

April 22, 2011

Kurt Berchtold, Executive Officer  
California Regional Water Quality Control Board/Santa Ana Region  
3737 Main Street, Suite 500  
Riverside, CA 92501-3348

Subject: Model Water Quality Management Plan and Technical Guidance Document

Dear Mr. Berchtold: *Kurt*

On March 22, 2011, the County of Orange, in cooperation with the Orange County Flood Control District and cities of Anaheim, Brea, Buena Park, Costa Mesa, Cypress, Fountain Valley, Fullerton, Garden Grove, Huntington Beach, Irvine, La Habra, La Palma, Laguna Hills, Laguna Woods, Lake Forest, Los Alamitos, Newport Beach, Orange, Placentia, Santa Ana, Seal Beach Stanton, Villa Park, Westminster and Yorba Linda (Permittees) provided a Model Water Quality Management Plan (MWQMP) for your review. A Technical Guidance Document and Non-Priority Project Water Quality Plan that were developed in conjunction with the Model WQMP were also provided. The County supports your approval of the Model WQMP as amended by the Revision Sheets provided to your staff this week.

The discussion today regarding these documents highlighted two outstanding issues of Permittee concern. Regarding linear utility projects, your staff noted that such projects that ultimately maintain alignment and grade would not be deemed "Priority Projects" and thus not require a WQMP. The errata sheet presented today excised language presented in our Revision Sheets that exempts projects maintaining line and grade. The County notes that linear utility projects have historically not been subject to Project WQMP requirements and they are specifically exempted in the 2007 DAMP. Including language in the Model WQMP to address linear utility projects would be contrary to the 2007 DAMP which is made part of the permit at Section XIV.3.

The Permittees' second issue of concern centered on the Errata language addressing the feasibility analyses required to demonstrate the eligibility of a site to rely on a regional BMP solution. Several speakers providing testimony at today's meeting cited examples of how regional or sub-regional solutions can be superior. The Watershed Infiltration and Hydromodification Management Plans are intended to provide a comparison feasibility analysis of on-site versus regional LID treatment. The Model WQMP, as modified by our revision sheet, has structured the feasibility analysis to fully comply with the letter of the permit and the intent of Board.

Regarding today's public testimony the County wishes to immediately address two comments made by Orange County Coastkeeper. First Orange County Coastkeeper stated that its

comments had been summarily dismissed in the stakeholder process. Attachment 1 details key comments made by Orange County Coastkeeper, Natural Resources Defense Council and USEPA and summarizes how the current program documentation is directly responsive to these concerns. In addition, your staff has access to the TAG Project E-Room. The materials for the final TAG meeting on March 3, 2011, include a document listing comments received from all of the stakeholders, including Orange County Coastkeeper, Natural Resources Defense Council and USEPA, together with the potentially acceptable resolutions, for each comment, that were discussed at the March 3, 2011, meeting. The County would note that Orange County Coastkeeper and Natural Resources Defense Council were invited but did not attend this meeting.

On the contention that the Clean Water Act does not permit consideration of economic feasibility, the County would note that both the North Orange County and South Orange County permits explicitly require consideration of economic feasibility, specifically:

R8—2009-0030, Section XII.C.6: ***“The LID BMPs shall be designed to mimic pre-development hydrology through technically and economically feasible preventative and mitigative site design techniques. LID combines hydrologically functional site design, with pollution prevention methods to compensate for land development impact on hydrology and water quality.”*** (Emphasis added)

R9—2009-0002, Section F.(7)(b): ***“For each PDP participating, a technical feasibility analysis must be included demonstrating that it is technically infeasible to implement LID BMPs that comply with the requirements of Section F.1.(d)(4). The Copermitttee(s) must develop criteria for the technical feasibility analysis including a cost benefit analysis, examination of LID BMPs considered and alternatives chosen.*** (Emphasis added)

Further, the North Orange County permit includes fiscal feasibility in the definition of Maximum Extent Practicable:

R8—2009-0030, Findings, page 2: ***“MEP is not defined in the CWA; it refers to management practices, control techniques, and system, design and engineering methods for the control of pollutants taking into account considerations of synergistic, additive, and competing factors, including, but not limited to, gravity of the problem, technical feasibility, fiscal feasibility, public health risks, societal concerns, and social benefits.”***

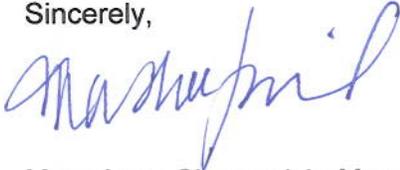
We have additionally provided responses to other selected comments received at today's Regional Board meeting in Attachment 2.

At the conclusion of today's discussions, it appeared that your staff would consult further with various constituencies and possibly make further revisions to the Errata sheet. The County notes that Section XII.C.1 of Order No. R8-2009-0030 - NPDES No. CAS618030 as amended by Order No. R8-2010-0062 only requires that the Model WQMP be approved by the Executive Officer. While the County has revised the Technical Guidance Document to incorporate all of the comments provided by your staff, all revisions to this document are deemed by the County to be at the sole discretion of the Permittees.

Kurt Berchtold, Executive Officer  
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Please direct any questions regarding this letter to Chris Crompton at (714)955-0630 or Richard Boon at (714)955-0670.

Sincerely,



Mary Anne Skorpanich, Manager  
OC Watersheds

Attachment 1: Summary of Key Program Elements Addressing EPA, Natural Resources  
Defense Council, and OC Coastkeeper Comments

Attachment 2: Summary of County Responses to Selected Comments Received at Regional  
Board Meeting April 22, 2011

c: NPDES Technical Advisory Committee/Planning Advisory Committee  
Region 8 Co-Permittees

## Attachment 1

### Summary of Key Water Quality Management Plan Elements Addressing EPA, Natural Resources Defense Council and Orange County Coastkeeper Comments

This table highlights key comments made by EPA, Natural Resources Defense Council, and Orange County Coastkeeper and provides summary explanations of how their comments have been recognized and incorporated into Water Quality Management Plan requirements.

#### Key comments received (in bold) and resultant actions (below, non bold)

##### **1. Watershed-based plans cannot contravene permit LID requirements.**

- Watershed-based plans could:
  - Identify regional opportunities,
  - Provide information to support/inform project-specific feasibility analysis, and/or
  - Could establish performance criteria more stringent (but not less stringent) than permit.

##### **2. Regional LID facilities should only be used after maximizing feasible LID BMPs on site.**

- In order to specify a preference for a regional LID facility, a watershed-based plan must include a front-loaded feasibility analysis, based on permit requirements, in which it demonstrates that the use of regional BMPs is preferable and consistent with the MEP standard.
- Participation in a regional LID BMP approach would not preclude a project from electing to incorporate appropriate LID BMPs on site to fully or partially meet the performance criteria.
- Projects must determine eligibility to participate in a Regional/Sub-Regional facility on a project-specific basis.
- Watershed-based plans must be approved by the Regional Board Executive Officer.

##### **3. The assessment of infiltration rates must account for soil amendments to improve the infiltration rate of compacted/tight soils.**

- The Plan has “pushed the limits” of generally accepted feasibility criteria relative to infiltration rate assessment:
  - The infiltration rate cutoff of 0.3 in/hr is the lowest found in any manual we are aware of that includes a minimum infiltration rate.
  - In addition, where infiltration rate is determined to be lower than 0.3 in/hr, partial infiltration must still be considered if no other infeasibility provisions apply.
- The infiltration rate used for feasibility assessment and design must consider the improvement that could be provided by soil amendments.

**Key comments received (in bold) and resultant actions (below, non bold)**

**4. Infiltration must be presumed to be feasible unless demonstrated infeasible.**

- Feasibility criteria evaluations must be supported by “substantial evidence” to demonstrate infeasibility
- The Plan has “pushed the limits” of generally accepted feasibility criteria to require consideration of infiltration where the majority of other similar guidance documents would consider infiltration to be infeasible. For example:
  - Infiltration is not automatically presumed infeasible in the proximity of contaminated sites and plumes; all large projects are still required to conduct an analysis to determine what level of infiltration could be done.
  - Infiltration is not automatically presumed to be infeasible in industrial land uses/zones; only industrial pollutant source areas are prohibited; other areas that are hydrologically disconnected from industrial pollutant source areas must consider infiltration (for example, separated employee parking lot/ office buildings, etc.)
  - Depth to groundwater requirements have been refined through coordination with Orange County Water District to require consideration of some distributed (surface) LID BMPs in some areas with only 5 ft separation from seasonally-high groundwater (permit states 10 ft).

**5. Evapotranspiration BMPs must be considered as a means of retaining stormwater onsite.**

- All applicable hydrologic source controls (HSCs) must be considered if LID requirements cannot be otherwise met. HSCs rely heavily on ET to retain water and can be still used where infiltration and harvest and use are not otherwise feasible.
- The Plan documents include explicit requirements that biotreatment BMPs be designed to achieve the maximum feasible infiltration and ET. This is beyond the permit requirements, but was included to support the threshold.
- Criteria have been provided for design of green roofs so that local jurisdictions can effectively review and approve these BMPs.

**6. Application of water quality credits must not negate the requirement to first attempt to retain then biotreat the design capture volume (DCV).**

- In the current Plan, water quality credits may only be claimed after considering all options for retaining then biotreating the DCV (moved from beginning to end of flowchart).
- This is different than how the flowchart was presented by Regional Board staff at the May 2009 hearing, and is different from how water quality credits are implemented in similar programs in other jurisdictions. In other jurisdictions (Stockton, CA and West Virginia, for example) credits apply at the beginning of the analysis to reduce the LID design volume.

**Key comments received (in bold) and resultant actions (below, non bold)**

**7. Treatment Control BMPs must be provided prior to discharge to Waters of the US.**

- The Plan requires treatment to address pollutants of concern prior to discharge to a Waters of the US unless costs of pollution control (BMPs) greatly outweigh pollution control benefits (Permit Section XII.E.1). In which case, the Project Proponent could file a waiver and participate in an alternative program.

**8. Regional maps must not be used as the sole basis for evaluating infiltration feasibility.**

- The Plan requires site-specific infiltration testing for feasibility analyses except in the following conditions:
  - Project is below established size thresholds, and
  - Mapped soil type is D, and
  - Review of all available information (geotechnical investigations, etc.) confirms the mapped soil type.
- Only in the rare case where no additional information is available, would the proponent of a small project be permitted to use regional maps solely.
- All projects planning to utilize infiltration must conduct infiltration testing, except with a few BMP type exceptions.

**9. BMPs must be designed to retain the DCV where feasible, consistent with the MEP requirement.**

- The BMP selection and design is based on performance-based criteria (average annual capture efficiency) to ensure that BMPs are effective and consistent in performance and meet the MEP requirement.
- On this basis, the Plan achieves higher and more consistent performance than would be achieved in many cases that comply with the literal requirements of the permit. For example, a harvest and use system with a low demand for harvested water (i.e. small amount of draught tolerant landscaping in a dense commercial project) would end up by-passing or overflows and its water quality performance could be much less than biotreatment and release.

## **Attachment 2**

### **Summary of County Responses to Selected Comments Received at April 22 Regional Board Meeting**

#### **Interpretation of MEP**

The interpretation of Maximum Extent Practicable (MEP) stated in the Permit clearly identifies fiscal feasibility, societal concerns, and social benefits.

“Footnote 2: MEP is not defined in the CWA; it refers to management practices, control techniques, and system, design and engineering methods for the control of pollutants taking into account considerations of synergistic, additive, and competing factors, including, but not limited to, gravity of the problem, technical feasibility, fiscal feasibility, public health risks, societal concerns, and social benefits. Furthermore, Section XII.E.1 of the Permit states “—or if the cost of BMP implementation greatly outweighs the pollution control benefits, a waiver of the BMPs may be granted.”

Therefore it is incorrect to state that costs should not be a consideration for LID/BMP feasibility criteria and BMP selection and design.

The requirements set forth in the Model WQMP and TGD reflect this interpretation. Several commenters at the meeting expressed interpretations of the MEP standard that are much narrower than this definition, which we believe are inconsistent with the Board’s intent and the original intent of the CWA as well as what is stated clearly in the Permit.

#### **Depth of Fill, Soil compaction and role of soil amendments.**

To respond to the comments made in comment letters, the TGD does not state that if a project is on fill that this is an automatic infeasibility determination. The guidance provided does recognize that for projects with significant fill and soil compaction that it is impossible to know what the underlying ability to infiltrate will be until the soils are in place and compacted. As a WQMP must be submitted before this activity, requiring infiltration to be considered is not practicable. In cases of a project being built upon previously placed fill, a determination does need to be made regarding the potential to infiltrate. In cases where there is a minor amount of fill or fill is minor in the area where infiltration can occur (downstream end of drainage management area), then it must be considered.

The Model WQMP and TGD recognize and emphasize the important role that soil amendments can play in improving the infiltration capacity of a site. Appendix XII of the TGD provides specific guidance on accounting for the potential role of soil amendments when measuring infiltration rates. In addition, Appendix XIV of the TGD includes a fact sheet that provides specific criteria for soil amendments to ensure that soil amendments meet their intended objective of increasing infiltration capacity. However, it is important to note that soil amendments can be effective in restoring soils that have been impacted by incidental surface infiltration while they are generally not effective in soils that have impermeable layers below the surface.

## **Regional Maps**

The comments made by EPA, Orange County Coastkeeper and the Natural Resources Defense Council indicate confusion about the role of regional maps in evaluating infiltration feasibility. Only small projects may rely on regional maps for the feasibility determination, but they must also use any available geotechnical reports from their site or adjacent sites to confirm that the regional maps soil types are accurate. Regional maps are never to be used for establishing a design infiltration rate.

## **40 percent justification**

The County presentation provided detailed reasons at the meeting why the 40 percent capture threshold is valid. The bottom line is that a biotreatment facility together with hydrological source controls (that must be considered when biotreatment is selected) would achieve the same or better volume loss of 40 percent and would result in less pollution being discharged to a receiving water than an infiltration or harvest and use system that achieves 40 percent capture or less.

## **Application of treatment controls**

There was some discussion regarding the application of treatment controls. In the Model WQMP, treatment control requirements are deemed met if feasible LID BMPs meet the required design capture volume. If it is not feasible to meet the entire design capture volume with LID BMPs (to the MEP standard), treatment control BMPs must be provided for the "unmet" volume and be selected to address priority POCs prior to discharge to Waters of the US. Treatment control BMPs can be waived (with 30 day advance notice to Executive Officer) where "costs greatly outweigh pollution control benefits"; granting of a waiver requires participation in alternative program. This is the Model WQMP approach to the application of treatment controls. Permit Section XII.E.1 can be referenced to confirm the above.

## **Regional Board Direction Regarding the Ability to Prioritize Regional/sub-Regional Facilities.**

It is important to consider the Board's direction during the Permit adoption hearing in 2009. The following is from the transcripts:

P 24-25: PONTELL: *And so going back to the prioritization of, if it was feasible, to capture and infiltrate, evapotransporate, or harvest re-use, all the water on a particular piece of property, but it was better to allow that water to go into a subregional solution, I do not see our chart allowing that to occur.*

[Various intermediate discussion]

MR. ADACKAPARA: *I think what we have done is we have provided the permittees – actually this is a mandated requirement under Section D.5. It says the permittees are required to develop watershed master plan, and we are hoping that concerns, just like what Mr. PonTell expressed, will be completely addressed in the watershed master plan.*

MR. THIBEAULT: *Or it already has been addressed. I think, Mr. PonTell, that this Board has always expressed its support for regional systems, and I'm not sure how anybody could say that a proposal to use a regional or subregional system that achieves the same net results, would not be acceptable. I can't imagine that because everything would be based on is it an equivalent*

*level of capture, harvest re-use, evapotranspiration then what would be achieved on-site? If it's the equivalent of what would be achieved on-site, how would it not be a compliant approach?*

MR. SMYTHE: *I wouldn't want to come before you arguing against something like that.*

MS. BESWICK: *And it would be out of character for you to do that.*

MR. THIBEAULT: *The Board has expressed that on the record many times.*

MR. PONTELL: *Thank you.*

We believe that together with the Permit language, this exchange during the permit adoption hearing clearly shows the Board's intention regarding the ability to prioritize the use of regional and sub-regional facilities in the Watershed Infiltration and Hydromodification Management Plan (Section XII.D.5 referenced above in the transcripts).