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RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

March 12, 2014

Dr. Jeong-Hee Lim, Water Resources Control Engineer
RWQCB - Colorado River Basin Region
73-720 Fred Waring Drive, Suite 100
Palm Desert, CA 92260

Dear Dr. Lim:

Re: Proposed 303 (d) List Revisions in the Colorado River Basin Region

The Riverside County Flood Control and Water Conservation District (District) appreciates the opportunity to provide comments on the proposed revisions to the Clean Water Act Section 303(d) List of Impaired Waterbodies in the Colorado River Basin Region. This letter is submitted on behalf of the Municipal Separate Storm Sewer (MS4) Permittees in the Whitewater River Region (the District, County of Riverside, Coachella Valley Water District, and Cities of Banning, Cathedral City, Coachella, Desert Hot Springs, Indian Wells, Indio, La Quinta, Palm Desert, Palm Springs, and Rancho Mirage).

The MS4 Permittees' comments pertain to the proposed addition of listings for total ammonia (i.e., ammonia, nitrogen) and toxicity in the Coachella Valley Stormwater Channel (Decision ID 30522 and 30527, respectively). Specifically, the MS4 Permittees request the following modifications:

- Clarify that the proposed new listings for toxicity and ammonia are not caused by MS4 discharges by revising the potential sources from unknown sources to the specific sources of the impairment[1]; and
- Modify the assessment methodology for the toxicity listing to be consistent with the State's 303(d) Listing Policy[2] as well as other Regional Boards.

These modifications are requested to ensure that a 303(d) listing, not caused by MS4 discharges, does not trigger unnecessary actions by the Permittees under the current[3] or future MS4 Permit. In addition to this comment letter, the MS4 Permittees would appreciate the opportunity to discuss the implications of, and approaches to addressing the potential listings with Colorado River Basin Regional Board (Regional Board) staff. Detailed information to support the requested modifications is provided below.

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[1] This modification would need to be made in several locations, including Table 1 in the Draft Resolution (R7-2014-0025), Draft Staff Report (Page 8), Attachment 4 and Attachment 8

[2] Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List, September 2004

[3] Order No. R7-2013-0011

COMMENT NO. 1 - CLARIFY THAT THE PROPOSED NEW LISTINGS FOR TOXICITY AND AMMONIA ARE NOT CAUSED BY MS4 DISCHARGES BY REVISING THE POTENTIAL SOURCES FROM UNKNOWN SOURCES TO THE SPECIFIC SOURCES OF THE IMPAIRMENT

1. **Dry Weather MS4 Discharges are not a Source of Flow in the Coachella Valley Stormwater Channel (CVSC) and therefore are not Contributing to Impairment**

   As described below, there are several lines of evidence which demonstrate that dry weather MS4 discharges are not a source of flow in the CVSC.

   - **Composition of Coachella Valley Stormwater Channel (CVSC) Flows**

     The CVSC is the only perennially flowing Receiving Water in the Whitewater River MS4 permit area; however, as noted in the current Whitewater River Region MS4 permit[4], MS4 discharges do not constitute a significant source of those flows (emphasis added):

     > "The CVSC is the 25 mile long, constructed downstream extension of the Whitewater River channel, beginning west of Washington Street in La Quinta and ending on the north shore of the Salton Sea. The lower 17-mile reach of the CVSC is the only surface waterbody in the Whitewater River Region that features perennial flow; ***these flows are dominated by effluent from NPDES permitted POTW discharges, rising groundwater, and agricultural return flows.***[5]"

   - **Regional Soil Type**

     Whitewater River Region soil types limit the ability for dry weather MS4 flows to reach the CVSC, as noted in the current MS4 Permit[6] (emphasis added):

     > "The predominant soil types within the Whitewater River Region are classified as Carsitas and Myoma.[7] ***These sands are extremely pervious, and promote rapid infiltration of runoff."***
     >
     > "Due to the small percentage of the Whitewater River Watershed and the Whitewater River Region in urban land uses, Permittee requirements for New Developments to retain Urban Runoff, and natural soil conditions, ***Urban Runoff constitutes a minor percentage of the total flow*** in the Whitewater River during storm conditions. During non-storm conditions, Urban Runoff discharges to Receiving Waters in the Whitewater River Region are also relatively minor based on flow volume."

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[4] Order No. R7-2013-0011, Page 12, 3rd bullet

[5] U.S. Geological Survey National Streamflow Information Program; California Regional Water Quality Control Board, Colorado River Basin, ***Basin Plan***, Table 2-3; Coachella Valley Final Water Management Plan, September 2002; Coachella Valley Water Management Plan 2010 Update, Draft Report, December 2010

[6] Order No. R7-2013-0011, Page 11, 3rd bullet; Page 11, 5th bullet

[7] "Soils of the Coachella Valley." Coachella Valley Water District, http://www.cvwd.org/conservation/soils.php

Additionally, as required by Phase 1 of the Bacterial Indicator TMDL at CVSC, the City of Coachella submitted and received Regional Board approval for its Quality Assurance Project Plan (QAPP) in May of 2013. One of the objectives of the City's QAPP is to conduct monthly monitoring to assess whether flows from the City's three MS4 outfalls have surface connectivity with flows in the CVSC. In accordance with Phase 1 implementation of the TMDL, this monitoring data is submitted to the Regional Board on a quarterly basis, and it provides evidence that as of May 2013, discharges from MS4 outfalls to the CVSC have not occurred. The Permittees request that Regional Board staff review this data, as it can provide additional valuable insight regarding MS4 contribution to flows in the CVSC.

- **Diversion of All MS4 Outfalls to CVSC to Drywells**

  There are only three MS4 outfalls which outlet to the proposed listed reach of the CVSC. As of 2011, all three of these outfalls have been diverted to dry wells[8], thereby ensuring that no discharges occur from the City of Coachella's MS4 to the CVSC during dry weather. During a site walk with City of Coachella staff on March 14, 2013, Regional Board staff confirmed the presence and functionality of the drywell diversions. The current MS4 permit[9] features language which reflects implementation of these BMPs:

  > "The City of Coachella has proactively implemented structural Best Management Practices (BMPs) to effectively infiltrate all Dry Weather Urban Runoff prior to reaching MS4 Outfalls regulated by the CVSC Bacterial Indicators TMDL. These structural BMPs were completed in 2011 with additional modifications planned to improve the effectiveness of the Avenue 52 outfall controls. These BMPs ensure that there are no discharges from the City's MS4 during Dry Weather."

  The analysis used for the proposed 303(d) listings is based on data from 2005 – 2008, and therefore does not take this major change to the MS4 into account.

The lines of evidence above demonstrate that MS4 discharges are not responsible for flows in the CVSC. In addition, as dry weather discharges from MS4 outfalls are now being diverted, any remaining impairment issues cannot be attributable to MS4 discharges.

2. Wet Weather MS4 Discharges Did Not Cause the Exceedances on Which the Proposed 303(d) Listings are Based

The basis for the proposed listings is data collected through the Surface Water Ambient Monitoring Program (SWAMP) on the following dates:

- October 26, 2005
- May 2, 2006

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[8] Personal communication, Berlinda Blackburn, Environmental/Regulatory Programs Manager, City of Coachella, September 1, 2011

[9] Order No. R7-2013-0011, Page 16, Finding 44

- May 8, 2007
- October 22, 2007
- April 22, 2008; and
- October 29, 2008

According to rainfall records for these years (see Attachment A, Table A-1 - Table A-6), no wet weather discharges occurred on the day of, or 72 hours prior to these sample dates. Therefore, MS4 wet weather discharges did not cause the exceedances on which the proposed listings are based.

In summary, as demonstrated by the multiple lines of evidence above, neither dry weather nor wet weather MS4 discharges are contributing to the impairments proposed as new listings for the CVSC. Therefore, the Permittees request that the proposed new listings for toxicity and ammonia be revised to clarify that the impairments are not caused by MS4 discharges.

COMMENT NO. 2 - MODIFY THE ASSESSMENT METHODOLOGY FOR THE TOXICITY LISTING TO BE CONSISTENT WITH THE STATE'S 303(D) LISTING POLICY AS WELL AS OTHER REGIONAL BOARDS

The supporting documentation for the proposed toxicity listing in the CVSC identifies three of nine samples as exceeding the objective. However, the Permittees are unable to replicate this outcome based upon the raw data used in the assessment. It appears that data were evaluated inconsistently, where for some sampling events the test results were evaluated together for a single date, and for other sampling events the test results were evaluated independently for a particular date. Therefore, the Permittees are submitting a 303(d) assessment that is consistent with methodologies in the State's 303(d) Listing Policy, as well as the methodologies used by other Regional Boards[10]. The assessment and the resulting analysis are included as Attachment B.

The revised assessment is being requested to ensure that the 303(d) List accurately analyzes the available data, as it has implications not only for the listing decision, but also for the factors that must be met for delisting decisions in the future. As the State's 303(d) Listing Policy is based upon a binomial equation that derives allowable exceedances per a particular sample size, the number of exceedances, as well as the methodology used to derive those exceedances, are important.

For example, based upon the Permittees' analysis of the raw data used for the proposed listing[11], only two of seven samples exceed the water quality objective, whereas the Regional Board's assessment identifies three of nine samples. Per the State's Listing Policy, a waterbody meets the listing criteria for two exceedances in a sample size of 2-24 and for three exceedances in sample size of 25-36. While both analyses result in meeting the listing criteria, based upon available data, the sample sizes demonstrate the importance of accurately determining the number of exceedances. If additional data are provided through the comment process or in the future, the determination of impairment could be driven by the

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[10] See toxicity listings in the 2010 303(d) List for the Los Angeles and San Diego regions

[11] Provided via email on February 6, 2014, from Dr. Jeong-Hee Lim, Water Resources Control Engineer, Colorado River Basin Regional Water Quality Control Board

methodology rather than the actual data. Utilizing the methodology requested by the Permittees, 18 out of 18 additional samples that meet water quality objectives are necessary to demonstrate that the CVSC is unimpaired by toxicity. Utilizing the Regional Board's methodology, at least 34 out of 34 additional samples that meet water quality objectives are necessary to demonstrate that the CVSC is unimpaired by toxicity. Further, the delisting criteria are even more stringent than the listing criteria, potentially compounding the issue in the future. Therefore, an accurate assessment of the data are critical for the listing decision as well as for future delisting decisions.

In addition, consistent with the Permittees' analysis, the two exceedances identified were collected in 2005 and 2006. Since that time, all dry weather MS4 discharges have been diverted (see Comment No. 1). The State's 303(d) Listing Policy specifically states[12]:

> "If the implementation of a management practice(s) has resulted in a change in the water body segment, only recently collected data [since the implementation of the management measure(s)] should be considered."

Therefore, consistent with Comment No. 1 and Comment No. 2, it is important to accurately determine the number of exceedances, when the exceedances occurred relative to the implementation of management actions, and the source of the exceedances. As demonstrated in this comment letter, the source of the exceedances are not MS4 discharges.

In summary, the Permittees request (1) the proposed new listings for toxicity and ammonia are revised to clarify that the impairments are not caused by MS4 discharges; and (2) the assessment methodology for the toxicity listing be revised per Attachment B, consistent with the State's 303(d) Listing Policy as well as the methodology utilized by other Regional Boards.

The MS4 Permittees are committed to water quality in the Colorado River Basin Region and look forward to the continued collaboration with Regional Board staff. Thank you for your consideration of these comments. If you have any questions, please contact me at aadiaz@rcflood.org or 951. 955.8602.

Very truly yours,

Arturo Diaz

ARTURO DIAZ
Water Quality Planning Manager

Attachments: Attachment A - Rainfall Records
Attachment B - Revised Analysis for Toxicity Data

ec: Whitewater Municipal Stormwater Permittees

SEB:cw
P8/159462

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[12] State Water Resources Control Board Resolution No. 2004-0063 (303(d) Listing Policy), Section 6.1.5.3

ATTACHMENT A: RAINFALL RECORDS

Table A-1. Daily Rainfall for October 2005 (inches). Dark blue lines identify sample collection date (October 26, 2005). Light blue lines indicate prior 72 hours. Sum refers to precipitation within the month. Total refers to annual precipitation to-date. (Source: Riverside County Flood Control and Water Conservation District).

	October 2005				
Day	Banning	Palm Sprgs	DHS	Ro. Mirage	Cath City
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					0.05
15					
16					
17	0.23	0.70	1.18	1.61	0.63
18	1.06	0.90	0.88	0.26	1.13
19					
20			0.01		
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
Sum	**1.29**	**1.60**	**2.07**	**1.87**	**1.81**
Total	**3.16**	**1.99**	**3.57**	**2.44**	**2.28**

Table A-2. Daily Rainfall for April and May 2006 (inches). Dark blue lines identify sample collection date (May 2, 2006). Light blue lines indicate prior 72 hours. Sum refers to precipitation within the month. Total refers to annual precipitation to-date. (Source: Riverside County Flood Control and Water Conservation District).

	April 2006					May 2006				
Day	Banning	PalmSprgs	DHS	Ro.Mirage	Cath City	Banning	PalmSprgs	DHS	Ro.Mirage	Cath City
1										
2										
3										
4	0.01									
5	1.46	0.10	0.08		0.01					
6	0.54	0.09	0.11	0.04	0.01					
7					0.01					
8										
9										
10										
11	0.01									
12										
13										
14										
15	0.39									
16	0.02									
17										
18										
19										
20										
21										
22						0.06				
23						0.01				
24	0.01									
25										
26										
27										
28										
29										
30										
31										
Sum	**2.44**	**0.19**	**0.19**	**0.04**	**0.03**	**0.07**	**0.00**	**0.00**	**0.00**	**0.00**
Total	**11.68**	**3.61**	**5.75**	**3.17**	**3.21**	**11.75**	**3.61**	**5.75**	**3.17**	**3.21**

Table A-3. Daily Rainfall for May 2007 (inches). Dark blue lines identify sample collection date (May 8, 2007). Light blue lines indicate prior 72 hours. Sum refers to precipitation within the month. Total refers to annual precipitation to-date. (Source: Riverside County Flood Control and Water Conservation District).

	May 2007				
Day	Banning	PalmSprgs	DHS	Ro.Mirage	Cath City
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23	0.01				
24					
25					
26					
27					
28					
29					
30					
31					
Sum	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**
Total	**2.89**	**0.12**	**0.12**	**0.07**	**0.49**

Table A-4. Daily Rainfall for October 2007 (inches). Dark blue lines identify sample collection date (October 22, 2007). Light blue lines indicate prior 72 hours. Sum refers to precipitation within the month. Total refers to annual precipitation to-date. (Source: Riverside County Flood Control and Water Conservation District).

	October 2007				
Day	Banning	PalmSprgs	DHS	Ro.Mirage	Cath City
1					
2				0.08	
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13	0.06				
14	0.01				
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
Sum	**0.07**	**0.00**	**0.00**	**0.08**	**0.00**
Total	**0.10**	**0.02**	**0.01**	**0.08**	**0.03**

Table A-5. Daily Rainfall for April 2008 (inches). Dark blue lines identify sample collection date (April 22, 2008). Light blue lines indicate prior 72 hours. Sum refers to precipitation within the month. Total refers to annual precipitation to-date. (Source: Riverside County Flood Control and Water Conservation District).

	April 2008				
Day	Banning	PalmSprgs	DHS	Ro.Mirage	Cath City
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
Sum	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Total	**13.42**	**5.23**	**5.15**	**2.47**	**4.27**

Table A-6. Daily Rainfall for October 2008 (inches). Dark blue lines identify sample collection date (October 29, 2008). Light blue lines indicate prior 72 hours. Sum refers to precipitation within the month. Total refers to annual precipitation to-date. (Source: Riverside County Flood Control and Water Conservation District).

	October 2008				
Day	Banning	PalmSprgs	DHS	Ro.Mirage	Cath City
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
Sum	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Total	**0.15**	**1.41**	**0.13**	**0.55**	**0.65**

ATTACHMENT B: REVISED ANALYSIS FOR TOXICITY DATA

The available data include samples collected from two different locations within the CVSC:

- CVSC near the outlet to the Salton Sea
- CVSC at Avenue 52

Five (5) sampling events occurred at CVSC near the outlet to the Salton Sea, while two (2) sampling events occurred at CVSC at Avenue 52 (Table B-1). If the sites are combined to characterize the CVSC, then the sample size is seven (7). Alternatively, the data may be used to more specifically identify where exceedances of the objective are occurring (e.g., making the listing specific to the segment of the CVSC). In that case, the maximum sample size would be five (5) for the CVSC near the outlet to the Salton Sea and two (2) for the CVSC at Avenue 52.

Table B-1. Number of Discrete Sampling Events for Proposed Toxicity Listing

Sample Date	CVSC Near Outlet to the Salton Sea	CVSC at Avenue 52*
10/26/2005	NA	x
5/2/2006	x	x
5/8/2007	x	NA
10/22/2007	x	NA
4/22/2008	x	NA
10/29/2008	x	NA
Total Samples By Site	5	2

* Samples collected prior to the implementation of diversions. All MS4 drains that outlet to the CVSC are now diverted.

In addition, two test species are assessed for two different chronic endpoints at each of the sampling sites:

- Ceriodaphnia dubia (percent survival and reproduction)
- Pimephales promelas (percent survival and growth)

In evaluating toxicity data for the 303(d) List, both the Los Angeles and San Diego Regional Water Quality Control Boards evaluate the test species separately, but represent the two chronic endpoints as one resultant value (e.g., exceeding either or both endpoints results in a single exceedances). This approach recognizes that different organisms have different sensitivities to different stressors/pollutants and is consistent with the State's 303(d) Listing Policy that states[13]:

> "For data that is not temporally independent (e.g., when multiple samples are collected at a single location on the same day), the measurements shall be combined and represented by a single resultant value."

[13]State's 303(d) Listing Policy, Section 6.1.5.6

Based upon the data used in the proposed toxicity listing, and utilizing the approach consistent with the State's 303(d) Listing Policy and other Regional Board's 303(d) assessment, the resulting assessment yields the following:

- For Ceriodaphnia dubia: 2 of 7 samples exceed the objective
- For Pimephales promelas: 2 of 7 samples exceed the objective

The analysis is detailed in Table B-2 and Table B-3 and summarized in Table B-4. The Permittees request that this assessment replace the assessment utilized for the proposed toxicity listing for the CVSC.

Table B-2. Revised 303(d) Assessment for Toxicity in CVSC, Based upon Ceriodaphnia dubia

	CVSC Near Outlet to the Salton Sea		
	Ceriodaphnia dubia	Ceriodaphnia dubia	Summary of Exceedances
Sample Date	Reproduction	Percent Survival	For Ceriodaphnia dubia
5/2/2006	No	No	0
5/8/2007	No	No	0
10/22/2007	No	No	0
4/22/2008	No	No	0
10/29/2008	No	No	0
Total Number of Samples			5
Number of Exceedances			0
	CVSC at Avenue 52		
	Ceriodaphnia dubia	Ceriodaphnia dubia	Summary of Exceedances
Sample Date	Reproduction	Percent Survival	For Ceriodaphnia dubia
10/26/2005*	Yes	Yes	1
5/2/2006*	Yes	No	1
Total Number of Samples			2
Number of Exceedances			2

* Samples collected prior to the implementation of diversions. All MS4 drains that outlet to the CVSC are now diverted.

Table B-3. Revised 303(d) Assessment for Toxicity in CVSC, Based upon Pimephales promelas

	CVSC Near Outlet to the Salton Sea		
	Pimephales promelas	Pimephales promelas	Summary of Exceedances
Sample Date	Growth	Percent Survival	For Pimephales promelas
5/2/2006	No	No	0
5/8/2007	No	No	0
10/22/2007	No	No	0
4/22/2008	No	No	0
10/29/2008	No	No	0
Total Number of Samples			5
Number of Exceedances			0
	CVSC at Avenue 52		
	Pimephales promelas	Pimephales promelas	Summary of Exceedances
Sample Date	Growth	Percent Survival	For Pimephales promelas
10/26/2005*	Yes	Yes	1
5/2/2006*	Yes	Yes	1
Total Number of Samples			2
Number of Exceedances			2

* Samples collected prior to the implementation of diversions. All MS4 drains that outlet to the CVSC are now diverted.

Table B-4. Summary of Exceedances Based upon the Revised 303(d) Assessment for Toxicity in the CVSC

	CVSC Near Outlet to Salton Sea	
	Ceriodaphnia dubia	Pimephales promelas
Number of Samples	5	5
Number of Exceedances	0	0
	CVSC at Avenue 52*	
	Ceriodaphnia dubia	Pimephales promelas
Number of Samples	2	2
Number of Exceedances	2*	2*
	Entire CVSC	
	Ceriodaphnia dubia	Pimephales promelas
Number of Samples	7	7
Number of Exceedances	2*	2*

* Samples collected prior to the implementation of diversions. All MS4 drains that outlet to the CVSC are now diverted.