San Diego Bacteria TMDL Meeting, 10/29/15

Meeting Notes, Action Item List, Decision Record, and Parking Lot

MEETING NOTES

The meeting summary is organized around major points in the meeting agenda, which is included at the end of the meeting summary, along with a list of attendees. Agreements are **highlighted in bold**. Action items are listed at the end of the meeting summary.

1. Introduction and Purpose of Meeting

The purpose of the meeting was to:

- Discuss flow chart to support process
- Continue discussion on draft TMDL target language
- Provide overview of Tecolote QMRA and Wet Weather Epi Study

2. Process Flow Chart

Ashli Desai (LWA) went over the proposed draft flow chart describing the process. A few potential changes were noted:

- Jimmy Smith (RWQCB) noted that decisions on the targets may not be needed to prepare the Problem Statement.
- Jeremy Haas (RWQCB) suggested that the reference studies might also inform the selection of indicators.
- Jimmy Smith requested that the legend be modified to note that the studies are a line of evidence that provides information for a decision rather than just supporting a decision.
- Todd Snyder (County of San Diego) noted that the Wet Weather Epi Study might impact the source analysis and consideration of non-MS4 sources.
- Jimmy Smith requested that the methodologies for analysis of samples be included as one of the discussion/decision items under the TMDL Implementation Plan and Schedule.

Drew Kleis (City of San Diego) requested that a discussion of the purpose of the Cost Benefit Analysis occur at a future meeting to ensure that everyone was on the same page. Todd Snyder suggested that the discussion start by looking at the purpose outlined in the Triennial Review. This topic will be agendized for a future meeting (see parking lot list).

Drew Kleis asked how the number of users would be considered in the analysis. Jimmy Smith noted that the key would be to link to the beneficial uses and figure out how to monetize the value of a few users versus many users. Cynthia Gorham (RWQCB) noted that it may be a consideration in prioritizing and scheduling BMPs. Jimmy Smith noted that management actions could consider alternatives to structural BMPs in these situations, such as informing and educating the few users.

3. TMDL Targets-Discussion Item

An updated handout was provided that included draft TMDL Target language for consideration with decisions highlighted with updates based on the discussion at the October 7, 2015 meeting.

The first main discussion item was continued discussion on the 32 vs. 36 illness rate to be used as part of the agreed upon risk-based framework. Jeremy Haas (RWQCB) noted that as part of the Triennial Review, the RWQCB staff were to look at the science, studies and other available information to

determine if they support making changes. So the first question is does the science support changing to an illness rate of 32 from the current rate of 36 illnesses per 1000. In his view, the RWQCB would likely say yes so then need to consider the implementation, costs and other factors to determine if it is appropriate to make the change. Jimmy Smith (RWQCB) noted that the RWQCB would want to understand the costs and additional BMPs that would be required to address the lower illness rate and if it would truly make a difference to implementation. The discussion also covered whether a 13241 analysis would be needed (see parking lot items) and noted that the Cost Benefit Analysis should consider both illness rates in the alternatives analysis. Jeremy proposed a decision on the illness rate which was agreed to by the County of San Diego and City of San Diego with a few modifications. Jian Peng (Orange County) will confer with Chris Crompton on the decision and confirm moving forward in the process with the following decision.

> **Both the 36 and the 32 per 1000 illness rates are scientifically defensible and the 32 per 1000 illness rate represents an incremental improvement in water quality in accordance with the 2012 USEPA criteria. ~~The 32 per 1000 illness rate has been selected with the possibility of revision based on the results of the Cost Benefit Analysis and/or if the SWRCB selects the 36 per 1000 illness rate as part of the Revision of Bacterial Objectives.~~ (Decision modified at the November 19 Workgroup meeting)**

The language used to express the risk-based framework and the proposed illness rate in the draft TMDL language handout will be reviewed by RWQCB staff and comments will be provided by November 6, 2015 to Chris Minton (LWA).

The second discussion point was on the selection of indicators. **The participants agreed that using *E. Coli* as the single indicator for freshwater and Enterococcus as the single indicator for marine waters.** Jeremy noted that both indicators are valid in freshwater per the USEPA 2012 criteria, but local information supports using *E. Coli* only. The consultant team was requested to develop supporting information for the Draft Technical Report that considers the public health component as well as the reference reach information and discussion of sources and regrowth to justify the selection of *E. Coli*. Additionally, Jimmy noted that the TMDL may need to consider the impacts of watershed enterococcus loading on marine waters even if *E. Coli* is the only freshwater indicator.

The third discussion point was on the interpretation of the Statistical Threshold Value (STV) in the USEPA 2012 Criteria document. The consultant team recommended interpreting the STV as a single sample value. Based on the discussion, the consultant team was requested to prepare more background on the STV and the proposed recommendation for discussion at the next meeting. The background should include the potential public health implications of the decision and the basis for selecting the 90th percentile value for the STV and the implications of the decision for beneficial use protection. Additionally, the purpose of the STV should be articulated to understand its purpose. Jeremy Haas noted that there might be different considerations for changes to the water quality objectives in the Basin Plan and the interpretation of those objectives into the TMDL as targets.

The method of calculating the geometric mean for comparison to the geomean objective was briefly discussed, but will be discussed further at the next meeting. Participants were asked to review the analysis provided at the 10-7-15 meeting in preparation for the discussion in November.

4. Tecolote QMRA- Information Item

Dustin Bambic (Paradigm Environmental) provided an overview of the Tecolote QMRA study. The presentation provided an overview of conducting QMRAs in general and noted that the absence of significant human signals was needed to move forward with doing a QMRA study. In the Tecolote study, the initial year of monitoring resulted in a human signal detected in the lower watershed. This resulted in a year of source abatement work to reduce the human signal. Several hot spots have been addressed,

generally in places where old sewer pipes overlay the storm drain system. Additional monitoring is being done to see if human markers have been reduced to allow completion of the QMRA.

As part of the discussion, questions about potential implementation language that could be included in the TMDL to address the infrastructure issues was discussed. Jeremy Haas proposed a potential process whereby if human sources were identified by a MS4, the MS4 would notify the RWQCB and the RWQCB would then contact the sewer agency to address the issue. This approach was proposed because the RWQCB cannot provide an allocation to these agencies because discharge of untreated sewage is prohibited. Todd Snyder (County of San Diego) had some concerns about the MS4 being responsible for identifying these issues. This item has been included in the parking lot table for future discussion.

5. Wet Weather Epi Study- Information Item

Jo Ann Weber, County of San Diego, provided an overview of the initial Wet Weather Epi Study results. Key messages from the presentation included:

- Ocean exposure does result in an increase in gastrointestinal illness regardless of indicator bacteria concentration. This is consistent with other epidemiological studies and shows the surfers in the study were not any healthier than other populations.
- The study has the second most exposure days of any epidemiological study conducted to date.
- There was a higher incident of gastrointestinal illness in wet weather as compared to dry weather.
- A relationship was found between enterococcus and illness rate during wet weather with a less strong relationship during dry weather.
- Additional analysis is needed to compare the illness rates to the USEPA criteria thresholds.
- Human markers were found during wet weather and the concentrations were higher during larger storms.
- In the San Diego River, the further away the samples were collected from the river mouth, the lower the indicator bacteria concentrations with the two furthest away sites being below the objectives for most of the collected samples.
- For the preliminary QMRA analysis, norovirus, which only comes from human sources, was the primary virus contributing to the health risk of the samples in both watersheds with similar concentrations found in both watersheds. The City and County are embarking on a source identification study to this winter to identify potential sources.

The next study group meeting is on December 8th. The results of the comparison to the USEPA criteria illness rates will be presented at that meeting and the RWQCB staff is encouraged to attend. An update to the RWQCB on the study will occur during the December 16, 2015 RWQCB meeting.

6. Next steps

Agreed on next steps include:

- Team will prepare background information on the STV
- RWQCB staff will review the draft TMDL targets memo and flow chart and provide comments by November 6, 2015 to Chris Minton
- Team will update the draft TMDL targets memo and flow chart based on any comments received by November 6, 2015

See the Workgroup Action Items Report for a complete list of all action items and their status.

7. Next meeting date

The next workgroup meeting will be November 19, 2015, from 9:30 AM – 1:30 PM, per the agreed meeting schedule.

Attendees

Regional Board: Jeremy Haas, Michelle Mata, Jimmy Smith
San Diego City: Ruth Kolb, Drew Kleis
San Diego County: Todd Snyder, Jo Ann Weber
Orange County Public Works: Jian Peng
Team: Dustin Bambic, Clint Boschen, Ashli Desai, Chris Minton

Agenda

San Diego Bacteria TMDL Workgroup Meeting
City of San Diego Storm Water Office – Conference Room 1
9370 Chesapeake Drive, Suite 100, San Diego 92123
Meeting #8-October 29, 2015 9:30 am to 1 pm

1. Introductions and Purpose of Meeting (9:30-9:35 am)

2. Process Flow Chart (9:35-9:55 am)

    a. Purpose: Review flow chart describing the various decisions and their interactions with one another and the special studies.
    b. Handout: Process flow chart
    c. Relevant studies: None
    d. Decisions: None

3. TMDL Targets-Discussion Item (9:55-11:45 am)

    a. Purpose: Discussion of key decisions items presented at 9/10/15 meeting
    b. Handout: Draft risk-based language, presentation on requested analysis
    c. Relevant studies: USEPA 2012 Criteria, Reference Reach Study
    d. Decisions: May be outgrowth of discussion

4. Tecolote QMRA Overview (11:45-12:15 pm)

    a. Purpose: Information item update on study
    b. Handout: None
    c. Relevant studies: Tecolote QMRA
    d. Decisions: None

5. Wet Weather Epi Study Update-Information Item (12:15-12:45 pm)

    a. Purpose: Information item update on study results
    b. Handout: None
    c. Relevant studies: Wet Weather Epi Study
    d. Decisions: None

6. Next Steps (12:45 am-1 pm)

San Diego Bacteria TMDL Workgroup Action Items Report

Key to status colors:

- Green indicates a completed deliverable
- Blue indicates greater than 30 days until the deliverable is due
- Yellow indicates a deliverable is due within 30 days
- Red indicates an overdue deliverable

Mtng Date	Deliverable	Assigned To	Due Date	Status	Comments
08/27/15	List of studies, completion dates, value added, implications for reopener	Consultant team	09/02/15		
08/27/15	Distribute draft cost sharing agreement	Todd Snyder	09/10/15		
08/27/15	Review past MOUs to assess whether useful concepts or language can be borrowed for this MOU	Drew Kleis, Ruth Kolb	09/10/15		
08/27/15	Discuss cost sharing agreement	Workgroup	09/10/15		
08/27/15	Finalize MOU	Workgroup	09/10/15		
08/27/15	Michelle Mata to meet with small group to review planned overall approach and its relationship to schedule; develop picture of how pieces fit in logical progression	Michelle Mata, Clint Boschen, Chris Minton, Ashli Desai, key permittees	10/7/15 meeting handout		
09/0/15	Evaluate implications of 32 vs. 36 illness rate using available monitoring data from creeks and beaches	Chris Minton, Dustin Bambic	10/7/15 meeting presentation		
09/10/15	Frame a more formal description of how a risk-based framework could be used in the TMDL	Ruth Kolb	10/7/15 meeting handout		
09/10/15	Develop options for calculating geomeans that account for varying intensities/frequencies of monitoring events	Chris Minton, Dustin Bambic	10/7/15 meeting presentation		
09/10/15	Expand the example table (single sample vs. STV) to include a column showing how the geomean compares to the single sample and STV results	Chris Minton, Dustin Bambic	Undefined, but soon		
09/10/15	Prepare a set of scenarios showing a range of comparisons across the options presented	Chris Minton, Dustin Bambic	10/7/15 meeting presentation		
10/07/15	Prepare background information on the basis for the 32 vs. 36 illness rates	Chris Minton, Dustin Bambic	10/29/15 meeting		
10/07/15	Add language to draft TMDL targets memo to explain the	Chris Minton, Dustin	10/29/15 meeting		

	applicability of the reference reach analysis in the risk-based framework	Bambic			
10/07/15	Prepare a draft decision flow chart	Ashli Desai, Clint Boschen	10/29/15 meeting		
10/07/15	Prepare a draft Technical Report outline	Team	12/10/15 meeting		
10/29/15	Prepare background information on STV	Team	11/12/15		
10/29/15	Provide comments on draft decision flow chart and draft TMDL targets memo	RWQCB staff	11/6/15		
10/29/15	Provide revised TMDL targets memo and flow chart based on comments	Team	11/12/15		

San Diego Bacteria TMDL Workgroup Decision Record

Number	Date	Decision	Type	Yes	No	Abstain
2015-1	09-02-15	Allow two weeks for review of meeting notes	Consensus			
2015-2	09-02-15	Michelle Mata to take on central coordinating role	Consensus			
2015-3	09-02-15	Materials for discussion/review distributed minimum of 10 calendar days before meeting	Consensus			
2015-4	09-02-15	Meeting agendas to include decision points, discussion lead, intended outcomes, and reference to background documents	Consensus			
2015-5	09-02-15	Use 9/10 meeting as trial run for planned approach to more detailed discussion	Consensus			
2015-6	09-10-15	Future discussions of methods for calculating exceedance rates and related topics will account for different settings (freshwater, marine, bays) where this has important implications for the policy	Consensus			
2015-7	10-07-15	Overall schedule of completion between December 2017 and April 2018 with target of September 2016 for technical report	Consensus			
2015-8	10-07-15	Documentation and justification of assumptions will be provided in technical report	Consensus			
2015-9	10-07-15	Use of risk-based framework is appropriate	Consensus			
2015-10	10-29-15	Both the 36 and the 32 per 1000 illness rates are scientifically defensible and the 32 per 1000 illness rate represents an incremental improvement in water quality in accordance with the 2012 USEPA criteria. ~~The 32 per 1000 illness rate has been selected with the possibility of revision based on the results of the Cost Benefit Analysis and/or if the SWRCB selects the 36 per 1000 illness rate as part of the Revision of Bacterial Objectives~~. (decision modified at the November 19 Workgroup meeting)	County San Diego, City of San Diego and RWQCB agreed. Pending final agreement from Orange county			
2015-11	10-29-15	*E. Coli* as the single indicator for freshwater and Enterococcus as the single indicator for marine waters	Consensus			

San Diego Bacteria TMDL Workgroup Parking Lot

Meeting Date	Issue	Tentative Meeting Date for discussion
9/10/15	Relationship of monitoring locations and procedures to compliance	TBD
10-29-15	Purpose of Cost Benefit Analysis Study and alternatives to be considered in the study	December or January
10-29-15	Need for 13241 analysis for proposed objectives	TBD
10-29-15	Methodologies for monitoring and analysis	TBD
10-29-15	Approach for addressing non-MS4 contributions (particularly wastewater) in TMDL	TBD