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

JUN 18 2013

Michael Fulton
Director, Water Quality Division
Arizona Department of Environmental Quality
1110 West Washington Street
Phoenix, Arizona 85007

Dear Mr. Fulton:

I am hereby transmitting to you the final list of water bodies that EPA is adding to Arizona's 2010 list of water quality limited segments still requiring total maximum daily loads (TMDLs) pursuant to Clean Water Act Section 303(d), and 40 CFR 130.7(d)(2).

On March 1, 2013, EPA took action on Arizona's 2010 Section 303(d) List, approving the State's inclusion of all waters and pollutants that the State identified as requiring TMDLs and disapproving the State's omission of several water body-pollutant combinations that met federal listing requirements.

EPA provided public notice and solicited public comment on its identification of water body-pollutant combinations for inclusion on Arizona's List. The enclosure summarizes comments received and provides EPA's response, and Table 1 of the enclosure identifies the final list of water body-pollutant combinations added by EPA. The final list of water bodies that EPA is adding to Arizona's List includes two of the six water bodies and associated pollutants identified in EPA's March 1, 2013 letter.

If you have questions on any aspect of this final listing decision, please call me at (415) 972-3275, or refer staff to Karin Graves at (415) 972-3153.

Sincerely yours,

Jane Diamond
Director, Water Division

cc: Linda Taunt, Deputy Director, Water Division, ADEQ
Debra Daniel, Surface Water Section Manager, ADEQ
Jason Sutter, TMDL Unit Supervisor, ADEQ
Jackson Jenkins, Director, PCRWRD
Jeff Prevatt, Program Manager, PCRWRD Compliance

Enclosure

EPA Decision Concerning Arizona's 2010 Clean Water Act Section 303(d) List Responsiveness Summary and Final List of Water Bodies Added to Arizona's List of Water Quality Limited Segments Still Requiring a TMDL

Introduction

On March 1, 2013, EPA took action on Arizona's 2010 Section 303(d) List, approving the State's inclusion of all waters and pollutants that the State identified as requiring a total maximum daily load (TMDL) and disapproving the State's omission of several water bodies that exceeded federal criteria for mercury in fish tissue, and State aquatic and wildlife criteria for ammonia, chlorine and copper. The water bodies and associated pollutants that EPA added to the State's 2010 list of water quality limited segments requiring a TMDL were identified in Table 1 of the enclosure to EPA's March 1, 2013 letter.

On March 4, 2013, EPA began the public comment period on its action to add six water body pollutant listings to the Arizona 2010 303(d) list. EPA solicited public comment and provided notice of availability by posting EPA's public notice document on the EPA Region IX website; additionally EPA's public notice document was sent to all recipients on ADEQ's email list used to notice planning actions. EPA's comment period, 35 days long, closed on April 8, 2013.

Written comments were received from the Pima County Regional Wastewater Reclamation Department (PCRWRD) and the Arizona Department of Environmental Quality (ADEQ). PCRWRD and ADEQ commented on the four water bodies that exceeded State aquatic and wildlife criteria for ammonia, chlorine and copper. EPA reviewed the comments and decided to remove the four water bodies that exceeded State aquatic and wildlife criteria for ammonia, chlorine and copper from the list. EPA is not revising its decision to add the two water bodies that exceeded federal mercury criteria in fish tissue to Arizona's final 2010 list of water quality limited segments. EPA's response to PCRWRD's and ADEQ's comments follows their comments below.

Comments Received

1) PCRWRD Comment Summary:

"Pima County Regional Wastewater Reclamation Department (PCRWRD) appreciates the opportunity to submit comments regarding the above public noticed EPA action. We are writing to state our support of the Arizona Department of Environmental Quality's (ADEQ) decision to place the two Santa Cruz River reaches, Santa Cruz River – Roger Road WWTP outfall – Intermittent Reach (Water Body ID 15050301-003B), and Santa Cruz River – Canada del Oro – HUC 15050303 (Water Body ID 15050301-001) in Category 4b – Other pollution control requirements are reasonably expected to result in the attainment of the water quality standard Attachment I). Furthermore, while a third stream reach, Santa Cruz River – HUC 15050303

Boundary – Baum (Water Body ID 15050303-005A) has been characterized into Category 4b, we believe that additional considerations presented below indicate that there is inconclusive data for a determination of impairment for that segment.

We believe that after reviewing the information provided you will conclude that ADEQ's approach has achieved the desired results and that the Santa Cruz River is now in full attainment, obviating the need for a Category 4 or 5 listing. Nevertheless, we have prepared our response in accordance with the guidance for demonstrating Category 4b demonstrations. Based on the information discussed below we respectfully request that EPA revise its list of added waters to remove the three reaches of the Santa Cruz River itemized above."

2) ADEQ Comment Summary:

"The Arizona Department of Environmental Quality (ADEQ) appreciates the opportunity to submit comments regarding the above public noticed EPA action. ADEQ is requesting that EPA reconsider its decision to place four reaches of the Santa Cruz River (Water Body IDs 15050301-003B; 15050301-001 and 15050303-005A and 15050301-009) on Arizona's 2010 303(d) list. ADEQ believes that Category 4b: "Other pollution control requirements are reasonable expected to result in the attainment of the water quality standard"—is the correct classification for these waters based on the information discussed below."

EPA Response to PCRWRD and ADEQ

EPA appreciates the additional effluent and ambient water quality data, maps of the specific reaches and monitoring locations, specific sections of the Ina Road and Roger Road WWTP permits, and additional information provided by PCRWD.

EPA evaluated the information provided by PCRWD. EPA also reviewed information in the draft report *Upper Santa Cruz River Watershed – Data Compilation and Analysis* (Tetra Tech, 2013) as well as related emails, which are part of a collaborative effort between EPA and ADEQ to understand impairment issues in the Upper Santa Cruz River. EPA concludes that sufficient documentation was provided to justify excluding water bodies 15050301-003B, 15050301-001, 15050303-005A, and 15050301-009 from Arizona's 2010 list of water quality limited segments requiring a TMDL. Rationale for EPA's decision and specific information regarding each of the four water bodies is provided below.

Santa Cruz River water body 15050301-003B (Roger Road WWTP outfall to Intermittent Reach)

ADEQ placed water body 15050301-003B in Category 4b. There were two exceedances of the ammonia acute aquatic and wildlife effluent dependent water (A&Wedw) standard during the last 3 years of monitoring data in the assessment period (2006-2008), and four exceedances of the ammonia chronic A&Wedw standard during the assessment period (2004-2008).

Water body 15050301-003B is 2.9 miles in length, and classified as an effluent-dependent water. By Arizona's definition: "Effluent-dependent water means a surface water, classified under R18-11-113, that consists of a point source discharge of wastewater. An effluent-dependent water is a surface water that, without the point source discharge of wastewater, would be an ephemeral water." (Arizona Water Quality Standards for Surface Waters, p. 4). Except during precipitation events, flow in effluent-dependent water bodies is dependent on effluent from a point source discharge.

The Roger Road Wastewater Reclamation Facility (WRF) has a maximum treatment capacity of 41 million gallons per day (mgd), and effluent enters the Santa Cruz River at the base of water body 15050301-003B, (Roger Road WRF Permit No. AZ0020923, p. 4). Based on information provided by PCRWRD, the Roger Road WRF effluent discharge is the only known point source of ammonia to the water body (PCRWRD, p. 2). The Roger Road WRF Permit No. AZ0020923, which became effective on August 12, 2012, requires compliance with the ammonia water quality standard by January 30, 2015. As a result of the permit requirements, Pima County is currently replacing the WRF with a new 5-Stage Bardenpho WRF that will be able to meet ammonia standards applicable to this reach of the Santa Cruz River. Based on information from the PCRWRD, construction is one year ahead of schedule and will begin operation by the end of 2013.

Monitoring requirements for ammonia are included in the permit, and ADEQ has the ability to revise pollution controls as necessary (Roger Road WRF Permit No. AZ0020923 Fact Sheet, p.7). Since the new treatment process and permit requirements assure compliance with the ammonia standards by January 30, 2015, EPA has concluded that it is appropriate to place water body 15050301-003B in Category 4b instead of the 303(d) list of water quality limited segments.

Santa Cruz River water body 15050301-001 (Canada del Oro to HUC 15050303)

ADEQ placed water body 15050301-001 in Category 4b. There were three exceedances of the ammonia acute A&Wedw standard during the last 3 years of monitoring data in the assessment period (2006-2008), and six exceedances of the ammonia chronic A&Wedw standard during the assessment period (2004-2008).

Waterbody 15050301-001 is 8.6 miles in length, classified as an effluent-dependent water, and downstream of water body 15050301-003B.

The Ina Road WRF has a maximum treatment capacity of 50 mgd, and effluent enters the Santa Cruz at the base of water body 15050301-001, (Ina Road WRF Permit No. AZ0020001, p. 1). Based on information provided by PCRWRD, the Ina Road WRF and Roger Road WRF discharges are the only known point sources of ammonia to the water body (PCRWRD, p. 2). The Ina Road WRF Permit No. AZ0020001, which became effective on August 20, 2012, requires compliance with the ammonia water quality standard by January 30, 2014. As a result of the permit requirements, Pima County is currently replacing the WRF with a new 5-Stage Bardenpho WRF that will be able to meet ammonia standards applicable to this reach of the Santa Cruz River. Based on information from the PCRWRD, the Ina Road WRF began full de-

nitrification in September 2012, sixteen months ahead of the compliance schedule deadline. PCRWRD provided effluent data to show that from September 19, 2012 – March 5, 2013 the WRF has been achieving applicable ammonia standards in the effluent.

Monitoring requirements for ammonia are included in the permit, and ADEQ has the ability to revise pollution controls as necessary. (Ina Road WRF Permit No. AZ0020001 Fact Sheet, p.7). Since the new treatment process and permit requirements assure compliance with the ammonia standards by January 30, 2014, EPA has concluded that it is appropriate to place water body 15050301-001 in Category 4b instead of the 303(d) list of water quality limited segments.

Santa Cruz River water body 15050303-005A (HUC 15050303 Boundary to Baum)

Water body 15050303-005A is 24.5 miles long, and ADEQ placed the water body in Category 4b. There were five exceedances (all in 2004) of the copper acute Aquatic and Wildlife effluent-dependent water (A&Wedw) standard during the assessment period of January 1, 2004 – December 31, 2008.

Water body 15050303-005A is classified as an effluent-dependent water and is downstream of water bodies 15050301-003B and 15050301-001. Water for this reach is provided by effluent from the Ina Road and Roger Road WRFs.

Metal translator studies to determine the applicable dissolved to total ratio for copper were developed for both Ina Road and Roger Road WRFs and approved by ADEQ in 2010. The translator was applied to the effluent limits in the Ina Road and Roger Road WRF permits. Monitoring for copper at each of the WRF outfalls is required once a month (Ina Road Permit No. AZ0020001, p. 4 and Roger Road Permit No. AZ0020923, p. 4).

PCRWRD provided more current data (2006 through 2013) from both the Roger Road and Ina Road facilities in their comments to EPA. Since the translated copper standard was approved in 2010 and implemented in the permit, the effluent discharging to this water body is meeting the applicable translated copper standard. In addition, PCRWCD provided data to show that ambient monitoring data is meeting the applicable translated copper standard. EPA evaluated the new data provided and found that water body 15050303-005A is meeting the applicable translated copper standard and should not be included in Arizona's 303(d) list of water quality limited segments.

Santa Cruz River water body 15050301-009 (Nogales WWTP – Josephine Canyon)

ADEQ placed water body 15050301-009 in Category 4b. There were three exceedances of the chlorine acute A&Wedw standard during the last 3 years of monitoring data in the assessment period (2006-2008). This reach of the Santa Cruz is classified as an effluent-dependent water, and the Nogales International Wastewater Treatment Plant (NIWTP) discharges effluent at the base of water body 15050301-009. Effluent from the NIWTP is the primary source of water in the water body, although it also receives water (raw sewage and storm flow) flowing from

Nogales Wash. The NIWTP is not considered to be a current source of chlorine as the facility switched from chlorination to UV filtration in 2009 (Konner, 2013). In addition, ADEQ has included water quality effluent limits and ambient monitoring for chlorine residual in the draft NIWTP permit AZ0025607 (p. 47).

The NIWTP treats wastewater from Nogales, Arizona and Nogales, Sonora, Mexico that is delivered to the NIWTP through the International Outfall Interceptor. Generally, any water that is in Nogales Wash is not treated at the NIWTP. However, periodically the NIWTP pulls water from the Nogales Wash for treatment when there is a sanitary sewer overflow during dry conditions (Tetra Tech, 5). Since the 1990's additional chlorine has been added to the Nogales Wash during sanitary sewer overflows to counteract the smell and treat the raw sewage. It is likely that the source of the residual chlorine in the Santa Cruz River is the chlorine disinfection added to Nogales Wash.

EPA has concluded that the chlorine exceedances in water body 15050301-009 are likely the result of chlorine entering the water body from the Nogales Wash. EPA has also concluded that this water quality limited segment is likely to be addressed via a technology-based approach rather than a TMDL.

Final list of water body-pollutant combinations added to Arizona's list of water quality limited segments still requiring a TMDL

Fish tissue impaired for mercury

As described in the introduction above, EPA is not revising its decision to add two water bodies (Lake Powell – Water body 14070006-1130, and Tonto Creek – Water body 15060105-013B) to Arizona's final 2010 list of water quality limited segments requiring a TMDL. The water bodies were identified in Table 1 of the enclosure to EPA's March 1, 2013 letter. Rationale for adding these water bodies was included in the March 1, 2013 enclosure (EPA, 2013). EPA did not receive comments on its decision to add these two water bodies to the State's 2010 list of water quality limited segments requiring a TMDL.

Table 1, on the following page, presents the final list of water body-pollutant combinations that EPA is adding to Arizona's list of water quality limited segments still requiring a TMDL pursuant to Clean Water Act, section 303(d) and 40 CFR 130.7(d)(2).

Table 1: EPA's Additions to Arizona's 2010 Section 303(d) List of Water Quality Limited Segments Still Requiring Total Maximum Daily Loads for mercury in fish tissue

Water Body Name	Water Body ID	EPA Assessment Summary
Lake Powell	14070006-1130	ADEQ's criterion of 0.3 mg methyl mercury/kg in fish tissue exceeded, and fish consumption use impaired.
Tonto Creek - Trib at 341810 / 1110414 - Haigler Creek	15060105-013B	ADEQ's criterion of 0.3 mg methyl mercury/kg in fish tissue exceeded, and fish consumption use impaired.

References

EPA's Partial Approval and Partial Disapproval

EPA 2010. EPA's Partial Approval and Partial Disapproval Letter and Enclosure for Arizona's 2010 Section 303(d) List to Mike Fulton, ADEQ from John Kemmerer, Acting Director, Water Division, EPA Region 9. March 1, 2013.

Submittals

Arizona Department of Environmental Quality, 2012. Transmittal of the 2010 303(d) List. Letter from Mike Fulton, ADEQ, to Nancy Woo, USEPA and supporting materials, including the 2010 303(d) List, and responsiveness summary, dated October 17, 2012.

Arizona Department of Environmental Quality (ADEQ), 2013. Letter from Mike Fulton, ADEQ, to Karin Graves, EPA's Action to Add Waters to Arizona's 2010 List of Waters Requiring a Total Maximum Daily Load (TMDL), dated April 8, 2013.

Pima County Regional Wastewater Reclamation Department (PCRWRD), 2013. Letter from Jackson Jenkins, PCRWRD, to Karin Graves, EPA's Action to Add Waters to Arizona's 2010 List of Waters Requiring a Total Maximum Daily Load (TMDL), dated April 4, 2013.

Other Documents

Arizona Department of Environmental Quality (ADEQ). 2009. Title 18. Environmental Quality; Chapter 11. Department of Environmental Quality Water Quality Standards; Article I. Water Quality Standards for Surface Water.

ADEQ 2012d. Ina Road Permit No. AZ0020001, August 20, 2012.

ADEQ 2012e. Ina Road WRF Permit No. AZ0020001 Fact Sheet

ADEQ 2012f. Roger Road WRF Permit No. AZ0020923, August 12, 2012.

ADEQ 2012g. Roger Road WRF Permit No. AZ0020923 Fact Sheet

Email from Tom Konner, US EPA dated April 26, 2013

Email from Tom Konner, US EPA dated May 28, 2013

Tetra Tech, Technical Memorandum, DRAFT Upper Santa Cruz River Watershed – Data Compilation and Analysis, February 13, 2013