project clean water

Water Quality Improvement Plan
Carlsbad Watershed Management Area
Consultation Committee Meeting
January 22, 2014
11:30 a.m. – 2:00 p.m.

Consultation Committee Recommendations Form

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General Comments

1. Overall, the Copermittees should be commended for their work in establishing the Water Quality Improvement Plan (WQIP) framework and working with the Consultation Committee.
2. Based on the experience of the first Consultation Committee meeting (January 22, 2014), the following suggestions are offered for the development of the Carlsbad Watershed Management Area (WMA) WQIP (Carlsbad WQIP):
    - It is recognized that the call for data should have a time constraint so that regulatory schedules can be met. However, when it is determined that other data sources exist and have significant effect, then those data/information should be incorporated into the Carlsbad WQIP.
    - The Consultation Committee members have already begun to contribute a significant amount of effort reviewing and providing comments and recommendations. Out of courtesy and to minimize any challenges during future Regional Water Quality Control Board (RWQCB) public hearings, it is recommended that a response-to-comments document or equivalent be prepared. At minimum, the disposition of Consultation Committee comments should be explained. Additionally, acknowledgement should be provided in the document to credit the individuals/organizations serving on the Consultation Committee.
    - It is highly recommended that an additional meeting be scheduled to review the sections on sources and potential strategies in the current Draft Carlsbad WQIP conditions before moving on to other document sections. The section on the highest priority water quality conditions (HPWQC) is supported by monitoring data that has been vetted and is fairly straight forward to review. However, the sections on sources and strategies in the Draft Carlsbad WQIP lack specificity and do not provide a clear idea of HPWQC sources in the WMA nor strategies to address them. Although it is recognized that the process is not “consensus” driven, it is significantly more powerful to have the stakeholders onboard with this process, particularly when it comes to developing strategies. This will prevent/minimize significant re-work, of subsequent document sections (sources, strategies, etc.), and challenges during RWQCB public meetings.

Priority Water Quality Conditions

1. Identification of the Priority Water Quality Conditions (PWQCs) for the Carlsbad WMA should be based on a careful review and evaluation of the available data collected from multiple sources throughout the WMA. Because significant resources will likely be expended to meet the compliance targets and goals of the WQIP, it is extremely important that the information used for determining PWQCs are based on scientifically credible data. The multiples lines of evidence (MLOE) approach taken by the Responsible Agencies is appropriate in this regard because it appears to rely heavily on regulatory drivers (TMDLs and 303(d) listings), the Long-Term Effectiveness Assessment (LTEA), and the Regional Monitoring Program, all of which contain transparent assessment processes and data that have gone through a QA/QC process. We believe the quality of the data used to make any assertions within the WQIP need to be clearly explained with respect to how the data were used in the PWQC prioritization process.
2. Currently, the Draft Carlsbad WQIP provides a framework for how the PWQCs were determined, but does not provide sufficient detail to determine the objectivity of that process. For instance, based on the Regional Monitoring Data and the LTEA, it could be argued that total dissolved solids (TDS) is a PWQC because it is considered a high priority in both assessments. The same could be said for Poor IBI scores. This is based on the language in the text referring to consistency and correlations between MLOEs. However, neither of these metrics are listed as regulatory drivers and therefore do not rank high compared to constituents such as indicator bacteria. Since the determination of the PWQCs is a critical first step in determining the strategies (and resources) for improving water quality in the WMA for the foreseeable future, we feel it is important that the process by which the PWQCs were established should be described clearly in the Carlsbad WQIP to sustain stakeholder support for the process and eliminate any confusion on priorities moving forward.
3. That said, based on the summary provided in Table 1 of the Draft Carlsbad WQIP and the supporting documents provided to the Consultation Panel, we agree that the PWQCs are Indicator Bacteria, Nutrients, Sediment, and Toxicity and that the overall highest priority water quality condition (HPWQC) in the WMA is Indicator Bacteria.
4. We also recommend that a single high priority water quality condition (indicator bacteria) be the focus for the following reasons:
    - There is a TMDL for bacteria in the San Diego Region that has strict deadlines for compliance (which will focus resources on effective BMPs to meet regulatory targets);
    - Indicator bacteria are identified as priority constituents during both wet and dry conditions, which means that BMPs will need to address all weather conditions;
    - Having a single Highest PWQC will help prioritize BMP implementation by focusing resources on the most ubiquitous pollutant;

- Bacteria is one of the most difficult pollutants to remove from water in the environment, thus BMPs focused on indicator bacteria will likely remove many other pollutants as well.

5. Although we feel that indicator bacteria is a good candidate for the HPWQC, we feel it is important that the other PWQC be included in any evaluation of BMP strategies. This can be accomplished by assessing the efficacy of a BMP for indicator bacteria as the primary focus (e.g., through pollutant removal evaluations or cost/benefit analyses), while also including an assessment of the efficacy of that BMP for treating nutrients, sediment, and toxicity. Since indicator bacteria will essentially act as a surrogate for other pollutants, evaluating the efficacy of a BMP's ability to remove those pollutants will help verify the extent to which the BMP will improve water quality overall.
6. In addition, we feel that the prioritization process that includes all the PWQCs should include a separate evaluation of each hydrologic sub-area (HAS) in the WMA. It should be recognized that the high priority water quality condition may not be the same for each HSA (for example, spatial patterns for some constituents such as Phosphorus, are evident in Table 1). A separate evaluation for each HSA should not be difficult, given the data that have already been collected. This will provide site-specific information and help develop the most efficient and effective strategies for improving water quality throughout the WMA.
7. It should also be recognized that different temporal patterns exist for some constituents. For instance, sediment is clearly a concern during wet weather, but not during dry weather. The opposite pattern may be observed for nutrients. The PWQCs should be determined separately for dry and wet weather to help determine BMP selection and phasing.
8. Nutrients should be further defined as nitrogenous based compounds (e.g., nitrate or total nitrogen) and phosphorus compounds (e.g., total phosphorus to orthophosphate). This is important because the sources and remediation strategies for nitrate are likely very different from those of phosphorus and lumping them together may reduce BMP effectiveness.
9. Finally, the LTEA assessment acknowledges that the standards for nutrients are different in dry and wet weather, which may account for the differences in PWQCs during dry and wet weather assessments in the LTEA and Regional Monitoring Program. For instance, I believe that the standard for dry weather nitrogenous compounds is based on a Total Nitrogen Basin Plan objective of 1 mg/L (which is based on a biostimulatory threshold) and for wet weather it is 10 mg/L for nitrate (which is based on a drinking water standard). These differences in standards may have a strong influence on the extent to which nutrients are ranked in the prioritization process and should be acknowledged in the Draft Carlsbad WQIP.

Additional specific recommendations are provided below:

Page 1, Introduction:

The purpose statement should be more descriptive and reflective of the required benchmarks being used in the permit – to state that the WQIPs are guidance towards "improved water quality" may be misleading – it is suggested that a more defined benchmark other than "improved water quality" – i.e., the Basin Plan, TMDL(s) or other defined benchmark in the Permit replace the statement …" towards "improved water quality".

Identify that the WQIP adaptive process is an annual update.

Page 1: Delete "agricultural lands" - these land uses are under the jurisdictional MS4 programs under Existing Development and Businesses, AND development and are not "non-MS4" sources. Certain commercial agricultural businesses will fall under the draft WDRs for agricultural lands. Provide more specificity as to how agricultural land uses will be categorized as non-MS4 sources under the WQIP process.

Page 1, footnote 3:

a. This footnote should be in the body of the document.
b. This does not describe the correlation between the MS4 Permit and how the WQIP operates within the Permit. The WQIP and MS4 Permit have many complex inter-relationships, including the following:
    - BMP Design Manual (Regional Effort)
    - Alternative Compliance Project Types for Water Quality and HMP (Permit Section E)
    - Water Quality Equivalency (WQE) (County Effort)
    - WMAA process (Regional Effort)
    - Existing Development Requirements
    - Development and Redevelopment Requirements
    - Responsible Agency Individual JURMP Programs

c. The statement that " unless there is a quantifiable nexus between MS4 discharges and receiving water conditions, conditions may be outside of the copermittees' purview" should be referenced back to the specific permit condition that this states – or is this under the MEP UNLESS the area is within a TMDL?

    The above should be addressed in more detail as a basis for selecting the Priority Water Quality Conditions, MS4 Sources, and Potential Strategies, as footnote 3 is unclear regarding how this statement was arrived at.

Page 1 - Term used for "Non-MS4 Sources"– There seems to be a dual use of this term – is this term being applied for entities that are outside of the MS4 permit? It appears that it is being used to describe land uses in this context that ARE within the MS4 permittees' responsibility to control (i.e., agricultural, existing development are within an MS4 permit holders responsibility). This term should be more clearly defined and relate back to the Permit condition that defines it.

Page 2 – MLOE Process

The MLOE process and categories is appropriate as a basis for identifying the PWQC and HPWQC; however, the conclusion for the selected PWQC needs more justification. It is suggested that a tiered approach be used since strategies can be used for multiple pollutants and that a table be provided to identify the PWQC and the HPWQC that can be treated by the same strategies and programs – such as bacteria and pollutants.

Table 1:

- General: Add row to identify if CLRPS OR BLRPS are being prepared for each HSA

Page 8

- PWQC and HPWQC should be identified in a *tiered approach for each HSA* to allow for a flexibility of programs and projects to be identified as strategies both watershed-wide and within each jurisdiction.
- Identify or provide nexus between the general pollutant categories and the discrete pollutants listed in Table 1. Discuss that different pollutant types within a general category may require different strategies to address (subtype, wet, or dry conditions).
- The HMP criteria should be based on the default HMP for development projects that assume the lower threshold for stream channel susceptibility for the majority of the watershed. Also, the County's WMAA analysis should be used to inform this process. So the statement on page 8 needs to be revised – HMP impacts ARE captured in regulatory drivers.
- The SWRCB Trash Policy should be identified as a potential driver.

Green Box page 8:

- Clarify what the "rigorous process" will be;
- How will copermittees schedule and implement the strategies?
- PWQC/HPWQC Identification:
  - Available strategies are known to have quantifiable positive effects - *the strategies listed at the end of this memo are not identified as to whether or not these met the criteria* – for example are the applicable to wet AND dry conditions??

- This specific list for HPWQC *does not justify the selection of Bacteria over Nutrients given.*
- The statements: there are "acceptable standards and criteria"/"combination of above"- Table 5 for Nutrients and Bacteria is inconsistent – while standards are in development for algae indicators, there is a Basin Plan numeric benchmark for nutrients. This needs to be listed. This is what the MS4 permit states and it seems odd that this is sidestepped in Table 5 and that the identification process, while it starts out in a scientific fashion ends up appearing to be pre-determined without the MLOE process in play.

Sources of Pollutants and Stressors

1. The WQIP needs to be more specific when listing the sources. Table 3 provides very little useful information on the sources of PWQCs because it is not constituent-specific. Future drafts should provide more detail on the specific sources of indicator bacteria in the WMA and other PWQCs (as they relate to the sources listed in Table 3).

We have provided some specific comments below:

Page 9

- Define "regular basis" re: WQIP update schedule.
- Add wet or dry conditions
- Table 3 – clarify the units are either each OR number

Table 3: Areas in agriculture should be in acres. It is misleading that this is zero or less than 4 for the entire watershed. The same comment can be applied to parks, landfills and golf courses which are land intensive. There should be some estimate of percent of land area or some apples to apples comparison. How were the residential areas calculated – SANDAG existing land use maps?? Some consistency should be applied.

- Provide an explanation how agricultural sources are outside of the MS4 permit since this a zoning issue administered through the individual jurisdiction and the runoff from these areas enters the MS4 areas.
- Suggest consistent use of the term copermittee versus responsible agencies as defined in beginning of the memo.
- Is the General Industrial Category indicative of the SWRCB General Industrial Permit Holders? Clarify if this is the case.

Potential Water Quality Strategies

We recognize that the strategies presented in this first Draft of the Carlsbad WQIP are general in nature. However, per the comments above, it would be very helpful to better understand the geographic component of the identified conditions, sources and stressors for this WMA in order to provide more in-depth consideration of the potential strategies presented. The list of potential strategies provided in Attachment 1 appears to be a generic list of BMPs that has no specific relevance to the PWQCs, particularly indicator bacteria. Specific recommendations are provided below.

1. Please provide strategies that are specific to indicator bacteria and the other PWQCs. Many of the BMPs listed in Attachment 1 may have little effect on reducing bacterial concentrations and loads in the WMA. Other basic steps of identifying BMPs should be included. For example, the most effective way to determine appropriate BMPs for indicator bacteria is to conduct a bacterial source identification study to understand the host origin and transport mechanisms of bacteria in the watershed. A recent series of papers on bacterial markers was published as part of the Source Identification Pilot Project (SIPP), coordinated by the Southern California Coastal Water Research Project (SCCWRP). SCCWRP also released a document on conducting bacterial source identification studies in late 2012. Understanding the sources of indicator bacteria in the WMA should be considered as the first step in defining a strategy for BMP implementation.
2. It is recommended that the WQIP employ a "triple-bottom-line" approach in evaluating potential strategies to address priority water quality conditions. The "triple-bottom-line" approach evaluates the environmental, economic, and social components of potential strategies in order to balance potential environmental benefits with social and economic factors.
3. Many sources are unknown – do not apply strategies to these if they are not verified sources.
4. Many of the strategies do not correlate to the water quality condition. Please revise Attachment 1 accordingly.
5. Some strategies are vague or not clearly defined. For example, the strategies associated with the Regulatory Revisions are not very well defined. Please identify the concepts that would be included in the amendments to these documents.
6. Potential structural BMPs should consider a variety of regional measures to contribute to the discussion of strategy in order to evaluate potential effectiveness, feasibility, costs, and funding options. This narrative would help to define concepts and costs to create alternative compliance methodology.

Additional specific recommendations are provided below:

Page 11

- Potential Strategies List (Green Box)

    - Add HOAs

- Should expand the definition of "strategies" to be more comprehensive so that they can function at an individual category level, jurisdictional level, HSA level or watershed –wide level – BMPs and Activities should be revised to include:
    - Programs
    - Projects
    - BMPs

  It is not clear what is meant by activities – these are better folded into "programs". Provide a better definition of "activities". Are these MS4 mandated?

- The JURMP programs that will affect or tie into the Alternative Compliance Strategies listed in the Permit section E need to be identified and included.
- The WQIP strategies and JURMP programs can become an alternative compliance program for development. This discussion is missing the connective thoughts as to what these programs really mean and how they work together – please include the linkage between that section of the permit in E, this WQIP, and the impairments.

Attachment 1

- More work needs to be done to connect the strategies with the criteria listed in Table 5.
- Identify how any of these meet the criteria listed on page 8.
- Identify which of these strategies may be alternative compliance eligible if developed into a program jurisdiction-wide

The Alternative Compliance Program Should be separated into its own section and expanded to include the following so that it is consistent with the WQE project list developed by the County:

- Green Streets
- LID Conversions (medians, parks)
- Agency Wide Filter Installation
- Protection of watershed through land purchase is flexible
    - Upland – 25% slopes
    - Floodplain
    - Reduction of Floodplain Build Up
    - MSCP/MHCP purchase of mitigation lands
    - Preservation of Function of Floodplain

- Established water/sewer or other agency programs/projects can be used if they meet permit criteria
  - IRWM
  - Stormwater can be groundwater
- In Lieu Fee Program
- 401/404 Mitigation Credits – Water Quality/HMP

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- Based on this discussion and the criteria presented, it appears that there is flexibility to identify those pollutants that can be addressed with the same programs and projects as strategies. A tiered approach whereby there are companion pollutants that can be addressed alongside the bacteria so that each jurisdiction can have more flexibility to address as well. The selection is not well supported, given the criteria and the information in Table 5 where it appears that Nutrients and Bacteria meet the criteria.

Table 5:

1. All – Cite specific data sources of conclusions.
2. Add Basin Plan Numeric Objectives Specifically OR TMDL numeric requirements
3. It appears that some statements need to be qualified whether or not it is being focused on a sub HSA OR the entire watershed. Perhaps break this out by HSA, as there are unique features for each HSA.
4. MS4 Sources of nutrients are known from studies conducted in San Marcos Lake. Please add this information to Table 5.
5. Why are "historic land uses" in this table – again MS4 agencies and the Permit do not distinguish between historic – it recognizes current conditions – land uses are regulated by jurisdictions and have been since 2001 – so this is an inaccurate statement at best and is not discussed anywhere in this memo regarding "historic". Delete this phrase – the same can be said for the other pollutants as well. Please point to the permit condition that identifies this or rewrite this to be more in context.
6. The way strategies with known positive effects is addressed in the Draft Carlsbad WQIP (i.e., referring to the LTEA) is weak; the toolbox needs to be filled with as many tools as possible, including manufactured BMPs, all pointing to the flexibility intended in the MS4 permit. An exclusive reliance on standard BMPs will likely limit our ability to improve water quality, particularly in dealing with indicator bacteria, where the science is rapidly evolving.
7. Acceptable Standard: Add Row for Basin Plan WQOs and provide discrete numeric WQO.
8. Nutrients

a. MS4 Sources: item 2 appears to be unsupported by any data addressing historic land uses – the MS4 permit does not address historic land uses. This should be deleted.
b. Standards: replace with Basin Plan – proposed should not be a rationale that there are "acceptable " standards