STATE OF NEW MEXICO
WATER QUALITY CONTROL COMMISSION

IN THE MATTER OF PETITION TO AMEND SURFACE WATER QUALITY STANDARDS 20.6.4 NMAC

WQCC 14-05 (R)

New Mexico Environment Department,

Petitioner.

DIRECT TESTIMONY OF JAMES HOGAN

I. INTRODUCTION

My name is James Hogan and I am currently bureau chief of the New Mexico Environment Department ("NMED") Surface Water Quality Bureau ("SWQB"). I am presenting this written testimony on behalf of the SWQB concerning the SWQB's proposed amendments to the State of New Mexico's Standards for Interstate and Intrastate Surface Waters ("Standards"), codified as Title 20, Chapter 6, Part 4 of the New Mexico Administrative Code (20.6.4 NMAC). At this hearing, the SWQB is proposing amendments to Surface Water Quality Standards as mandated by Section 303(c)(1) of the federal Clean Water Act ("CWA"), which requires each state to hold a public hearing at least once every three years to review and modify, as appropriate, its water quality standards. This process is called the "Triennial Review".

The SWQB has four primary objectives for this triennial review:

1) resolve outstanding issues from the last triennial review;
2) make updates to reflect new information and technical capabilities;
3) address segment-specific issues, and
4) make the Standards more clear, informative, and accessible.

In order to accomplish the first three objectives, the SWQB's petition included the following proposed changes:

- procedures to adopt temporary water quality standards;
- an update to 20.4.6.16 NMAC for those piscicide applications already covered under the EPA National Pollutant Discharge Elimination System ("NPDES") Pesticide General Permit ("PGP");
- re-classification of certain streams as ephemeral (20.6.4.97 NMAC) pursuant to Subsection C of 20.6.4.15 NMAC;
- language to address the United States Environmental Protection Agency ("EPA") determination of the applicability of the hardness-based aluminum criteria; and
- Use Attainability Analyses ("UAAs") to refine aquatic life uses for streams in the San Juan River and in the Mimbres River closed basin.

To accomplish the fourth objective, the SWQB proposes changes affecting numerous classified segments:

- segment descriptions including adding the public water supply use to Springer Lake and the use of hydrologic terminology (numerous segments);
- secondary contact recreation uses for certain streams are updated to primary contact recreation uses and criteria based on 40 CFR § 131.20(a) and the most recent recommendations from the EPA;
- the addition of definitions such as most probable number ("MPN"), pH, irrigation storage and closed basin, and

- changes to clarify meaning, applicability, and to avoid duplication and repetition.

In July 2014, the SWQB petitioned the Water Quality Control Commission to hold a hearing on the proposed amendments. The petition was supported by the SWQB's Bases for Changes (SWQB Exhibit 2).

Kristine Pintado, an engineer specialist supervisor and the water quality standards coordinator with the SWQB, will provide testimony in support of the temporary standards and piscicide provision proposals, application of the hydrology protocol ("HP") to five ephemeral drainages at Chino Mines, and other minor changes in particular sections and to certain classified segments. Jodey Kougioulis, Deborah Sarabia and Bryan Dail, all environmental scientists with the SWQB, will provide testimony on the SWQB's application of the HP, aquatic life UAAs and changes to certain segments. Kirk Patten, the Assistant Chief of Fisheries for the Research and Management Section of the New Mexico Department of Game and Fish ("NMDG & F") will provide additional testimony in support of the piscicide provision proposal. The aforementioned staff from the SWQB and the NMDG & F will stand for cross examination, along with me.

II. QUALIFICATIONS

I hold a Bachelor of Science degree in Geochemistry from Bates College, and a Doctorate (Ph.D.) in Earth Sciences from Dartmouth College, where I conducted and published original research on the use of solute isotopes as tracers of water flow in watersheds, wetlands and landfills. I have also completed a one-month long intensive, career-focused program covering the basics of accounting, marketing, finance and leadership at Dartmouth's Tuck School of Business.

I have held the position of bureau chief of NMED's SWQB since March 2013 and before that was acting bureau chief for SWQB during June 2012 through February 2013. In this position I oversee the State program for surface water quality, including certification of federal permits issued under the CWA for point source discharges and dredge or fill operations, implementation of watershed and river protection projects with state and federal money, monitoring and assessment of state surface waters, and certification of operators of water and wastewater treatment plants.

I have been employed with NMED since February of 2009. Prior to serving as acting chief, I was the program manager of the Monitoring, Assessment and Standards Section of the SWQB. Responsibilities of this section include revising water quality standards, collecting water quality data statewide, assessing this data to develop the biennial 303d list of impaired waterbodies, and developing Total Maximum Daily Load ("TMDL") planning documents.

Prior to joining the NMED, I was the Assistant/Associate Director of the center for Sustainability of semi-Arid Hydrology and Riparian Areas ("SAHRA"), a National Science Foundation ("NSF") Science and Technology Center, and an Adjunct Assistant Professor of Hydrology and Water Resources at the University of Arizona. I have published over 25 peer reviewed publications covering many areas of environmental geochemistry and hydrology include identifying salinity and nutrient sources in the Rio Grande, understanding groundwater recharge and salinization processes in the Hueco Bolson Aquifer of the El Paso-Juarez area, and identifying recharge source, groundwater flowpaths, and the nature of groundwater – surface water exchange in the Verde and San Pedro Basins of Arizona.

A copy of my resume is marked as SWQB Exhibit 3. It is accurate and up-to-date.

III. WATER QUALITY STANDARDS

Under the New Mexico Water Quality Act ("WQA"), the Water Quality Control Commission ("Commission") is the water pollution control agency for all purposes of the CWA and has responsible for adopting water quality standards. NMSA 1978, § 74-6-3.E. 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 surface water standards must be submitted by the state to the EPA for approval.[1]

Under the WQA, any person (including the SWQB) may at any time petition the Commission to adopt, amend, or repeal a water quality standard. NMSA 1978, § 74-6-6.B. The Commission must hold a public hearing in order to adopt new or amended standards. NMSA 1978, § 74-6-6.A.

What is a water quality standard? Section 74-6-4.D of the WQA provides that the Commission:

> "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."

The CWA regulations provide similar direction: "States adopt water quality standards to protect

[1] New Mexico's last "triennial review" commenced in August 2008 and concluded with EPA's approval in April 2011 of most of the Commission's amendments. The current triennial review was initiated within three years after EPA's action on the last triennial review, that is, during 2013.

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

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. NMSA 1978, § 74-6-4.D; 40 CFR § 131.11(a). The Standards contain narrative criteria that apply to all designated uses. An example of a narrative criterion is that for turbidity, which states, "Turbidity attributable to other than natural causes shall not reduce light transmission to the point that the normal growth,

function or reproduction of aquatic life is impaired ...." 20.6.4.13.J NMAC. The Standards also identify numeric criteria that are specific to particular designated uses. For example, the dissolved aluminum criterion of 5,000 micrograms per liter applies to waters with the irrigation use, and a maximum temperature of 32.2°C (or 90°F) applies to waters with the warmwater aquatic life use. 20.6.4.900.J NMAC.

According to CWA regulations, water quality standards ("WQS") 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. The Commission has also adopted implementation measures specific to antidegradation in its Continuing Planning Process ("CPP"), specifically Appendix A: Antidegradation Policy Implementation Procedure. Such measures are also subject to the EPA's review and action consistent with § 303(c) of the CWA and with 40 CFR § 131.12(a), which requires states to identify methods for implementing their statewide antidegradation policy, and 40 CFR § 130.5(b)(6), which requires that the state describe the process for establishing and assuring adequate implementation of new or revised WQS in its CPP. The EPA approved New Mexico's current antidegradation policy and implementation procedures on April 11, 2013.

The SWQB's proposed amendments include several changes to designated uses and criteria. It proposes no change to the State's antidegradation policy.

What purpose do water quality standards serve? 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. Discharges from point sources or nonpoint sources are to be managed in such a manner that designated uses are protected. Point source discharges are regulated under National Pollutant Discharge Elimination System or NPDES permits issued by EPA under CWA Section 402, and the discharge of dredged

or fill material requires a permit issued by the U. S. Army Corps of Engineers under CWA Section 404. In both cases, NMED must certify that the permitted activities will be conducted in a manner that will comply with applicable State water quality standards. 20.6.2.2001-.2002 NMAC. NMED also implements a Nonpoint Source Management Program that identifies non-regulatory strategies for controlling nonpoint sources of pollution to achieve the water quality standards. Finally, the WQA allows for direct enforcement of the water quality standards, that is, civil penalties may be assessed against a person violating a standard. NMSA 1978, § 74-6-10.

IV. TRIENNIAL REVIEW

The EPA Water Quality Standards Handbook (Section 6.1)[2] interprets the three-year review requirement to mean "the 3-year period is measured from the date of the letter in which the state informs EPA that revised or new standards have been adopted for the affected waters and are being submitted for EPA review." The amendments for the previous triennial review were approved and adopted by the Commission in November 2010 and became effective for State purposes on December 1, 2010. CWA Section 303(c)(3) requires that all water quality standards be approved by the EPA to assure consistency with the requirements of the CWA. The amendments as adopted were submitted to the EPA on December 1, 2010.

For this current Triennial Review, the SWQB satisfied the three-year review requirement with the initiation of an informal 30-day Scoping Period for the Triennial Review conducted from April 3, 2013 to May 15, 2013. SWQB Exhibit 4. The EPA provided a letter of

[2] http://water.epa.gov/scitech/swguidance/standards/handbook/upload/handbook-chapter6.pdf

recommendations for the Triennial Review on December 4, 2013. SWQB Exhibit 5. SWQB responded on February 19, 2014. SWQB Exhibit 6.

At the conclusion of the current Triennial Review and after the Commission approves and adopts its final decision into state law, the revised standards are sent to the EPA. CWA Section 303(c)(3) requires that all water quality standards be approved by the EPA to assure consistency with the requirements of the CWA. If the EPA does not approve the water quality standards, it first gives the state an opportunity to correct the problem. If the state cannot or will not correct the problem, then the EPA must promulgate water quality standards on behalf of the state. There have been several instances when the EPA has disapproved a portion of New Mexico's proposed water quality standards, but in each case the Commission has adopted revisions in subsequent hearings to address the problem.

V. REQUIREMENTS FOR ADOPTION OF WATER QUALITY STANDARDS

In preparing the proposed amendments, SWQB has followed all state and federal requirements for the content and justification of revisions to water quality standards. In particular, SWQB's proposed amendments meet the following requirements:

1. The WQA states that when adopting water quality standards "[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." NMSA 1978, § 74-6-4.D. Further federal regulations require that "States must adopt those water quality criteria that protect the designated use. Such criteria must be based on sound scientific rationale and must contain sufficient

parameters or constituents to protect the designated use" 40 CFR § 131.11. SWQB's testimony provides appropriate scientific and other evidence for all proposed amendments.

2. In accordance with the water quality standards in Section 20.6.4.10 NMAC and the federal water quality regulations:

> "...the state shall from time to time, but at least once every three years, review applicable water quality standards and, as appropriate, modify and adopt standards. Any water body segment with water quality standards that do not include the uses specified in Section 101(a) of the Clean Water Act ("CWA") shall be re-examined to determine if any new information has become available. If such new information indicates that the uses specified in the CWA Section 101(a)(2) are attainable, the State shall revise its standards accordingly." 40 CFR §131.20 (a).

EPA considers Secondary Contact and Limited Aquatic Life as not meeting the uses specified in Section 101(a)(2) of the CWA. SWQB's testimony provides this required review and where necessary proposed amendments to the standards. Pursuant to 40 CFR 131.10(k), these changes in designation do not require a UAA.

3. Conversely where the proposed amendment removes a designated use that is specified in CWA Section 101(a)(2) or to adopt a subcategory of a CWA Section 101(a)(2) use with less stringent criteria state must conduct a UAA as described in the state and federal regulations. 40 CFR §131.10(j)(2). The UAAs presented in SWQB testimony satisfy this requirement and were conducted in accordance with state and federal requirements.

4. Designated uses must 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 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."

5. The federal WQS regulations allow states and tribes to adopt procedures providing for regulatory flexibilities when implementing WQS programs, including temporary standards. 40 CFR § 131.13. The USEPA provides the basis for its support of temporary WQS in its Water Quality Standards Handbook (Second Edition, 1994). They reiterated this position in the 1998 Advanced Notice of Proposed Rulemaking ("ANPRM") (63 FR No. 129, July 7, 1998) and in more recently proposed changes to the federal water quality standards regulations (78 FR No. 171, September 4, 2013). The legal basis for granting a temporary WQS is that the state has fulfilled the substantive regulatory requirements for a use attainability demonstration under one or more of the 40 C.F.R. § 131.10(g) factors. SWQB's testimony on the temporary standard provision documents how these requirements will be met before a temporary standard would be approved.

VI. PUBLIC PARTICIPATION

The SWQB 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 Exhibit 4. Bureau staff was available to meet with stakeholder groups, as requested, for informal discussions regarding their issues of concern. On April 1, 2014, the SWQB 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 Division Director, via the SWQB, authorized an additional thirty (30)-day

comment period finally ending May 30, 2014.

During public review periods for both the Scoping Phase and Public Discussion Draft, the SWQB received comments from a variety of parties including the EPA, watershed/river conservation groups, municipalities, water districts, industrial/trade groups, private entities and citizens. All comments timely received have been compiled in alphabetic order (by commenter name), and the SWQB responses are attached as SWQB Exhibits 8 and 9.

Pursuant to the Small Business Regulatory Relief Act (NMSA 1978, §§ 14-4A-1 *et seq.*) on July 2, 2014, the SWQB provided a copy of the proposed amendments to the Small Business Regulatory Advisory Commission. SWQB Exhibit 10.

The SWQB 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, which was determined by the Commission to be held on April 14, 2015.

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 (the Albuquerque Journal, Santa Fe New Mexican, the 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's website. SWQB Exhibit 12.

Finally, SWQB met with several stakeholders who requested an opportunity to discuss the triennial review.

Additional public participation specific for the UAA proposals will also be presented in testimony on these proposed amendments.

VII. CONCLUSION

The SWQB recommends that the Commission adopt the proposed Standards based upon the testimony of the SWQB's witnesses. This concludes my direct testimony.