UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
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JUL 26 2017

Trevor Baggiore
Director
Water Quality Division
Arizona Department of Environmental Quality
1110 West Washington Street
Phoenix, Arizona 85007-2952

Subject: Arizona 2016 CWA Section 303(d) List of Impaired Waters

Dear Mr. Baggiore:

Thank you for submitting Arizona's 2016 Clean Water Act (CWA) 303(d) List of Impaired Waters (2016 List). The U.S. Environmental Protection Agency (EPA), which received the initial submittal on December 27, 2016 and supplemental materials through May 23, 2017, has completed review of the listing package.

This letter summarizes the actions the EPA takes today on the 2016 List based on CWA section 303(d) and the EPA implementing regulations. The legal requirements and the rationale for the actions are enclosed.

1. Approval: The EPA approves all water quality limited segments (WQLSs) and associated pollutants identified by the Arizona Department of Environmental Quality (ADEQ) as requiring a total maximum daily load under CWA section 303(d).

2. Proposed Additions: The 2016 List did not include several WQLSs meeting federal listing requirements. Consistent with the actions requested in your May 23, 2017 letter, the EPA disapproves the omission of six WQLSs for Apache Lake, Bartlett Lake, Copper Creek and Granite Creek, as specified in Table 4 of the Enclosure, and proposes to add the six WQLSs to the 2016 List pursuant to 40 CFR § 130.7(d)(2). The EPA will solicit public comments on the proposed additions and advise ADEQ of any revision to the proposal per comments received.

ADEQ's public process for developing the 2016 List is consistent with the procedural requirements of CWA section 303(d) and its implementing regulations, including 40 CFR § 130.7(c)(1). The priority WQLS rankings in Appendix G of the 2016 List comport with

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40 CFR § 130.7(b) requirements and offer an appropriate framework for ADEQ's future total maximum daily load development.

I value the collaboration between our two agencies and look forward to continuing our partnership to protect Arizona's waters. If you have any questions, please let me know or refer staff to Janet Hashimoto, Manager of the Water Quality Assessment Section, at (415) 972-3452.

Sincerely,

7/26/2017

Tomás Torres
Director, Water Division

Enclosure

cc: Krista Osterberg, ADEQ
Jason Jones, ADEQ

Enclosure

EPA Review of Arizona's 2016 303(d) List

Date of Receipt by the EPA: December 27, 2016
Date of Receipt by the EPA of Additional Information Requested: January 17, 2017; January 23, 2017; February 1, 2017; February 2, 2017; February 9, 2017; April 14, 2017; April 21, 2017; and May 23, 2017.

Purpose

The purpose of this document is to describe the rationale for the EPA's action on Arizona's 2016 Clean Water Act (CWA) Section 303(d) list of water quality limited segments (WQLSs) requiring a Total Maximum Daily Load (TMDL) pursuant to 40 CFR 130.7(a) (2016 List). The EPA reviewed the State's submittal including the listing decisions, the assessment methodology used by the State in developing its 2016 List, and supporting data.

The EPA's review of the 2016 List is based on the EPA's analysis of whether the State reasonably considered existing and readily available water quality-related data and information, and reasonably identified waters required to be listed. This review describes the basis for the EPA's decision to approve the State's 2016 List identified in Appendix C of Arizona's submittal, to disapprove the omission of six WQLSs that meet listing criteria, and to propose adding these waters to the 2016 List. The EPA's determinations are based on materials submitted by the State and the references cited at the end of this document.

Statutory and Regulatory Background

Identification of WQLSs for Inclusion in the List

CWA Section 303(d)(1) directs each state to identify those waters within its boundaries for which effluent limitations required by Section 301(b)(1)(A) and (B) are not stringent enough to achieve any applicable water quality standard (WQS), and to establish a priority ranking for addressing such waters, taking into account the severity of the pollution and the uses to be made of such waters. The 303(d) listing requirements apply to both waters impaired by point sources and waters impaired by nonpoint sources of pollution.

The EPA regulations provide that a state does not need to list WQLSs where the following types of controls are adequate to implement applicable standards: (1) technology-based effluent limitations as required by the CWA, (2) more stringent effluent limitations required by federal, State or local authority, or (3) other pollution requirements required by State, local, or federal authority. See 40 CFR 130.7(b)(1).

In developing its list, each state is required to assemble and evaluate all existing and readily available water quality-related data and information, including, at a minimum: (1) waters identified as partially meeting or not meeting designated uses or as threatened in the state's most recent CWA Section 305(b) report; (2) waters for which dilution calculations or predictive

modeling indicate nonattainment of applicable standards; (3) waters for which water quality problems have been reported by governmental agencies, members of the public, or academic institutions; and (4) waters identified as impaired or threatened in any CWA Section 319 nonpoint source assessment submitted to the EPA. See 40 CFR 130.7(b)(5). The EPA's 2006 assessment and listing guidance describes additional types of water quality-related data and information that should be assembled and evaluated for developing state lists.

Consideration of Existing and Readily Available Water Quality-Related Data and Information

The EPA regulations at 40 CFR 130.7(b)(6) require each state to include, as part of its submittals to the EPA, documentation to support decisions to rely or not rely on particular data and information, and decisions to list or not list waters. Such documentation needs to include, at a minimum, the following information: (1) a description of the methodology used to develop the list; (2) a description of the data and information used to identify waters; and (3) any other reasonable information requested by the EPA.

Priority Ranking

The EPA regulations at 40 CFR 130.7(b)(4) require each state to prioritize waters on its list for TMDL development, and also to identify those WQLS targeted for TMDL development in the next two years. In prioritizing and targeting waters, each state must, at a minimum, take into account the severity of the pollution and the uses to be made of such waters. See 303(d)(1)(A). A state may consider other factors relevant to prioritizing waters for TMDL development, including immediate programmatic needs, vulnerability of particular waters as aquatic habitats, recreational, economic, and aesthetic importance of particular waters, degree of public interest and support, and state or national policies and priorities. See 57 FR 33040, 33044-45 (July 24, 1992), and EPA 1991.

Analysis of Submittal from the State of Arizona

Identification of WQLSs

The EPA has reviewed the State's submittals and concludes that the State developed the 2016 List in compliance with CWA Section 303(d) and 40 CFR 130.7. The EPA's review is based on its analysis of whether the State reasonably considered existing and readily available water quality related data and information and reasonably identified waters required to be listed.

Arizona used the final 2012/2014 List and 305(b) Report as its starting point, and based its 2016 CWA Section 303(d) submittal on its analysis of readily available data and information to determine whether additions to or deletions from the final 2012/2014 List were necessary. Arizona's approach, wherein previously listed waters remain WQLSs unless the existing and readily available water quality-related data no longer indicate impairment, is consistent with federal requirements. The EPA finds it was reasonable for Arizona to include most of the previously listed waters on the 2016 List.

Assembly of Data

The EPA's review found the data compilation process was clear and provided an adequate basis for water body assessments. The State focused on data collected over a 5-year assessment period, between July 1, 2010 and June 30, 2015. The EPA finds it reasonable for the State to base its assessments on water quality data generally collected during the 2010-2015 timeframe because recent ambient water quality data are most likely to be representative and indicative of current water quality conditions. The EPA also finds it is reasonable for the State to consider some older data (e.g., sediment and tissue data) because these media are longer-term indicators of chemical contamination than ambient water column data, and provide reliable information for assessing water quality conditions for a longer period of time.

The State assembled data and information for the 2016 305(b) Assessment Report and development of the 2016 List. Staff compiled data and information from multiple sources, including those identified at 40 CFR 130.7(b)(5)(iii). The Arizona Department of Environmental Quality (ADEQ) actively sought data from available websites, agencies and groups likely to have data. The State issues public notices soliciting data and information annually in February; with the most recent solicitation being in 2014 (as described in the Public Comment section). The solicitation notices were sent to an extensive emailing list, and posted on the ADEQ website. Overall, the State considered data and information submitted during the comment period including: fish advisories; EPA databases; existing and readily available water quality data and information reported by local, State and federal agencies, citizen groups, academic institutions and the public; and other sources of data and information that were readily available to staff. The EPA finds the State's approach to assembling readily available information to be reasonable.

Listing Methodology

Arizona's Methods and Technical Support, Chapter 2 in the 2016 CWA Assessment, provides information on the methodology ADEQ uses to identify impaired waters, and specifies explicit factors for making listing and delisting decisions for different pollutant types based on different kinds of data. Also, in July 2000, Arizona enacted a statute governing its identification of impaired waters. See Arizona Revised Statutes (ARS) Section 49-232. ADEQ regulations known as the "Impaired Water Identification Rule" or "IWIR" became effective in 2002. See Arizona Administrative Code R18-11-601 *et seq.* ADEQ prepared the 2016 List in accordance with the 2016 Methods and Technical Support chapter and the IWIR. In general, ADEQ includes a waterbody in the List based on adequate documentation showing that WQS, contained in the Arizona Administrative Code Title 18, Chapter 11, Article 1, Water Quality Standards for Surface Waters, were not being met during the assessment period. If sufficient data is not available to evaluate whether a designated use is supported, an attainment determination of "Inconclusive" is made. The Methods and Technical Support Chapter includes assessment methodologies and quantitative assessment factors including statistical methods for evaluating potential WQS exceedances, minimum data set requirements, and data quality requirements. These decision factors are applied to various types of data, including water chemistry, bacteria, nutrients, nuisance factors, and water and sediment toxicity. Arizona's 2016 305(b) Assessment Report includes a list of water segments where a WQS is not met or expected to not be met, but is being addressed by an EPA approved TMDL (see 2016 IR, Appendices B and G). The State

used the assessment decision factors as the basis for the majority of its 2016 listing decisions. The EPA reviewed the various assessments and concludes the State's assessments generally are consistent with federal listing requirements and applicable WQS.

Public Comment

ADEQ sought public input during the development of the 2016 List and the 2016 305(b) Assessment Report through solicitations for data and subsequent public comments. Every February, ADEQ issues a call-for-data to their TMDL / CWA Section 319 electronic mail list of approximately 800 recipients. ADEQ received external data from 2010 to 2014 through public data solicitation, but did not solicit data in 2015 because of extensive formatting issues with the 2014 data. There was no data solicitation in 2016 because ADEQ was in the process of migrating to a new database that, when complete in 2017, will allow external submissions directly through a data portal.

Approximately 50% of the data used in the 2016 assessment was from external sources. The 22 external entities and/or data sharing partners included: Apache Nitrogen Products, Arizona Game and Fish Department, Army Corps of Engineers, ASARCO, BHP, Capstone Mining, City of Tempe, Friend of the Forest, Friends of the Santa Cruz, National Park Service, Oak Creek Watershed Improvement Council, Pinal Creek Group, Resolution Copper, Salt River Project, Sierra Club, Slide Rock State Park, Sonoran Institute, United States Forest Service, United States Geological Survey, University of Arizona, Upper Gila Watershed Partnership, and Various Volunteer Groups. The largest contributors of data were the United States Geological Survey, Army Corps of Engineers, and Pinal Creek Group.

A solicitation for public comment on Arizona's draft list was open from June 13, 2016 to July 28, 2016. ARS Section 49-1092.03 provides for a 45-day comment period following publication during which any party that submitted written comments may challenge a listing of an impaired water by submitting a notice of appeal to ADEQ. The EPA received documentation of the solicitation for public comments on Arizona's draft list and the responsiveness summary addressing those comments, from ADEQ, on September 30, 2016.

Conclusions

The EPA Finds that Arizona Properly Added 17 New WQLSs to the 2016 List

Based on the all existing and readily available data, Arizona identified 17 new WQLSs requiring TMDLs and included them on the 2016 List. Table 1, below, shows the water body and cause of the impairment comprising each new WQLS. The EPA finds that Arizona properly added 17 WQLSs, shown in Table 1, to the 2016 List.

Table 1: New WQLSs on Arizona's 2016 List

Watershed	Waterbody	Size	Cause of Impairment
Colorado-Grand Canyon	Paria River Utah border to Colorado River 14070007-123	29.4 mi	Selenium (total)
	Kanab Creek Jump-up Canyon to Colorado River 15010003-001	12.8 mi	Selenium (total)
Middle Gila	Agua Fria River Sycamore Creek to Big Bug Creek 15070102-023	9.1 mi	Selenium (total)
	Hassayampa River Buckeye Canal to Gila River 15070103-001B	2.3 mi	*E. coli*
	Money Metals Tributary Headwaters to Unnamed Tributary (UB1) 15070102-123	0.5 mi	Copper
			Zinc
	Unnamed Tributary to Eugene Gulch Headwaters to Eugene Gulch 15070102-1994	0.7 mi	Copper (dissolved)
Salt	Christopher Creek Headwaters to Tonto Creek 15060105-353	8 mi	Low dissolved oxygen
San Pedro	Copper Creek Headwaters - Prospect Canyon 15050203-022A	6.6 mi	Copper
			Selenium
	San Pedro River Mexico border to Charleston 15050202-008	28.3 mi	Dissolved oxygen
	Aravaipa Creek Aravaipa Canyon Wilderness - San Pedro River 15050203-004C	12.6 mi	*E. coli*
Santa Cruz	Santa Cruz River Tubac Bridge - Sopori Wash 15050301-008B	8.9 mi	*E. coli*
	Santa Cruz River Canada Del Oro to HUC 15050303 15050301-001	8.6 mi	*E. coli*
Verde	Verde River Sycamore Creek to Oak Creek 15060202-025	25.2 mi	Dissolved oxygen
			E. coli
	Oak Creek Spring Creek to Verde River 15060202-016	12.7 mi	*E. coli*

The EPA Finds That Arizona Demonstrated Good Cause for Delisting Nine WQLSs Based on Approved TMDLs

Arizona has developed TMDLs to address water quality impairments for nine WQLSs that were included on the 2012/2014 List. The EPA has approved the TMDLs for these nine WQLSs and Arizona removed them from the list. See, 40 CFR 130.7(b)(6)(iv). The EPA finds that Arizona has demonstrated good cause for delisting the nine WQLSs shown in Table 2.

Table 2: Waterbody listings addressed by an EPA-approved TMDL since 2012/2014 List

Watershed	**Waterbody**	**Size**	**Cause of Impairment**
Middle Gila	Gila River Centennial Wash - Gillespie Dam 15070101-008	5.3 mi	Boron (total)
			Selenium (total
Upper Gila	Gila River* Cottonwood Creek – San Francisco River 15040002-001	15.2 mi	*E. coli*
	Gila River* Apache Creek – Cottonwood Creek 15040002-002	6.4 mi	*E. coli*
Verde	Granite Creek Headwaters to Yavapai Reservation 15060202-059A	6.2 mi	*E. coli*
	Granite Creek Yavapai Reservation - Watson Lake 15060202-059B	2.81 mi	*E. coli*
	Watson Lake 15060202-1590	152 acres	Nitrogen
			Low Dissolved Oxygen
			High pH

*Segments are in the watershed covered by the Upper Gila TMDLs for *E. coli* (ADEQ OFR 11-08), approved by EPA in 2012.

The EPA Finds That Arizona Demonstrated Good Cause for Delisting 24 Additional WQLSs

Arizona's 2016 303(d) Assessment identified 24 WQLSs from the 2012/2014 List that were not included on the 2016 List because analysis of available data supported a conclusion that applicable standards were no longer exceeded or otherwise demonstrated good cause for delisting.[1] See 2016 305(b) Assessment Report, Appendix E, Delisting Impairments from Arizona's submittal. ADEQ staff provided delisting reports in areas that further document the reasons for the delistings of the 24 waterbodies listed in table 3. Reasons for delisting in this

[1] Arizona identified 25 WQLSs to be delisted with good cause in its initial submission. However in the clarification letter, received May 23, 2017, Arizona stated that "After a closer inspection of the data, ADEQ does not have enough information to delist Granite Creek." Granite Creek is discussed below and the remaining 24 WQLSs are discussed in this section.

cycle included availability of more recent or more accurate data which demonstrate the WQS is being met, and other updated information. The EPA reviewed Arizona's rationales for delisting of waters that were previously included on its 2012/14 List and finds that the State demonstrated good cause for delisting the 24 WQLSs shown in Table 3.

Table 3: WQLSs delistings for the 2016 List

Watershed	Waterbody	Size	2012/2014 Cause of Impairment	Reason for Delisting
Bill Williams	Bill Williams River Alamo Lake to Castaneda Wash 15030204-003	35.9 mi	High pH	More Recent or Accurate Data
Colorado-Lower Gila	Colorado River Bill Williams River to Osborne Wash 15030104-020	13.4 mi	Selenium (total)	More Recent or Accurate Data
	Colorado River Main Canal to Mexico border 15030107-001	32.2 mi	Low dissolved oxygen	More Recent or Accurate Data
	Colorado River Imperial Dam to Gila River 15030104-001	15.3 mi	Selenium (total)	More Recent or Accurate Data
	Gila River Coyote Wash to Castle Dome Wash 15070201-003A	22.5 mi	Selenium (total) Boron (total)	More Recent or Accurate Data
	Gila River Castle Dome Wash to Fortuna Wash 15070201-003B	5.7 mi	Selenium (total) Boron (total)	More Recent or Accurate Data
Little Colorado	Bear Canyon Lake 15020008-0130	55 a	Low pH	More Recent or Accurate Data
Salt	Christopher Creek Headwaters to Tonto Creek 15060105-353	8 mi	Phosphorus	More Recent or Accurate Data
	Salt River Pinal Creek to Roosevelt Lake 15060103-004	7.5 mi	Suspended Sediment Concentration Phosphorus Nitrogen	More Recent or Accurate Data

Watershed	Waterbody	Size	2012/2014 Cause of Impairment	Reason for Delisting
Salt	Salt River Stewart Mountain Dam to Verde River 15060106A-003	10.1 mi	Low dissolved oxygen	More Recent or Accurate Data
	Tonto Creek Headwaters to 341810/1110414 15060105-013A	8.1 mi	Nitrogen Low dissolved oxygen	More Recent or Accurate Data
	Tonto Creek (TON) Tributary at 341810 / 1110414 to Haigler Creek 15060105-013B	8.5 mi	Nitrogen	More Recent or Accurate Data
Santa Cruz	Santa Cruz River Nogales WWTP to Josephine Can 15050301-009	9.1 mi	Total residual chlorine Ammonia Cadmium	More Recent or Accurate Data
	Santa Cruz River Roger Road WWTP Outfall to Intermittent Reach 15050301-003B	2.9 mi	Ammonia	More Recent or Accurate Data
	Santa Cruz River HUC 15050303 Boundary to Baumgartner Road 15050303-005A	14.5 mi	Dissolved copper	More Recent or Accurate Data
Verde	East Verde River American Gulch to Verde River 15060203-022C	25.8 mi	Arsenic (total)	Impairment due to non-pollutant
	East Verde River Ellison Creek to American Gulch 15060203-022B	20.3 mi	Selenium (total)	More Recent or Accurate Data

<u>The EPA Disapproves Omission of Six WQLSs and Proposes Adding them to the 2016 List</u>

This section describes the basis for the EPA's decisions to (1) disapprove the State's omission of a waterbody and associated pollutant from the 2016 List, and (2) propose to add the waterbody and associated pollutant to Arizona's 2016 List. Subsequent to submitting the 2016 List, ADEQ requested that the EPA add six WQLSs to the list. See Letter from Trevor Baggiore, ADEQ, to Tomás Torres, May 23, 2017. The EPA must first disapprove the omission of a WQLS before it can add the WQLS to the list. See 40 CFR 130.7 (d)(2). The EPA analyzed the State's waterbody assessments and supporting rationales, including those provided subsequent to the initial submission, to determine whether omission of the waters from the 2016 List was consistent with federal listing requirements and the provisions of State WQS.

When determining whether to add omitted waters to Arizona's 2016 List, the EPA first considered provisions within State WQS and, where necessary, referred to the EPA's water quality assessment guidance documents (EPA 2001, 2003, 2005, 2006, 2009). The EPA is proposing to add the WQLSs shown in Table 4 to Arizona's 2016 List.

Table 4: Waterbodies proposed for addition by the EPA to Arizona's 2016 List

Waterbody Name	Waterbody ID	Length / Area	Impairments
Apache Lake	15060106A-0070	2,192 acres	Mercury in fish tissue
Bartlett Lake	15060203-0110	2,376 acres	Mercury in fish tissue
Copper Creek	15050203-022A	6.641 miles	Cadmium, iron, and zinc
Granite Creek	15060202-059A	6.2 miles	Dissolved oxygen

Mercury Impairments in Apache Lake and Bartlett Lake

The EPA proposes to add WQLSs for Apache Lake and Bartlett Lake, which do not meet WQS for mercury. ADEQ has requested that EPA add WQLSs for Apache Lake and Bartlett Lake to the 2016 List due to fish tissue mercury exceedances because "Arizona does not currently have impairment identification procedures for listing waters based on mercury in fish tissue, but does believe these waters to be impaired." See Letter from Trevor Baggiore, ADEQ, to Tomás Torres, May 23, 2017.

The bioaccumulation of mercury in fish tissue poses a potential threat to human health. In January 2001, the EPA published its recommended CWA Section 304(a) water quality criterion for methylmercury, expressed as a fish tissue concentration value, and set at 0.3 milligram methylmercury per kilogram of wet-weight fish tissue, or 0.3 mg/kg. This criterion represents the concentration of methylmercury in freshwater and estuarine fish and shellfish tissue that should not be exceeded to protect consumers of fish and shellfish among the general population.

The EPA recommends that each state, territory, and authorized tribe use the criterion in establishing or updating WQS and in issuing fish and shellfish consumption advisories. Each state and authorized tribe remains free not to use the EPA's current recommendations, provided that their water quality criteria for methylmercury protect the designated uses and are based on a scientifically defensible methodology, considering bioaccumulation and local or statewide fish consumption. The EPA's methylmercury criterion of 0.3 mg methylmercury/kg in fish tissue is based on a total fish and shellfish consumption-weighted rate of 17.5 gm fish/day. Under CWA Section 303(c), each state and authorized tribe must adopt water quality criteria that protect designated uses.

CWA Section 303(c)(1) provides that each state and authorized tribe review their WQS every three years and modify and adopt WQS as appropriate. In 2009 ADEQ adopted the 0.3 mg/kg mercury fish consumption WQS but the IWIR has not been updated to include fish tissue

assessment procedures. ADEQ, as a result, is currently refrained from making impairment decisions based on fish tissue results. The fish tissue mercury exceedances in the IR are included for information purposes only, reporting an exceedance when the mean minus one standard deviation, for a minimum of five fish per species, is greater than 0.3 mg/kg. ADEQ's 2016 CWA Assessment states that until implementation procedures are adopted, ADEQ will not use fish consumption data for impairment listing decisions.

In February of 2016, ADEQ, in association with the Arizona Game and Fish Department, issued fish consumption advisories for largemouth bass in Apache Lake and for flathead catfish in Bartlett Lake based on mercury in fish tissue results. A July 2015 advisory in Bartlett Lake for channel catfish and largemouth bass was already in effect. Apache Lake is a 2,192-acre impoundment within the Salt River Watershed and the Salt River Project chain of reservoirs which provide water to the Phoenix metropolitan area. The lake is listed in Arizona's 2016 IR as inconclusive for fish consumption, despite finding 0.31 mg/kg largemouth bass mercury in fish tissue which exceed the 0.3 mg/kg applicable WQS. In the Verde River Watershed Report, ADEQ notes that a fish consumption advisory was issued for the waterbody for largemouth bass. Bartlett Lake is a 2,376-acre impoundment located in the Verde River Watershed and the Salt River Project area which provides water to the Phoenix metropolitan area. The lake is listed in the 2016 IR as inconclusive for fish consumption, although the mercury in fish tissue results for three fishes [0.35, 0.53, and 0.39 mg/kg for flathead catfish, largemouth bass, and channel catfish, respectively] exceed the 0.3 mg/kg applicable WQS. ADEQ notes in the Salt River Watershed Report that a fish consumption advisory was issued for the waterbody for the three aforementioned fishes. It is already listed as a high monitoring priority to collect more fish tissue samples due to the exceedances.

Section 303(d) of the CWA and its implementing regulations require that these waterbody-pollutant combinations be evaluated notwithstanding the earlier noted delay in updating the IWIR. Based on the EPA's review of available data for the two waterbodies, the arithmetic average mercury concentrations in a given game fish exceeded ADEQ's criterion of 0.3 mg methylmercury/kg in fish tissue. Thus, the Arizona fish consumption use is impaired for these waterbody segments, meeting the federal listing requirements under 40 CFR 130.7. As ADEQ believes, these waterbodies are impaired for mercury and do not support the "fishable" goals of the CWA. See 40 CFR 130.10(d)(6). Segments that exceed water quality standards, or do not support designated uses, meet the requirements for listing under 40 CFR 130.7. Reflecting the restrictions of the current IWIR, ADEQ is currently refrained from listing waterbodies against the mercury standard. Apache and Bartlett Lakes are impaired for mercury and ADEQ supports the EPA's proposal to add them to the 2016 List.

Iron, Cadmium and Zinc Impairments in Copper Creek

The EPA proposes to add WQLSs for Copper Creek, which does not meet WQS for cadmium, iron, and zinc. ADEQ has requested that the EPA add Copper Creek for impairments of iron, cadmium and zinc "due to post-submittal discovery of data indicating impairment." See Letter from Trevor Baggiore, ADEQ, to Tomás Torres, May 23, 2017. Copper Creek, from the Headwaters to Prospect Canyon, is located in the San Pedro Watershed. ADEQ became aware of

additional data in this reach which it shared with the EPA on November 1, 2016. The data included the dissolved metals results from 2011-2014 for cadmium, iron, and zinc (Table 5).

Table 5 Samples exceeding WQS for Copper Creek

Parameter	Applicable Criterion	Exceedances
Cadmium	6.2 µg/L	11, 57, 82, 365, 590 µg/L
Iron	1,000 µg/L	1,200, 1,100, and 5,900 µg/L
Zinc	379 µg/L	9,250, 17,000, 3,000, and 1,400 µg/L

This data shows exceedances, within this segment, of the applicable chronic criteria for Aquatic and Wildlife Warm Water (A&Ww) in Arizona Water Quality Standards at Title 18, Chapter 11, Appendix A, Table 1. Therefore, as ADEQ indicated in its letter sent May 23, 2017, Copper Creek should be listed for cadmium, iron, and zinc; the EPA proposes to add these WQLSs to the 2016 List.

Dissolved Oxygen Impairments in Granite Creek

The EPA proposes to add Granite Creek, which does not meet WQS for dissolved oxygen, to the 2016 List. Although Arizona initially delisted Granite Creek, ADEQ later stated that "[a]fter a closer inspection of the data, ADEQ does not have enough information to delist Granite Creek for dissolved oxygen" and requested that the EPA add Granite Creek to the 2016 List. See Letter from Trevor Baggiore, ADEQ, to Tomás Torres, May 23, 2017. Granite Creek, from the headwaters to the Yavapai Reservation, is located in the Verde Watershed. ADEQ determined after the initial submission to the EPA that "The exceedance rate [for dissolved oxygen] is still over [the WQS allowable] ten percent…"; there is not enough information within this assessment period to provide good cause to delist this WQLS. The EPA agrees that the more recent data does not alter the previous list's conclusion that Granite Creek is not meeting WQS for dissolved oxygen, and EPA therefore proposes to add this waterbody to the 2016 List.

<u>The EPA Defers Action on Omission of Two WQLSs</u>

The State omitted from the 2016 List two WQLSs located on tributaries to Queen Creek that were included on the 2012/2014 List. EPA is deferring action on these two WQLSs in consideration of a number of factors, including the absence of sufficient data.

<u>The EPA Is Not Required to Act on Arizona's TMDL Priority Ranking and Schedule</u>

The State's submittal includes a priority ranking for the completion for those waters requiring a TMDL. See 2016 CWA Section 305(b) Assessment Report, Appendix G, ADEQ TMDL Priority Ranking and Schedule for further information. The EPA finds that Arizona's 2016 priority rankings for TMDL development meet requirements related to priority setting in 40 CFR 130.7(b). The EPA is not taking action on these priorities as federal regulations do not require the EPA approval of priority rankings or schedules.

Administrative Record Supporting This Action

In support of this decision to partially approve and partially disapprove and add WQLSs to Arizona's 2016 List, the EPA carefully reviewed the materials submitted by ADEQ. The EPA record supporting the decision to approve the State's inclusion of the waters and pollutants identified on the State's 2016 CWA Section 303(d) Report and List, includes the materials submitted by the State, the EPA guidance concerning preparation of CWA Section 303(d) lists, the EPA's past comments on Arizona's listing methodology and draft lists, and the EPA's decision letter and this Enclosure.

The EPA is aware that the State compiled and considered additional materials (e.g., raw data and water quality analysis reports) as part of its list development process that were not included in the materials submitted to the EPA. It is unnecessary for the EPA to consider all of the materials considered by the State in order to determine that the State complied with the applicable federal listing requirements. Federal regulations do not require the State to submit all data and information considered as part of the submittal. See 40 CFR 130.7(b)(6)(ii). However, at the EPA's request, the State did provide additional materials, such as raw data and other relevant information. The EPA determined that the materials submitted by the State provide sufficient documentation to support the decision to partially approve, partially disapprove, and add WQLSs to the 2016 List.

References

ADEQ 2014. Tonto Creek Total Nitrogen TMDL Effectiveness Monitoring Report Recommendation for Delisting, January 2014.

ADEQ 2014. De-List Report for Total Selenium (Chronic) Reach 15060203-022B, East Verde River – Ellison Creek to American Gulch, April 23, 2014.

ADEQ 2014. Reach Segmentation and De-List Report for Total Boron & Total Selenium Reach 15070201-003 Lower Gila River – Coyote Wash to Fortuna Wash, September 1, 2014.

ADEQ 2015. Standard Operating Procedures for Surface Water Quality Sampling, March 2015.

ADEQ 2015. Surface Water Section Quality Assurance Program Plan Prepared by the Surface Water Section, February 2015. http://legacy.azdeq.gov/environ/water/assessment/download/SWS_QAPP.pdf

ADEQ 2015. Draft 2016 Status of Water Quality, Arizona's 305(b) Assessment and 303(d) Listing Report, June 2016. http://www.azdeq.gov/public-notice-call-comments-2016-draft-clean-water-act-assessment

ADEQ 2015. Final De-list Report for Total Arsenic Reach 15060203-022C East Verde River – American Gulch to the Verde River, June 9, 2015.

ADEQ 2016. Solicitation of Public Comments. Notified via email entitled "FW: Courtesy Copy: Notice of 45-Day Public Comment Period: Draft 2016 Clean Water Act Assessment (06/13/2016 - 07/28/2016)", June 13, 2016

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