REGION 9
SAN FRANCISCO, CA 94105

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

Transmitted by email only

Subject: Approval of Arizona's 2019 Triennial Review Water Quality Standards for Acrolein, *E. coli*, Definitions, and Appendix B Surface Waters and Designated Uses

Dear Director Baggiore,

Enclosed please find the U.S. Environmental Protection Agency's (EPA) approval of 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 take effect immediately for CWA purposes.

EPA's approval includes revised water quality standard for acrolein and *E. coli,* revisions to definitions, and Appendix B surface waters description changes. EPA's analysis and rationale is found in Enclosure A.

I look forward to our continued partnership in protecting Arizona's water quality; please contact me if you would like to discuss further, or your staff may contact Tina Yin at 415-972-3579 or Yin.Tina@epa.gov.

Sincerely,

Digitally signed by
TOMAS TORRES
Date: 2025.06.10
08:51:35 -07'00'

Tomás Torres
Director, Water Division

ENCLOSURES

cc: Erin Jordan, ADEQ

Enclosure A
EPA Water Quality Standards Review and Decision Rationale
Arizona 2019 Triennial Review: Acrolein, *E. coli*, Appendix B Surface Waters and Designated Uses

A. 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. 40 C.F.R. Part 131. Arizona's surface water quality standards are included in the Arizona Surface Water Protection Program as described in Article 1 of the Arizona Administrative Code Title 18, Chapter 11. Arizona's adoption of new and revised WQS involved the following actions: A Notice of Proposed Rulemaking on February 1, 2019, a public comment period from February 1, 2019 to March 28, 2019, a public hearing on 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 its final rulemaking and supporting documentation (2019 Submittal) to EPA by letter dated November 19, 2019.[1] 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 revisions and additions, some of which Arizona subsequently withdrew. Arizona withdrew numeric human health criteria on December 21, 2021. On September 14, 2022, ADEQ withdrew select Appendix B changes for Hassayampa River, Martinez Creek, Santa Cruz River, and Del Monte Gulch Effluent Dependant Waters (EDW). On June 9, 2023, ADEQ withdrew revisions in Appendix B of ADEQ's water quality standards as well as the previously adopted ammonia criterion for Aquatic & Wildlife Effluent Dependent Water (A&Wedw) (see Enclosure B). On January 24, 2022, EPA approved a subset of the 2019 Submittal including revised definitions, antidegradation requirements, mixing zone and WQS variance regulations. On October 26, 2022, EPA approved water quality standards for carbaryl, diazinon, nonylphenol, and demeton to support aquatic life uses.

The specific portions of the 2019 Submittal included in this action are fully described below.[2] Where EPA has determined that Arizona's rule revisions are new or revised WQS, EPA has reviewed and acted on these additions pursuant to Section 303(c) of the CWA.[3]

[1] ADEQ also provided EPA with additional technical justification documents from November 24, 2019 through September 30, 2020.
[2] EPA has not yet completed review and ESA consultation regarding Arizona's revised cadmium and the non-rescinded portions of the ammonia criteria to protect aquatic life uses.
[3] 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.

B. 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, among other things, 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.

Arizona submitted changes in seven chapters and three appendices of the state WQS at Title 18, Chapter 11: 101. Definitions, 107.01. Antidegradation Criteria, 109. Numeric Water Quality Standards, 114. Mixing Zones, 115. Site-Specific Standards, 120. Enforcement of Non-Permitted Discharges, 122. Variances, Appendix A. Numeric Water Quality Standards, Appendix B. Surface Waters and Designated Uses, and Appendix C. Site-Specific Standards.

With this action, EPA is approving new and revised WQS for aquatic life criteria for acrolein, human health criteria for *E. coli*, revised definitions, and Appendix B Surface Waters and Designated Uses as submitted to EPA in Arizona's 2019 Triennial Review. As described below, EPA finds that these WQS are consistent with the CWA and 40 C.F.R. Part 131 and are therefore approved for CWA Purposes.

C. EPA Review of New and Revised WQS

I. R18-11-101: Definitions

In the 2019 Submittal, Arizona renumbered and revised definitions in this section as shown in Table 1 below. Arizona also added six new definitions shown in Table 2 below. EPA finds the new and revised definitions shown in Table 1 and 2 below to be consistent with 40 C.F.R. Part 131 and approves pursuant to Section 303(c) of the Act.

Table 1. Amended Definitions in Arizona WQS Article 1

Term	2016 Arizona WQS	2019 Submittal Arizona WQS
Critical Flow Condition	The lowest flow over seven consecutive days that has a probability of occurring once in 10 years (7 Q 10)	[See Critical flow conditions of the discharge and Critical flow conditions of the receiving water in **Table 2**]
Reference Condition	A set of ecological measurements from a population of relatively undisturbed waterbodies within a region that establish a basis for making comparisons of biological condition among samples	A set of abiotic physical stream habitat, water quality, and site selection criteria established by the Director that describe the typical characteristics of stream sites in a region that are least disturbed by environmental stressors. From these criteria, the Director identifies reference biological assemblages of macroinvertebrates and algae and calculates the Arizona Indexes of Biological Integrity.
Surface Waters	A water of the United States and includes the following: a. A water that is currently used, was used in the past, or may be susceptible to use in interstate or foreign commerce; b. An interstate water, including an interstate wetland; c. All other waters, such as an intrastate lake, reservoir, natural pond, river, stream (including an intermittent or ephemeral stream), creek, wash, draw, mudflat, sandflat, wetland, slough, backwater, prairie pothole, wet meadow, or playa lake, the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce, including any such water: i. That is or could be used by interstate or foreign travelers for recreational or other purposes; ii. From which fish or shellfish are or could be taken and	"Navigable waters" as defined in A.R.S. §49-201(22).[4] EPA notes Arizona made this change to allow for its definition of Waters of the United States (WOTUS) to be nimble enough to align with changing legal interpretations of WOTUS.

[4] This has subsequently been re-numbered as: A.R.S. §49-201(53): "WOTUS" means waters of the state that are also navigable waters as defined by section 502(7) of the Clean Water Act.

Term	2016 Arizona WQS	2019 Submittal Arizona WQS
	sold in interstate or foreign commerce; or iii. That is used or could be used for industrial purposes by industries in interstate or foreign commerce; d. An impoundment of a surface water as defined by this definition; e. A tributary of a surface water identified in subsections (41)(a) through (d); and f. A wetland adjacent to a surface water identified in subsections (41)(a) through (e)	
Zone of passage	A continuous water route of volume, cross sectional area, and quality necessary to allow passage of free swimming or drifting organisms with no acutely toxic effect produced on the organisms.	[Removed] Term no longer relevant to Arizona WQS.

Table 2. New Definitions in Arizona WQS Article 1

Term	New Definition
Complete Mixing	The location at which concentration of a pollutant across a transect of a surface water differs by less than five percent
Critical flow conditions of the receiving water	The hydrologically based receiving water low flow averages that the director uses to calculate and implement applicable water quality criteria: a. For acute aquatic water quality standard criteria, the receiving water critical condition is represented as the lowest one-day average flow event expected to occur once every ten years, on average (1Q10). b. For chronic aquatic water quality standard criteria, the receiving water critical flow condition is represented as the lowest seven-consecutive-day average flow expected to occur once every 10 years, on average (7Q10), or c. For human health based water quality standard criteria, in order to simulate long-term exposure, the receiving water critical flow condition is the harmonic mean flow.

Pollutant Minimization Program	A structured set of activities to improve processes and pollutant controls that will prevent and reduce pollutant loadings.
Variance	A time-limited designated use and criterion for a specific pollutant(s) or water quality parameter(s) that reflect the highest attainable condition during the term of the variance
Zone of initial dilution	A small area in the immediate vicinity of an outfall structure in which turbulence is high and causes rapid mixing with the surrounding water

II. R18-11-109: Numeric Water Quality Standards

Arizona revised its Escherichia coli (*E. coli*) water quality criteria for Full Body Contact (FBC) and Partial Body Contact (PBC) designated uses. The *E. coli* criteria is comprised of two sets of criteria values expressed in colony forming units per 100 milliliters of water (cfu/100mL)—the geometric mean and the single sample maximum or statistical threshold value. Arizona did not change the geometric mean criteria of 126 cfu/100ml. Arizona revised section R18-11-109 of its WQS as follows:

a) "Single sample maximum" (SSM) is revised to "statistical threshold value" (STV).
b) The FBC criteria STV is revised to 410 cfu/100 mL. This corresponds to the 90th percentile of the water quality distribution used to derive the 2012 EPA criteria. The previous FBC SSM was 235 cfu/100 mL.[5]

EPA finds the WQS revisions are consistent with the science supporting EPA's 2012 Recreational Water Quality Criteria Recommendations and thus are consistent with 40 C.F.R. Part 131 and are approved by EPA pursuant to CWA section 303(c).

III. Appendix A. Numeric Water Quality Standards

ADEQ revised its acute and chronic acrolein criteria to be 3 µg/L for all aquatic and wildlife designated use supporting waters (Table 3). Arizona also established a new criterion 3 µg/L for ephemeral waters. The revised criteria are more stringent than the previous criteria of 34 and 30 µg/L for acute and chronic respectively. The revised acrolein criteria of 3 µg/L is equivalent to EPA's 2009 CWA 304(a) National Recommended Aquatic Life Criteria for acrolein which is based on the latest peer reviewed science. EPA finds that the numeric criteria for acrolein (Table 3 below) are consistent with 40 C.F.R. § 131.11 and approves pursuant to section 303(c) of the CWA.

[5] See Section D. II below for Arizona's non-substantive change to the PBC STV.

Table 3. Approved Water Quality Standards for Acrolein to protect aquatic life uses[6]

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)
Acrolein	107028	3	3	3	3	3	3	3

D. EPA Approval of Non-Substantive Changes to WQS

EPA reviewed the following revisions to Arizona's WQS and determined these are non-substantive revisions to WQS. EPA approves these non-substantive changes to previously approved WQS to provide transparency as to which provisions are applicable for purposes of the CWA in accordance with 40 C.F.R 131. These approved non-substantive changes do not revise previously approved underlying WQS.

I. R18-11-107.01: Antidegradation Criteria B(3)

The baseline characterization paragraph has been moved from section R18-11-107.01 B(3)(C) to R18-11-107.01 B(3)(A).

II. R18-11-109: Numeric Water Quality Standards

The footnote to R18-11-109 section G has been moved to R18-11-109 section B.

Arizona revised its Partial Body Contact (PBC) criteria STV to 576 cfu/100 mL. The previous PBC SSM was 575 cfu/100 mL. EPA finds this to be a non-substantive revision due to the bacteriologically insignificant nature of a 1 cfu/100 mL change.

Arizona amended language related to implementation of its nutrient criteria in section F.

Table 4. Nutrient Criteria

2016 Arizona WQS	2019 Submittal Arizona WQS
Nutrient criteria. The following are water quality standards for total phosphorus and total nitrogen (expressed in milligrams per liter (mg/L)) that apply to the surface waters listed below. A minimum of 10 samples, each taken at least 10 days apart in a consecutive 12-month period, are required to determine a 90th	Nutrient criteria. The following are water quality standards for total phosphorus and total nitrogen (expressed in milligrams per liter (mg/L)) that apply to the surface waters listed below. A minimum of 10 samples, each taken at least 10 days apart in a consecutive 12- month period, are required to determine a 90th

[6] Defined p.4 Arizona Administrative Code Article 1 R18-11-101 Definitions: A&Wc: Aquatic and wildlife cold water; A&Ww: Aquatic and Wildlife warm water; A&Wedw: Aquatic and Wildlife effluent dependent waters; A&We: Aquatic and Wildlife ephemeral waters

2016 Arizona WQS	2019 Submittal Arizona WQS
percentile. Not more than 10 percent of the samples may exceed the 90th percentile value listed below.	percentile. Not more than 10 percent of the samples may exceed the 90th percentile value listed below. The Director will apply these water quality standards for total phosphorus and total nitrogen to the surface waters listed below, and to their perennial tributaries, if listed.

III. Appendix A: Numeric Water Quality Standards

The Arizona 2019 Triennial Review included the following editorial changes in Appendix A.

Table 5. Appendix A Editorial Revisions

Action	2016 Arizona WQS	2019 Submittal Arizona WQS
Name Change	p,p'-Dichlorodiphenyltrichloroethane (DDT) and metabolites (DDD) and (DDE)	DDT and its breakdown products
CAS Number Addition	Tritium - NA	10028178
CAS Number Addition	Methylmercury- NA	22967926
CAS Number Addition	Strontium- NA	7440246
Spelling Change	Tributylin	Tributyltin

Typographical error: Arizona included an inaccurate CAS number for the pollutant endrin aldehyde. The 2019 Submittal identifies endrin aldehyde with the CAS number 7421933, rather than the correct CAS number of 7421934. ADEQ will correct this error in future rulemaking.

IV. Appendix B: Surface Waters and Designated Uses

The following are description changes to waterbodies in Appendix B that are non-substantive changes to WQS (Table 8 and Table 9). In its submittal, Arizona explains revisions include name corrections, description updates to be consistent with waterbody names in the National Hydrography Dataset, to make waterbody locations more accurate and to correct typographical errors.[7] EPA reviewed the revisions to Appendix B and supporting documentation submitted by ADEQ and EPA concludes that the revisions shown in Tables 8 and 9 below are non-substantive changes to WQS and do not change designated uses associated with the waterbodies.

[7] Arizona Administrative Register Vol. 25, Issue 40. Notice of Final Rulemaking p. 2538. October 4, 2019.

Table 6. Non-Substantive Appendix B Surface Waters Segment Description Changes

Surface Water	2016 Arizona WQS	2019 Submittal Arizona WQS	Rationale for Revision
Colorado - Grand Canyon Watershed (CG)			
Grand Wash	Headwaters to Lake Mead	Headwaters to Colorado River	Revised to conform with NHD.
Grapevine Wash	Headwaters to Lake Mead	Headwaters to Colorado River	
Short Creek	Headwaters to confluence with Virgin River	Headwaters to confluence with Fort Pearce Wash	Corrected for accuracy.
Bill Williams Watershed (BW)			
Cottonwood Canyon	Below Bear Trap Spring to confluence at Smith Canyon	Below Bear Trap Spring to confluence at Sycamore Creek	Revised to conform with NHD.
Colorado - Lower Gila Watershed (CL)			
Mohave Wash	Headwaters to Lake Havasu	Headwaters to Lower Colorado River	Revised to conform with NHD and provide clarity.
Middle Gila Watershed (MG)			
Lynx Creek	Below confluence with unnamed tributary to confluence with Agua Fria River	Below confluence with unnamed tributary at 34°34'29"/112°21'07" to confluence with Agua Fria River	This revision is providing clarity for the location of the unnamed tributary
New River	Headwaters to Interstate 17	Headwaters to Interstate 17 at 33°54'19.5''/112°08'46''	This revision provides clarity to the waterbody location
Santa Cruz – Rio Magdelena – Rio Sonoyta Watershed (SC)			
Flux Canyon	Headwaters to confluence with Alum Canyon	Headwaters to confluence with Alum Gulch	This edit updates the waterbody names.
Lemmon Canyon Creek	Below unnamed tributary to confluence with Sabino Canyon Creek	Below unnamed tributary at 32°23'48"/110°47'49 to confluence with Sabino Canyon Creek	This revision provides clarity on location.
Madera Canyon Creek*	Below unnamed tributary to confluence with the Santa Cruz River	Below unnamed tributary at 31°43'42"/110°52'51 to	This revision improves clarity for the location of the unnamed tributary.

Surface Water	2016 Arizona WQS	2019 Submittal Arizona WQS	Rationale for Revision
		confluence with the Santa Cruz River	
Rose Canyon Creek	Headwaters to Rose Canyon Lake	Headwaters to confluence with Sycamore Canyon	Rose Canyon Lake is included in the updated description and does not impact its uses.
Sabino Canyon*	Headwaters to confluence with unnamed tributary at 32°23'28"/110°47'03"	Headwaters to 32°23'20"/110°47'06"	This revision improves the accuracy of the waterbody location.
Sabino Canyon*	Below unnamed tributary to confluence with Tanque Verde River	Below 32°23'20"/110°47'06" to confluence with Tanque Verde River	This revision improves clarity of the waterbody location.
Sonoita Creek	Below groundwater upwelling point to confluence with the Santa Cruz River	Below 1600 feet downstream of Town of Patagonia WWTP outfall groundwater upwelling point to confluence with the Santa Cruz River	This revision provides additional information of the waterbody.
Three R Canyon	Headwaters to 31°28'26"/110°46'04"	Headwaters to Unnamed Trib to Three R Canyon at 31°28'26"/110°46'04"	This revision provides clarity.
Three R Canyon	From 31°28'26"/110°46'04" to 31°28'28"/110°47'15"	From 31°28'26"/110°46'04" to 31°28'28"/110°47'15" (Cox Gulch)	This revision provides clarity.
Three R Canyon	From 31°28'28"/110°47'15" to confluence with Sonoita Creek	From (Cox Gulch) 31°28'28"/110°47'15" to confluence with Sonoita Creek	This revision provides clarity.
Vekol Wash	Those reaches not located on the Ak-Chin, Tohono O'odham and Gila River Indian Reservations	Headwater to Santa Cruz Wash: Those reaches not located on the Ak-Chin, Tohono O'odham and Gila River Indian Reservations	This revision provides clarity.

Surface Water	2016 Arizona WQS	2019 Submittal Arizona WQS	Rationale for Revision
Williams Ranch Tanks	31°55'14"/110°25'31"	Removal of waterbody	These are two isolated water tanks that were erroneously included in the list of waterbodies.
San Pedro – Willcox Playa – Rio Yaqui Watershed (SP)			
Dry Canyon	Headwaters to confluence with Abbot Canyon	Headwaters to confluence with Whitewater Draw	Corrected for accuracy.
San Pedro River	U.S./ Mexico Border to Redington	U.S./ Mexico Border to Buehman Canyon	The waterbody segment was revised to be at a specific confluence.
San Pedro River	From Redington to confluence with the Gila River	From Buehman canyon to confluence with the Gila River	The waterbody segment was revised to be at a specific confluence.
Salt River Watershed (SR)			
Black River, North Fork of East Fork	Headwaters to confluence with Black River, East Fork	Headwaters to confluence with Boneyard Creek	This revision provides clarity.
Upper Gila Watershed (UG)			
Frye Canyon Creek	Highline CanalHeadwaters to terminus near San Simon River	Frye Mesa reservoir to terminus at Highline Canal	This revision provides clarity.
Verde River Watershed (VR)			
Sycamore Creek	Headwaters to confluence with Verde River	Headwaters to confluence with Verde River at 34°04'42''/111°42'14''	This revision adds coordinates and improves accuracy of description.

Table 7. Name Changes to Waterbodies in Appendix B

Waterbody Name (2016)	Waterbody Name (2019)
Bill Williams Watershed	
Cottonwood Canyon Creek	Cottonwood Canyon
Colorado - Grand Canyon Watershed	
Agate Canyon Creek	Agate Canyon
Hakatai Canyon Creek	Hakatai Canyon
Olo Creek	Olo Canyon
Ruby Canyon Creek	Ruby Canyon
Sapphire Canyon Creek	Sapphire Canyon
Serpentine Canyon Creek	Serpentine Canyon
Turquoise Canyon Creek	Turquoise Canyon
YPG pond	Yuma Proving Ground Pond
Little Colorado Watershed	
Black Canyon Creek	Black Canyon
Blue Ridge Reservoir	Cragin Reservoir
Middle Gila Watershed	
Lower Lake Pleasant	Lake Pleasant, Lower
Indian School Park Lake	Steele Indian School Pond
Santa Cruz – Rio Magdelena – Rio Sonoyta Watershed	
Palisade Canyon Creek	Palisade Canyon
Sabino Canyon Creek	Sabino Canyon
Santa Cruz Wash	Santa Cruz River
Soldier Lake	Soldier Tank
Sycamore Canyon Creek	Sycamore Canyon
San Pedro – Willcox Playa – Rio Yaqui Watershed	
Blackwater Draw	Black Draw
Booger Canyon Creek	Booger Canyon
Fourmile Canyon Creek	Fourmile Creek
Goudy Canyon Creek	Goudy Canyon Wash
Greenbrush Draw	Greenbush Draw
Horse Camp Canyon Creek	Horse Camp Canyon
Miller Canyon Creek	Miller Canyon

Waterbody Name (2016)	Waterbody Name (2019)
Golf Course Pond	Mountain View Golf Course Pond
Rattlesnake Canyon	Rattlesnake Creek
Redfield Canyon Creek	Redfield Canyon
Rucker Canyon Creek	Rucker Canyon
Swamp Springs Canyon Creek	Swamp Springs Canyon
Virgus Canyon Creek	Virgus Canyon
Ward Canyon Creek	Ward Canyon
Salt River Watershed	
Pool Corral Lake	Pole Corral Lake
Upper Gila Watershed	
Buckalou Creek	Buckelew Creek
Cluff Ranch Pond #1	Cluff Reservoir #1
Cluff Ranch Pond #3	Cluff Reservoir #3
Lower George's Reservoir	Georges Tank
Del Monte Wash	Del Monte Gulch
Del Monte Wash (EDW)	Del Monte Gulch (EDW)
Hell Canyon Tank	Hells Canyon Tank
Jacks Canyon Wash	Jacks Canyon
Jacks Canyon Wash (EDW)	Jacks Canyon (EDW)
Stone Dam Lake	Masonry Number 2 Reservoir

The Lake Tank in the Middle Gila Watershed was reorganized alphabetically in Appendix B using "the" instead of "lake.

V. Appendix C Site-Specific Standards

The surface water description and location for Rio de Flag (EDW) in the Lower Colorado Watershed was revised from "Flagstaff WWTP outfall to the confluence with San Francisco Wash at 35°14'04"/111°28'02.5" to "Flagstaff WWTP outfall to the confluence with San Francisco Wash." EPA finds the removal of the coordinates are not new nor revised WQS subject to CWA Section 303(c).

Arizona amended the format of its WQS including addition of Appendix C to show previously approved site specific WQS. The units for the selenium site-specific criterion for Yuma East Wetlands in the Colorado-Lower Gila Watershed was corrected from 2.2 mg/L to 2.2 µg/L. On December 26, 2008, ADEQ published a final rulemaking updating its WQS. ADEQ clarified "The rulemaking modifies chronic selenium criterion applicable to this discharge to protect aquatic life of 2.2 µg/L." EPA finds this revision corrects a typographical error for previously approved WQS.

E. Endangered Species Act (ESA) Consultation

Section 7(a)(2) of the ESA states that each federal agency shall ensure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any endangered or threatened (listed) species or result in the destruction or adverse modification of critical habitat.

Approval of Acrolein aquatic life criteria

EPA prepared a biological evaluation finding that approval of Arizona's acrolein criteria "may affect but is not likely to adversely affect" 37 federally listed species in Arizona and that that approval of the acrolein criteria is not likely to adversely affect the 25 designated critical habitats of these species. On November 23, 2022 EPA transmitted to the US Fish and Wildlife Service a request for concurrence with EPA's findings. On April 24, 2023, FWS provided concurrence.

Approval of Revision to Human Health criteria

EPA's discretion to act on a state submission concerning human health is limited to determining whether the submission is consistent with 40 C.F.R. Part 131. EPA has concluded that it lacks sufficient discretionary federal involvement or control to protect listed species when it approves or disapproves human health criteria adopted by states as part of their water quality standards. Therefore, ESA consultation requirements do not apply to EPA's actions to approve Arizona's new and revised *E. coli* criteria.

F. Consultation with Indian Tribes

EPA upholds its trust responsibility to federally recognized tribal governments consistent with the "*EPA Policy on Consultation with Indian Tribes.*"[8] 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.

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.

[8] US Environmental Protection Agency. "EPA Policy on Consultation with Indian Tribes."

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 expressed concerns about general water quality effects from development near traditional cultural properties located off reservation lands. EPA acknowledged the Tribe's concerns and notes that EPA's authority to review ADEQ's WQS under CWA 303(c) would not impact 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 United States" for Arizona WQS. The Navigable Waters Protection Rule was vacated by the courts on August 31, 2021. On August 29, 2023 EPA and the US Army Corps of Engineers issued a conforming final rule to amend the "Revised Definition of WOTUS" consistent with the US Supreme Court's May 2023 *Sackett v Environmental Protection Agency* ruling. EPA shared the Tribe's comments to inform this rulemaking. 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. On March 12, 2025, EPA and the Army Corps announced a joint memorandum issuing guidance on implementation of "continuous surface connection" consistent with *Sackett v. EPA*. The agencies also announced a *Federal Register* notice for listening sessions and opened a docket to solicit feedback on key aspects of the definition of WOTUS.

The Tribe also mentioned the possibility that its future tribal WQS may be more stringent than upstream Arizona standards. 40 C.F.R. §131.10 (b) requires that WQS must be protective of downstream WQS. In this review, EPA evaluated applicable downstream WQS to ensure that ADEQ's WQS are sufficiently protective. EPA will work with Ak-Chin as they develop WQS to work through downstream protections.

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.[9] 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:

[9] September 2020 voicemail from T. Yin to CRIT (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. EPA found Arizona's revision to be consistent with EPA's 2012 recommended criteria and is protective of recreation use. EPA approved this revision in this action.
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 granted dilution must be minimized. 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. EPA approved this revised WQS on January 24, 2022.
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.

G. Conclusion

Based on EPA's review, the revised WQS are consistent with the requirements of the CWA and 40 C.F.R. Part 131. Therefore, the revisions discussed in this approval rationale, are approved by EPA pursuant to Section 303(c) of the Act.

H. References

ADEQ (2021). Letter from Baggiore, T. to Blake, E. Withdrawal of ADEQ's 2019 Triennial Review Proposed Numeric Human Health and Safety Standards. Phoenix, Arizona. Arizona Department of Environmental Quality. December 21, 2021.

ADEQ (2022). Letter from Baggiore, T. to Blake, E. Withdrawal of select ADEQ 2019 Triennial Review Appendix B proposed changes. Phoenix, Arizona. Arizona Department of Environmental Quality. September 14, 2022.

ADEQ (2023). Letter from Baggiore, T. to Blake, E. Rescinding Appendix B and A&Wedw changes. Phoenix, Arizona. Arizona Department of Environmental Quality. June 2, 2023.

US EPA (2022). Letter from Torres, T. to Baggiore, T. Arizona 2019 Triennial Review Revised Water Quality Standards - Definitions, Antidegradation Criteria, Mixing Zones and Variances. EPA Region 9 Water Division. January 24, 2022.

US EPA (2022). Letter from Torres, T. to Baggiore, T. State of Arizona 2019 Triennial Review; Approval of Water Quality Standards for Carbaryl, Diazinon, Nonylphenol, and Demeton. EPA Region 9 Water Division. October 26, 2022.

Enclosure B

Rescinded Appendix B Surface Waters and Designated Uses

Arizona's 2019 Submittal revised surface water descriptions in Appendix B of Article 1 as shown below in Table 4. By letters dated September 14, 2022 and June 2, 2023, Arizona withdrew these revisions therefore these revisions are not subject to CWA Section 303(c) action by EPA. The withdrawn revisions are described below to provide clarity and to summarize Arizona's intentions for future revisions.

Table 8. Withdrawn Provisions of Appendix B Surface Waters Segment Description Changes

Surface Water	2016 Arizona WQS (Unless otherwise noted)	2019 Submittal Arizona WQS	Rationale for Withdrawal
Middle Gila Watershed (MG)			
Unnamed Wash (EDW)	Luke Air Force Base WWTP outfall at 33°32'00"/112°19'03" to confluence with the Agua Fria River	Luke Air Force Base WWTP outfall at 33°32'21"/112°19'15" to confluence with the Agua Fria River	ADEQ has stated that the Luke AFB WWTP does not have an active permit to discharge and plans to remove this waterbody in a future action.
Weaver Creek	Headwaters to confluence with Antelope Creek	Headwaters to confluence with Antelope Creek, tributary with Martinez Creek	ADEQ's eMaps and the National Hydrography Dataset (NHD) show that Weaver Creek confluences with Antelope Creek and not with Martinez Wash.
Mountain Valley Park Ponds (EDW)	Mountain Valley Park Ponds (EDW)	Yavapai Lake (EDW)	
Santa Cruz – Rio Magdelena – Rio Sonoyta Watershed (SC)			
Greene Wash	Greene Reservoir at 32°37'09"/111°41'12" to the Tohono O'odham Indian Reservation boundary	Santa Cruz River to the Tohono O'odham Indian Reservation boundary	Based on the United States Geological Survey's (USGS) National Map, Greene Wash begins at Greene Canal, not the Santa Cruz River. Additionally, Greene Canal begins at the Santa Cruz River and is not listed as a waterbody in Appendix B and may need to be included in a future action.
Palisade Canyon	Headwaters to confluence with	Headwaters to confluence with	A Use Attainability Analysis (defined at 40 C.F.R. 131.3(g)) would be needed as the

Surface Water	2016 Arizona WQS (Unless otherwise noted)	2019 Submittal Arizona WQS	Rationale for Withdrawal
	unnamed tributary at 32°21'59"/110°46'16"	unnamed tributary at 32°22'33"/110°45'31"	boundary for A&Wc and A&Ww uses have shifted with this change.
Palisade Canyon	Below unnamed tributary to confluence with Sabino Canyon Creek	Below 32°22'33"/110°45'31" to unnamed tributary of Sabino Canyon	
Santa Rosa Wash (EDW)	Palo Verde Utilities WWTP outfall at 33°04'20''/112°01'47'' to the Gila River Indian Reservation	Palo Verde Utilities CO-WRF outfall at 33°04'20''/ 112°01'47'' to the Chin Indian Reservation	This change is incorrect. The Santa Rosa Wash flows from Palo Verde Utilities CO-WRF outfall to the Gila River Indian Community Reservation.
Salt River Watershed (SR)			
Salt River	2008 Triennial Review: Confluence of White River and Black River to Roosevelt Lake	White Mountain Apache Reservation Boundary at 33°48'52''/110°31'33'' to Roosevelt Lake	This waterbody segment was erroneously omitted in the 2016 Triennial Review. In the 2019 submission, this waterbody was added back into Appendix B and the segment description was revised to exclude areas within White Mountain Apache Indian Reservation and San Carlos Indian Reservation. However, the agriculture irrigation use was inadvertently omitted as a designated use in the 2019 revision. ADEQ has stated that they will correct this omission in their next WQS action.
Verde River Watershed (VR)			
Camp Creek	Headwaters to confluence with the Verde River	Headwaters to confluence with the Sycamore Creek	There are two waterbodies named Camp Creek both in the Verde River Watershed (AZ15060203-232 and AZ15060203-031). ADEQ clarified that this amendment was for AZ15060203-031.
Verde River	From confluence of Chino Wash and Granite Creek to Bartlett Lake Dam	From headwaters at confluence of Chino Wash and Granite Creek to Bartlett Lake Dam	Based on ADEQ's eMaps, NHD, and the USGS National Map, the Verde River originates at Sullivan Lake and the description should be updated to reflect this.
Lower Colorado Watershed (LC)			

Surface Water	2016 Arizona WQS (Unless otherwise noted)	2019 Submittal Arizona WQS	Rationale for Withdrawal
Little Colorado River	Below confluence with the Puerco River to the Navajo Nation Reservation boundary	Below Puerco River confluence to the Colorado River, Excluding segments on Native American Lands	The Little Colorado River from Puerco River to parts of Joseph City appears to be above 5000 ft and would likely require an addition of A&Wc use. ADEQ to confirm the Little Colorado River uses are protective of downstream uses per 40 CFR 131.10(b).
San Pedro – Willcox Playa – Rio Yaqui Watershed (SP)			
Blacktail Pond	Fort Huachuca Military Reservation at 31°24'13"/110°17'23"	Fort Huachuca Military Reservation at 31°31'04"/110°24'47", headwater lake in Blacktail Canyon	