

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

1 **I. INTRODUCTION**

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

11 The SWQB has four primary objectives for this triennial review:

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

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

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

13

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

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

1 • changes to clarify meaning, applicability, and to avoid duplication and repetition.

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

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

15

16 **II. QUALIFICATIONS**

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

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

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

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

22 A copy of my resume is marked as SWQB Exhibit 3. It is accurate and up-to-date.
23

1 **III. WATER QUALITY STANDARDS**

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3 Under the New Mexico Water Quality Act (“WQA”), the Water Quality Control
4 Commission (“Commission”) is the water pollution control agency for all purposes of the CWA
5 and has responsible for adopting water quality standards. NMSA 1978, § 74-6-3.E. Section
6 303(c) of the CWA requires each state to hold public hearings from time to time, but at least
7 every three years, for the purpose of reviewing and, as appropriate, modifying and adopting
8 water quality standards. New or revised surface water standards must be submitted by the state to
9 the EPA for approval.¹

10 Under the WQA, any person (including the SWQB) may at any time petition the
11 Commission to adopt, amend, or repeal a water quality standard. NMSA 1978, § 74-6-6.B. The
12 Commission must hold a public hearing in order to adopt new or amended standards. NMSA
13 1978, § 74-6-6.A.

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

16 “shall adopt water quality standards for surface and ground water of the state
17 subject to the Water Quality Act. The standards shall include narrative standards
18 and as appropriate, the designated uses of the waters and the water quality criteria
19 necessary to protect such uses. The standards shall at a minimum protect the
20 public health or welfare, enhance the quality of water and serve the purposes of
21 the Water Quality Act.”

22 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.

1 public health or welfare, enhance the quality of water and serve the purposes of the Clean Water
2 Act.” 40 CFR § 131.2. Serving the purposes of the CWA means that “water quality standards
3 should, wherever attainable, provide water quality for the protection and propagation of fish,
4 shellfish and wildlife, recreation in and on the water, and agricultural, industrial, and other
5 purposes including navigation.” *Id.* A water quality standard “defines the goals for a water body,
6 or portion thereof, by designating the use or uses to be made of the water and by setting criteria
7 necessary to protect the uses.” *Id.* The designated uses in New Mexico’s Standards, set forth in
8 20.6.4.7 NMAC, are:

- 9 • domestic water supply
- 10 • livestock watering
- 11 • irrigation
- 12 • aquatic life (coldwater, coolwater, warmwater and four other subcategories)
- 13 • primary and secondary contact
- 14 • fish culture
- 15 • wildlife habitat
- 16 • public water supply

17
18 The Standards also establish water quality criteria that will protect the designated uses of
19 a water body. These criteria must be based on robust scientific rationale and must contain
20 sufficient parameters or constituents to protect the designated use. NMSA 1978, § 74-6-4.D; 40
21 CFR § 131.11(a). The Standards contain narrative criteria that apply to all designated uses. An
22 example of a narrative criterion is that for turbidity, which states, “Turbidity attributable to other
23 than natural causes shall not reduce light transmission to the point that the normal growth,

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

6 According to CWA regulations, water quality standards (“WQS”) must also contain an
7 antidegradation policy. 40 CFR § 131.6(d). New Mexico’s antidegradation policy is articulated
8 at 20.6.4.8.A NMAC. The Commission has also adopted implementation measures specific to
9 antidegradation in its Continuing Planning Process (“CPP”), specifically Appendix A:
10 Antidegradation Policy Implementation Procedure. Such measures are also subject to the EPA’s
11 review and action consistent with § 303(c) of the CWA and with 40 CFR § 131.12(a), which
12 requires states to identify methods for implementing their statewide antidegradation policy, and 40
13 CFR § 130.5(b)(6), which requires that the state describe the process for establishing and assuring
14 adequate implementation of new or revised WQS in its CPP. The EPA approved New Mexico’s
15 current antidegradation policy and implementation procedures on April 11, 2013.

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

18 What purpose do water quality standards serve? In addition to setting water quality goals,
19 standards also serve “as the regulatory basis for the establishment of water-quality-based
20 treatment controls and strategies beyond technology-based levels of treatment required by
21 Sections 301(b) and 306 of the [Clean Water] Act”. 40 CFR § 131.2. Discharges from point
22 sources or nonpoint sources are to be managed in such a manner that designated uses are
23 protected. Point source discharges are regulated under National Pollutant Discharge Elimination
24 System or NPDES permits issued by EPA under CWA Section 402, and the discharge of dredged

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

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9 **IV. TRIENNIAL REVIEW**

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

19 For this current Triennial Review, the SWQB satisfied the three-year review requirement
20 with the initiation of an informal 30-day Scoping Period for the Triennial Review conducted
21 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>

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

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

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13 **V. REQUIREMENTS FOR ADOPTION OF WATER QUALITY STANDARDS**

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

18 1. The WQA states that when adopting water quality standards “[T]he commission
19 shall give weight it deems appropriate to all facts and circumstances, including the use and value
20 of the water for water supplies, propagation of fish and wildlife, recreational purposes and
21 agricultural, industrial and other purposes.” NMSA 1978, § 74-6-4.D. Further federal
22 regulations require that “States must adopt those water quality criteria that protect the designated
23 use. Such criteria must be based on sound scientific rationale and must contain sufficient

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

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

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

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

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

21 4. Designated uses must reflect the uses actually being attained. 40 CFR § 131.10(i).
22 EPA’s Water Quality Standards Handbook explains the requirement as follows: “If a water body
23 is designated for a use that requires less stringent criteria than a use that is being attained, the

1 State must revise the use on that water body to reflect the use that is being attained.”

2 5. The federal WQS regulations allow states and tribes to adopt procedures
3 providing for regulatory flexibilities when implementing WQS programs, including temporary
4 standards. 40 CFR § 131.13. The USEPA provides the basis for its support of temporary WQS
5 in its Water Quality Standards Handbook (Second Edition, 1994). They reiterated this position
6 in the 1998 Advanced Notice of Proposed Rulemaking (“ANPRM”) (63 FR No. 129, July 7,
7 1998) and in more recently proposed changes to the federal water quality standards regulations
8 (78 FR No. 171, September 4, 2013). The legal basis for granting a temporary WQS is that the
9 state has fulfilled the substantive regulatory requirements for a use attainability demonstration
10 under one or more of the 40 C.F.R. § 131.10(g) factors. SWQB’s testimony on the temporary
11 standard provision documents how these requirements will be met before a temporary standard
12 would be approved.

13

14 **VI. PUBLIC PARTICIPATION**

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16 The SWQB published the announcement of a “Scoping Phase” and the intent to prepare
17 the Triennial Review on April 3, 2013, and invited public input for thirty (30) days to identify
18 issues of concern and to propose revisions for consideration in the standards ending on May 15,
19 2013. SWQB Exhibit 4. Bureau staff was available to meet with stakeholder groups, as
20 requested, for informal discussions regarding their issues of concern. On April 1, 2014, the
21 SWQB published a “Public Discussion Draft” of the proposed amendments and invited public
22 comment for thirty (30) days. SWQB Exhibit 7. After receiving requests for an extension of the
23 comment period, the Division Director, via the SWQB, authorized an additional thirty (30)-day

1 comment period finally ending May 30, 2014.

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

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

10 The SWQB petitioned the Commission during its July 8, 2014 regular public meeting to
11 conduct the Triennial Review of New Mexico's Water Quality Standards, 20.6.4 NMAC. Along
12 with the petition, the SWQB presented its proposed amendments and narrative explanation,
13 scheduling order and request for hearing, which was determined by the Commission to be held
14 on April 14, 2015.

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

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

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

1

2 **VII. CONCLUSION**

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