Beaches and Creeks TMDL Cost-Benefit Analysis
Steering Committee Meeting
May 31, 2017

Steering Committee Members Present
Jeremy Haas, San Diego Regional Water Quality Control Board
Jimmy Smith, San Diego Regional Water Quality Control Board
Todd Snyder, County of San Diego, Watershed Protection Program
Ruth Kolb, City of San Diego, Storm Water and Transportation
Rob Hutsel, San Diego River Park Foundation
Chris Crompton, County of Orange, Stormwater Quality Planning
Ted Shaw, Atlantis Group, representing San Diego County Taxpayers Association
Jeff Van Every, City of San Diego Public Utilities Division

Supporting Roles
Lewis Michaelson, Katz & Associates
Bree Robertoy, Katz & Associates
Natalia Hentschel, Katz & Associates
Chad Praul, Environmental Incentives (participating via phone)
Evan Branosky, Environmental Incentives (participating via phone)
Jo Ann Weber, County of San Diego
Helen Yu, San Diego Regional Water Quality Control Board
Michelle Santillan, San Diego Regional Water Quality Control Board
Clint Boschen, TetraTech (participating via phone)
David Pohl, ESA
Andy Collison, ESA
Tony Hancock, Brown & Caldwell
Jian Peng, County of Orange, Stormwater Quality Planning

Technical Memo - Restoration Approach [ESA]
Detailed responses to Steering Committee and Technical Advisory Committee (TAC) comments regarding the *Inputs for Stream and Riparian Habitat Restoration San Diego and Orange Counties* report are provided in a memo submitted by ESA on May 2, 2017. ESA made the following updates to the report:

- The 50 percent contingency used in the original report was reduced to 25 percent to maintain consistency with other cost estimates.
- An additional analysis of bacteria removal efficiency ranges was performed. ESA did not change the number of watersheds not in attainment, and the analysis only included publicly owned sites. The results are provided in the technical memo and will also be included in the Cost-Benefit Analysis (CBA) report.
- A wetland case study was added to the report. The study is based on parcel evaluation that is converted to watershed scale.
- Discussion was added to the report regarding co-benefits of dry weather systems. ESA did not provide a quantitative analysis.

Steering Committee Questions/Comments

- J. Smith: Flow rates of 1 or 1.5 CFS are more consistent with dry weather conditions.
    - ESA used a continuous hydrologic model. The model assumes a certain capacity for dry weather, then calculations are done to bypass that. Systems also sometimes run in tandem in modeling.
- J. Haas: Urbanized watersheds affect hydrology.
    - Yes, particularly on the infiltration side. The San Diego hydrologic model accounts for that.
- J. Smith: I recall a comment regarding expanding beyond natural systems to join more traditional BMPs with this approach; did you address that?
    - The comment was to include a natural treatment system in combination with other BMPs for an overall solution. The next step in the process will probably be to combine scenarios. Having a more engineered system would result in higher efficiency.
- Is it possible to analyze how much retrofit (e.g., by analyzing which projects are subject to redevelopment under the MS4 permit) would be required to meet regulations as a next step? This would help when deciding which tools to employ. How we combine scenarios to determine implementation tools is the next step.
    - We have to know where in the system there need to be retrofits. It would be localized to neighborhood level.
- J. Smith: We will not only be combining scenarios, but we may also be changing from using fecal indicator bacteria to FH183. In the future, we will need to address how to incorporate and translate these.

<u>Technical Memo - Stormwater Scenarios</u> [TetraTech]

In response to comments and questions submitted by the Steering Committee and TAC, TetraTech made the following updates to the Stormwater Scenarios:

- More detailed documentation was added regarding modeling, including an appendix that discusses the background of the modeling and calibration used in the CBA.
- Illness risk estimates were addressed by calculating confidence intervals and 5^{th}/95^{th} percentile risk estimates to bracket the results.
- Clarification was provided regarding what stormwater sources looked at versus human sources, as well as endpoints.
- Main report and appendix text was streamlined to ensure consistency.
- Additional calculations were performed for high and low illness risks.

Steering Committee Questions/Comments

- H. Yu: Provide an update on dilution factor calculations. Was there a consensus regarding which should be used?
    - The assumptions used for the original analysis were maintained, and documentation was added to the report. The dilution factor was conservative and based on the Surfer Health Study.
- J. Smith: Only one BMP was similar between San Diego and Orange County, and costs and efficiencies were starkly different.
    - City of San Diego engineers and the consultant team looked into that. They are working with Environmental Incentives to update the report.

Technical Memo - Human Sources Scenario [Brown & Caldwell]
In response to comments and questions submitted by the Steering Committee and TAC, Brown & Caldwell made the following updates to the Human Sources Scenario:

- Geographic adjustments were made to San Diego drainage. Areas were excluded that drain from non-spilling reservoirs. Non-spilling reservoirs were defined by J. A. Weber and were calculated based whether they spill, not whether they are capable of spilling.
- Analyses for San Diego County and Orange County were combined into one memo.
- Clear language and caveats were added to clarify that confidence in the analysis is not high enough to warrant implementation actions. A 'stamp' was added on tables, and language was added to the report.
- Rough order of magnitude cost estimates were provided. The consultant team is conducting a sensitivity analysis.
- Provided a range to Soller Environmental using loading calibrations and SCCWRP's ranges.
- Pie charts were removed as they are prone to misinterpretation.
- Language was added regarding sanitary sewer pipe leakage.
- The cost-effectiveness curve was removed.
- Septic system loading was revised.
- SSO/PSLD volumes were calculated as averages.
- Language was added in the transient population section to clarify that FH183 is not a good surrogate for viruses.
- Language was clarified throughout document.

Steering Committee Questions/Comments

- J. Smith: We may receive a public comment that Rec-1 use can't be discounted in areas that are excluded in the CBA.
- T. Shaw: The table for load reduction strategies shows a column for 100 percent removal, but the text states that 100 percent removal is unlikely. I'm looking for consistency/clarity.
    - That is the difference between ideal and practicable. Removal of 100 percent represents an upper limit system, but not a reality. We looked at the number in terms of total loading and load removal, not meeting a regulatory target. Removal of 100 percent may be above and beyond any regulatory target established.
    - **ACTION:** Add language to explain this distinction.
- J. Smith: The load reduction strategies table shows pathogens, but there is no scenario where human waste is allowed in Chollas Creek.
    - There is zero tolerance for dumping waste, but there is no such thing as a leak-proof system.
- J. Smith: How do we translate the results of this scenario to risk? That is the ending we should achieve.
- T. Shaw: For the transient population, the cost per person is listed as $14,000; is that annual?
    - Yes, the figure was pulled from a 2010 grand jury report. A caveat is included in the text saying that those costs don't include a lot of services.
- J. Smith: Is recommendation language included regarding what additional data is needed?
    - Broad recommendations are included at the end of the memo.
    - **ACTION:** Include additional recommendations regarding data needs in the report.

Communication Plan

A Communication Plan is in development to assist the Steering Committee in communicating about the CBA process and report. The final draft of Phase I of the Communication Plan was submitted to the larger Steering Committee for review and approval. The Steering Committee was offered the opportunity to discuss components of the Plan with the consultant who developed it and asked to provide approval of the Plan, if possible.

Steering Committee Discussion & Recommended Changes

- R. Hutsel: I'm most interested in strategies for communicating with individual user groups.
    - The Communication Plan is meant to cover a lot of different entities communicating with different stakeholders in a variety of platforms.
- T. Snyder: In regards to the development of materials happening in conjunction with Phase II, I would suggest bundling those into the consultant scope of work for Phase II.
    - J.A. Weber: The consultant is developing a two-page fact sheet with the next deliverable.
- J. Smith: My concern is that the key messages seem too high level and don't communicate findings. They also seem overly positive. We would want to make them more realistic to address data limitations and uncertainty. The messages should convey intrigue in potential bacteria load reduction (e.g., from transient population), but also uncertainty.
    - It is important to provide positive statements regarding value. Results will be the focus of messages developed in Phase II of the Communication Plan, as the results are not yet final. Phase I messages are process-driven.
    - **ACTION:** Add some discussion of results in Phase I.
- T. Snyder: If we compare where we are today versus where we were before the CBA process, we have made great strides. The TMDL has already been implemented, so the whole idea that we need more information to act is false, as the action has already been committed.
- C. Crompton: Regarding the key message that states, "The CBA was developed with the best readily available science," the science wasn't readily available. We put a lot of effort into it.
    - **ACTION:** Remove 'readily' from key message #2.
- T. Snyder: Create a fifth key message surrounding the limitations of the report to flesh it out.
    - T. Shaw: I think it would go under the scientific validity section.
    - **ACTION:** Katz & Associates will work with Environmental Incentives to develop the limitations messaging.
- J. Smith: What about including recommendations in the key messages (e.g., if we had X data we could inform implementation better in X way)? This should also be included in the workshop presentation.
    - C. Praul: There will be a section in the report to discuss recommendations for additional study.
    - The CBA is part of a larger policy discussion. Recommendations are meant to provide a more reliable, confident CBA. Other policy decisions will be dealt with in another forum.
- R. Hutsel: Talking point #4 suggests that the CBA process is closed, but it is still an open process. Talking points should focus on opportunities for the public to provide comment.
    - **ACTION:** Split talking point #4 into two points. The first should convey that the project team received scoping comments and incorporated them into the CBA. The second should focus on upcoming opportunity for public comments on the draft CBA report.

- T. Snyder: Success would be achieved if we don't just stop with this CBA, but continue with additional analyses. If we continue to collect data and do another report, that would be the definition of success.
- J. Smith: Keep in mind the San Diego Water Board is concerned with reducing risk at the most efficient cost; that is how the public will define success.
- C. Crompton: I see the CBA as a finite effort, as it was a large effort. We may revisit it later, but I see this as finite.
- J. Smith: When I see the term 'this CBA,' it makes me think of one CBA, but this is really 12 CBAs if you count each scenario. Each has their own takeaway. Depending on the policy scenario adopted, recommendations are different. Maybe allude to that in the Communication Plan.
    - **ACTION:** Katz & Associates will work with Environmental Incentives to resolve.
- **OTHER ACTIONS:**
    - Add 'U.S.' to mentions of EPA throughout the Communication Plan.
    - Elaborate on the definition of "adaptive process," and add that this will inform other processes.
    - Add cost efficiency to key message #1.
    - Replace references to swimming with 'recreation.'

<u>Schedule</u>

- The updated draft CBA will be provided to the Steering Committee on June 14. The committee will have two weeks to review and prepare comments to be discussed orally at a meeting on June 28.
- A teleconference is scheduled on July 7 to make decisions regarding next steps and whether another Steering Committee review is required before public review of the CBA.
- The document will be released to the public via the San Diego Water Board website on July 17.
- The public workshop will be held August 1 or 2 at either the San Diego Water Board or County of San Diego.
- Comments from the Steering Committee or public requiring major change in analysis would result in an extension of the schedule, as only two weeks are allotted to address comments.
- The final document is anticipated to be delivered Sept 21.

Steering Committee Questions/Comments

- There needs to be clear criteria regarding what would warrant a postponement/stop in the process.
    - J. Smith: I can agree to a high threshold (e.g., fatal flaw).
    - C. Crompton: We have discussed the CBA at length. I'm not seeing anything that would stop the process.
- R. Hutsel: I'd prefer to provide notice of the workshop at least 30 days in advance. The San Diego River Park Foundation can distribute the notice through its newsletter.
    - M. Mata: The notice will be distributed via the website and electronically to those who signed up for notifications.
    - **ACTION:** M. Mata to check and make sure attendees of the scoping workshop are registered to receive notifications.
- J. Haas: How many pages will the document be? I would like more time for review of final document.
    - The draft will be about 125 pages in the report and 200 pages in the appendices.

- **ACTION:** Add time for review of the final document, which will result in an extension of the final deadline.

Next Steps

- J. A. Weber will send out an update on the Ocean Beach Recreation Observations study.
- Environmental Incentives is developing the workshop presentation. Katz & Associates will assist as needed.