



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

Trevor Baggione
Director, Water Quality Division
Arizona Department of Environmental Quality
1110 W. Washington St.
Phoenix, Arizona 85007

By email only

Subject: State of Arizona 2019 Triennial Review; Approval of Water Quality Standards for Carbaryl, Diazinon, Nonylphenol, and Demeton

Dear Director Baggione,

I am pleased to approve the Subject water quality standards consistent with the requirements of section 303(c) of the Clean Water Act (CWA) and 40 C.F.R. Part 131. The approved standards, which take effect immediately for CWA purposes include new acute and chronic criteria for carbaryl, diazinon and nonylphenol and new chronic criteria for demeton to safeguard aquatic life uses. Incorporated as part of this letter are Enclosure A (Table of Approved Standards) and Enclosure B (EPA's detailed analysis of the standards and rationale for approval).

I look forward to our continued partnership to protect Arizona's water quality and advance human health and wildlife protection. Please contact me if you would like to discuss further, or your staff may contact Diana Hsieh at 415-972-3526 with questions concerning this approval.

Sincerely,

Tomás Torres
Director, Water Division

Enclosures

cc: Erin Jordan, ADEQ

Enclosure A

Table of Approved Water Quality Standards

Parameter	CAS Number	A&Wc Acute (µg/L)	A&Wc Chronic (µg/L)	A&Ww Acute (µg/L)	A&Ww Chronic (µg/L)	A&Wedw Acute (µg/L)	A&Wedw Chronic (µg/L)	A&We Acute (µg/L)
Carbaryl	52252	2.1	2.1	2.1	2.1	2.1	2.1	2.1
Demeton	8065483	-	0.1	-	0.1	-	0.1	-
Diazinon	333415	0.17	0.17	0.17	0.17	0.17	0.17	0.17
Nonylphenol	104405	28	6.6	28	6.6	28	6.6	28

Enclosure B
EPA Review of Arizona 2019 Triennial Review
Aquatic Life Criteria for Carbaryl, Diazinon, Demeton, and Nonylphenol

Background

Section 303 of the CWA, 33 U.S.C. §1313, requires states to establish water quality standards (WQS) and to submit any new or revised standards to EPA for review and approval or disapproval. See also 40 C.F.R. Part 131. Arizona's adoption of new or revised WQS involved the following actions: A Notice of Proposed Rulemaking on February 1, 2019, a public hearing on March 28, 2019, a public comment period from February 1, 2019 to March 28, 2019 and a Notice of Final Rulemaking (NFRM) on July 9, 2019. The NFRM was approved by the Governor's Regulatory Review Council on September 4, 2019. The Arizona Secretary of State published the state adopted amendments October 4, 2019 in the Arizona Administrative Register. The Attorney General for Arizona certified that the revisions were duly adopted pursuant to Arizona law on November 13, 2019. Arizona transmitted the revisions to EPA by letter dated November 19, 2019 and provided supplemental information on November 24, 2019. ADEQ continued to submit supplemental technical information through September 30, 2020. EPA finds the public participation procedures followed by the State in development and adoption of the revisions to the statewide WQS are consistent with the procedural requirement set forth in 40 C.F.R. §131.20(b).

Arizona's 2019 submittal to EPA included many WQS. On December 21, 2021, Arizona informed EPA that its numeric human health criteria were based on incorrect assumptions and withdrew them. Arizona committed to revising these criteria in its next triennial review. On January 24, 2022, EPA approved a subset of the 2019 submittal including revised definitions, antidegradation criteria, mixing zone and variances regulations.

As discussed more fully below, where EPA has determined that Arizona's rule revisions are new or revised water quality standards, EPA has reviewed and acted on these additions pursuant to Section 303(c) of the CWA.¹ In this action, EPA is completing review of WQS for four pesticides. EPA will review additional new and revised aquatic life criteria adopted in the 2019 Triennial Review in a separate action.

Synopsis of Action

Clean Water Act (CWA) section 303(c) directs states to adopt water quality standards for waters that are subject to the CWA. EPA's implementing regulations at 40 C.F.R. Part 131, require that water quality standards specify appropriate designated uses of the waters and water quality criteria that protect those uses. EPA reviews the WQS to determine if they are consistent with the factors listed at 40 C.F.R. § 131.5 and contain the minimum requirements listed at 40 C.F.R. § 131.6.

This action pertains to the aquatic life criteria for carbaryl, diazinon, demeton and nonylphenol submitted in the 2019 Triennial Review for and found in Arizona Administrative Code Title 18, Appendix A: Numeric Water Quality Standards. Deletions to Arizona's WQS regulations are shown as

¹ EPA has provided FAQs on "What is a New or Revised Water Quality Standard Under CWA 303(c)(3)?" at <https://www.epa.gov/sites/production/files/2014-11/documents/cwa303faq.pdf>. The link provides detailed information of such analysis.

stricken, while additions are show as underlined. EPA finds these water quality criteria to be consistent with 40 C.F.R. Part 131 and approves criteria pursuant to Section 303(c) of the Act.

EPA Review of New WQS

I. Appendix A. Water Quality Criteria by Designated Use

Arizona established new WQS for the pesticides carbaryl, demeton, diazinon, and nonylphenol. Arizona’s new water quality standards for each pesticide are consistent with EPA national recommended 304(a) water quality criteria. Supported by robust science, EPA’s recommended aquatic life criteria for toxic chemicals are the highest concentration of specific pollutants that are not expected to pose a significant risk to the majority of species in a given environment.² EPA notes that the addition of these criteria for pesticides adds a level of protection to Arizona’s aquatic life. EPA finds these WQS to be consistent with 40 C.F.R. Part 131 and approves the criteria pursuant to Section 303(c) of the Act. EPA approves the following WQS:

Acute Criteria

Pollutant	Previous WQS				Approved Value (µg/L)			
	Cold Water	Warm Water	EDW	Ephemeral	Cold Water	Warm Water	EDW	Ephemeral
Carbaryl	nc	nc	nc	nc	<u>2.1</u>	<u>2.1</u>	<u>2.1</u>	<u>2.1</u>
Diazinon	nc	nc	nc	nc	<u>0.17</u>	<u>0.17</u>	<u>0.17</u>	<u>0.17</u>
Nonylphenol	nc	nc	nc	nc	<u>28</u>	<u>28</u>	<u>28</u>	<u>28</u>

nc = no criteria

Chronic Criteria

Pollutant	Previous WQS			Approved Value (µg/L)		
	Cold Water	Warm Water	EDW	Cold Water	Warm Water	EDW
Carbaryl	nc	nc	nc	<u>2.1</u>	<u>2.1</u>	<u>2.1</u>
Demeton	nc	nc	nc	<u>0.1</u>	<u>0.1</u>	<u>0.1</u>
Diazinon	nc	nc	nc	<u>0.17</u>	<u>0.17</u>	<u>0.17</u>
Nonylphenol	nc	nc	nc	<u>6.6</u>	<u>6.6</u>	<u>6.6</u>

nc = no criteria

Consultation with Indian Tribes

EPA upholds its trust responsibility to federally recognized tribal governments consistent with the “2011 EPA Policy on Consultation and Coordination with Indian Tribes” (<https://www.epa.gov/tribal/epa-policy-consultation-and-coordination-indian-tribes>). Meaningful communication and coordination with appropriate tribal leadership on a government-to-government basis prior to EPA taking actions or making decisions that may affect tribal interests is a fundamental principal of this Policy.

² <https://www.epa.gov/wqc/national-recommended-water-quality-criteria-aquatic-life-criteria-table>

On August 20, 2019 EPA sent written invitations to consult to 24 tribes whose interests may be affected by this action. Four tribes requested Consultation: White Mountain Apache Tribe, Hopi Tribe, Ak-Chin Indian Community, and Colorado River Indian Tribes.

White Mountain Apache Tribe (WMAT)

A Consultation teleconference between EPA Region 9 Water Division Director Tomás Torres and WMAT Chairperson Gwendena Lee-Gatewood was held on January 29, 2020. WMAT also submitted written comments to EPA by letter (February 6, 2020) expressing concern that Arizona standards may be less protective than downstream tribal standards. EPA compared Arizona’s proposed new and revised standards with WMAT approved standards and determined Arizona’s WQS in this action are protective of the downstream WMAT WQS beneficial uses as required by 40 C.F.R. §131.10 (b). The Tribe also identified inaccuracies in Arizona’s submission on location coordinates of tribal boundaries. EPA provided the tribe’s comments regarding tribal boundaries to ADEQ.

Hopi Tribe

The Hopi Tribe submitted written comments to EPA by letter (July 21, 2020). The tribe indicated no objections to the proposed changes in water quality standards. The tribe stressed its concerns about general water quality effects from development near traditional cultural properties off reservation. EPA acknowledged the tribe’s concerns and notes that its action under CWA 303(c) does not approve or disapprove future development.

Ak-Chin Indian Community

The Ak-Chin Indian Community submitted written comments to EPA by letter (January 9, 2020). The primary concern identified by the tribe related to the impact of the ambiguity of the definition and jurisdictional application of “waters of the Unites States” for Arizona WQS. The Navigable Waters Protection Rule was vacated by the courts on August 31, 2021. On November 18, 2021, the U.S. Environmental Protection Agency and the Department of the Army signed a proposed rule to revise the definition of WOTUS. EPA has shared the tribe’s comments to inform this rulemaking.

The tribe also mentioned the possibility that its future tribal water quality standards may be more stringent than upstream Arizona standards. 40 C.F.R. §131.10 (b) requires that WQS must be protective of downstream WQS and is included in EPA’s review. The tribe’s letter concluded that they “do not believe formal tribal consultation on the narrative or numeric value of Arizona’s proposed standards is necessary” but requested that EPA clarify in our decision how the standards will apply, considering the changes to the definition of navigable waters. EPA clarifies that the approved WQS in this decision document will apply to Waters of the United States.

Colorado River Indian Tribes (CRIT)

The Colorado River Indian Tribes (CRIT) submitted written comments (January 10, 2020) to facilitate scoping its concerns to be discussed during consultation. EPA attempted to arrange consultation by phone and email.³ After receiving no responses to repeated outreach EPA closed this consultation offer.

In reviewing the WQS, EPA considered the four main areas of concern raised in the Tribe’s letter:

³ September 2020 voicemail T. Yin to W. Nabahe; 9/14/21 T. Yin email to CRIT (D. Gutherie, R. Loudbear and A. Flora); 11/1/21 T. Yin email to CRIT (D. Gutherie, A. Flores, A. Flora, J. Rivera, T. Harper, R. Loudbear

1. Arizona's revised WQS, specifically human health criteria are less protective without adequate justification. Arizona withdrew its revised numeric human health criteria from EPA action on December 21, 2021.
2. Arizona's revised e-coli criteria is less protective of recreation use. Arizona withdrew this criterion from EPA action on December 21, 2021.
3. Arizona's revised mixing zone policy removes numeric standards. Arizona's revised mixing zone policy describes how Arizona will evaluate and establish mixing zones to ensure protection of water quality. By requiring that mixing zones be no larger than necessary, Arizona will ensure that the previous numeric maximum does not become the default mixing zone size. It also clarifies that, while the WQS authorize the permitting authority to grant dilution in permits, the WQS preference the minimization of granted dilution. Further, by requiring that mixing zones not exceed the point where complete mixing occurs would clarify that mixing zones may only be applied in zones where physical mixing is occurring and is predictable.
4. Enforcement penalties for non-permitted dischargers are inadequate: EPA notes that enforcement policies are not subject to EPA's review under CWA Section 303(c). EPA has shared this comment with EPA Region 9's Enforcement and Compliance Assurance Division.

Conclusion

Based on EPA's review, the new WQS are consistent with the requirements of the CWA and 40 C.F.R. Part 131. Therefore, the additions are approved by EPA pursuant to Section 303(c) of the Act.