data indicate that the temperature [~~in~~] of the surface water of the state may exceed that which could continually support aquatic life adapted to coldwater[~~25°C (77°F)~~].

Similar to the revisions to the "limited aquatic life," striking the reference to flow leaves this definition less specific. In addition, the inclusion of the narrative referring to coldwater aquatic life and striking the low-end of applicable water temperature does not affect the understanding of this definition.

P. Terms beginning with the letter "P".

(3) "Persistent toxic pollutants" means pollutants, generally organic, that are resistant to

environmental degradation through chemical, biological and photolytic processes and can bioaccumulate in organisms, causing adverse impacts on human health and aquatic life.

The EPA supports the inclusion of this definition.

S. Terms beginning with the letter "S".

(5) "Surface water(s) of the state"

(i) means all surface waters situated wholly or partly within or bordering upon the state, including the following:

(1) lakes[,];
(2) rivers[,];
(3) streams (including intermittent and ephemeral streams) [,];
(4) mudflats[,];
(5) sandflats[,];
(6) wetlands[,];
(7) sloughs[,];
(8) prairie potholes [,];
(9) wet meadows[,];
(10) playa lakes[,];
(11) reservoirs[,]; [~~or~~] and
(12) natural ponds.

(ii) [~~Surface waters of the state~~] also means all tributaries of such waters, including adjacent wetlands, any manmade bodies of water that were originally created in surface waters of the state or resulted in the impoundment of surface waters of the state, and any "waters of the United States" as defined under the Clean Water Act that are not included in the preceding description.

(iii) [~~Surface waters of the state~~] does not include private waters that do not combine with other surface or subsurface water or any water under tribal regulatory jurisdiction pursuant to Section 518 of the Clean Water Act. Waste treatment systems, including treatment ponds or lagoons designed and actively used to meet requirements of the Clean Water Act (other than cooling ponds as defined in 40 CFR Part 423.11(m) that also meet the criteria of this definition), are not surface waters of the state, unless they were originally created in surface waters of the state or resulted in the impoundment of surface waters of the state.

The EPA supports the inclusion of the term "ephemeral" in this definition. Other formatting changes, including striking the term "Surface waters of the state" in sections (ii) and (iii) are not substantive.

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.

B. In accordance with 40 CFR 131.10(i), when an existing use, as defined in 20.6.4.7 NMAC, is more stringent than the designated use and supporting evidence demonstrates the presence of that use, the designated use shall be amended to be no less stringent than the existing use.

[~~B.~~] C. It is recognized that, in some cases, numeric criteria [~~have been adopted that reflect use designations rather than existing conditions of surface waters of the state.~~] for a particular designated use may not adequately reflect the local conditions and the adaptive nature of particular organisms to utilize a water without harm. In these cases, a water quality criterion may be modified to reflect the natural condition of a specific waterbody. [~~Narrative criteria are required for many constituents because accurate data on background levels are lacking. More intensive water quality monitoring may identify surface waters of the state where existing quality is considerably better than the established criteria.~~] When justified by sufficient data and information, a numeric [~~the~~] water quality [~~criteria~~]criterion [~~will~~]may be adopted or modified to a less stringent criterion and still protect the attainable uses of the waterbody. The modification of the criterion does not necessarily change the designated use. The removal or amendment of a designated use to a less stringent use can only be done through a use attainability analysis in accordance with 20.6.4.15 NMAC.

[~~F.~~]G. Temporary standards[~~:~~].

The proposed revisions to 20.6.4.10 A and B clarify the required process the NMED will use in amending a designated use where the existing use is more stringent than the current designated consistent with 40 C.F.R. 131.10(i).

Although the NMED did not propose any revisions to subparagraph G. Temporary standards, the EPA recommends that this provision be revised to clarify that work plans should be designed to meet the highest attainable condition rather than the underlying standard, consistent with 40 CFR 131.14.

20.6.4.11 APPLICABILITY OF WATER QUALITY STANDARDS:

A. [RESERVED]

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

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

The deletion of the definition of harmonic mean flow here is nonsubstantive given that the term has been defined previously.

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

The deletion of the definition of "unclassified waters of the state" here is nonsubstantive given that the term has been defined previously.

20.6.4.12 COMPLIANCE WITH WATER QUALITY STANDARDS:

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

The rephrasing here is nonsubstantive – no comment is necessary.

20.6.4.13 GENERAL CRITERIA:

F. Toxic pollutants:

(1) Except as provided in 20.6.4.16 NMAC, surface waters of the state shall be free of toxic pollutants, including but not limited to contaminants of emerging concern and those toxic pollutants defined in 20.6.2 NMAC, from other than natural causes in amounts, concentrations or combinations that affect the propagation of fish or that are toxic to humans, livestock or other animals, fish or other aquatic organisms, wildlife using aquatic environments for habitation or aquatic organisms for food, or that will or can reasonably be expected

to bioaccumulate in tissues of fish, shellfish and other aquatic organisms to levels that will impair the health of aquatic organisms or wildlife or result in unacceptable tastes, odors or health risks to human consumers of aquatic organisms.

The inclusion of this language is consistent with the addition of the definition of persistent toxic pollutants.

20.6.4.15 USE ATTAINABILITY ANALYSIS:

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

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

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

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

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

(2) the department's *Hydrology Protocol*, latest edition, approved by the commission, for identifying ephemeral, ~~[and]~~ intermittent, and perennial waters; or

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

C. Determining the highest attainable use. If the use attainability analysis determines that the designated use is not attainable based on one of the factors in 40 CFR 131.10(g), the use attainability analysis shall then determine the highest attainable use for the protection and propagation of fish, shellfish and wildlife and recreation in and on the water based on methods described in Subsection B of this section.

D. Process to remove a designated use and establish the highest attainable use.

(1) The process for developing a use attainability analysis and petitioning the commission for removing a designated use and establishing the highest attainable use shall be done in accordance with the State's current *Water Quality Management Plan/Continuing Planning Process*.

~~[C.]~~(2) If the findings of a use attainability analysis, conducted by the department, ~~[based on]~~ in accordance with the department's *Hydrology Protocol* (latest edition)~~[, approved by the commission,]~~ demonstrates ~~[to the satisfaction of the department]~~that federal Clean Water Act Section 101(a)(2) uses, that are not existing uses, are not feasible in an ephemeral water body due to the factor in 40 CFR 131.10(g)(2), the department may consider proceeding with the expedited use attainability analysis process in accordance with the State's current *Water Quality Management Plan/Continuing Planning Process*. The following elements must be met for the expedited use attainability analysis process to be authorized and implemented:

(a) The department is the primary investigator of the use attainability analysis;

(b) The use attainability analysis determined, through the application of the *Hydrology Protocol*, that the water being investigated is ephemeral and has no effluent discharges of sufficient volume that could compensate for the low-flow;

(c) The use attainability analysis determined that the existing uses of the water being investigated are not more stringent than those in 20.6.4.97 NMAC;

(d) The designated uses in 20.6.4.97 NMAC have been determined to be the highest attainable uses for the water being analyzed;

(e) The department ~~[shall]~~posted the use attainability analysis on its water quality standards website and ~~[notify]~~ notified its interested parties list of a 30-day public comment period~~.~~;

(f) ~~[After reviewing]~~The department reviewed and responded to any comments received during the

30-day public comment period~~.~~; and

(g) The department [~~may proceed by submitting~~]submitted the use attainability analysis and response to comments to region 6 EPA for technical approval.

If technical approval is granted by region 6 EPA, the water shall be subject to 20.6.4.97 NMAC for federal Clean Water Act purposes. The use attainability analysis, the technical approval, and the applicability of 20.6.4.97 NMAC to the water shall be posted on the department's water quality standards website. The department shall periodically petition the commission to list ephemeral waters under Subsection C of 20.6.4.97 NMAC and to incorporate changes to classified segments as appropriate.

[~~D.~~] E. Use attainability analysis conducted by an entity other than the department. Any person may submit notice to the department stating their intent to conduct a use attainability analysis. The proponent shall provide such notice along with [~~develop~~]a work plan supporting [~~to conduct~~]the development of a use attainability analysis[~~, and shall submit the work plan~~] to the department and region 6 EPA for review and comment. Upon approval of the work plan by the department, the proponent shall conduct the use attainability analysis and implement public noticing in accordance with the approved work plan. The work plan shall identify, at a minimum, the waterbody of concern and the reasoning for conducting a use attainability analysis, the [~~scope~~]source and validity of data [~~currently available and the scope of data to be gathered~~]to be used to demonstrate that the current use is not attainable, the factors in 40 CFR 131.10(g) affecting [~~use~~]the attainment of that use, [~~that will be analyzed~~]a description of the data being proposed to be used to demonstrate the highest attainable use, [~~and~~]the provisions for consultation with appropriate state and federal agencies, description of how stakeholders and potentially affected tribes will be identified and engaged, a description of the public notice mechanisms to be employed and [~~consultation with appropriate state and federal agencies~~]the expected timelines and administrative involvement with petitioning for a rulemaking, pending the outcome of the use attainability analysis. [~~Upon approval of the work plan by the department, the proponent shall conduct the use attainability analysis in accordance with the approved work plan. The cost of such analysis shall be the responsibility of the proponent.~~] Upon completion of the use attainability analysis, the proponent shall submit the data, findings and conclusions to the department, and provide public notice of the use attainability analysis in accordance with the approved work plan. Pending the conclusions of the use attainability analysis and as described in the approved work plan, [~~T~~]the department or the proponent may petition the commission to modify the designated use [~~if the conclusions of the analysis support such action~~]. The cost of such use attainability analysis shall be the responsibility of the proponent. Subsequent costs associated with the administrative rulemaking process shall be the responsibility of the petitioner.
[20.6.4.15 NMAC - Rp 20 NMAC 6.1.1107, 10/12/2000; Rn, 20.6.4.14 NMAC, 5/23/2005; A, 5/23/2005; A, 7/17/2005; A, 12/1/2010; A, XX/XX/XXXX]

The revised language appears generally consistent with New Mexico's recently revised Water Quality Management Plan/Continuing Planning Process (WQMP/CPP) document that the EPA approved on October 23, 2020. However, the EPA recommends that the reference to "technical approval" by the EPA be struck from this provision and the WQMP/CPP during the next periodic update of that document. The EPA specifically recommends deleting 20.6.4.15(D)(g) and revising the phrase "If technical approval is granted by region 6 EPA" to "If EPA approves the revision under section 303(c) of the CWA,…" The EPA encourages the NMED to provide the EPA with the opportunity to review workplans and draft UAAs in order to discuss and resolve concerns at an early stage to expedite future 303(c) review. However, the EPA will not provide technical approval for any UAA to ensure that associated comments or recommendations are not considered a final decision or finding under §303(c) of the CWA or Water Quality Standards Regulation (40 CFR 131). The NMAC does not supersede the CWA requirement that water quality standards be adopted by the state before they can be approved by the EPA as effective for CWA purposes. Any decisions on the effectiveness of new and revised water quality standards for CWA purposes will be made by the EPA following their adoption and submission to Region 6 by the WQCC.

The EPA also recommends that the NMED extend the public comment period from 30 days to 45 days. 40 CFR Part 25.5(b) requires that the hearing notice and relevant documents for public review be provided at least 45 days in advance of the hearing, unless there are no substantial documents for review and the matter is not substantive or controversial.

20.6.4.97 EPHEMERAL WATERS: Ephemeral surface waters of the state as identified below and additional ephemeral waters as identified on the department's water quality standards website pursuant to Paragraph (2) of **Subsection** [~~C~~]D **of 20.6.4.15 NMAC are subject to the designated uses and criteria as specified in this section. Ephemeral waters classified in 20.6.4.101-899 NMAC are subject to the designated uses and criteria as specified in those sections.**

The rephrasing here is nonsubstantive – no comment is necessary.

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, 10/12/2000; A, 5/23/2005; A, 12/1/2010; A, XX/XX/XXXX]

The EPA supports the revision to the primary contact use and the applicable criteria for segment 20.6.4.103. This is consistent with the latest EPA recommendations for recreational contact and CWA 101(a) goals (77 FR71191, November 29, 2012).

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

A. Designated uses: irrigation, marginal warmwater aquatic life, livestock watering, public water supply, 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) At mean monthly flows above 100 cfs, the monthly average concentration for: TDS 1,500 mg/L or less, sulfate 500 mg/L or less and chloride 250 mg/L or less.

(3) Criteria referenced in 20.6.2.2102 NMAC, Rio Grande basin-community sewerage systems, apply if the applicability conditions in 20.6.2.2100 NMAC are met.

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

The new language here is specific to New Mexico's Part 2 regulations for Ground and Surface Water Protection and is not related to surface water quality standards regulated under section 303(c) of the CWA. However, since the NMED often conditions Pollution Discharge Elimination System (NPDES) permits through its 401-certification authority on inclusion of standards for groundwater and surface water protection, it is relevant to the EPA NPDES permitting program. As a result, the EPA recommends that the NMED provide specific guidance for NPDES permit writers in implementing the criteria in 20.6.2.2192 NMAC.

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

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

B. Criteria:

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

designated uses.

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

(3) Criteria referenced in 20.6.2.2102, NMAC Rio Grande basin-community sewerage systems, apply if the applicability conditions in 20.6.2.2100 NMAC are met.

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

As noted in comments for the prior provision, the new language here is specific to New Mexico's Part 2 regulations for Ground and Surface Water Protection and is not related to surface water quality standards regulated under section 303(c) of the CWA. However, the previous comments on proposed revisions to 20.6.4.105 related to NPDES permitting remain relevant.

20.6.4.108 RIO GRANDE BASIN: [-] Perennial reaches of the Jemez river and [all its]perennial reaches of tributaries to the Jemez river above Soda dam near the town of Jemez Springs, except San Gregorio lake and Sulphur creek above its confluence with Redondo creek, and perennial reaches of the Guadalupe river and perennial reaches of [all its] tributaries to the Guadalupe river and reaches of Calaveras Canyon.

A. Designated uses: domestic water supply, fish culture, 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 400 µS/cm or less (800 µS/cm or less on Sulphur creek); the monthly geometric mean of *E. coli* bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less; and pH within the range of 2.0 to 8.8 on Sulphur creek.

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

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

The new language in 20.6.4.108 NMAC is intended to clarify that non-perennial tributaries to the named waters, including the Jemez River, Guadalupe River and some reaches of Calaveras Canyon are not classified under perennial sections of 20.6.4 NMAC. The EPA recommends that NMED clarify what regulatory segment or any non-perennial portions or non-perennial tributaries of these waters will be contained in. Supporting documentation is required if less protective designated uses will apply to waters now excluded from this regulatory segment.

20.6.4.115 RIO GRANDE BASIN: [-] The perennial reaches of Rio Vallecitos and [its]perennial reaches of tributaries to Rio Vallecitos except Hopewell lake, and perennial reaches of Rio del Oso and perennial reaches of El Rito creek above the town of El Rito.

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

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.

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

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

The new language in 20.6.4.115 NMAC is intended to clarify that non-perennial tributaries to the Rio Vallecitos are not classified under perennial sections of 20.6.4 NMAC. The EPA recommends that NMED clarify what regulatory segment or classification the non-perennial tributaries of these waters will be contained in. Supporting documentation is required if less protective designated uses will apply to waters now excluded from this regulatory segment.

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 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, 10/12/2010; A, 5/23/2005; A, 12/1/2010; A, 3/2/2017; A, XX/XX/XXXX]

The EPA supports the revision to the primary contact use and the applicable criteria for segment 20.6.4.116. This is consistent with the latest EPA recommendations for recreational contact and CWA 101(a) goals (77 FR71191, November 29, 2012).

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

A. Designated uses: coldwater aquatic life, livestock watering, wildlife habitat and secondarycontact.

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

[20.6.4.126 NMAC - N, 5/23/2005; A, 12/1/2010; A, XX/XX/XXXX]

The revisions to 20.6.4.126 NMAC expands the description to include DP canyon, Ancho canyon and additional perennial portions of Water canyon (although the latter are not clearly defined) to those waters within lands managed by the United States Department of Energy within Los Alamos National Laboratory (LANL). This segment retains both the previously designated coldwater aquatic life and the secondary contact recreation uses. Since the perennial portions of DP canyon, Ancho canyon and additional perennial portions of Water canyon have not been previously described in a regulatory segment, the NMED/SWQB must provide a UAA supporting the secondary contact recreation use as required by 40 CFR 131.10.

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

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, except that the following segment-specific criteria apply: the acute total ammonia criteria set forth in Subsection [~~K~~]L of 20.6.4.900 NMAC ([~~salmonids~~]*Oncorhynchus* spp. absent).

C. Waters:

(1) Portions of Ancho canyon;
(2) Portions of Arroyo de la Delfe;
(3) Portions of Cañon de Valle;
(4) Portions of Fence canyon;
(5) Portions of Los Alamos;
(6) Portions of Martin Spring canyon;
(7) Portions of Mortandad;
(8) Portions of Pajarito canyon;
(9) Portions of Potrillo canyon;
(10) Portions of Ten Site canyon;

(11) Portions of Water canyon;
[20.6.4.128 NMAC - N, 5/23/2005; A, 12/1/2010; A, XX/XX/XXXX]
[**NOTE:** This section was divided effective XX/XX/XXXX. The standards for the intermittent portions of watercourses within LANL are in 20.6.4.140 NMAC.]

The revisions to 20.6.4.128 NMAC strikes the term intermittent and limits the segment definition to include only the named ephemeral waters or portions of those waters within lands managed by the United States Department of Energy/LANL. The restructuring of the waters contained in this segment are listed but does not alter the previous designated uses and criteria that are applicable to the remaining named waters identified in this provision and does not require supporting documentation. The intermittent waters now excluded from this regulatory segment are now contained in the new regulatory segment 20.6.4.140 NMAC discussed below.

20.6.4.140 RIO GRANDE BASIN: Non-perennial waters or portions of waters within lands managed by the DOE within LANL not specifically identified in 20.6.4.126 NMAC or 20.6.4.128 NMAC including but not limited to intermittent portions of Cañon de Valle, DP canyon, Effluent canyon, Fence canyon, Fish Ladder canyon, Los Alamos canyon, Martin Spring canyon, Pajarito canyon, Two-Mile canyon, and Water canyon. (Surface waters within lands scheduled for transfer from DOE to tribal, state or local authorities are specifically excluded.)

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

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

[20.6.4.140 NMAC - N, XX/XX/XXXX]

This new regulatory segment is the result of parsing out the non-perennial/intermittent waters or portions of waters that were previously identified in segment 20.6.4.128 NMAC. See prior comments on 20.6.4.128. Since this new segment specifies the warmwater aquatic life and primary contact designated uses, no supporting UAA would be required.

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, 10/12/2000; A, 5/23/2005; A, 12/1/2010; A, XX/XX/XXXX]
[**NOTE:** The segment covered by this section was divided effective 5/23/2005. The standards for Avalon Reservoir are under 20.6.4.219 NMAC.]

The EPA supports the revision to the primary contact use and the applicable criteria for segment 20.6.4.204. This action is consistent with the latest EPA recommendations for recreational contact and CWA 101(a) goals (77 FR71191, November 29, 2012).

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~~]Perennial reaches of tributaries to the Rio Hondo downstream of Bonney canyon excluding North Spring river and perennial reaches of the Rio Felix.

A. Designated uses: irrigation, livestock watering, wildlife habitat, secondary 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, 10/12/2010; A, 5/23/2005; A, 12/1/2010; A, 3/2/2017; A, XX/XX/XXXX]

[**NOTE:** This segment was divided effective XX/XX/XXXX. The standards for 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, and perennial reaches of the Rio Hondo are under 20.6.4.231 NMAC.]

The revisions to 20.6.4.206 NMAC moves 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 North Spring river and perennial reaches of the Rio Hondo downstream of Bonney canyon to the new segment, 20.6.4.231 NMAC, reflecting the primary contact recreation use. Revisions also specify the perennial tributaries of the Rio Hondo downstream of Bonney canyon excluding the North Spring River, and retain the perennial reaches of the Rio Felix in this segment. The restructuring of the WQS applicable to the waters contained in this segment does not alter the designated uses and criteria that are applicable to the remaining named waters and does not require supporting documentation.

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, 10/12/2000; A, 5/23/2005; A, 12/1/2010; A, XX/XX/XXXX]

EPA supports the revision to the primary contact use and the applicable criteria for segment 20.6.4.207. This is consistent with the latest EPA recommendations for recreational contact and CWA 101(a) goals (77 FR71191, November 29, 2012).

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

A. Designated uses: fish culture, irrigation, livestock watering, wildlife habitat, coldwater aquatic life 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: temperature 30°C (86°F) or less, and phosphorus (unfiltered sample) less than 0.1 mg/L.

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

The revisions to 20.6.4.208 NMAC redefines the coverage of the Rio Peñasco to the perennial portions and perennial tributaries to the Rio Peñasco above Hwy 24 and adds the perennial portions of Cox canyon to clarify that non-perennial tributaries are not classified under perennial sections of 20.6.4 NMAC. The EPA recommends that NMED clarify what regulatory segment any non-perennial portions or non-perennial tributaries of these waters will be contained in. Supporting documentation is required if less protective designated uses will apply to waters now excluded from this regulatory segment.

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

A. Designated uses: domestic water supply, high quality coldwater aquatic life, irrigation, livestock watering, wildlife habitat, public 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 criteria apply: specific conductance 600 µS/cm or less in Eagle creek, 1,100 µS/cm or less in Bonito creek and 1,500 µS/cm or less in the Rio Ruidoso; phosphorus (unfiltered sample) less than 0.1 mg/L; the monthly geometric mean of *E. coli* bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.

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

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

The new language in 20.6.4.209 NMAC redefines this regulatory segment, narrowing application to the perennial reaches of the Rio Bonito to those perennial portions upstream of Hwy 48, excluding Bonito Lake, and the perennial tributaries to the Rio Bonito upstream of Hwy 48. It also redefines application to the perennial reaches and perennial tributaries of the Rio Ruidoso to those upstream of the U.S. Hwy 70 bridge near Seeping Springs Lake above the Mescalero Apache boundary to clarify that non-perennial tributaries are not classified under perennial sections of 20.6.4 NMAC. The EPA recommends that NMED clarify what regulatory segment or any non-perennial portions or non-perennial tributaries of these waters will be contained in. Supporting documentation is required if less protective designated uses will apply to waters now excluded from this regulatory segment.

20.6.4.215 PECOS RIVER BASIN: [-] Perennial reaches of the Gallinas river upstream of the diversion for the Las Vegas municipal reservoir and [all its]perennial reaches of tributaries to the Gallinas river upstream of the diversion for the Las Vegas municipal reservoir, perennial reaches of Tecolote creek upstream of Blue creek[,] and all perennial reaches of tributaries [of]to Tecolote creek upstream of Blue creek.

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

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 (450 µS/cm or less in Wright Canyon creek); the monthly geometric mean of E. coli bacteria 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less.

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

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

The new language in 20.6.4.215 NMAC redefines this regulatory segment, narrowing application to the perennial reaches of the of the Gallinas River upstream of the diversion for the Las Vegas municipal reservoir and the perennial tributaries to the Gallinas. It also narrows the application to the perennial tributaries of Tecolote Creek upstream of Blue Creek. These revisions are intended to clarify that non-perennial tributaries are not classified under perennial sections of 20.6.4 NMAC. The EPA recommends that NMED clarify what regulatory segment or classification any non-perennial portions or non-perennial tributaries of these waters will be contained in. Supporting documentation is required if less protective designated uses will apply to waters now excluded from

this regulatory segment.

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

A. Designated uses: irrigation, livestock watering, wildlife habitat, marginal coldwater aquatic life 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: temperature 30°C (86°F) or less.

[20.6.4.220 NMAC - N, 5/23/2005; A, 12/1/2010; A, XX/XX/XXXX]

The new language in 20.6.4.220 NMAC redefines this regulatory segment for the Gallinas River, narrowing application to the perennial reaches of its tributaries upstream of the diversion for the Las Vegas municipal reservoir. The new language in 20.6.4.215 NMAC redefines this regulatory segment, narrowing application to the perennial reaches of the of the Gallinas River upstream of the diversion for the Las Vegas municipal reservoir and the perennial tributaries to the Gallinas. It also narrows the application to the perennial tributaries of Tecolote Creek upstream of Blue Creek. These revisions are intended to clarify that non-perennial tributaries are not classified under perennial sections of 20.6.4 NMAC. The EPA recommends that NMED clarify what regulatory segment or classification any non-perennial portions or tributaries of these waters will be contained in. Supporting documentation is required if less protective designated uses will apply to waters now excluded from this regulatory segment.

20.6.4.231 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 North Spring river and perennial reaches of the Rio Hondo downstream of Bonney canyon.

A. Designated uses: irrigation, livestock watering, wildlife habitat, 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. [N, XX/XX/XXXX]

This new regulatory segment contains the perennial waters originally contained in segment 20.6.4.206 NMAC. These include the mainstem of the Pecos River from the headwaters of Brantly Reservior upstream to Salt Creek and perennial reaches of the Rio Peñasco and the perennial reaches of the North Spring River and the Rio Hondo. These waters retain the warmwater aquatic life use and now include the more protective primary contact recreation designation. No supporting documentation is necessary for this new segment.

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

A. Designated uses: marginal coldwater aquatic life, warmwater aquatic life, primary contact, irrigation, 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.

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

XX/XX/XXXX]

The new language in 20.6.4.307 NMAC redefines this regulatory segment, narrowing application to the perennial reaches of the of Ocate Creek to the portion downstream of Ocate and the perennial tributaries to Ocate Creek. This segment retains the current marginal coldwater aquatic life, primary contact and other designated uses. These revisions are intended to clarify that non-perennial tributaries are not classified under perennial sections of 20.6.4 NMAC. The EPA recommends that NMED clarify what regulatory segment or classification any non-perennial portions or tributaries of these waters will be contained in. Supporting documentation is required if less protective designated uses will apply to waters now excluded from this regulatory segment.

20.6.4.308 CANADIAN RIVER BASIN: [-] Charette lakes.

A. Designated uses: coldwater aquatic life, warmwater aquatic life, secondary 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, 10/12/2000; A, 5/23/2005; A, 12/1/2010; A, XX/XX/XXXX]

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

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

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 500 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.

[20.6.4.309 NMAC - Rp 20 NMAC 6.1.2306, 10/12/2000; A, 7/19/2001; A, 5/23/2005; A, 12/1/2010; A, 7/10/2012; A, XX/XX/XXXX]

[**NOTE:** The segment covered by this section was divided effective 5/23/2005. The standards for the additional segment are under 20.6.4.310 NMAC. The standards for Shuree ponds are in 20.6.4.314 NMAC and the standards for Eagle Nest lake are in 20.6.4.315 NMAC, effective 7/10/2012]

The new language in 20.6.4.309 NMAC redefines this regulatory segment, narrowing application to the perennial reaches of tributaries to Coyote Creek, the Cimarron River itself above Hwy 21 except Eagle Lake, and the perennial reaches of tributaries to the Cimarron River above Hwy 21, perennial reaches of Rayado Creek above the Miami Lake diversion and perennial reaches of tributaries to Rayado Creek. This segment retains the current high quality coldwater aquatic life, primary contact and other designated uses. These revisions are intended to clarify that non-perennial tributaries are not classified under perennial sections of 20.6.4 NMAC. The EPA recommends that NMED clarify what regulatory segment or classification any non-perennial portions or tributaries of these waters will be contained in. Supporting documentation is required if less protective designated uses will apply to waters now excluded from this regulatory segment.

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:

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~~]a pH within the range of 6.6 to 9.0 apply to this use, a maximum of 8 µg/L for total microcystins, and a maximum of 15 µg/L for cylindropermopsin. The results for *E. coli* may be reported as either colony forming units (CFU) or the most probable number (MPN) depending on the analytical method used.

The proposed criteria in 20.6.4.900 D. for total microcystin and cylindrospermopsin are consistent with EPA's current national recommendations. However, in addition to specifying the magnitude, the EPA recommends that the NMED include duration and frequency to be protective of human health in recreational waters. As written, these values will be interpreted as never to be exceeded criteria, which is more stringent than EPA's 304(a) recommendations. The EPA's guidance for these parameters can be found at: https://www.epa.gov/sites/production/files/2019-05/documents/hh-rec-criteria-habs-factsheet-2019.pdf.

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

(6) Marginal warmwater: dissolved oxygen 5 mg/L or more, pH within the range of 6.6 to 9.0 and [~~maximum~~]temperatures that may routinely exceed 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.

The revised language in 20.6.4.900 H.(6) eliminates the maximum temperature limitation in the marginal warmwater aquatic life use provision consist with the definition of marginal warmwater held in 20.6.4.7 M(2). No comment is necessary.

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 has a pH between 6.5 and 9 and 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:

(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 has a pH between 6.5 and 9 and 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:

In its April 30, 2012 action, the EPA disapproved the application of the hardness-based equation in 20.6.4.900 I.(1) and (2) for waters where the pH is below 6.5 as not protective of applicable designated uses in waters below that pH. The revised language here and in 20.6.4.900 J.(1), clarifies that the previously approved 750 and 87 µg/L 304(a) criteria for aluminum are and will remain the applicable water quality standards for CWA purposes in waters where the pH is at or below 6.5. In that 2012 action, the EPA also recommended that the State insert a footnote

specifying that the hardness-based equations only apply at a pH of 6.5 to 9.0 to resolve the disapproval. The revised language in both 20.6.4.900 I.(1) and (2), specifying a pH range between 6.5 and 9.0 and the inclusion of a footnote in 20.6.4.900 J.(1) would resolve EPA's 2012 disapproval. EPA also recommends that NMED clarify applicability in the new footnote in 20.6.4.900 J.(1)(i) which is discussed in more detail in comments specific to that section.

Subsequent to the 2012 action, the EPA published updated §304(a) criteria for aluminum for freshwater (Aquatic Life Ambient Water Quality Criteria for Aluminum - 2018, EPA-822-R-18-001). The updated aluminum criteria are based on the latest science on aluminum toxicity to aquatic life and apply to waters within a pH range of 5.0 – 10.5. The EPA recommends that the NMED update its current aluminum criteria for waters within this pH range with the updated §304(a) aluminum criteria. However, given that there are waters in New Mexico with pH levels below 3, it would be appropriate to also retain and continue to apply the 750 and 87 µg/L criteria in waters with a pH below 5.0 and is also discussed in more detail in section 20.6.4.900 J.(1).

Please note that the 2015 revisions to the EPA's water quality standards (WQS) regulation at 40 CFR §131.20(a) require any state that chooses not to adopt new or revised criteria for any parameters for which the EPA has published new or updated criteria recommendations under CWA §304(a) to explain its decision when reporting the results of its triennial review to the EPA. The goal of the revised regulation is to ensure public transparency about state WQS decisions.

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

The EPA supports the proposed revisions in 20.6.4.900 I (3) for acute and chronic hardness-based metals criteria. The EPA used the hardness-based equations in 20.6.4.900 (I) to calculate and confirm that the revisions to acute and chronic criteria are consistent with the EPA's current national recommendations.

J. Use-specific numeric criteria.

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

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

(i) The acute and chronic aquatic life criteria for dissolved aluminum is only applicable when the concurrent pH is outside the range established for the hardness-based total recoverable criteria for aluminum in Paragraphs (1) and (2) of Subsection I of 20.6.4.900 NMAC.

Based on the proposed revisions to 20.6.4.900 J.(1), including the criteria table and the new footnote in 20.6.4.900 J.(1)(i), it is clear that the NMED is working to meet the requirements in 40 CFR §131.20(a) by adopting or revising both aquatic life and human health criteria consistent with the EPA's recommended § 304(a) criteria. The EPA supports the new/revised criteria proposed in 20.6.4.900 J.(1).

The NMED has proposed the reinsertion of 750 ug/L acute and 87 ug/L chronic aluminum criteria that have remained effective for CWA purposes in 20.6.4.900 J.(1) although previously deleted from the 20.6.4.900 J.(1) numeric criteria table. As noted above, the revised language in both 20.6.4.900 I.(1) and (2), specifying a pH range between 6.5 and 9.0 and the inclusion of the related footnote in

20.6.4.900 J.(1) address the EPA's 2012 disapproval. If the 1988 aluminum criteria and this footnote are retained as proposed, the EPA recommends incorporating the numerical pH range between 6.50 and 9.0 in footnote (i) to clarify the conditions under which the 750 ug/L acute and 87 ug/L chronic aluminum criteria will apply. In addition, the EPA suggests that all section 20.6.4.900 J.(1) footnotes be reordered consistent with how they appear in the criteria table cells, replacing what is now 20.6.4.900 J(1)(a) with the new (i) and continue that format with all footnotes progressing down the table.

However, the EPA recommends that the NMED adopt the updated §304(a) aquatic life criteria for aluminum. The EPA's updated 304(a) aluminum criteria are based on a multiple linear regression model using pH, dissolved organic carbon, and hardness. The EPA also developed an aluminum criteria calculator based on site-specific information which is available from the website in both Excel and R formats (in footnote 2). The latest science shows that pH is important in determining the mechanism of toxicity of aluminum. While increased toxicity at low pH is common for all metals, pH appears to be particularly important with aluminum due to the drastic change in solubility and increase in the bioavailable fraction of the metal at low pH. Given that the pH in New Mexico's waters is highly variable, with ranges of 2.8-3.3 in waters flowing through volcanic rock to a pH of 8.0 or possibly higher in waters flowing through alkaline desert soils, it is important to consider these conditions in determining how criteria are applied. Although the updated criteria address conditions in the neutral to high pH ranges, it should not preclude consideration of the likelihood of increased bioavailability and toxicity at low pH. Then it is reasonable to retain the EPA's 1988 criteria for waters with exceptionally low pH ranges and rely on the updated criteria in the majority of the state's waters.

In addition to the adoption of the updated aquatic life criteria for aluminum, the EPA recommends that NMED consider updating the aquatic life criteria for the following pollutants to reflect the latest science as contained in EPA's latest criteria recommendation documents: EPA-822-R-18-001); Cadmium (Aquatic Life Ambient Water Quality Criteria for Cadmium - 20 I 6. EPA-820-R-16-002); Copper (Aquatic Life Ambient Water Quality Criteria for Copper - 2007, EPA-822-R-07-001); and Selenium (Aquatic Life Ambient Water Quality Criterion for Selenium – Freshwater 2016, EPA 822-R-16-006).

<u>Cadmium:</u> EPA published revised aquatic life criteria recommendations for cadmium in 2016. The updated saltwater criteria are 33 ug/L (acute) and 7.9 ug/L (chronic). The updated freshwater criteria are hardness-based equations similar to the freshwater criteria in the current NMAC:

- *acute criterion = $e^{(0.9789(\ln(\text{hardness}))-3.866}$*
- *chronic criterion = $e^{0.79779(\ln(\text{hardness}))-3.909}$*

<u>Copper:</u> EPA revised the hardness-based aquatic life criteria for freshwater copper in 2007, to a biotic ligand model (BLM). The BLM was developed using data that became available after the development of EPA's 1984 criteria document and updated criteria recommendations published in 1995. The BLM utilizes a model that incorporates the characteristics of the receiving water body that can affect the toxicity of copper. Ten input parameters are included in the model to determine accurate criteria that are neither over nor under protective.

Selenium: EPA published an updated freshwater aquatic life criterion for selenium in 2016, which consists of several components to protect for chronic effects. Aquatic communities are expected to be protected by this chronic criterion from any potential acute effects of selenium, so there is no

acute criterion in the 2016 criteria document.

If the NMED does not adopt the most recent revised for aluminum and the other 304(a) criteria recommendations that the EPA has published that are described above, New Mexico is obligated to provide an explanation why it has not adopted these criteria when it submits the results of its triennial review to the EPA as noted above.

K. The criteria for total ammonia considers sensitive freshwater mussel species in the Family Unionidae, freshwater non-pulmonate snails, and *Oncorhynchus* spp. (a genus of fish in the family Salmonidae), hence further protecting the aquatic community. The total ammonia criteria magnitude is measured as Total Ammonia Nitrogen (TAN) mg/L. TAN is the sum of NH_4 and NH_3 TAN mg/L magnitude is derived as a function of pH and temperature (EPA 2013).

L . The acute aquatic life criteria for TAN (mg/L) was derived by the EPA (2013) as the one-hour average concentration of TAN mg/L that shall not be exceeded more than once every three years on average. The EPA acute criterion magnitude was derived using the following equation:

Acute TAN Criterion Magnitude for 1-hour average=

$$\text{MIN}\left(\left(\frac{0.275}{1+10^{7.204-pH}}+\frac{39}{1+10^{pH-7.204}}\right)\left(0.7249\left(\frac{0.0114}{1+10^{7.204-pH}}+\frac{1.6181}{1+10^{pH-7.204}}\right)\left(23.12\times 10^{0.036(20-T)}\right)\right)\right)$$

T (temperature °C) and *pH* are defined as the paired values associated with the TAN sample.

The EPA supports the proposed revisions to language in 20.6.4.900(K) and 20.6.4.900(L), which are consistent with EPA guidance for aquatic life ambient water quality criteria for ammonia. The temperature and pH-dependent values in tables L.(1) and L.(2) are also consistent with the values in EPA's current nationally recommended freshwater ammonia criteria. However, the equation for acute criterion magnitude is missing a comma after the first close parenthesis, and a multiplication sign between the second close parenthesis and the fifth open parenthesis. The EPA recommends correcting these typos; the placement of the comma is critical because the equation contains a minimum (MIN) function. The minimum function returns the item with the lowest value from the elements separated by a comma. Without the placement of a comma the equation is subject to misinterpretation.

`(1) Temperature and pH-dependent values of the acute TAN criterion magnitude - *Oncorhynchus* spp. absent.

(2) Temperature and pH-dependent values for the acute TAN criterion magnitude - *Oncorhynchus* spp. are present.

M. The chronic aquatic life criteria for TAN (mg/L) was derived by the EPA (2013) as a thirty-day rolling average concentration of TAN mg/L that shall not be exceeded more than once every three years on average. The EPA chronic criterion magnitude was derived using the following equation:

Chronic TAN Criterion Magnitude for 30-day average=

$$0.8876\times\left(\frac{0.0278}{1+10^{7.688-pH}}+\frac{1.1994}{1+10^{pH-7.688}}\right)\times\left(2.126\times 10^{0.028\times\left(20-MAX(T,7)\right)}\right)$$

T (temperature °C) and pH are defined as the paired values associated with the TAN sample.

The EPA supports the proposed revision to aquatic life criteria for ammonia in 20.6.4.900(M). The temperature- and pH-dependent values in table M(1) are consistent with EPA's current nationally

recommended freshwater ammonia criteria. The EPA recommends adding the criterion component limiting the highest four-day average within the 30-day averaging period to no more than 2.5 times the chronic criterion magnitude (CCC), for consistency with EPA's current nationally recommended ammonia criteria. As described in EPA's ammonia criteria document, this criterion component is critical to minimize variability in ammonia levels within a given 4-day period that could harm aquatic life.