



**CITY OF ATASCADERO**  
**PUBLIC WORKS DEPARTMENT**  
6907 EL CAMINO REAL, ATASCADERO, CA 93422  
Telephone (805) 470-3180

May 10, 2013

Mr. Jeffrey Young  
Chair - Central Coast Water Board  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401

**Re: City Comments on the Draft Post Construction Stormwater Management Requirements For Development Projects in the Central Coast Region Reconsideration**

Dear Mr. Young,

The City of Atascadero (City) appreciates the opportunity to comment on the *Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast Region* (Requirements) second adoption. The Requirements are being re-considered because the State Water Board's recently adopted General Statewide Stormwater Permit nullified the Central Coast Water Board's previous action. The City has reviewed the proposed changes and has the following two comments:

1. The City agrees with and incorporates by reference, the comment letter from CASQA. CASQA's comments are well supported and add technical sophistication to the Requirements. Specifically, we encourage the Water Board to include the following bolded language in Attachment 1, Page 8, Section B.4.d.vi:
  - "...or )hydrologic analysis and sizing methods, equally effective in optimizing on-site retention of the runoff **to match pre-development hydrology** generated by the rainfall event specified in Section B.4.c that have been approved by the Central Coast Water Board Executive Officer..."

City staff believes this is a reasonable request since matching pre-development hydrology would maintain watershed function and therefore protect receiving water quality.

Second, the City agrees with CASQA that Performance Measure Number 4 (page 10) should be removed from the requirements. Removing Performance Measure 4 is reasonable since the Requirements already require infiltration of the 95% storm event. The Requirements make the case that infiltrating the 95% storm will maintain the dominant watershed processes. If this is already achieved by on projects with

15,000 square feet of impervious surface, it would already be achieved on projects with 22,500 square feet and peak matching would not be needed.

2. The City of Atascadero requests that the Water Board provide an additional year from the adoption of these requirements for implementation. The main argument against this request has been that municipalities have had years to prepare our citizens and Council members, and draft code modifications. However, most of the technical requirements were issued only late last spring. Up to that point, the municipalities like us were looking at a black box with no background technical information. While municipalities did ask for and receive an additional few months last spring, that was not time enough time to fully vet the technical requirements of implementation.

An example of why additional time is needed has already come to light. The multiplier of 1.963 used in Structural Stormwater Control Measure Sizing is overly conservative and has been replaced by a multiplier of 1.2. This may seem insignificant, but this could mean the difference between having a project move forward or stopping. If a project is stopped based on overly conservative requirements, then other project benefits could be missed like, riparian restoration, wetland restoration, jobs, transit stops, bike lanes and many other beneficial outcomes.

Please consider the large amount of municipal resources and time that is required to implement this program. Page 16 outlines requirements for program tracking and specifically the development of an O&M tracking database. The City currently has no financial resources to develop such a system. Therefore, the City will need the time to figure out how to effectively and inexpensively develop the system, and then allocate resources to implement it. Funding of storm water regulation mandates is still a major concern to the City, and the program remains a substantially unfunded State mandate.

Lastly, the State Water Board is not requiring implementation of its post-construction requirements until after July 2014. Placing the Central Coast municipalities on the same timeline would level the economic playing field and not give the State Board regulated municipalities and economic advantage over the Central Coast region.

The City appreciates the Water Boards thoughtful attention to our comments and request and we look forward to the July 12<sup>th</sup> hearing. Should you have any questions please call me at (805) 470-3424.

Sincerely,  
  
Russell S. Thompson  
Public Works Director

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**CITY OF CARPINTERIA, CALIFORNIA**  
**DEPARTMENT OF PUBLIC WORKS**



May 9, 2013

Kenneth A. Harris, Jr.  
Interim Executive Office  
Central Coast Water Quality Control Board  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401-7906

Subject: Central Coast Region Post-Construction Requirements Comments

Dear Mr. Harris,

Thank you for providing the opportunity to comment on the Draft Resolution No. R-3-2013-0032 - Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast Region(PCR).

The City of Carpinteria supports the goal of the Water Board to maintain and improve watershed processes and water quality. The City offers the following comments with the intention of improving the effectiveness of the Post-Construction Requirements and ensuring the adopted requirements will be effective and both technically and economically feasible.

**Implementation Schedule**

The Draft Resolution requires municipalities begin implementation of the PCRs to all regulated projects by September 6, 2013. This proposed schedule does not allow adequate time for municipalities to adopt enforceable mechanisms to implement the PCRs. Significant staff time and resources are required to revise and/or adopt Codes and other enforceable mechanisms, and all municipalities must follow proper public noticing procedures. The City has determined that dedicating valuable staff time and resources to approving these mechanisms while there was still uncertainty regarding design criteria in Attachment D, and other unresolved issues mentioned in this letter, would not be a practical use of public resources.

Following many hours of technical review, the Joint Effort Review Team presented proposed modifications to the Stormwater Control Measures in March. These modifications are reflected in the PCRs but have not yet been adopted by the Central Coast Regional Board. The current timeline for implementation poses several problems. In addition to adopting enforceable mechanisms, executing adequate technical guidance for both permittees and applicants by the September date would be difficult.

The City is working with the County of Santa Barbara and other Santa Barbara County agencies to develop technical guidance and implement the PCRs using a Proposition 84 grant that the County received from the State Water Resources Control Board, "Implementing the Joint Effort". The grant, awarded in July 2012, was not executed by the Water Board until April 2013. An extension of at least 4 months would allow the City, working with the County and the consultant hired to help with PCR

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implementation, to develop better resolution for the technical guide and complete the code adoption process. The City recommends extending the implementation date by 4 months, to take effect January 2014.

#### **Technical Issues**

The City agrees with and supports the comments submitted in the letter signed by Central Coast municipalities, including City of Carpinteria, submitted May 9, 2013. In addition to these concerns, the City has an overarching concern that the regulations have not been tested for feasibility on projects in our region. The Joint Effort was initiated with the goal of protecting watershed processes to benefit receiving waters through a scientific approach. However, the event-based runoff retention requirement lacks supporting scientific documentation as an approach to hydromodification. The assumption by Water Board staff that all Watershed Management Zones (WMZs) have the same rainfall/runoff pattern and that runoff would only occur from more than the 85<sup>th</sup> or 95<sup>th</sup> percentile storm event is surprising given the time, money, and effort put into the original technical analysis.

Additionally, the PCRs do not allow hydrologic analysis and structural Stormwater Control Measure sizing as an option for developers to match the pre-development hydrology. The language in PCRs Section V.4.d.vi. is obviated by the language in PCRs Section B.4.c., which mandates retention of the volume of a specific storm (85th percentile or 95th percentile) regardless of whether a specific site in its pre-development condition has highly permeable soils or impermeable soils. Continuous simulation analysis of pre- and post-project flows would allow Stormwater Control Measures to be sized so that post-project flow rates and durations would be kept within the flow rates and durations that existed pre-project or pre-development. The City recommends revising the Draft Resolution to include the use of continuous simulation modeling to match post-project flow rates and durations with pre-project flow rates and durations.

#### **Applicability**

This timeline for implementation presents a challenge to both municipalities and developers in the development review process. Significant time and money has already been invested into a project design by the time the project is ready for consideration of its discretionary permits. Implementation of the new requirements should be applied to projects that have not yet had their applications deemed complete within 180 days of Water Board approval. At this early stage of a project (i.e., completeness review), it is more appropriate to ask for additional information and/or changes to a project to comply with local/state regulations. It would be unfair to require a developer to redesign a project that has already been deemed complete and is on its way toward completing its CEQA review and/or discretionary approvals for a design concept that was found to be consistent with the standards already in effect at the time of application completeness.

#### **Undesired consequences**

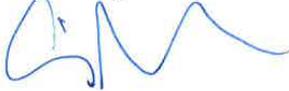
Requiring infiltration of runoff to the extent described in the proposed regulations may have undesired consequences on local habitat landscapes that have adjusted over time to the increased water inputs afforded by urban development. For example, in the case of Carpinteria Creek, historic dry season creek flows at the point where the creek enters the City limits have diminished over the years due to drawdown from agricultural and private domestic wells in the vicinity. Within City limits, the creek receives inputs from urban runoff. While this runoff may not be clean or "natural," it does serve to help offset the reductions in creek flows from aquifer drawdown upstream. Some of this urban runoff helps to provide for year-round pools of fresh water in lower Carpinteria Creek that support sensitive species, including the Federally listed Southern Steelhead and Tidewater Goby. Carpinteria Creek is listed as

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critical habitat for both species; as such, any land use or regulatory decisions that would affect their habitat, such as measures to significantly reduce or alter freshwater inputs to the habitat need to be carefully considered and reviewed.

Thank you for providing the opportunity to comment on the Draft Post-Construction Requirements. The City looks forward to working with the Central Coast Water Board on implementing standards that are both feasible and cost-effective. If you have any questions, please contact me.

Sincerely,



Erin Maker  
Environmental Coordinator  
Department of Public Works

cc: Dave Durflinger, City Manager  
Charlie Ebeling, C.E., T.E., Director of Public Works



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May 10, 2013

Via Electronic Mail and Overnight Mail

Chairman Jeffrey Young  
c/o Dominic Roques  
California Regional Water Quality Control Board,  
Central Coast Region  
895 Aerovista Place, Suite 101  
San Louis Obispo, CA 93401

**Re: Post-Construction Requirements - Draft Resolution No. R3-2013-0032**

Dear Chairman Young:

Somach Simmons & Dunn represents the City of Goleta ("Goleta") with respect to the Post-Construction Requirements that are being considered by the Central Coast Water Quality Control Board ("Central Coast Water Board"). On behalf of Goleta, we appreciate the opportunity to express concerns and submit comments on the Post-Construction Requirements contained in Draft Resolution No. R3-2013-0032. Incorporated in 2002, Goleta lies on the south coast of Santa Barbara County, stretching approximately eight square miles within a narrow plain between the Santa Ynez Mountains and the Pacific Ocean. Goleta is home to approximately 30,000 residents and an entrepreneurial business community. Goleta owns and operates a small municipal separate storm sewer system (MS4) and would be subject to the Post-Construction Requirements in Draft Resolution No. R3-2013-0032.

Goleta has significant concerns with the characterization of the action pending before the Central Coast Water Board as well as certain substantive provisions being proposed. As a preliminary matter, the Post-Construction Requirements presented here represent a major change in how stormwater runoff would be regulated on the Central Coast for the Phase II municipal separate storm sewer systems ("MS4s"), and is a significant departure from how other Phase II communities are being regulated throughout the rest of California. Specifically, the Post-Construction Requirements (and in particular Performance Requirement No. 3) are intended to address hydromodification concerns and are looking to ensure that new development and redevelopment projects are built in a manner to protect "watershed processes." In other words, the primary goal is to have runoff from new development and redevelopment projects match runoff from a project sites undeveloped condition. Such an objective, while admirable, is not feasible or appropriate in many circumstances due to the fact that urbanization has occurred over

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many decades and much of the topography has been permanently altered to accommodate urbanization. Further, it is arguably unlawful to include hydromodification requirements in MS4 permits. The purpose and intent with respect to national pollutant discharge elimination system (“NPDES”) permits is to limit the discharge of “pollutants” into waters that cause or may cause an impact to beneficial uses.<sup>1</sup> Hydromodification requirements are about watershed processes and flow – not pollutants. Stormwater flow is not a pollutant, and as such, the regulation of it herein through the Post-Construction Requirements contained in Draft Resolution R3-2013-0032 is unlawful.<sup>2</sup>

Further, the requirements presented here put the Phase II Central Coast communities at a significant disadvantage as compared to most others in California. While most of California’s municipalities are being required to apply low impact development standards (i.e., retain runoff equal to volume from 85<sup>th</sup> percentile 24-hour storm event) to development and redevelopment projects, the runoff retention performance criteria seek to have runoff from development and redevelopment projects mimic the undeveloped state of the project site – regardless of the permanent nature of altered conditions that may have occurred on the site. Goleta finds this major policy shift, and certain specific requirements contained in the Post-Construction Requirements to be problematic for both technical and legal reasons. Goleta’s specific concerns are presented here.

**I. The Central Coast Water Board’s Post-Construction Requirements Adoption Process Is Inconsistent With The Phase II General Permit**

Goleta must express its concerns and frustration with the adoption process that has occurred with respect to adoption of these requirements. Generally, Central Coast Water Board staff appear to be downplaying the action pending before the Central Coast Water Board by characterizing the adoption process for the Post-Construction Requirements as simply being a readoption process for procedural reasons to ensure consistency with the State Water Resources Control Board’s (State Water Board) General Permit for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (Phase II General Permit), adopted by the State Water Board on February 5, 2013.<sup>3</sup> Central Coast Water Board staff have stated that the Phase II General Permit “allows the Central Coast Water Board to readopt its Post-Construction Requirements

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<sup>1</sup> See, e.g. 33 U.S.C. § 402(a), NPDES permits may be issued for the “discharge of any pollutant, or combination of pollutants.”

<sup>2</sup> See *Virginia Department of Transportation, et al. v. United States Environmental Protection Agency, et al.*, Civil Action No. 1:12-CV-775 (filed January 3, 2013 in the United States District Court for the Eastern District of Virginia).

<sup>3</sup> Staff Report for Central Coast Water Board Meeting of March 14-15, 2013 Re: Stormwater Post-Construction Requirements (March 2013 Staff Report), p. 2; Draft Resolution No. R3-2013-0032 at p. 2, ¶ 6.

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and continue implementation of the requirements.”<sup>4</sup> The Central Coast Water Board staff also acknowledged that Section E.12.k of the Phase II General Permit provides the basis for the Central Coast Water Board to “re-approve” the Post-Construction Requirements.<sup>5</sup> Section E.12.k provides:

Small MS4s subject to Section E of this Order, in place of complying with the requirements set forth in Section E.12, ... shall comply with post-construction storm water management requirements based on a watershed-process approach developed by Regional Water Board that include the following:

- Completion of a comprehensive assessment of dominant watershed processes affected by urban storm water
- LID site design and runoff reduction measures, numeric runoff treatment and retention controls, and hydromodification controls that will maintain watershed processes and protect water quality and beneficial uses
- A process by which Regional Board staff will actively engage Permittees to adaptively manage requirements as determined by the assessment of watershed processes
- An annual reporting program that involves Regional Board staff and State Board staff to inform statewide watershed process based criteria

The regional watershed-process based approach must be approved by the Regional Water Board following a public process.<sup>6</sup>

The Post-Construction Requirements may only be imposed pursuant to the Phase II General Permit. As such, the Post-Construction requirements constitute new requirements, and the Central Coast Water Board cannot simply rubber stamp Resolution No. R3-2012-0025, and maintain all of its previous timelines. Accordingly, the Central Coast Water Board can only take actions that are consistent with the authority granted by the State Water Board in adopting post-construction requirements that are different than those in the Phase II General Permit. Importantly, the Central Coast Water Board must demonstrate that any region specific, watershed-based post-construction requirements have a strong technical basis, and such alternative requirements must undergo a public review process prior to adoption and implementation. As of now, based on the documents the Central Coast Water Board staff has prepared describing and purportedly supporting Resolution No. R3-2013-0032, the Central Coast Water Board will not

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<sup>4</sup> March 2013 Staff Report at p. 2.

<sup>5</sup> Letter from Kenneth A. Harris, Jr. to Stormwater Dischargers Regarding Phase II Permit and Schedule for Implementation of Post-Construction Requirements, February 20, 2013 (Water Board February 2013 Letter), p. 2.

<sup>6</sup> Phase II General Permit at p. 62.

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meaningfully adhere to these requirements if the Post-Construction Requirements are adopted as is.

**A. Central Coast Water Board Staff Has Mischaracterized The State Water Board's Written Statements Regarding Watershed Process-Based Post Construction Requirements**

Central Coast Water Board staff has improperly characterized the State Water Board's statements in the Phase II General Permit Fact Sheet (Phase II Permit Fact Sheet) as indicating that the State Water Board "encourages full implementation of," and "supports," the Post-Construction Requirements.<sup>7</sup> A careful reading of the Phase II Fact Sheet reveals the State Water Board's general support for a watershed process based approach, but not specific support for, or on endorsement of, the Central Coast requirements. The State Water Board stated that "[a]fter receiving extensive public comment on Attachment J, the State Water Board determined that, while the Board continues to support a watershed process-based approach to hydromodification requirements, the Joint Effort process should be allowed to evolve and proceed, without incorporation into this Order, to address several unresolved issues acknowledged by the parties to that process, including the Regional Water Board."<sup>8</sup> This State Water Board statement does not encourage implementation of any specific requirements, let alone the Post-Construction Requirements. At most, it encourages a locally-driven process. Also, the fact that the State Water Board recognized there are "several unresolved issues" indicates that the State Water Board did not know what post-construction requirements might evolve from a locally-driven process. Therefore, the State Water Board could not have been encouraging implementation of any specific post-construction requirements, let alone the Central Coast specific requirements.

Also, it is inappropriate to state that the State Water Board "supports" the Post-Construction Requirements. The Phase II Permit Fact Sheet states that the State Water Board "continues to support a watershed process-based approach to hydromodification requirements."<sup>9</sup> This statement merely indicates that the State Water Board recognizes that a watershed process-based approach could be valuable, but does not endorse any specific requirements.

The Central Coast Water Board staff has also mischaracterized the State Water Board's statements regarding future implementation of post-construction requirements in an apparent attempt to justify an urgent adoption of the requirements. Despite Central Coast Water Board staff's comments to the contrary, the State Water Board did not state

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<sup>7</sup> March 2013 Staff Report at p. 2.

<sup>8</sup> Phase II Permit Fact Sheet at p. 36.

<sup>9</sup> Phase II Permit Fact Sheet at p. 36.

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that “the [Post-Construction] requirements *need* to be readopted by the Central Coast Water Board ...”<sup>10</sup> The State Water Board did state that “Central Coast Region Small MS4s will be required to implement watershed-process based requirements” under Section E.12.k. “only after those requirements *have been reconsidered and approved* by the Central Coast Water Board.”<sup>11</sup> This statement does not evince support for the Central Coast specific requirements. Rather, it indicates that MS4s will be required to implement “watershed-process based requirements” generally, under certain conditions. There is no reference to Central Coast specific requirements. The phrase “those requirements,” modifies “watershed-process based requirements,” and should not be misconstrued as referring to Central Coast specific requirements.

Moreover, the Central Coast Water Board staff has stated that the State Water Board found readoption of the Post-Construction Requirements “to be necessary.”<sup>12</sup> This is a mischaracterization of the State Water Board’s position as well. The State Water Board did not find that any specific action by the Central Coast Water Board was necessary, let alone readoption of the Post-Construction Requirements. The State Water Board simply made the point that Resolution No. R3-2012-0025 could no longer serve as the basis for the Central Coast Water Board to impose post-construction requirements because Resolution No. R3-2012-0025 required MS4s to incorporate the post-construction requirements into Storm Water Management Programs, which MS4s are no longer required to prepare under the Phase General II Permit.<sup>13</sup>

Further, evidence that the State Water Board did not specifically approve of the post-construction requirements adopted in Resolution No. R3-2012-0025 is provided by the fact that the State Water Board removed the Central Coast specific post-construction requirements from the November 16, 2012 draft of the Phase II General Permit.<sup>14</sup> The State Water Board removed the Central Coast specific post-construction requirements to allow the local process “to address several unresolved issues acknowledged by the parties to that process, including the Regional Water Board.”<sup>15</sup> The State Water Board’s decision to remove the Central Coast specific requirements from a draft of the Phase II General Permit clearly indicates that the State Water Board did not want to take a position on the Central Coast specific requirements. Moreover, by allowing the local process to proceed, the State Water Board was relying on the Central Coast Water Board to develop any new requirements, which may or may not resemble the requirements in Resolution No. R3-2012-0025.

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<sup>10</sup> March 2013 Staff Report at p. 2, emphasis added.

<sup>11</sup> Phase II Permit Fact Sheet at p. 36, emphasis added.

<sup>12</sup> March 2013 Staff Report at p. 2.

<sup>13</sup> Phase II Permit Fact Sheet at p. 36.

<sup>14</sup> Phase II Permit Fact Sheet at p. 36.

<sup>15</sup> Phase II Permit Fact Sheet at p. 36.

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The evidence in the record does not support Central Coast Water Board staff assertions that the State Water Board fully supports adoption of the Central Coast specific post-construction requirements. Therefore, these assertions should not be relied on as a basis for immediately adopting the Post-Construction Requirements without a meaningful technical and public review process.

**B. By Including Section E.12.k. In The Phase II General Permit, The State Water Board Did Not Specifically Endorse The Central Coast Specific Requirements**

While Section E.12.k. may provide the Central Coast Water Board the authority to adopt the Post-Construction Requirements, Section E.12.k itself, does not constitute a State Water Board endorsement of the Post-Construction Requirements, as contained in Draft Resolution No. R3-2013-0032. Section E.12.k. evolved from the State Water Board's recognition that "storm water management techniques that are intended to mimic natural hydrologic functions ... can protect key hydrologic processes ...."<sup>16</sup> The State Water Board plans to "work towards developing runoff retention and hydromodification control criteria that are keyed to watershed processes."<sup>17</sup> Further, the State Water Board plans to delineate watershed management zones and will identify applicable areas and determine criteria for runoff retention and hydromodification that will be included in the next Phase II General Permit.<sup>18</sup> In the interim, the State Water Board recognized that development of such criteria can be significantly "informed" by similar regional efforts carried out by Regional Water Quality Control Boards.<sup>19</sup> The State Water Board included Section E.12.k. in the Phase II General Permit, as an alternative to the general post-construction requirements in Section E.12.<sup>20</sup> Section E.12.k. provides for a regional board to develop a specific watershed process-based approach, which may or may not be similar to the Central Coast specific post-construction requirements. As such, Section E.12.k. does not serve as an endorsement of the Central Coast specific requirements.

Importantly, even though the State Water Board ultimately included Section E.12.k. in the Phase II General Permit, State Water Board members were clearly concerned about simply leaving regional boards to develop watershed process based approaches under Section E.12.k. without any formal oversight by the State Water Board. On February 5, 2013, at the State Water Board hearing on the Phase II General Permit, after staff indicated that the State Water Board and regional boards that implement the

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<sup>16</sup> Phase II Permit Fact Sheet at p. 35.

<sup>17</sup> Phase II Permit Fact Sheet at p. 35.

<sup>18</sup> Phase II Permit Fact Sheet at p. 35.

<sup>19</sup> Phase II Permit Fact Sheet at p. 35.

<sup>20</sup> Phase II Permit Fact Sheet at p. 35.

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watershed-process based approach would conduct annual reviews of the programs, Chairman Hoppin raised the issue of how the State Water Board and regional boards would annually review progress.<sup>21</sup> Chairman Hoppin was clearly concerned about the State Water Board and regional boards taking different paths in the development of watershed process-based approaches to post-construction requirements. After Board Member Spivey-Weber asked whether the annual review process would entail formal review by the State Water Board members, and staff responded that it would not, other State Water Board members requested that there be a more formal review process by the State Water Board.<sup>22</sup> Specifically, Board Member Doduc proposed that there be an annual review of the watershed-process based programs, and that it be more formal than staff originally proposed.<sup>23</sup> Board Member Moore also endorsed an annual State Water Board review of the watershed-based processes because the issue of post-construction requirements is important, and maintaining a public dialogue about the issues would be productive.<sup>24</sup> These comments indicate that the State Water Board ultimately accepted Section E.12.k. with cautious optimism. While the State Water Board members may support a watershed process-based approach, they requested a formal annual review to ensure regional boards are implementing programs consistent with the State Water Board directives and that the concerns of interested parties are being adequately addressed.

### **C. The Central Coast Water Board Should Extend The Date To Start Implementation Of The Post-Construction Requirements**

Considering the State Water Board's action, if the Post-Construction Requirements are adopted, the Central Coast Water Board needs to extend the date on which MS4s must begin applying the Post-Construction Requirements to regulated projects. When the Central Coast Water Board adopted Resolution No. R3-2012-0025 on September 6, 2012, it provided for a one-year period to commence implementation.<sup>25</sup> Draft Resolution No. R3-2013-0032 retains the same date to begin implementation - September 6, 2013.<sup>26</sup> Assuming the Central Coast Water Board adopts Resolution No. R3-2013-0032 in July 2013, as projected, the Central Coast MS4s would only have about two months to prepare for implementation. The Central Coast Water Board staff has attempted to justify this short time frame by noting that it is only bringing two "short

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<sup>21</sup> CD of Phase II General Permit Hearing, February 5, 2013 at 38:15.

<sup>22</sup> CD of Phase II General Permit Hearing, February 5, 2013 at 39:15, 41:37.

<sup>23</sup> CD of Phase II General Permit Hearing, February 5, 2013 at 43:45.

<sup>24</sup> CD of Phase II General Permit Hearing, February 5, 2013 at 48:30.

<sup>25</sup> Draft Resolution No. R3-2012-0025 at p. 6, ¶ 5.

<sup>26</sup> Draft Resolution No. R3-2013-0032 at p. 8, ¶ 5. There is an inconsistency between Resolution No. R3-2013-0032 and Attachment 1 of Resolution No. R3-2013-0032, which provides that MS4s shall apply the Post-Construction Requirements, within 365 days of the Central Coast Water Board approval of the Post-Construction Requirements, to all Regulated Projects. (Attachment 1 at p. 2, § B.4.(e).) 365 days from July 12, 2013 would be July 12, 2014.

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term actions” to the Central Coast Water Board for adoption in July 2013,” and that these modifications “are relatively minor.”<sup>27</sup> One of the two actions, however, is the adoption of the Post-Construction Requirements.<sup>28</sup> It is hard to see how adoption of the Post-Construction Requirements in their entirety is a minor action. Considering that the requirements still contain numerous contested technical provisions, adoption of the Post-Construction Requirements is anything but minor. Because the Central Coast Water Board’s proposed action for July 2013 is not minor, retaining the same implementation date of September 6, 2013 would be inappropriate.

By characterizing the proposed action in this manner, Central Coast Water Board staff are assuming that, despite the adoption of the Phase II General Permit, Central Coast MS4s have continued to prepare for implementation of the Post-Construction Requirements. Such an assumption is false for two primary reasons. First, the State Water Board’s adoption of the Phase II General Permit nullified the Central Coast Water Board’s previously adopted Post-Construction Requirements. Until they are re-adopted, as is required by the Phase II General Permit, such requirements are not in effect. Moreover, because of the State Water Board’s action, the Central Coast MS4s had a reasonable expectation that such requirements were null and void.

Second, the staff’s assumption presumes that the Central Coast Water Board will adopt the previous post-construction requirements as proposed by staff. Until the Central Coast Water Board takes action, such a presumption is inappropriate. If staff are to implement water quality requirements based on a presumption of future adoption, there would be no need for Regional Boards. Further, such a presumption undermines the intent and purpose of a public adoption process. The State Water Board is requiring that these provisions be adopted through a public process to provide stakeholders with an appropriate opportunity to voice concerns and criticism. To limit and make meaningless that opportunity directly contravenes the State Water Board’s requirement and undermines stakeholder due process rights. Therefore, it is not reasonable for the Central Coast Water Board to expect that Goleta would simply continue to prepare for implementation of, as yet unadopted, Post-Construction Requirements. The Central Coast Water Board should clearly recognize that this expectation is inappropriate and should at the very least adopt a new schedule that establishes a reasonable implementation date based on the scope of any requirements imposed, and that is based on the Central Coast Water Board’s actual adoption date.

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<sup>27</sup> March 2013 Staff Report at p. 5.

<sup>28</sup> March 2013 Staff Report at p. 5.

## **II. Proposed Post-Construction Requirements Are Flawed**

As indicated previously, Goleta has significant concerns with the major policy shift that would occur with the adoption of these Post Construction Requirements. Specifically, Goleta finds it inappropriate and premature to require Central Coast MS4s to apply a hydromodification standard such as Performance Requirement No. 3 in advance of State Water Board efforts that are likely to occur to determine what is an appropriate standard for Phase II communities in general. Further, Goleta argues that the Central Coast Water Board's adoption of Performance Requirement No. 3 is unlawful for the reasons discussed in Section III, IV and V below. In addition to its overall policy and legal concerns, Goleta has significant technical concerns with many of the provisions contained in the Post-Construction Requirements. According to Draft Resolution No. R3-2013-0032, the primary objective of the Post-Construction Requirements is to maintain and restore watershed processes, which the Central Coast Water Board determined is necessary to protect water quality and beneficial uses.<sup>29</sup> In other words, the Post-Construction Requirements are intended to ensure generally that runoff from development and re-development sites is approximately the same as that runoff that would otherwise occur should there be no development. However, and is shown further below, Performance Requirement No. 3 exceeds such a standard in certain soils, and Performance Requirement No. 4 is unnecessary considering application of Performance Requirement No. 3. Further, the proposed "off-ramps" may be impractical, or at the very least are ambiguous.

### **A. The 95th Percentile Runoff Retention Requirements Result In Oversized BMPs For Certain Soils**

Application of criteria in Performance Requirement No. 3 vary based on the identified watershed management zone ("WMZ") for the area in question. All of Goleta is considered to be in WMZ 1.<sup>30</sup> For WMZ 1, the runoff retention requirement is as follows: "Retain 95<sup>th</sup> Percentile Rainfall Event – Prevent offsite discharge from events up to the 95<sup>th</sup> percentile 24-hour rainfall event as determined from local rainfall data. [] Compliance must be achieved via infiltration."<sup>31</sup> Performance Requirement No. 3 assumes in general that the volume that would be required to be retained "appears to best represent the volume that is fully infiltrated in a natural condition and thus should be managed onsite to maintain th[e] pre-development hydrology for duration, rate and volume of stormwater flows."<sup>32</sup> Considering this intent, it is possible to assess the value

<sup>29</sup> Draft Resolution No. R3-2013-0032 at p. 4, ¶ 17.

<sup>30</sup> Goleta has significant concerns with the gross designation of WMZs, which are discussed in part further below in this section.

<sup>31</sup> Draft Resolution No. R3-2013-0032, Attachment 1 at p. 6.

<sup>32</sup> Draft Resolution No. R3-2013-0032, Attachment 2 at p. 23.

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of the proposed Post-Construction Requirements by comparing the stormwater control measure size necessary to retain the 95th percentile 24-hour storm event per the sizing requirements in the Draft Resolution R3-2013-0032 to the stormwater control measure size necessary to match undeveloped runoff from a site. These comparisons are best made by accounting for site-specific factors such as soil type.<sup>33</sup> For example, Sixty-four (64) percent of soils within Goleta's jurisdiction are Hydrologic Soil Group (HSG) D soils.<sup>34</sup> HSG D soils are "very slow" infiltrative soils.<sup>35</sup>

As indicated in the attached Geosyntec Memorandum, Performance Requirement No. 3 for type D soils results in oversized stormwater control measures, and thus its application to type D soils is inconsistent with the Central Coast Water Board staff's intent and purpose with respect to the requirement. Further, oversized control measures provide no additional environmental benefit. Thus, the cost associated with ensuring compliance with Performance Requirement No. 3, especially with respect to application to type D soils, is not justified.

Specifically, whether using the "Simple Method" or the "Routing Method," when the retention basin size required to match undeveloped discharge on type D soils is compared to the retention basin size necessary to retain the 95th percentile 24-hour event using the "Simple Method," the size of the retention facility would be about 26% larger than necessary.<sup>36</sup> Also, when the BMP size for the undeveloped condition on type D soils is compared to the size of the retention facility necessary for the "Routing Method" on type D soils, the retention facility would be about 40% larger than necessary.<sup>37</sup> As such, the proposed runoff retention provisions, especially as applied to type D soils, results in post-development standards that far exceed the undeveloped condition, which is alleged to be the primary intent behind Performance Requirement No. 3. Accordingly, Performance Requirement No. 3 is inappropriate as applied to HSD D soils. Because of this impractical application, Goleta recommends that, at the very least, Performance Requirement No. 3 be revised to specifically exclude application to HSG D soils.

Further, Performance Requirement No. 3 limits compliance for WMZ 1 to be achieved only through infiltration on-site.<sup>38</sup> Limiting compliance in this manner is overly

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<sup>33</sup> See Stormwater Phase II Final Rule, Federal and State-Operated MS4s: Program Implementation, EPA 833-F-00-012 (Dec. 2005), p. 2, emphasis added.

<sup>34</sup> Memorandum from Geosyntec to City of Goleta regarding Post-Construction Management Requirements (May 8, 2013) at p. 2, and Figure 2 (Geosyntec Memorandum), attached as Exhibit A.

<sup>35</sup> Draft Resolution No. R3-2013-0032, Attachment 2 at p. 27; Stormwater Control Measure Sizing: Evaluation of Attachment D to the Central Coast Requirements (April 8, 2013) (SCM Sizing Report), p. 5, Table 3.

<sup>36</sup> Geosyntec Memorandum at p. 5, and Figure 4.

<sup>37</sup> Geosyntec Memorandum at p. 5, and Figure 4

<sup>38</sup> Draft Resolution No. R3-2013-0032, Attachment 1 at p. 6.

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restrictive and eliminates many best management practice options that would otherwise be available and appropriate. For example, for WMZ 2, compliance may be achieved through storage, rainwater harvesting, infiltration, and/or evapotranspiration. According to Attachment 2, the justification for this limitation as applied to WMZ 1 is because the dominant watershed process in WMZ 1 is infiltration into shallow and deeper soil layers, and that overland flow is localized and rare.<sup>39</sup> However, considering the gross scale of the WMZs, it is inappropriate to limit compliance to just infiltration without providing the permittees some ability or flexibility to use other stormwater control measures based on local site conditions. Moreover, the Central Coast Water Board's authority to dictate which type of management practices must be used is questionable, especially when the objective is related to groundwater recharge and not water quality.<sup>40</sup>

Considering the technical deficiencies with Performance Requirement No. 3 (and its legal deficiencies), Goleta recommends that Performance Requirement No. 3 be removed in its entirety. To the extent that the Central Coast Water Board decides to adopt it anyway, the requirement needs to be modified significantly to provide permittees with greater flexibility to adjust compliance with the requirement as necessary considering individual site conditions.

**B. The Ten Percent Adjustment For Sites With Technical Infeasibility Is Not Supported By Evidence In The Record, And At The Very Least is Ambiguous**

Rather than specifically excluding impractical applications of Performance Requirement No. 3, the Post-Construction Requirements include alternative provisions for when compliance with the requirement may not be technically feasible. Specifically, under the terms in Attachment 1 to Draft Resolution No. R3-2013-0032, "Technical infeasibility may be caused by site conditions, including: ... iii) Sites where soil types significantly limit infiltration. ... v) Space constraints (e.g., infill projects, some redevelopment projects, high density development)."<sup>41</sup> One alternative when technical infeasibility is considered to exist is implementation of retention-based Stormwater Control Measures (SCMs) on ten percent of the impervious area. The alternative set at "ten percent" is arbitrary and inflexible. As discussed below, ten percent was selected as the portion of the impervious area that must be dedicated to retention-based SCMs

<sup>39</sup> Draft Resolution No. R3-2013-0032, Attachment 2 at p. 24.

<sup>40</sup> Water Code section 13360 prohibits Regional Boards from dictating the "manner in which compliance may be had with that requirement, order, or decree, and the person so ordered shall be permitted to comply with the order in any lawful manner." Accordingly, if the Central Coast Water Board is legally able to include hydromodification provisions and in particular provisions that are specifically designed for groundwater recharge purposes, determining how to comply with such provisions remains in the discretion of the permittee – not the Central Coast Water Board.

<sup>41</sup> Draft Resolution No. R3-2013-0032.

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because it corresponds with “landscape dedications.”<sup>42</sup> No other justification is provided. Further, there are no proposed findings that link evidence in the record to the requirement to support an alternative set at ten percent. Accordingly, the Central Coast Water Board should reconsider the basis for this provision and, if appropriate, propose a dedication requirement with a proper evidentiary basis.

Even if the ten percent dedication provision was justified and supported by evidence in the record it is still an inflexible provision that does not account for the density of development in and around the project site. The Central Coast Water Board should, therefore, allow permittees to adjust the designated ten percent requirement based on site density. Moreover, if a BMP is still infeasible, a permittee should have the flexibility to require alternative on-site compliance measures. For example, the Ventura County Municipal Separate Storm Sewer System Permit (“Ventura MS4 Permit”) provides that, when retention is technically infeasible, a project applicant may implement an alternative on-site compliance measure, which requires reducing the percentage of impervious area to no more than 30 percent of the total project area and treatment of all remaining runoff.<sup>43</sup> Under the Ventura MS4 Permit, alternative compliance is achieved by maintaining the impervious/pervious area balance, which is a matter of site design that a project applicant can achieve in high-density areas. The Central Coast Water Board, at the very least, should consider revising the Ten Percent Adjustment provision to allow permittees flexibility in determining what is the appropriate adjustment when technical infeasibility exists.

Besides being technically inflexible, the alternative for a Regulated Project to dedicate ten percent of the impervious surface area where technical infeasibility prevents full on-site compliance with the runoff retention requirement is neither supported by the findings nor the evidence in the record. Clear articulation of “the relationships between evidence and findings and between findings and ultimate action” discloses “the analytic route the administrative agency traveled from evidence to action.”<sup>44</sup> Resolution No. R3-2013-0032 does not contain any findings regarding the selection of ten percent as the quantity of land that must be dedicated to retention-based measures to avoid being forced to mitigate off-site. Attachment 2, which provides the rationale for the requirements outlined in Resolution No. R3-2013-0032 contains a specific finding concerning this dedication requirement, but the finding is not supported by the evidence. Attachment 2 states that the ten percent dedication requirement “provides a clear point of compliance that corresponds well with landscape dedications already required by many

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<sup>42</sup> Resolution No. R3-2013-0032, Attachment 2 at p. 23.

<sup>43</sup> Ventura County Municipal Separate Storm Sewer System Permit, Order No. R4-2010-0108 (July 8, 2010) at p. 58.

<sup>44</sup> *Topanga Assn. For a Scenic Community v. County of Los Angeles* (1994) 11 Cal.3d 506, 515 (*Topanga*)

municipalities.”<sup>45</sup> The Central Coast Water Board contends that the retention requirement, of which the dedication requirement is a component, has a water quality and hydromodification benefit. The Central Coast Water Board cites no such bases for the ten percent dedication requirement. Rather, the requirement is related to “landscape dedications.” Thus, the evidence cited by the Central Coast Water Board is not relevant to the ten percent dedication requirement because it is not evidence indicating that the size of the dedication requirement is related to potential water quality benefits. Because the dedication requirement is not supported by the evidence, the Central Coast Water Board should reconsider the provision accordingly.

Notwithstanding the fact that a ten-percent alternative is not supported by evidence in the record, the requirement itself is ambiguous. It states, in part, that “on-site retention of the full Retention Volume per Section B.4. d.vi. is not required and the Regulated Project is required to dedicate no less than ten percent of the Regulated Project’s Equivalent Impervious Surface Area to retention-based Stormwater Control Measures.”<sup>46</sup> The term “retention-based” is not defined in the draft resolution or its attachments. If the term is intended to include biofiltration, then the ten percent alternative becomes more feasible. However, if it is intended to exclude biofiltration, then the ten percent alternative may also be technically infeasible.

**C. The Off-Site Alternative to the Runoff Retention Requirements Is Infeasible**

With respect to the off-site alternative, it does not provide for a feasible alternative in Goleta’s case. Draft Resolution No. R3-2013-0032 provides that “Off-site mitigation is required when Regulated Projects do not retain the full Retention Volume per Section B.4.b and B.4.c and 1) fail to demonstrate technical infeasibility of full retention, or 2) demonstrate technical infeasibility of full retention and fail to dedicate at least ten percent of the Regulated Project’s Equivalent Impervious Surface Area to retention-based Stormwater Control Measures.”<sup>47</sup>

Goleta has little open space for off-site mitigation. Most open space within Goleta’s sphere of influence is protected as designated Environmentally Sensitive Habitat Areas (ESHAs) or agricultural land. On November 6, 2012, Goleta voters passed an initiative such that large open spaces zoned for agricultural use will be restricted for development through December 31, 2032.<sup>48</sup> These restrictions will make it virtually

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<sup>45</sup> Resolution No. R3-2013-0032, Attachment 2 at p. 23.

<sup>46</sup> Resolution No. R3-2013-0032, Attachment 1 at p. 9.

<sup>47</sup> Draft Resolution No. R3-2013-0032, Attachment 1 at p. 9.

<sup>48</sup> Specifically, Goleta voters were asked whether the City of Goleta General Plan should be amended to require that for the next twenty years any changes to specified policies and designation of certain land 10

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impossible for some project proponents to use the off-site alternative compliance provisions when the Post-Construction Requirements cannot be met on-site. Furthermore, because, off-site compliance must be achieved within the same watershed as the regulated project, unless otherwise approved by the Central Coast Water Board's Executive Officer, those project proponents that cannot find a site in Goleta may struggle to find a viable alternative.<sup>49</sup> As such, the off-site mitigation is an infeasible alternative.

**D. Central Coast Water Board Should Expand The List of Projects Exempt From The Proposed Post-Construction Requirements Based On Project Approval Stage**

Generally, the Post-Construction requirements would apply to "all applicable development projects that require approvals and/or permits issued under the Permittee's planning, building, or other comparable authority."<sup>50</sup> Specifically, the proposed Post-Construction Requirements would apply to projects that have not received the first discretionary approval of project design.<sup>51</sup> This limited exemption could unfairly derail projects where significant investments have been made and project proponents have acquired vested development rights.

Once a developer acquires a vested right to build out a development, he can do so pursuant to the conditions and regulations in place at the time of vesting, notwithstanding newly enacted ordinances that might otherwise apply to the development. In California, there are three ways to obtain a vested right. First, if a city or county changes its regulations, a property owner can still claim a vested right to build out a project under the prior land use regulations if the owner has obtained a building permit, performed substantial work, and incurred substantial liabilities in good faith reliance on the permit.<sup>52</sup> Second, a development agreement provides a mechanism for obtaining a vested right.<sup>53</sup> A development agreement (Gov. Code, § 65864 – 65869.5) "between a developer and a local government limits the power of the government to apply newly enacted ordinances to ongoing developments."<sup>54</sup> Finally, a vesting tentative map gives a developer a vested right to obtain all necessary building permits and discretionary approvals according to the regulations in place at the time the map is complete.<sup>55</sup>

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acres or more currently designated as Agriculture be required to be approved by the voters as well as the City Council. <http://www.smartvoter.org/2012/11/06/ca/sba/mcas/G2012/>. Visited site on April 28, 2013.

<sup>49</sup> Draft Resolution No. R3-2013-0032, Attachment 1 at p. 13.

<sup>50</sup> Draft Resolution No. R3-2013-0032, Attachment 1 at p. 1.

<sup>51</sup> Draft Resolution No. R3-2013-0032, Attachment 1 at p. 3.

<sup>52</sup> *Avco Community Developers, Inc. v. South Coast Regional Com.* (1976) 17 Cal.3d 785, 791.

<sup>53</sup> Gov. Code, § 65866; *City of West Hollywood v. Beverly Towers* (1991) 52 Cal.3d 1184, 1194 (*City of West Hollywood*).

<sup>54</sup> *City of West Hollywood, supra*, 52 Cal.3d at p. 1193, n. 6.

<sup>55</sup> Gov. Code, § 66498.1; *City of West Hollywood, supra*, 52 Cal.3d at p. 1193, n. 6.

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Draft Resolution No. R3-2013-0032 exempts only those projects that have not yet received the “first discretionary design approval.” Thus, it appears that even projects with a development agreement in place, may not be exempt. If Goleta were to try to impose new stormwater regulations on a project that is the subject of a development agreement, it could subject Goleta to challenge by the developer. Moreover, the broad category of projects that have not yet received the “first discretionary design approval,” may not capture projects which have been “deemed complete for processing,” projects that are the subject of a Specific Plan, and those for which the developer has completed public improvements, obtained financing and/or participated in the financing of public improvements. Were Goleta to subject projects at these stages to new stormwater regulations, it may unfairly halt projects where significant investments have been made, and limit the economic feasibility of completing the project.

The State Water Board recognized the need to apply a more reasonable standard in the Phase II General Permit. The post-construction standards of the Phase II General Permit apply to Regulated Projects, including projects “*that have not been deemed complete for processing*” and “discretionary permit projects that have not requested and received an extension of previously granted approvals.”<sup>56</sup> The Central Coast Water Board should follow the lead of the State Water Board, and in addition to exempting projects that have acquired a project design approval, exempt discretionary projects “deemed complete for processing,” and those for which a vesting tentative map has been issued.<sup>57</sup> Further, to protect the vested rights of those with development agreements in place, the Central Coast Water Board should exempt those projects subject to development agreements. Goleta also requests that the Central Coast Water Board exempt projects that are the subject of a Specific Plan, and those for which a developer has completed public improvements, obtained financing, and/or participated in the financing of public improvements; or which requires the private party to reimburse the local agency for public improvements upon the development of such a private project. By providing these exemptions, applicants that have acquired vested rights, or made other substantial investments and progress in the application process would not be required to redesign their proposed projects, at potentially considerable expense. Moreover, such an exemption would relieve Goleta from being in the untenable position of defending itself from a legal challenge (e.g., claims of a taking) by a developer with a vested right to develop under prior regulations.

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<sup>56</sup> Phase II General Permit at p. 51.

<sup>57</sup> The Central Coast Water Board’s proposed exemption for projects with a “completed project application” is an inadequate alternative. By requiring an MS4 to apply for this exemption and show “financial infeasibility,” such a request is left to the discretion of the Central Coast Water Board’s Executive Officer, and it is based on a vague standard. Goleta requests that this exemption be clearly articulated and not be subject to further decision making by staff.

**E. Performance Requirement No. 4 Should Be Deleted**

Should the Central Coast Water Board adopt Performance Requirement No. 3 despite its technical and legal deficiencies, Performance Requirement No. 4 is unnecessary because implementing the retention requirements in Performance Requirement No. 3 (where feasible) provide any peak management benefit that may otherwise be attained under Performance Requirement No. 4. According to the Draft Resolution and its attachments, Performance Requirement No. 3 is intended to manage significant runoff from large storms. In doing so, this achieves the objective of Performance Requirement No. 4, which is to retain the first part of larger storms.<sup>58</sup> Performance Requirement No. 4 would require that post-development peak flows not exceed pre-project peak flows for the 2- through 10-yr storm events. Besides being unnecessary, implementation of Performance Requirement No. 4 would be inconsistent with the Maximum Extend Practice (MEP) standard because it would provide no additional benefit and would only impose additional costs.<sup>59</sup>

For example, the Central Coast Water Board's justification for Performance Requirement No. 4 notes that "[r]etaining both runoff produced by small storms and the first part of larger storms can reduce cumulative impacts of altered flow regimes on receiving water hydrology, including channel degradation and diminished baseflow."<sup>60</sup> However, the evidence cited by the Central Coast Water Board to support this proposition impliedly dismisses the need for Performance Requirement No. 4. The EISA Technical Guidance indicates that "retaining all storms up to and including the 95th percentile storm event is analogous to maintaining or restoring the pre-development hydrology with respect to the volume, flow rate, duration and temperature of the runoff for most sites."<sup>61</sup> Thus, the evidence indicates that retention of the 95th percentile 24-hour event, where feasible, achieves any hydromodification benefit that Performance Requirement No. 4 is designed to achieve. Therefore, Performance Requirement No. 4 only increases costs, and provides no added water quality benefit. Accordingly, Central Coast Water Board should eliminate Performance Requirement No. 4 from Resolution No. R3-2013-0032.

**F. The Term "Urban Sustainability Area" Is Too Narrowly Defined**

Draft Resolution No. R3-2013-0032's attempts to relax the retention requirements and provide an easier means of achieving alternative compliance are arguably

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<sup>58</sup> Draft Resolution No. R3-2013-0032, Attachment 2 at pp. 23, 28.

<sup>59</sup> State Water Board Order No. 2003-005 DWQ at p. 9; see also Memorandum from E. Jennings, State Water Board Office of the Chief Counsel, to A. Matthews, State Water Board Division of Water Quality (Feb. 11, 1993) ("1993 Memorandum") at pp. 4-5, attached as Exhibit B.

<sup>60</sup> Draft Resolution No. R3-2013-0032, Attachment 2 at p. 28.

<sup>61</sup> Draft Resolution No. R3-2013-0032, Attachment 2 at p. 28.

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meaningless because of the restrictive definition of Urban Sustainability Area. Draft Resolution No. R3-2013-0032 provides that an Urban Sustainability Area (USA) “may only encompass redevelopment in high density urban centers ... that are pedestrian oriented and/or transit-oriented development projects intended to promote infill of existing urban areas.” This definition may exclude many meaningful redevelopment projects in Goleta that are not in areas considered high density or pedestrian/transit oriented. Moreover, the fact that an MS4 must have its USA approved by the Central Coast Water Board’s Executive Officer further limits the potential benefits associated with a USA designation under the proposed Post-Construction Requirements because approval is discretionary and subject to vague standards. The Central Coast Water Board should offer real incentives for redevelopment projects that minimize the creation of new impervious surfaces. As currently drafted, the definition of USA likely limits these opportunities.

**G. Resolution No. R3-2013-0032 Should Provide an Exemption From The Retention And Hydromodification Requirements For Projects In Low Lying Areas That Drain Only To Non-Stream Receiving Waters**

In addition to our general concerns expressed above, there are project sites where the benefits from runoff retention and peak management will not be realized because the project site sits above a high groundwater table and drains to a non-stream receiving water. The Central Coast Water Board should, at the very least, provide an exemption from the retention and peak-management requirements for projects where such conditions are present.

Resolution No. R3-2013-0032, Attachment 2 provides the basis for Performance Requirement No. 4: Peak Management. Specifically, “[p]eak management is required only in Watershed Management Zones where receiving waters (streams) are potentially impacted by hydromodification effects resulting from alterations to runoff duration, rate and volume.”<sup>62</sup> Central Coast Water Board staff is assuming that “the Peak Management criterion, when used in combination with the Runoff Retention Requirement, will ... protect[] stream channels from hydromodification impacts.”<sup>63</sup> Also, the Central Coast Water Board is assuming that retaining runoff from small storms and the first part of larger storms “can reduce the cumulative impacts of altered flow regimes on receiving water hydrology, including channel degradation and diminished baseflow.”<sup>64</sup> Clearly, the focus of Performance Requirement No. 4 is to protect *stream* channels. Where a project does not drain to any stream channels, it cannot have an impact on stream channels. For example, a project on land that drains to a tidally-influence slough will have no impact on

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<sup>62</sup> Draft Resolution No. R3-2013-0032, Attachment 2 at p. 28.

<sup>63</sup> Draft Resolution No. R3-2013-0032, Attachment 2 at p. 28.

<sup>64</sup> Draft Resolution No. R3-2013-0032, Attachment 2 at p. 28.

*stream* channels. Imposing Performance Requirement No. 4 on such projects would be superlative. Such a requirement would run afoul of the MEP standard because such a requirement is impractical and the cost would significantly outweigh the benefit.

Further, the purported benefits of the runoff retention requirement cannot be achieved on low-lying parcels, overlying a high groundwater table. The basis for Performance Requirement No. 3: Runoff Retention, is that “it will provide broad support to watershed processes, including, reduced overland flow, infiltration, interflow, and groundwater recharge ....”<sup>65</sup> Contrary to the intent of the performance requirement, these low-lying areas do not allow for infiltration and recharge of the basin with runoff because of the high groundwater table. Moreover, there is no interflow benefit where there is a high groundwater table because there is no distinction between shallow subsurface flow and deep groundwater flow.<sup>66</sup>

With respect to application of the proposed off ramps, the two-potential off-ramps for a project on low-lying land, overlying a high groundwater table, and not draining to a *stream* channel, are not useful or applicable. First, while a project proponent could seek an exemption from the runoff retention requirement by claiming infeasibility, because the depth to seasonal high groundwater limits infiltration or prevents construction of subgrade stormwater control measures, the project proponent must then dedicate 10% of the impervious area to retention-based control measures.<sup>67</sup> It appears that retention-based control measures, however, are designed to maximize infiltration of runoff, which is not possible in the case of a site with a high groundwater table.<sup>68</sup> Therefore, this off-ramp provides no benefit.

The other potential off-ramp for such a project might be found in Performance Requirement No. 5: Special Circumstances. Such a project may qualify as a “Highly Altered Stream Channel Special Circumstance” or a “Historic Lake and Wetland Special Circumstance,” but the exemption is not available for even a moderately sized project. For a Highly Altered Channel Special Circumstance project creating and/or replacing  $\geq 22,500$  square feet, the project proponent must implement Performance Requirement Nos. 2 and 3. As explained above, Performance Requirement No. 3 is infeasible on such lands. As such, these special circumstance exemptions provide no benefit for moderately sized projects because project proponents will otherwise be forced to implement infeasible requirements.

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<sup>65</sup> Draft Resolution No. R3-2013-0032, Attachment 2 at p. 23.

<sup>66</sup> Draft Resolution No. R3-2013-0032, Attachment 2 at p. 5.

<sup>67</sup> Draft Resolution No. R3-2013-0032, Attachment 1 at p. 9 ¶ B.4.e) and p. 14 ¶ C.1.c).

<sup>68</sup> Draft Resolution No. R3-2013-0032, Attachment 1 at pp. 26-27.

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Accordingly, the Central Coast Water Board should provide an exemption from Performance Requirement Nos. 3 and 4 for those projects on low-lying land that sit above a high groundwater table and do not drain to a stream channel.

### **III. The Central Coast Water Board Has Failed To Make Findings Based On Evidence That Bridge the Analytic Gap Between The Evidence And The Proposed Requirements**

Draft Resolution No. R3-2013-0032 proposes that the Central Coast Water Board adopt the Post-Construction Requirements “as the minimum post-construction criteria that Central Coast Traditional MS4s ... must apply to applicable development and redevelopment projects in order to protect water quality and comply with the MEP standard and Phase II Municipal General Permit section E.12.k.”<sup>69</sup> Draft Resolution No. R3-2013-0032 proposes hydromodification requirements that run afoul of state and federal law. For the reasons explained below, the Central Coast Water Board should reject the proposed Post-Construction Requirements and require Central Coast small MS4s to comply with the same Phase II General Permit requirements as all other small MS4s.

The Central Coast Water Board has characterized Resolution No. R3-2013-0032 as constituting waste discharge requirements (WDRs), and Goleta agrees.<sup>70</sup> The adoption of WDRs, is of course, a quasi-adjudicatory act.<sup>71</sup> The proposed Post-Construction Requirements are enforceable post-construction hydromodification criteria that purportedly serve to implement the Phase II General Permit.<sup>72</sup> If Goleta fails to comply with such requirements, it would be subject to enforcement action for violation of the Phase II General Permit.<sup>73</sup>

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<sup>69</sup> Draft Resolution No. R3-2013-0032 at p. 8, ¶ 2.

<sup>70</sup> Finding No. 30 of Draft Resolution No. R3-2013-0032 states: “This action to adopt this Resolution is exempt from the provisions of the California Environmental Quality Act (Public Resources Code § 21100 et seq.) in accordance with section 13389 of the Porter-Cologne Water Quality Control Act (Porter-Cologne, Division 7 of the California Water Code).” Water Code section 13389 provides: “Neither the state board nor the regional boards shall be required to comply with the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code *prior to the adoption of any waste discharge requirement*, except requirements for new sources as defined in the Federal Water Pollution Control Act or acts amendatory thereof or supplementary thereto.” (Emphasis added.)

<sup>71</sup> *California Association of Sanitation Agencies v. State Water Resources Control Bd.* (2012) 208 Cal.App.4th 1438, 1462 fn. 22.

<sup>72</sup> See, e.g., Attachment 2 to Resolution No. R3-2012-0032 at p. 2 [“These Post-Construction Requirements ... are the minimum post-construction criteria that Central Coast traditional, small MS4 stormwater dischargers must apply to applicable new development and redevelopment projects in order to comply with the MEP standard.”].)

<sup>73</sup> See Phase II General Permit at p. 12.

When adopting permit requirements, the Central Coast Water Board has a duty to “set forth findings to bridge the analytic gap between the raw evidence and the ultimate decision or order.”<sup>74</sup> This serves to “conduce the administrative body to draw legally relevant sub-conclusions supportive of its ultimate decision” and “facilitate orderly analysis and minimize the likelihood that the agency will randomly leap from evidence to conclusions.”<sup>75</sup> As the California Supreme Court explained, clear articulation of “the relationships between evidence and findings and between findings and ultimate action” discloses “the analytic route the administrative agency traveled from evidence to action.”<sup>76</sup> The Legislature “contemplated that the agency would reveal this route” in the findings.<sup>77</sup> Findings revealing the analytic route traveled by the agency must be supported by evidence in the record.<sup>78</sup>

The Central Coast Water Board has failed to satisfy these duties in Draft Resolution No. R3-2013-0032. The findings in Resolution No. R3-2013-0032 consist of general statements and broad conclusions related to a perceived need for post-construction hydromodification criteria.<sup>79</sup> The findings do not explain the basis for each Post-Construction Requirement proposed by the Central Coast Water Board or how they relate to Goleta in particular. For example, the findings do not explain how the broad-scale Water Management Zone (WMZ) designations on which the proposed Post-Construction Requirements are based account for local differences in soils, topography, and other environmental conditions. Accordingly, the findings impermissibly fail to “bridge the analytic gap between the raw evidence and the ultimate decision or order” or reveal the “analytic route the [Central Coast Water Board has] traveled from evidence to ultimate action.”<sup>80</sup>

Resolution No. R3-2013-0032 creates substantive obligations of great significance. Nowhere does it explain or justify these specific requirements. Finding No. 13 states: “The Technical Support Document (Attachment 2) contains rationale, justification, and explanation for the Post-Construction Requirements. This information is hereby incorporated by reference.” Goleta submits that incorporating a technical document cannot satisfy the requirement to serve as a bridge between the evidence and ultimate order. The Central Coast Water Board must make findings, rather than generally referring to a separate informational document.

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<sup>74</sup> *Topanga, supra*, 11 Cal.3d at p. 515.

<sup>75</sup> *Id.* at p. 516.

<sup>76</sup> *Id.* at p. 515.

<sup>77</sup> *Ibid.*

<sup>78</sup> *Id.* at pp. 514-515.

<sup>79</sup> Draft Resolution No. R3-2013-0032, pp. 1-9, Attachment 1 at pp. 1-32.

<sup>80</sup> *Topanga, supra*, 11 Cal.3d at p. 515.

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However, assuming *arguendo* that incorporating Attachment 2 into Resolution No. R3-2013-0032 could ever satisfy the requirement to explain the basis for regulatory requirements in the findings, the findings still fall below the legal standard. Attachment 2 generally discusses the regulatory context and environmental conditions before briefly addressing the categories of the Post-Construction Requirements, rather than the many specific requirements of each category. For example, Attachment 2 does not explain why the Central Coast Water Board determined it necessary to have small MS4s or Goleta in particular apply site design and runoff reduction performance requirements to residential properties.<sup>81</sup> Nor does Attachment 2 explain why 2,500 square feet was determined as the threshold for invoking such performance requirements when that amount of impervious surface is created or replaced.<sup>82</sup> Attachment 2 also does not explain why the square-footage thresholds for Performance Requirement Nos. 2, 3, and 4 were determined to be appropriate. Moreover, Resolution No. R3-2013-0032 does not explain how each Post-Construction Requirement comports with the MEP standard.

With regard to the requirement to retain runoff from events up to the 95th percentile 24-hour rainfall event, no findings explain how the requirement is technically or economically feasible for the localities in which it is being applied.<sup>83</sup> Respecting Attachment D to Attachment 1, which defines the Tributary Area as the entire project without excluding existing impervious areas that will not be replaced, Attachment 2 directs readers to an April 8, 2013 study, which evaluated stormwater control measure sizing criteria.<sup>84</sup> Though this study justifies the proposed basin sizing requirements to some extent, the study does not contain findings explaining how the retention requirement is technically or economically feasible.

In addition to failing to bridge the analytic gap between the evidence and specific post-construction requirements, the Central Coast Water Board is proposing regulatory requirements not supported by evidence in the record. The record is replete with references to the unnecessary and unattainable nature of many of the proposed Post-Construction Requirements.<sup>85</sup> The Central Coast Water Board has not adequately studied or considered the specific concerns of parties who provided comments on Draft Resolution R3-2012-0025 and its subsequent revisions. As a result, even if the Central Coast Water Board concludes the Post-Construction Requirements are addressed in findings, the findings are not supported by the evidence in the record.

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<sup>81</sup> Draft Resolution No. R3-2013-0032, Attachment 1 at p. 3, and Attachment 2 at p. 19.

<sup>82</sup> Draft Resolution No. R3-2013-0032, Attachment 1 at p. 3, and Attachment 2 at p. 19.

<sup>83</sup> Draft Resolution No. R3-2013-0032, Attachment 2 at pp. 22-28.

<sup>84</sup> Draft Resolution No. R3-2013-0032, Attachment 2 at p. 22, and Attachment G to Attachment 2.

<sup>85</sup> See comment letters regarding the Joint Effort Post-Construction Requirements submitted by the City of Lompoc on June 20, 2012; the County of Santa Barbara on July 3, 2012; the City of Goleta on July 5, 2012; and the California Stormwater Quality Association on July 6, 2012.

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**IV. Adoption of Draft Resolution No. R3-2013-0032 Would Violate Water Code Sections 13263(a) And 13241 By Failing to Consider Certain Requirements Before Adopting the Resolution**

Water Code section 13263(a) requires the Central Coast Water Board to consider the factors of Water Code section 13241 when adopting permit-based requirements more restrictive than those mandated by federal law.<sup>86</sup> The factors listed in Water Code section 13241 include:

- (a) Past, present, and probable future beneficial uses of water.
- (b) Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto.
- (c) Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area.
- (d) Economic considerations.
- (e) The need for developing housing within the region.
- (f) The need to develop and use recycled water.

As explained by the Supreme Court in *Burbank*, “economic considerations” include the cost the permit holder will incur to comply with the adopted numeric pollutant restrictions.<sup>87</sup> Guidance from the State Water Board’s Chief Counsel reaffirms that the Central Coast Water Board has an affirmative duty to consider economics and must engage in a balancing of public interest factors.<sup>88</sup> The Central Coast Water Board must address the Water Code section 13241 factors in the permit findings where such requirements exceed federal requirements.<sup>89</sup>

The objective of the proposed Post-Construction Requirements are supposedly “to ensure that the permittee is reducing pollutant discharges to the Maximum Extent

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<sup>86</sup> *Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4th 613, 626-627 (*Burbank*).

<sup>87</sup> *Burbank, supra*, 35 Cal.4th, p. 627.

<sup>88</sup> Memorandum to Regional Water Board Executive Officers and Regional Water Board Attorneys, from William R. Attwater, Chief Counsel, SWRCB, Re: Guidance on the Consideration of Economics in the Adoption of Water Quality Objectives (Jan. 4, 1994) (Attwater Memorandum) attached hereto as Exhibit C.

<sup>89</sup> *In the Matter of the Review on Own Motion of Waste Discharge Requirements Order No. 5-01-044 for Vacaville’s Easterly Wastewater Treatment Plant*, State Board Order WQO 2002-0015 (Oct. 3, 2002), p. 35.

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Practicable and preventing stormwater discharges from causing or contributing to a violation of receiving water quality standards in all applicable development projects. . . .<sup>90</sup> Further, the Draft Resolution claims that maintenance and restoration of watershed processes . . . is necessary to protect water quality and beneficial uses."<sup>91</sup> Based on these findings, the Post-Construction Requirements proposed here are apparently intended to maintain and restore watershed processes, which Central Coast Water Board staff finds is necessary to implement water quality standards. Based on the Central Coast Water Board staff's rationale, such requirements are water quality based and therefore extend beyond the mandated MEP standard.

As recognized in previous court decisions, MEP is the minimum standard and states have the discretion, but are not required, to impose more stringent requirements.<sup>92</sup> Because MEP is the federal mandated requirement, and because water quality based controls are imposed using discretionary authority, application of water quality based controls exceed the requirements of federal law, and are therefore subject to Water Code section 13623, and its incorporation of Water Code section 13241.

As such, the Central Coast Water Board is required to consider economics and the other public interest factors in Water Code section 13241.<sup>93</sup> The findings and record in this matter are devoid of evidence that the Central Coast Water Board has adequately and properly considered the factors of Water Code section 13241 in its adoption of the proposed Post-Construction Requirements.

**V. Resolution No. R3-2013-0032 Would Impose Requirements On Goleta That Exceed The MEP Standard**

Besides collectively being a water-quality based standard, and to the extent that the Central Coast Water Board staff claims that they are technology-based standards, the proposed Post-Construction Requirements are inconsistent with the MEP standard prescribed by the CWA, federal regulations, and State Water Board orders (including the Phase II General Permit).

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<sup>90</sup> Draft Resolution No. R3-2013-0032, Attachment 1 at p. 1.

<sup>91</sup> Draft Resolution No. R3-2013-0032 at p. 4, ¶ 17.

<sup>92</sup> See, e.g. *Building Industry Assn. et al. v. State Water Resources Control Board* (2004) 124 Cal.App.4th 866, 883; see also *Defenders of Wildlife et al. vs. Carol M. Browner* (9th Cir. 1999) 1991 F. 3d 1159, 1166-1167.

<sup>93</sup> Wat. Code, § 13263; *Burbank, supra*, 35 Cal.4th at p. 627.

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Under the CWA, all MS4 permits must require controls to reduce the discharge of pollutants to the MEP. In this regard, the CWA states:

Permits for discharges from municipal storm sewers . . . shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the [permitting authority] determines appropriate for the control of such pollutants.<sup>94</sup>

Federal regulations and the Phase II General Permit require MS4 permittees to develop, implement, and enforce Best Management Practices (BMPs) to reduce discharges of pollutants to the MEP.<sup>95</sup> MS4s must develop and implement BMPs and associated measurable goals to fulfill requirements associated with the following six minimum control measures: (1) public education and outreach on storm water impacts; (2) public involvement and participation in the development and implementation activities related to the program; (3) illicit discharge detection and elimination; (4) construction and site storm water runoff control; (5) post-construction storm water management in new development and redevelopment; and (6) pollution prevention and good housekeeping for municipal operations.<sup>96</sup>

The MEP standard is met by implementing BMPs.<sup>97</sup> The federal regulations describe BMPs as “generally the most appropriate form of effluent limitations when designed to satisfy technology requirements (*including reduction of pollutants to the maximum extent practicable*) and to protect water quality.”<sup>98</sup> The MEP standard entails an iterative process whereby the permittee reviews and improves BMPs over time.<sup>99</sup>

The applicable legal authority and guidance emphasize the need to consider site-specific factors (including cost) when determining what constitutes MEP. Immediately following is a more detailed discussion of the MEP standard in this regard and Goleta’s explanation for why the requirements of Draft Resolution No. R3-2013-0032 impermissibly conflict with the MEP standard.

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<sup>94</sup> 33 U.S.C. § 1342(p)(3)(B)(iii).

<sup>95</sup> 40 C.F.R. § 122.34(a); Phase II General Permit at p. 10.

<sup>96</sup> 40 C.F.R. § 122.34; Phase II General Permit at pp. 19-62.

<sup>97</sup> 40 C.F.R. § 122.34(a).

<sup>98</sup> *Ibid.*, emphasis added.

<sup>99</sup> *Id.*, § 122.34(g); Phase II General Permit at p. 9; see *In the Matter of the Petitions of Building Industry Association of San Diego County and Western State Petroleum Association*, State Water Board Order WQ 2001-15 (Nov. 15, 2001), pp. 5, 7; *In the Matter of the Petitions of the Cities of Bellflower, et al., the City of Arcadia, and Western States Petroleum Association*, State Water Board Order WQ 2000-11 (July 19, 2001), pp. 3, 16.

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**A. The MEP Standard Is Flexible, Continually Evolves, and Requires the Consideration of Site-Specific Factors**

Applicable legal authority and other guidance make clear that MEP is a flexible, evolving, and site-specific standard that involves the consideration of various factors. Such factors include public acceptance, cost versus benefits, and technical and economic feasibility. Technical feasibility may depend on local environmental conditions (e.g., soils, geography, parcel size), while economic feasibility may depend on local economic conditions.

EPA guidance states that the MEP standard “allow[s] the permitting authority and regulated MS4s *maximum flexibility* in their interpretation of it as appropriate.”<sup>100</sup> EPA guidance emphasizes the importance of applying MEP in a flexible, site-specific manner as part of an iterative process.<sup>101</sup> For example, EPA guidance for small MS4s states:

*This final rule requires the permittee to choose appropriate best management practices (BMPs) for each minimum control measure. In other words, EPA expects Phase II permittees to develop and update their stormwater management plans and their BMPs to fit the particular characteristics and needs of the permittee and the area served by its MS4. Therefore the Federal or State operator of a regulated storm sewer system can take advantage of the flexibility provided by the rule to utilize the most suitable minimum control measures for its MS4.*<sup>102</sup>

Additional EPA guidance for small MS4s states: “Because redevelopment projects may have site constraints not found on new development sites, the Phase II Final Rule provides flexibility for implementing post-construction controls on redevelopment sites that consider these constraints.”<sup>103</sup> Further, “[i]t is important to recognize that many BMPs are climate-specific, and not all BMPs are appropriate in every geographic area.”<sup>104</sup> Other EPA guidance for new development and redevelopment states: “EPA recommends that the BMPs chosen: *be appropriate for the local community; minimize water quality impacts; and attempt to maintain pre-development runoff conditions.*”<sup>105</sup>

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<sup>100</sup> Storm Water Phase II Compliance Assistance Guide, EPA 833-R-00-002 (Mar. 2000), pp. 4-17, emphasis added.

<sup>101</sup> 64 Fed. Reg. 68722, 68732, 68755 (Dec. 8, 1999); MS4 Program Evaluation Guidance, EPA 833-R-07-003 (Jan. 2007), p. 2; Stormwater Phase II Final Rule, EPA 833-F-00-009 (Jan. 2000), p. 1.

<sup>102</sup> Stormwater Phase II Final Rule, Federal and State-Operated MS4s: Program Implementation, EPA 833-F-00-012 (Dec. 2005), p. 2, emphasis added.

<sup>103</sup> Stormwater Phase II Final Rule, Post-Construction Runoff Minimum Control Measure, EPA 833-F-00-012 (Dec. 2005), p. 2.

<sup>104</sup> *Ibid.*

<sup>105</sup> See 40 C.F.R. § 122.34(b)(5)(iii), emphasis added.

Moreover, the Phase II General Permit describes MEP as “an ever-evolving, flexible, and advancing concept, *which considers technical and economic feasibility.*”<sup>106</sup> The Phase II General Permit emphasizes the need for such flexibility and an iterative MEP process as follows:

BMP development is a dynamic process and may require changes over time as the Permittees gain experience and/or the state of the science and art progresses. To do this, the Permittees must conduct and document evaluation and assessment of each relevant element of its program, and their program as a whole, and revise activities, control measures/ BMPs, and measurable goals, as necessary to meet MEP.<sup>107</sup>

Order No. 2003-005 DWQ explained that technical feasibility, cost, effectiveness, and public acceptance are factors used to develop BMPs that achieve MEP:

*In choosing BMPs, the major focus is on technical feasibility, but cost, effectiveness, and public acceptance are also relevant. If a Permittee chooses only the most inexpensive BMPs, it is likely that MEP has not been met. If a Permittee employs all applicable BMPs except those that are not technically feasible in the locality, or whose cost exceeds any benefit to be derived, it would meet the MEP standard. MEP requires Permittees to choose effective BMPs, and to reject applicable BMPs only where other effective BMPs will serve the same purpose, the BMPs are not technically feasible, or the cost is prohibitive.*<sup>108</sup>

The 1993 Memorandum recommends considering the following site-specific factors to determine whether a municipality would achieve MEP in a given instance:

1. **Effectiveness:** Will the BMP address a pollutant of concern?
2. **Regulatory Compliance:** Is the BMP in compliance with storm water regulations as well as other environmental regulations?
3. **Public acceptance:** Does the BMP have public support?
4. **Cost:** Will the cost of implementing the BMP have a reasonable relationship to the pollution control benefits to be achieved?

<sup>106</sup> Phase II General Permit at p. 10, ¶ 36.

<sup>107</sup> Phase II General Permit at p. 10, ¶ 36.

<sup>108</sup> 1993 Memorandum at pp. 4-5, emphasis added, attached as Exhibit B.

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5. *Technical Feasibility: Is the BMP technically feasible considering soils, geography, water resources, etc.?*<sup>109</sup>

Draft Resolution No. R3-2013-0032 generally agrees with this description of the MEP standard as being flexible, site-specific, adaptive, and involving the consideration of economic and technical feasibility, stating:

The maximum extent practicable (MEP) standard is an ever-evolving, flexible, and advancing concept, which considers technical and economic feasibility. As knowledge about controlling urban runoff continues to evolve, so does that which constitutes MEP. Reducing the discharge of stormwater pollutants to the MEP in order to protect beneficial uses requires review and improvement, which includes seeking new opportunities[.]<sup>110</sup>

**B. Requirements Of Resolution No. R3-2013-0032 Impermissibly Conflict With The MEP Standard**

As an initial matter, nothing in the Phase II General Permit or federal regulations requires Goleta to implement the specific Post-Construction Requirements mandated by Resolution No. R3-2013-0032.<sup>111</sup> Nor do the federal regulations or Phase II General Permit identify hydromodification criteria as necessary or appropriate to fulfill any of the six minimum control measures that a SWMP must include.<sup>112</sup>

Further, as described above, the MEP standard is site-specific and a flexible concept whereby permittees review and refine BMPs over time. In this case, the Central Coast Water Board has passingly acknowledged the MEP standard, but has proposed very prescriptive requirements that apply across a region without proper regard for local economic and environmental conditions, or technical feasibility. Such requirements may be changed only through adoption of a resolution by the Central Coast Water Board. This approach is anything but flexible, amendable to evolution, or site-specific, and exceeds the MEP standard.

For the reasons provided below, the Post-Construction Requirements exceed the MEP standard because they: are not designed to address a pollutant or combination of pollutants (see Introduction above); are technically infeasible; will have costs that

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<sup>109</sup> 1993 Memorandum at pp. 4-5, emphasis added, attached as Exhibit B.

<sup>110</sup> Draft Resolution No. R3-2013-0032 at p. 6, ¶ 26.

<sup>111</sup> Phase II General Permit at p. 62.

<sup>112</sup> Phase II General Permit at pp. 56-57.

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surpass their economic benefits and/or will be economically infeasible; and are generally and overwhelmingly unaccepted by the public.

### **1. The Post-Construction Requirements Are Technically Infeasible**

The Post-Construction Requirements exceed MEP because they are technically infeasible. For Goleta, and presumably for other municipalities, one of the most infeasible and troubling requirements is the retention of runoff through infiltration for storms up to the 95th percentile 24-hour rainfall event. Resolution No. R3-2013-0032 acknowledges, "in some circumstances, site conditions (e.g., historical soil contamination) and the type of development (i.e., urban infill) can limit the feasibility of retaining, infiltrating, and reusing stormwater at sites."<sup>113</sup> This is particularly true with regard to the Goleta, which must comply with the Post-Construction Requirements for WMZs 1. Goleta's primarily Class D soils do not allow infiltration at a rate conducive to these retention/infiltration requirements. Compounding the problem is that Goleta primarily has only infill and redevelopment properties available within Goleta's sphere of influence. Based on these environmental conditions and Goleta's development history, much of Goleta would be incapable of infiltrating the 95th percentile 24-hour rainfall event.

Technical Guidance of the U.S. Environmental Protection Agency for Section 438 of the federal Energy Independence and Security Act (EISA) is the purported basis for the 95th percentile requirement.<sup>114</sup> The EISA guidance includes a 95th percentile retention requirement for federal facilities creating or replacing more than 5,000 square feet.<sup>115</sup> There is no basis to conclude (or findings in the record supporting) that this standard for federal facilities, which is backed by the resources of the federal government, is technically or economically feasible for Goleta.

Moreover, the Post-Construction Requirements do not incorporate the full text of Section 438 Technical Guidance, which lists an alternative option for compliance to perform a site-specific hydrologic analysis and provide the appropriate site-specific compliance.<sup>116</sup> Further, the Section 438 Technical Guidance provides for other options

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<sup>113</sup> Draft Resolution No. R3-2013-0032 at p. 5, ¶ 20.

<sup>114</sup> *Method and Findings of the Joint Effort for Hydromodification Control in the Central Coast Region of California*, prepared for the Central Coast Water Board by Stillwater Sciences and Tetra Tech (June 14, 2012), p. 46. See also Draft Resolution No. R3-2013-0032, Attachment 2 at pp. 23-24, 27.

<sup>115</sup> *Ibid.*

<sup>116</sup> *Technical Guidance On Implementing the Stormwater Runoff Requirements for Federal Projects Under Section 438 of the Energy Independence and Security Act*, EPA 841-B-09-001 (Dec. 2009), p. 12; see also California Stormwater Quality Association comment letter to Mr. Dominic Roques (July 6, 2012) (CASQA July 2012 Comment Letter), pp. 3-4.

when retention of the 95th percentile storm event is not feasible.<sup>117</sup> Other options include: the use of evapotranspiration and harvesting and reuse, rather than just infiltration for areas designated as WMZ 1 and portions of WMZs 4, 7, and 10; specific conditions that can be used to justify a determination that it is not technically feasible to implement fully the criteria, and rainwater harvesting and use is not practical; and, when a determination of technical infeasibility is made, projects can be approved based on a maximum extent technically feasible versus requiring off-site compliance, regardless if off-site compliance is feasible.<sup>118</sup>

Under the Post-Construction Requirements, the proponent of a regulated project may undertake alternative compliance measures (Ten Percent Adjustment or off-site compliance) if the infiltration requirements cannot be met due to infeasibility.<sup>119</sup> With respect to the Ten Percent Adjustment, as indicated in Section II.B., the language is currently ambiguous and could be infeasible if biofiltration in such cases is not considered a “retention-based BMP.” Alternative compliance refers to achieving the requirement off-site through mechanisms such as developer fee-in-lieu arrangements and/or use of regional facilities.<sup>120</sup> However, this alternative means compliance is also infeasible. For example, off-site compliance must occur in the same watershed.<sup>121</sup> For Goleta, existing development restrictions and environmental and economic constraints make this unworkable for many projects. Specifically, Goleta’s General Plan includes many designated Environmentally Sensitive Habitat Areas (“ESHAs”), which preclude the use of these areas for off-site mitigation. The Post-Construction Requirements allow the Central Coast Water Board Executive Officer to approve off-site compliance projects outside the watershed, but the approval is discretionary, there are no criteria for when this approval should be given, and there is no certainty that suitable alternative lands exist or that it will be technically and economically feasible to implement a project on them.<sup>122</sup> In most instances, all suitable land may exist on private property.

**2. The Costs Of The Proposed Post-Construction Requirements Would Surpass Their Economic and Environmental Benefits And/Or The Post-Construction Requirements Are Economically Infeasible**

The costs of the Post-Construction Requirements would arguably exceed their benefits, and in some cases, the costs may make the requirements economically infeasible to implement. Further, the Post-Construction Requirements come on the heels of the

<sup>117</sup> CASQA July 2012 Comment Letter at p. 4.

<sup>118</sup> CASQA July 2012 Comment Letter at p. 4.

<sup>119</sup> Draft Resolution No. R3-2013-0032, Attachment 1 at pp. 13-16.

<sup>120</sup> Draft Resolution No. R3-2013-0032, Attachment 1 at p. 13.

<sup>121</sup> Draft Resolution No. R3-2013-0032, Attachment 1 at p. 13.

<sup>122</sup> Draft Resolution No. R3-2013-0032, Attachment 1 at p. 13.

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elimination of redevelopment funds by the state. Other than Housing and Urban Development monies, this was the only source of funding that was available to encourage beneficial redevelopment and property improvement within Goleta.

The adopted requirements would increase both the cost and complexity of development for private and public infill and redevelopment projects. For example, substantial additional costs will be incurred for engineering practices, LID materials, infiltration structures, and plan check and inspection fees. To comply with the Post-Construction Requirements on small lots, businesses may need to modify their development plans in a manner that no longer makes the project feasible (e.g., eliminate parking lots or office areas), which may ultimately be considered a regulatory taking. (See section J, post.)

As a result of the additional costs represented by the Post-Construction Requirements, Goleta expects that it will have increased difficulty attracting new businesses and retaining profitable businesses; lose revenue from planning and building development fees; and lose revenue from property and sales tax. Lack of job creation from the loss of development/ redevelopment is expected to have tremendous long-term effects for Goleta. Further, affordable housing is expected to become unattainable as the cost of development consistent with the Post-Construction Requirements rises beyond that which is economically feasible, especially for a community like Goleta.

To implement the Post-Construction Requirements, Goleta would, among other things, have to revise its Storm Water Management Ordinance, planning application forms and handouts, building application forms and handouts, environmental guidelines, and improvement standards; train staff in requirements; undertake additional building and grading plan review and inspections; perform additional planning stormwater review for discretionary projects, concept plans, improvement plans, and stormwater control plan requirements; develop and adopt standards for basins and LID features; and comply with detailed verification and reporting requirements. Those actions, and the implementation and oversight of the new ordinance, would require significant staff time. Goleta simply cannot afford these additional expenses, and will be in the untenable position of having to divert money from vital public services in an attempt to cover the costs.

Accordingly, costs for meeting the proposed Post-Construction Requirement to retain runoff from storm events up to the 95th percentile 24-hour storm exceed the environmental and economic benefit to be gained. Such a requirement exceeds MEP. As indicated above, when requirements exceed MEP, the Central Coast Water Board must comply with Water Code section 13263 and consider the factors specified in Water Code section 13241, including economics.

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### **3. The Proposed Post-Construction Requirements Far Exceed Hydromodification Requirements In The Phase II General Permit**

The federal regulatory scheme establishes separate requirements for MS4 permits and applications based on whether the discharger is a large, medium, or small MS4.<sup>123</sup> The Phase I regulations govern the issuance of stormwater permits for large and medium MS4s, which by definition serve incorporated areas with populations of 100,000 or more.<sup>124</sup> The Phase II regulations govern the issuance of stormwater permits for small MS4s, which serve populations of less than 100,000.<sup>125</sup>

As mentioned, MS4s must implement BMPs, including six specific minimum control measures, and compliance with the BMPs equates to compliance with the MEP standard.<sup>126</sup> EPA has stated that small MS4s should not be required to implement BMPs that go beyond the six minimum control measures. For example, EPA guidance “strongly recommends” that:

[N]o additional requirements beyond the minimum control measures be imposed on regulated small MS4s without the agreement of the operator of the affected small MS4, except where an approved TMDL [total maximum daily load] or equivalent analysis provides adequate information to develop more specific measures to protect water quality.<sup>127</sup>

Although development and redevelopment standards are one of the six specific minimum control measures, the specific Post-Construction Requirements here exceed the level of BMPs associated with development and redevelopment standards for the Phase II communities.

Specifically, and as discussed previously, with these Post-Construction Requirements, the Central Coast Water Board staff is purportedly proposing hydromodification requirements based on watershed processes. This means that they are looking to ensure that the project site post-development mimics the undeveloped state of the site regardless of existing development and land use changes that have occurred over many decades. This approach to application of Post-Construction Requirements far exceeds the hydromodification approach being required of all other Phase II communities that are otherwise subject to Section E.12 of the Phase II General Permit. In the Phase II

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<sup>123</sup> See 40 C.F.R. § 122.26.

<sup>124</sup> See 40 C.F.R. §§ 122.26(b)(4), (7); 55 Fed. Reg. 47990 (Nov. 16, 1990).

<sup>125</sup> 40 C.F.R. §§ 122.26(b)(16), 122.30-122.37.

<sup>126</sup> 40 C.F.R. § 122.34.

<sup>127</sup> 40 C.F.R. § 122.34(e)(2).

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General Permit, hydromodification management basically requires that post-project runoff cannot exceed estimated pre-project flow rate for certain specified flow rates.<sup>128</sup> In other words, previous development and land use changes are taken into consideration. Considering that the Central Coast Water Board is clearly moving down a path that departs from current practice and policy, such diversion as compared to what is being applied to other Phase II communities exceeds MEP.

#### **4. There Is an Overall Lack of Public Acceptance of the Post-Construction Requirements**

Public comments and testimony related to the adoption of Resolution No. R3-2012-0025, and the Central Coast specific post construction requirements included in the November 16, 2012 draft of the Phase II General Permit provide overwhelming evidence of an overall lack of public acceptance for applying the Post-Construction Requirements to small MS4s. This is demonstrated by the fact that, in addition to a typical “responses to comments” document (which for Resolution No. R3-2012-0025 was 141 pages), Central Coast Water Board staff also prepared a summary of responses to major comments titled: “Key Issues in Public Comments on May 14, 2012 Draft Resolution No. R3-2012-0025 and Central Coast Water Board Staff Responses” (Key Issues).

Two of the requirements most frequently and consistently commented on as problematic were the requirements to: (1) prevent off-site discharge from events up to the 95th percentile 24-hour storm event, and (2) apply the Post-Construction Requirements to ministerial projects. Despite the critical public comments, the Central Coast Water Board has included the 95th percentile 24-hour storm event volume retention requirement in Draft Resolution No. R3-2013-0032.

Further evidence of public unwillingness to accept requirements proposed in Draft Resolution No. R3-2013-0032 is that, in response to extensive public comment, the State Water Board chose to remove “Attachment J” from its November 16, 2012 draft of the Phase II General Permit.<sup>129</sup> “Attachment J” contained the post-construction requirements developed as part of the Joint Effort – i.e., the Central Coast specific post-construction requirements. The State Water Board pulled Attachment J because of the “several unresolved issues acknowledged by the parties” to the Joint Effort, “including the Regional Water Board.”<sup>130</sup> Now, the Central Coast Water Board is proposing Draft Resolution No. R3-2013-0032, which essentially contains the same requirements as did Attachment J.

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<sup>128</sup> Phase II General Permit at p. 56.

<sup>129</sup> Phase II Permit Fact Sheet at p. 36.

<sup>130</sup> Phase II Permit Fact Sheet at p. 36.

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c/o Dominic Roques

Re: Post-Construction Requirements - Draft Resolution No. R3-2013-0032

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In light of the highly critical public response to Resolution No. R3-2012-0025 and Attachment J, both of which were essentially the same as Draft Resolution No. R3-2013-0032, it is clear that Resolution No. R3-2013-0032 would establish requirements that exceed the MEP standard, and should either be rejected, or modified accordingly.

**VI. The Proposed Post-Construction Requirements May Subject Goleta To Future Takings Claims By Project Proponents That Are Unable To Develop Or Redevelop Within Goleta Due To The Challenged Provisions**

Under the provisions of Draft Resolution No. R3-2013-0032, Goleta will be required to impose the Post-Construction Requirements on “Regulated Projects.”<sup>131</sup> Regulated Projects that create and/or replace a specific amount of impervious surface will be required to meet the on-site runoff retention requirement to contain and infiltrate the 95th percentile 24-hour storm volume.<sup>132</sup> Imposition of this requirement on Regulated Projects may constitute a governmental regulation that deprives project proponents of the economic benefit of their private property. The state and federal Constitutions guarantee real property owners just compensation when their land is taken for public use.<sup>133</sup> Regulatory takings, though not direct appropriation or physical invasion of private property, are compensable under the Fifth Amendment.<sup>134</sup> Courts examining regulatory takings challenges generally analyze three factors to determine whether a taking has occurred. The three factors are the economic impact of the regulation on the claimant, the extent to which the regulation has interfered with distinct investment-backed expectations, and the character of the governmental action.<sup>135</sup> The Post-Construction Requirements may be considered a regulatory taking if their application to Regulated Projects deprives project proponents of the economic benefit of their property.

The economic impact of the Post-Construction Requirements may be substantial in that it may deprive landowners of the ability to develop or redevelop the property in question. In addition, the Post-Construction Requirements essentially require project proponents to dedicate significant portions of the project site for infiltration of stormwater, which unreasonably impairs the value and use of the property. The need to retain the 95th percentile 24-hour storm event volume on-site through infiltration essentially requires that much of the project site be dedicated to open, pervious areas, which severely interferes with investment-backed expectations because it restricts the size and use of the property in question. Further, while the proposed regulation may not

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<sup>131</sup> “Regulated Projects” include “all New Development or Redevelopment projects that create and/or replace  $\geq$  2,500 square feet of impervious surface (collectively over the entire project site) (Draft Resolution No. R3-2013-0032, Attachment 1 at p. 1.)

<sup>132</sup> Draft Resolution No. R3-2013-0032, Attachment 1 at p. 6.

<sup>133</sup> *Allegretti & Co. v. County of Imperial* (2006) 138 Cal.App.4th 1261, 1269.

<sup>134</sup> *Lingle v. Chevron U.S.A. Inc.* (2005) 544 U.S. 528, 537.

<sup>135</sup> *Penn Central Transp. Co. v. City of New York* (1978) 438 U.S. 104.

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c/o Dominic Roques  
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constitute a typical physical invasion or appropriation of land, the proposed regulation would effectively appropriate these open, pervious areas to a public use. Even if no such appropriation is found, the severity of the economic impact and the devastation of the investment-backed expectations of the landowners could give rise to a regulatory taking.

Although Draft Resolution No. R3-2013-0032 includes alternative compliance mechanisms, these provisions do not provide a feasible alternative for Goleta and could still subject Goleta to takings claims. For example, where it is technically infeasible to fully retain and infiltrate the 95th percentile 24-hour storm event volume of water the project must dedicate no less than ten percent of the impervious surface area to "retention-based Stormwater Control Measures."<sup>136</sup> Stormwater Control Measures include control measures such as conserving and protecting natural areas, and maintaining or creating riparian buffers.<sup>137</sup> These measures essentially require that a portion of the project site be dedicated to open pervious areas. Thus, in order to escape the entire runoff retention requirement, a project could still be required to forgo development of a portion of a project site, thereby limiting the economic viability of a project. The land dedication requirement may subject Goleta to takings claims.

Also, off-site mitigation is an option when a project cannot retain the full retention volume, and either fails to demonstrate technical infeasibility of full retention, or demonstrates technical infeasibility of full retention and fails to dedicate at least ten percent of the Project's impervious surface area.<sup>138</sup> However, because Goleta has so little open space, and the open space that exists is subject to development restrictions, a Project will be forced to try to find a way to dedicate ten percent of the impervious area of the project site. Most open space within Goleta's sphere of influence is protected by its designation as an ESHA, or agricultural land. Furthermore, Goleta recently passed an initiative restricting agricultural land development. Also, off-site compliance must be achieved within the same watershed as the Regulated Project, unless otherwise approved by the Central Coast Water Board's Executive Officer.<sup>139</sup> This approval provision will further constrain off-site mitigation opportunities. All of these limitations on off-site mitigation will indirectly impose the ten-percent on-site dedication requirement, which could give rise to a takings claim. In light of these concerns, the Central Coast Water Board should revise Draft Resolution No. R3-2013-0032 to allow implementation of BMPs to the maximum extent feasible rather than requiring off-site compliance, regardless of whether off-site compliance is feasible.

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<sup>136</sup> Draft Resolution No. R3-2013-0032, Attachment 1 at p. 9, § B.4.e.

<sup>137</sup> Draft Resolution No. R3-2013-0032, Attachment 1 at pp. 26-27.

<sup>138</sup> Draft Resolution No. R3-2013-0032, Attachment 1 at p. 9.

<sup>139</sup> Draft Resolution No. R3-2013-0032, Attachment 1 at p. 13.

Chairman Jeffrey Young

c/o Dominic Roques

Re: Post-Construction Requirements - Draft Resolution No. R3-2013-0032

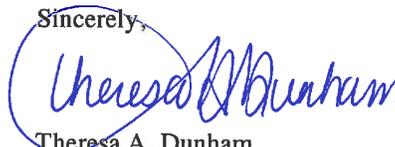
May 10, 2013

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## VII. Conclusion

Goleta respectfully requests that the Central Coast Water Board undertake a meaningful technical and public review process in developing post-construction requirements pursuant to the authority granted by the State Water Board in Section E.12.k. of the Phase II General Permit. Importantly, any post-construction requirements that the Central Coast Water Board might adopt must be consistent with the MEP standard. To the extent the Central Coast Water Board attempts to adopt requirements that exceed the MEP standard, it needs to undertake an economics analysis pursuant to Water Code section 13241. If the Central Coast Water Board is unable to adhere to these requirements, it should reject the proposed Post-Construction requirements and allow MS4s to implement post-construction stormwater management programs pursuant to the Phase II General Permit.

Sincerely,



Theresa A. Dunham  
Attorney at Law

TAD:yd

Exhibits A thru C Attached

cc: Dan Singer, City Manager, City of Goleta (*Via Electronic Mail*)  
Tim Giles, City Attorney, City of Goleta (*Via Electronic Mail*)  
Steve Wagner, Public Works Director, City of Goleta (*Via Electronic Mail*)

# **EXHIBIT A**

## Memorandum

Date: May 9, 2013  
To: Everett H. King and Steve Wagner, City of Goleta  
From: Lisa Austin, Kelly Havens, and Scott Mansell, Geosyntec Consultants  
Subject: Review of Post-Construction Stormwater Management Requirements  
for Development Projects in the Central Coast Region  
Geosyntec Project Number: WW1746

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### 1. BACKGROUND AND PURPOSE

Municipal separate storm sewer systems (MS4s) in the Central Coast are enrolled under the State-wide NPDES General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems, Order No. 2013-0001-DWQ (Phase II Municipal General Permit). The Phase II Municipal General Permit requires regulated small MS4s to address stormwater runoff from development and redevelopment projects through post-construction stormwater management requirements. The Central Coast Water Board, which developed the stormwater management requirements based on a watershed-process approach, approved Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast (Post-Construction Requirements) on September 6, 2012, through adoption of Resolution R3-2012-0025. However, the State Water Board staff reissued the Phase II Municipal General Permit in February, 2013, after resolution R3-2012-0025. So, the resolution must be reapproved by the Central Coast Water Board to properly reference the current Phase II Municipal General Permit and to allow for implementation of the reissued permit.

The Central Coast Water Board has released Draft Resolution R3-2013-0032, which accomplishes the re-approval necessitated by reissuance of the Phase II Municipal General Permit. It also revises the Post-Construction Requirements to remove an obstacle to implementation identified by stakeholders and Central Coast Water Board staff: overly conservative sizing requirements for achieving on-site runoff retention. Draft Resolution R3-2013-0032 is therefore a modified version of the original Resolution approving post-construction requirements.

Hydromodification requirements in the draft Resolution, Performance Requirement #3, are based on the findings of the Central Coast Joint Effort, which divided up areas of the Central Coast into Watershed Management Zones (WMZs). In WMZ 1, which comprises virtually all of the City of Goleta, Performance Requirement #3 requires that new and redevelopment projects prevent the offsite discharge of runoff from rainfall events up to the 95<sup>th</sup> percentile, 24-hour rainfall event using infiltration.

The stated purpose of using the 95<sup>th</sup> percentile event as a performance standard is to match predevelopment runoff and infiltration conditions, called “watershed processes” in the draft Resolution. The purpose of this memorandum is to evaluate whether sizing Stormwater Control Measures per Performance Requirement #3 accomplishes this goal. Specifically, the requirement to use the 95<sup>th</sup> percentile 24-hour rainfall depth for sizing a Stormwater Control Measure is addressed.

## 2. METHODOLOGY

To investigate the sizing requirements of the draft Resolution, continuous simulation models of developed and undeveloped conditions were developed using the USEPA Stormwater Management Model (SWMM version 5.0.022). The model output was used to examine the overall water balance for the period of record. Rainfall and soil parameters for the models were taken assuming the project would be in the City of Goleta (Figure 1). The pre-development (100% pervious) condition model was run using infiltration parameters typical for soils in Hydrologic Soil Group D, which encompasses 64 percent of the soils within the boundaries of the City of Goleta (Figure 2 and Table 1). The water balance from the existing condition model was compared to developed (100% impervious) condition models draining to a bioinfiltration Stormwater Control Measure. A range of developed condition models were run with varying storage volumes (a total of 23 models ranging between 0.15 and 2.4 watershed inches) as described in Section 2.3. Model parameters are shown in Table 2 below.

**Table 1: Hydrologic Soil Groups within City of Goleta Boundaries**

Hydrologic Soil Group	Area (Acres)	Percentage of Total
A	4.6	0.1
B	1072.8	26.3
C	376.8	9.2
D	2625.9	64.4

Review of Post-Construction Stormwater Management Requirements for Development Projects  
in the Central Coast Region

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**Table 2: SWMM Model Inputs**

SWMM Runoff Parameters	Units	Values
Wet time step	seconds	900
Wet/dry time step	seconds	900
Dry time step	seconds	14,400
Impervious Manning's n	--	0.01
Pervious Manning's n	--	0.1
Drainage area modeled	acres	10 (100% impervious in developed, 0% impervious in undeveloped)
Shape	--	Rectangular, 500 ft flow path length for pervious areas, 250 ft flow path length for impervious area (represents typical overland flow path lengths, not a very sensitive parameter)
Slopes	ft/ft	0.05 (represents average of relatively flat landscaping, streets, and roofs)
Evaporation	in / month	60% of monthly ET values from CIMIS for Goleta, Station 67
Soil properties / infiltration		Green-Ampt soil parameters as shown in Table 3
Depression storage, impervious	inches	Assumed to be 0 based on sensitivity analysis
Depression storage, pervious	inches	Assumed to be 0 based on sensitivity analysis

**2.1 Rainfall**

NCDC Gauge 047902 (Santa Barbara) was used, which has a period of record of 1949 – 2009, with 9.1% missing data, and an average annual rainfall depth of 15.8 inches. The location of the gauge relative to the City of Goleta is shown on Figure 1. The 85<sup>th</sup> percentile (1.4 inch) and 95<sup>th</sup> percentile (2.3 inch) rainfall depths were taken from the shapefiles provided by the Central Coast Water Board for the isohyets running through Goleta and near the rain gauge (Figure 1).

engineers | [scientists](#) | innovators

## 2.2 Soils

Soil parameters modeled were extracted from Santa Barbara County GIS Soil Data. Soils available in the City of Goleta are included in Figure 2. Pervious soil parameters were input into the subcatchment parameters of the undeveloped condition model.

The developed condition was assumed to be 100% impervious. The BMP to which the impervious catchment is draining is modeled with an underlying infiltration rate corresponding to the soil types listed. Infiltration parameters were selected based on available data from the County of Santa Barbara. Soil parameters modeled are included in Table 3 below.

**Table 3: Green-Ampt Soil Parameters**

Soil Type	Pervious Condition Parameters			Assumed Infiltration Rate below BMP (in/hr)
	Suction Head (in)	Infiltration Rate (in/hr)	Initial moisture deficit (units)	
D	8.7	0.06	0.26	0.06

## 2.3 BMP Modeled

The type of Stormwater Control Measure that was modeled for this analysis is a bioretention facility without an underdrain (called a “bioinfiltration” facility herein). The assumed control measure design was derived from the water quality treatment requirements in Performance Requirement #2 in the draft Resolution, which also applies to all development projects within the City of Goleta. The modeled bioinfiltration facility is composed of 12 inches of gravel (with an assumed 35% porosity), 24 inches of bioretention media (with an assumed 25% porosity), and 6 inches of allowable ponding depth. Thus, the bioinfiltration facility was modeled to have an effective storage depth of 1.35 and a constant area. No side slopes or freeboard were taken into account, and no underdrain was provided, so that all captured runoff was infiltrated.

In Attachment D of the draft Resolution, two different methods are given for sizing the bioinfiltration facility, a simple method and a routing method. The simple method requires that the bioinfiltration facility be sized to contain the entire runoff from the 95<sup>th</sup> percentile 24-hour storm event in the pore spaces and ponding above the facility. Using the assumed bioinfiltration design summarized above, the surface area of the facility can then be calculated. The routing method requires that the facility be sized to not overflow up to the runoff event from the 95<sup>th</sup> percentile storm event. Runoff rates at each time step within the hydrograph are calculated using the Santa Barbara Urban Hydrograph method and infiltration is based on soil parameters. When

using this method, if the facility is shown to not drain fully within 48 hours, then the size of the facility must be multiplied by 1.2. For the Goleta conditions of D soils, the bioinfiltration facility sized using the routing method did not drain within 48 hours, and the volume was, therefore, multiplied by 1.2. The simple and routing methods resulted in BMP volumes of 2.05 and 2.28 watershed-inches, respectively, for the Goleta area with D soils (Figure 3). The multiplier caused the routing method to have a larger required volume than the simple method.

BMPs were modeled with the assumed cross section at various surface areas (which corresponded to a range of storage volumes) for the D soil type.

#### **2.4 Model Output**

Existing condition model outputs (immediate infiltration, runoff, and evapotranspiration (ET)) were compared to these parameters in the developed condition models. The Stormwater Control Measure size necessary to match the discharge from the undeveloped condition was determined and compared to the Stormwater Control Measure sizes required by the draft Resolution.

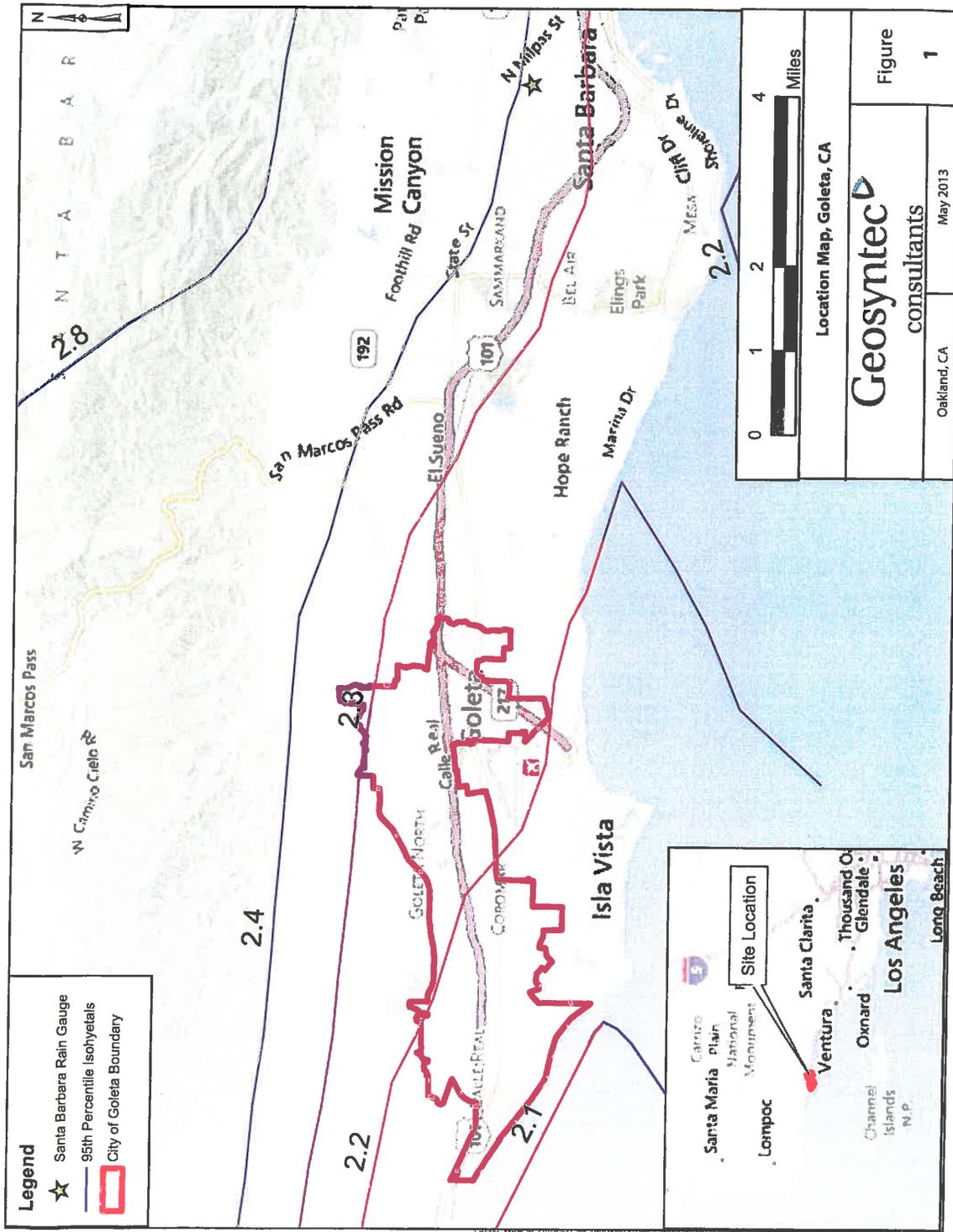
### **3. RESULTS**

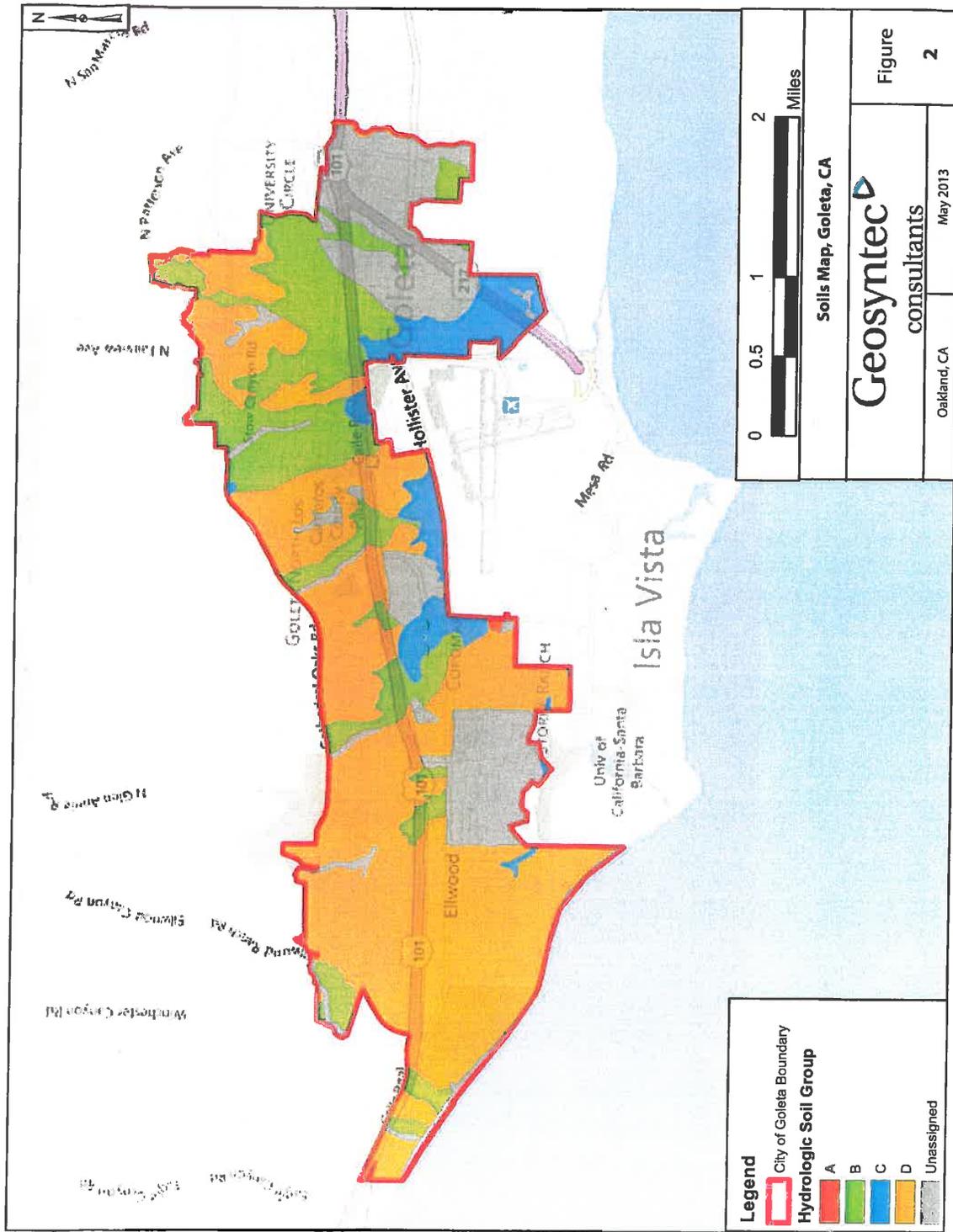
#### **3.1 Effectiveness of 95<sup>th</sup> Percentile Storm Event Sizing**

From the continuous models it was determined that a bioinfiltration facility size of 1.51 watershed-inches was required to match the runoff volume from undeveloped condition with D soils (Figure 3). This size is compared to the BMP sizes computed using the simple and routing methods using the 95<sup>th</sup> percentile rainfall depths (Figure 3). Both sizing methodologies using the 95<sup>th</sup> percentile storm event result in a bioinfiltration facility that is oversized in that it results in less runoff from the site than would occur in the undeveloped condition. The degree to which the bioinfiltration facility is oversized using this method was calculated using the equation:

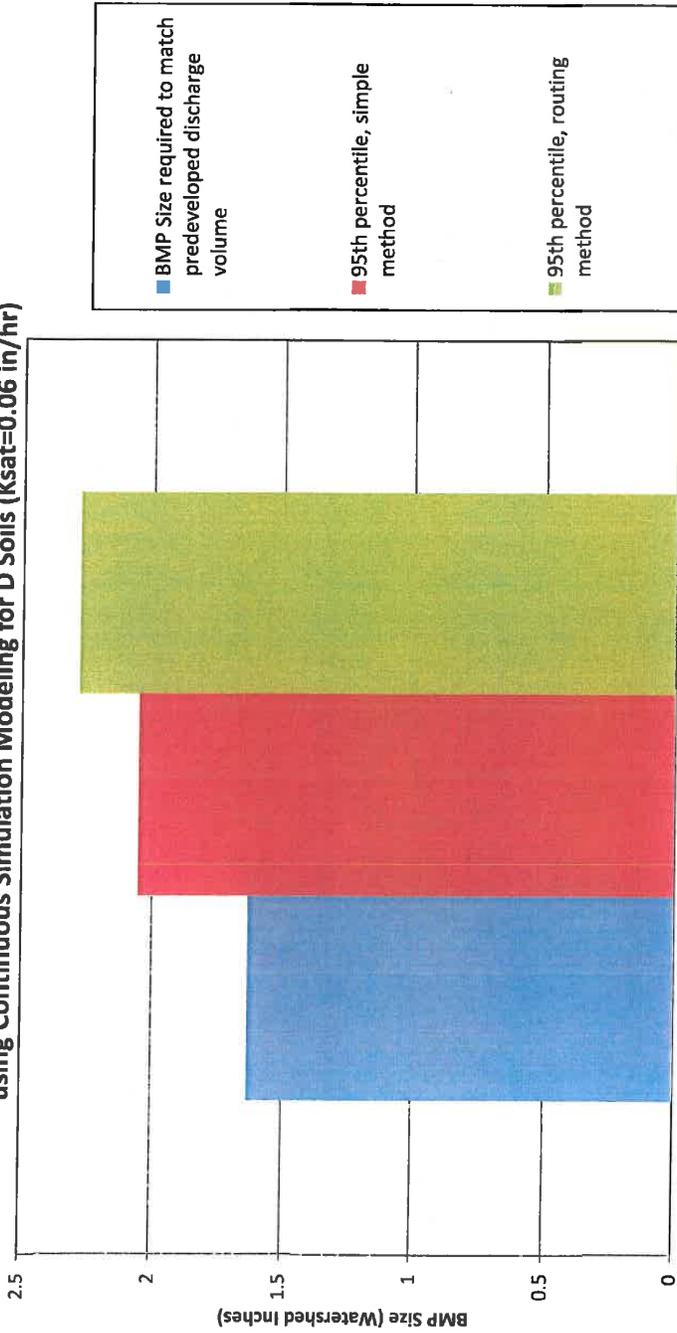
$$\left( \frac{V_{needed} - V_{required}}{V_{needed}} \right) \times 100\%$$

where  $V_{needed}$  is the bioinfiltration facility volume necessary to match undeveloped runoff and  $V_{required}$  is the bioinfiltration facility size based on the required methodology. This calculation resulted in bioinfiltration facility sizing that is 26 percent and 40 percent larger than necessary for the 95<sup>th</sup> percentile simple method and 95<sup>th</sup> percentile routing method, respectively (Figure 4). Therefore the two 95<sup>th</sup> percentile sizing alternatives in D soils in WMZ 1 result in a bioinfiltration facility that is oversized.





**Bioretention Sizing Needed to Prevent Discharge of Events up to the 95th Percentile, 24-hour Event  
using Continuous Simulation Modeling for D Soils (Ksat=0.06 in/hr)**



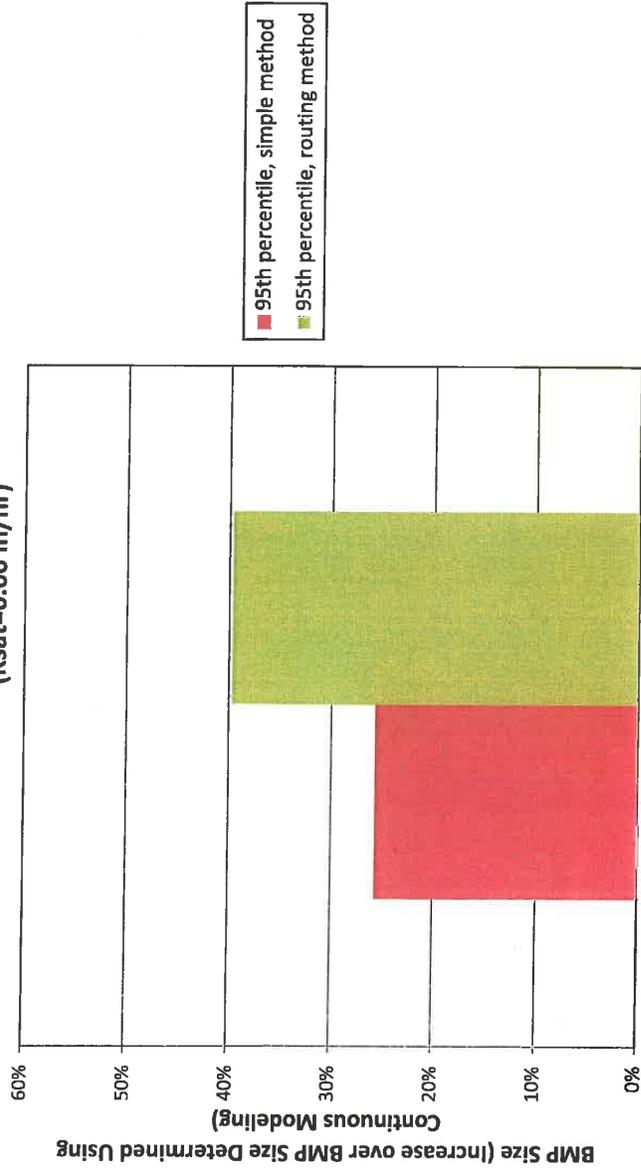
Bioretention Sizing in D Soils in Goleta, CA

**Geosyntec**  
consultants

Oakland, CA      May, 2013

Figure  
**3**

**Bioretention Sizing Needed to Prevent Discharge of Events up to the 95th Percentile, 24-hour Event using Continuous Simulation Modeling for D Soils (Ksat=0.06 in/hr)**



Bioretention Sizing in D Soils in Goleta, CA

**Geosyntec**  
consultants

Oakland, CA      May, 2013

Figure  
**4**

# **EXHIBIT B**

State of California

**M e m o r a n d u m**

To : Archie Matthews  
Division of Water Quality

Date: FEB 11 1993

*Elizabeth M. Jennings*

Elizabeth Miller Jennings  
Senior Staff Counsel  
OFFICE OF THE CHIEF COUNSEL

From : STATE WATER RESOURCES CONTROL BOARD  
901 P Street, Sacramento, CA 95814  
Mail Code: G-8

Subject: DEFINITION OF "MAXIMUM EXTENT PRACTICABLE"

ISSUE

What is the meaning of the standard "maximum extent practicable" (MEP) as used in the Clean Water Act's storm water provisions, and how can this standard be communicated to the regulated community? How can this concept be included in the draft BMP manual?

CONCLUSION

The standard "maximum extent practicable" is not specifically defined for use in the storm water program. It has been defined in other rules, however, to require taking all actions which are technically feasible. I have included draft language for the manual.

DISCUSSION

Section 402(p) of the Clean Water Act (33 U.S.C. § 1342(p)) provides that permits issued for discharges from municipal separate storm sewers must require controls to reduce the discharge of pollutants "to the maximum extent practicable". The statutory language provides that municipal permits:

"Shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other

FEB 11 1993

provisions as the [EPA] Administrator or the State determines appropriate for the control of such pollutants." Clean Water Act Section 402(p)(3)(B)(iii); 33 U.S.C. § 1342(p)(3)(B)(iii).

Neither Congress nor the U.S. Environmental Protection Agency (EPA) has defined the term "maximum extent practicable", and yet this is the critical standard which municipal dischargers must attain in order to comply with their permits. (The State could have spelled out the specific controls which the municipalities were required to undertake. However, such an approach would have relinquished the municipal dischargers of any flexibility in implementing their storm water programs.)

On its face, it is possible to discern some outline of the intent of Congress in establishing the MEP standard. First, the requirement is to reduce the discharge of pollutants, rather than totally prohibit such discharge. Presumably, the reason for this standard (and the difference from the more stringent standard applied to industrial dischargers in Section 402(p)(3)(A)), is the knowledge that it is not possible for municipal dischargers to prevent the discharge of all pollutants in storm water. The second point which is clearly encompassed in the standard is that it is the permitting agency, and not the discharger, which is the ultimate arbiter on whether there has been sufficient reduction of pollutants.

The most difficult issue is determining how much pollutants must be reduced, or, in other words, which best management practices (BMPs) must be employed in order to comply with the MEP standard. While the term is not defined in the Clean Water Act or the EPA regulations, the same term does appear in other federal laws and regulations, and there are some definitions or interpretations which may be useful to the storm water program.

In the Uranium Mill Tailings Radiation Control Act of 1978 (42 U.S.C. § 7901, et seq.), the Department of Energy was required to designate within one year of the Act's adoption "to the maximum extent practicable" contaminated areas within the vicinity of uranium processing sites. In addressing a lawsuit brought after the Department designated very few of the "vicinity properties", the federal court declared that MEP means "a substantial majority of the locations" should have been designated within the year. *Sierra Club v. Edwards* (D.C.D.C. 1983) 19 ERC 1357. Where a NEPA regulation required that "to the maximum extent practicable" environmental clearance was required for uncompleted projects which had never undergone NEPA review, a court held that the regulation "mandates a meaningful

FEB 11 1993

environmental review" rather than a "perfunctory evaluation". Save the Courthouse Committee v. Lynn (S.D.N.Y. 1975) 408 F.Supp. 1323.

In an interim final regulation recently promulgated by the Department of Transportation, MEP is defined, where operators of onshore oil pipelines must have resources "to the maximum extent practicable" to remove and to mitigate or prevent worst case discharges. 49 CFR Part 194. MEP is defined to mean:

"The limits of available technology and the practical and technical limits on an individual pipeline operator in planning the response resources required to provide the on-water recovery capability and the shoreline protection and cleanup capability to conduct response activities . . . ."

Finally, the term MEP is used in the Superfund legislation, wherein permanent solutions and alternative treatment technologies must be selected "to the maximum extent practicable". CERCLA, Section 121(b). The legislative history of the language indicates that the relevant factors in determining whether MEP is met include technical feasibility, cost, and state and public acceptance. 132 Cong. Rec. H 9561 (Oct. 8, 1986).

While each of the above interpretations and definitions varies, they do follow a pattern. The pattern that emerges is that there must be a serious attempt to comply, and that practical solutions may not be lightly rejected. If a municipality reviews a lengthy menu of BMPs, and chooses to select only a few of the least expensive, it is likely that MEP has not been met. On the other hand, if a municipal discharger employs all applicable BMPs except those where it can show that they are not technically feasible in the locality, or whose cost would exceed any benefit to be derived, it would have met the standard. In any case, the burden would be on the municipal discharger to show compliance.

The definitions contained in the pipeline regulation and the Superfund legislative history are most analogous to storm water regulation. The major emphasis in both of these rules are technical feasibility. Similarly, the municipal dischargers should be required to employ whatever BMPs are feasible, i.e., are likely to be effective and are not cost prohibitive. Thus, where a choice may be made between two BMPs which should provide generally comparative effectiveness, the discharger may choose the least expensive alternative and exclude the more expensive BMP. However, it would not be acceptable either to reject all BMPs which would address a pollutant source or to pick a BMP based solely on cost, which would be clearly less effective.

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As you know, the BMP Guidance manual is being published by the Task Force, which is made up of dischargers, rather than by the State Water Board. As far as I know, there is no intention for the State Water Board to adopt the manual as its own guidance document. Therefore, it is important to stress in the manual, both in the section on MEP and in the front of the manual, that this manual is not a publication of the State or the Regional Water Boards, and that these Boards have not specifically endorsed the contents. Rather, the manual was assembled by a group of dischargers in the interest of assisting themselves and others to comply with the storm water permits. In the section on MEP, it should be stated that the final determination regarding whether a discharger was reduced pollutants to the maximum extent practicable can only be made by the Regional or State Water Boards, but that selection and implementation of BMPs through consideration of the listed factors should assist dischargers in achieving compliance.

The following language is suggested in order to clarify that the manual is not the product of the State Water Board:

"This Manual was produced and published by the Storm Water Task Force, an advisory body of municipal agencies regulated by the storm water program. This Manual is not a publication of the State Water Resources Control Board or any Regional Water Quality Control Board, and none of these Boards has specifically endorsed the contents thereof. The purpose of this manual is to assist the members of the Task Force and other dischargers subject to storm water permits, in attaining compliance with such permits."

The following language is recommended in place of Insert A in the manual for municipal dischargers:

"Although MEP is not defined by the federal regulations, use of this manual in selecting BMPs should assist municipalities in achieving MEP. In selecting BMPs which will achieve MEP, it is important to remember that municipalities will be responsible to reduce the discharge of pollutants in storm water to the maximum extent practicable. This means choosing effective BMPs, and rejecting applicable BMPs only where other effective BMPs will serve the same purpose, the BMPs would not be technically feasible, or the cost would be prohibitive. The following factors may be useful to consider:

1. Effectiveness: Will the BMP address a pollutant of concern?

FEB 11 1993

- "2. Regulatory Compliance: Is the BMP in compliance with storm water regulations as well as other environmental regulations?
- "3. Public acceptance: Does the BMP have public support?
- "4. Cost: Will the cost of implementing the BMP have a reasonable relationship to the pollution control benefits to be achieved?
- "5. Technical Feasibility: Is the BMP technically feasible considering soils, geography, water resources, etc.?

"After selecting a menu of BMPs, it is of course the responsibility of the discharger to insure that all BMPs are implemented."

# **EXHIBIT C**

Memorandum

To : Regional Water Board  
Executive Officers  
  
Regional Water Board Attorneys

-7 11:5:07  
Date: JAN -4 1994

  
William R. Attwater  
Chief Counsel  
OFFICE OF THE CHIEF COUNSEL  
From : STATE WATER RESOURCES CONTROL BOARD  
901 P Street, Sacramento, CA 95814  
Mail Code: 6-8

Subject: GUIDANCE ON CONSIDERATION OF ECONOMICS IN THE ADOPTION OF WATER QUALITY OBJECTIVES

ISSUE

What is required of a Regional Water Quality Control Board (Regional Water Board) in order to fulfill its statutory duty to consider economics when adopting water quality objectives in water quality control plans or in waste discharge requirements?

CONCLUSION

A Regional Water Board is under an affirmative duty to consider economics when adopting water quality objectives in water quality control plans or, in the absence of applicable objectives in a water quality control plan, when adopting objectives on a case-by-case basis in waste discharge requirements. To fulfill this duty, the Regional Water Board should assess the costs of the proposed adoption of a water quality objective. This assessment will generally require the Regional Water Board to review available information to determine the following: (1) whether the objective is currently being attained; (2) what methods are available to achieve compliance with the objective, if it is not currently being attained; and (3) the costs of those methods. The Regional Water Board should also consider any information on economic impacts provided by the regulated community and other interested parties.

If the potential economic impacts of the proposed adoption of a water quality objective appear to be significant, the Regional Water Board must articulate why adoption of the objective is necessary to assure the reasonable protection of beneficial uses of state waters, despite the potential adverse economic consequences. For water quality control plan amendments, this

JAN - 4 1994

Regional Water Board  
Executive Officers et al. -2-

discussion could be included in the staff report or resolution for the proposed amendment. For waste discharge requirements, the rationale must be reflected in the findings.

#### DISCUSSION

##### A. Legal Analysis

##### 1. Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Water Quality Control Act, Water Code Section 13000 et seq. (Porter-Cologne Act or Act), the State Water Resources Control Board (State Water Board) and the Regional Water Boards are the principal state agencies charged with responsibility for water quality protection. The State and Regional Water Boards (Boards) exercise this responsibility primarily through the adoption of water quality control plans and the regulation of waste discharges which could affect water quality. See Water Code Secs. 13170, 13170.2, 13240, 13263, 13377, 13391.

Water quality control plans contain water quality objectives, as well as beneficial uses for the waters designated for protection and a program of implementation to achieve the objectives. Id. Sec. 13050(j). In the absence of applicable water quality objectives in a water quality control plan, the Regional Water Board may also develop objectives on a case-by-case basis in waste discharge requirements. See id. Sec. 13263(a).<sup>1</sup>

When adopting objectives either in a water quality control plan or in waste discharge requirements, the Boards are required to exercise their judgment to "ensure the reasonable protection of beneficial uses and the prevention of nuisance". Id. Secs. 13241, 13263; see id. Sec. 13170. The Porter-Cologne Act recognizes that water quality may change to some degree without

<sup>1</sup> The focus of this memorandum is limited to an analysis of the Boards' obligation to consider economics when adopting water quality objectives either in water quality control plans or, on a case-by-case basis, in waste discharge requirements. This memorandum does not discuss the extent to which the Boards' are required to consider the factors specified in Water Code Section 13241 in other situations. Specifically, this memorandum does not discuss the applicability of Section 13241 to the development of numeric effluent limitations, implementing narrative objectives contained in a water quality control plan. Further guidance on the latter topic will be developed at a later date.

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causing an unreasonable effect on beneficial uses. Id. The Act, therefore, identifies factors which the Boards must consider in determining what level of protection is reasonable. Id.<sup>2</sup> These factors include economic considerations. Id.<sup>3</sup>

The legislative history of the Porter-Cologne Act indicates that "[c]onservatism in the direction of high quality should guide the establishment of objectives both in water quality control plans and in waste discharge requirements". Recommended Changes in Water Quality Control, Final Report of the Study Panel to the [State Water Board], Study Project--Water Quality Control Program, p. 15 (1969) (Final Report). Objectives should "be tailored on the high quality side of needs of the present and future beneficial uses" Id. at 12. Nevertheless, objectives must be reasonable and economic considerations are a necessary part of the determination of reasonableness. "The regional boards must balance environmental characteristics, past, present and future beneficial uses, and economic considerations (both the cost of providing treatment facilities and the economic value of development) in establishing plans to achieve the highest water quality which is reasonable." Id. at 13.

2. Senate Bill 919

The Boards are under an additional mandate to consider economics when adopting objectives as a result of the recent enactment of Senate Bill 919. 1993 Cal. Stats., Chap. 1131, Sec. 8, to be codified at Pub. Res. Code, Div. 13, Ch. 4.5, Art. 4. The legislation, which is

2 Other factors which must be considered include:

- (a) Past, present, and probable future beneficial uses of water;
- (b) Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto;
- (c) Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area;
- (d) The need for developing housing within the region;
- (e) The need to develop and use recycled water.

3 See also Water Code Section 13000 which mandates that activities and factors which may affect water quality "shall be regulated to attain the highest water quality which is reasonable, considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible" (emphasis added).

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effective January 1, 1994, amended the California Environmental Quality Control Act, Public Resources Code Section 21000 et seq. (CEQA), to require that, whenever the Boards adopt rules requiring the installation of pollution control equipment or establishing a performance standard or treatment requirement, the Boards must conduct an environmental analysis of the reasonably foreseeable methods of compliance. This analysis must take into account a reasonable range of factors, including economics. For the reasons explained above, the latter requirement is duplicative of existing requirements under the Porter-Cologne Act regarding consideration of economics.

B. Recommendation

The meaning of the mandate to "consider economics" in the Porter-Cologne Act is not entirely clear. It is clear that the Porter-Cologne Act does not specify the weight which must be given to economic considerations. Consequently, the Boards may adopt water quality objectives even though adoption may result in significant economic consequences to the regulated community. The Porter-Cologne Act also does not require the Boards to do a formal cost-benefit analysis.

The Porter-Cologne Act does impose an affirmative duty on the Boards to consider economics when adopting water quality objectives. The Boards probably cannot fulfill this duty simply by responding to economic information supplied by the regulated community. Rather, the Boards should assess the costs of adoption of a proposed water quality objective. This assessment will normally entail three steps. First, the Boards should review any available information on receiving water and effluent quality to determine whether the proposed objective is currently being attained or can be attained. If the proposed objective is not currently attainable, the Boards should identify the methods which are presently available for complying with the objective. Finally, the Boards should consider any available information on the costs associated with the treatment technologies or other methods which they have identified for complying with a proposed objective.<sup>4</sup>

<sup>4</sup> See, for example, Manganese Wastewater In Coastal Urban Areas, National Research Council (1993). This text provides data on ten technically feasible wastewater treatment technologies, which can be used to make comparative judgments about performance and to estimate the approximate costs of meeting various effluent discharge standards, including standards for toxic organics and metals.

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In making their assessment of the cost impacts of a proposed objective, the Boards are not required to engage in speculation. Rather, the Boards should review currently available information. In addition, the Boards should consider, and respond on the record, to any information provided by dischargers or other interested persons regarding the potential cost implications of adoption of a proposed objective.

If the economic consequences of adoption of a proposed water quality objective are potentially significant, the Boards must articulate why adoption of the objective is necessary to ensure reasonable protection of beneficial uses. If the objective is later subjected to a legal challenge, the courts will consider whether the Boards adequately considered all relevant factors and demonstrated a rational connection between those factors, the choice made, and the purposes of the Porter-Cologne Act. See California Hotel & Motel Assn. v. Industrial Welfare Com., 25 Cal.3d 200, 212, 157 Cal.Rptr. 840, 599 P.2d 31 (1979).

Reasons for adopting a water quality objective, despite adverse economic consequences, could include the sensitivity of the receiving waterbody and its beneficial uses, the toxicity of the regulated substance, the reliability of economic or attainability data provided by the regulated community, public health implications of adopting a less stringent objective, or other appropriate factors. These factors may also include the legislative directive that a "margin of safety [ ] be maintained to assure the protection of all beneficial uses." Final Report, p. 15 and App. 2, p. 59.

If objectives are proposed for surface waters and adverse economic consequences stemming from adoption of the objectives could be avoided only if beneficial uses were downgraded, the Boards should address whether dedesignation would be feasible under the applicable requirements of the Clean Water Act and implementing regulations. See 40 C.F.R. Sec. 131.10. Dedesignation is feasible only for potential, rather than existing, uses. See *id.* Sec. 131.10(g). If dedesignation of potential beneficial uses is infeasible, the Boards should explain why, e.g., that there is a lack of data supporting dedesignation.<sup>5</sup>

<sup>5</sup> It should also be noted that, even if dedesignation of potential beneficial uses is feasible, in the great majority of cases it will not have any significant effect on the selection of a proposed objective. This is so because the proposed objective will be necessary to protect existing beneficial uses, which cannot be dedesignated.

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The State or Regional Water Board's rationale for determining that adoption of a proposed objective is necessary to protect water quality, despite adverse economic consequences, must be discernible from the record. This reasoning could be included in the staff report or in the resolution adopting a proposed water quality control plan amendment. When objectives are established on a case-by-case basis in waste discharge requirements, the rationale must be included in the findings.

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# CITY OF LOMPOC

May 6, 2013

Central Coast Regional Water Quality Control Board  
895 Aerovista Place, Suite 101  
San Luis Obispo, California 93401

RE: Draft Post-Construction Requirements for Development Projects in the Central Coast Region.

Dear Members of the Central Coast Regional Water Quality Control Board:

Thank you for allowing review and comment on the Draft Post-Construction Requirements. The City of Lompoc offers the following comments for your consideration, and incorporates by reference our past comments on Region 3's Post-Construction Requirements and petitions SWRCB/OCC File A-2228(b) and SWRCB/OCC File A-1965. Though changes to the adopted Post-Construction requirements are proposed, several critical permittee concerns remain unaddressed.

- The Draft Post-Construction Stormwater Management Requirements impose additional costs on permittees, constituting unfunded mandates, subject to reimbursement.
- Proposition 218 has severely restricted funding for MS4 storm water program implementation.
- The Maximum Extent Practicable (MEP) Standard is exceeded by the requirement to infiltrate the 95<sup>th</sup> percentile storm event, when there is no exemption for sites where this is technically infeasible.
- Requiring infiltration, to the exclusion of evaporation, transpiration, or storage/reuse, unreasonably restricts property owners' method of limiting run-off and does not mimic the natural hydrologic system.
- Not limiting required infiltration to the amount of water a site-specific analysis of pre-development hydrology determines would infiltrate into a site's soils when undeveloped, does not mirror natural hydrology.
- Requiring off-site infiltration at unknown cost, unidentified distance and on untested soils, lacks adequate nexus to receiving water quality and cannot ensure property owners rights to develop property are protected.
- Requiring identification and construction of off-site facilities, involving unknown costs, process and timing, is overly burdensome and will likely render desirable urban infill and redevelopment proposals infeasible.
- Adoption of the proposed requirements will transfer development pressure away from the central coast, away from urban areas and into rural areas where the requirements do not apply. This will directly result in fewer economic opportunities for Central Coast residents, stagnation and decay in our communities, and further loss of agricultural lands and open space we treasure.

Thank you for the opportunity to comment.

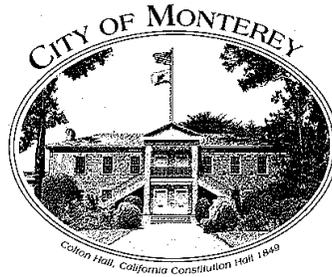
Sincerely,

A handwritten signature in cursive script that reads "Laurel M. Barcelona".

Laurel M. Barcelona  
City Administrator, City of Lompoc

c: Lompoc City Council  
Santa Barbara County Board of Supervisors  
Teresa Gallavan, Economic & Community Development Director  
Stacy Lawson, Senior Environmental Coordinator

CITY HALL, 100 CIVIC CENTER PLAZA, P.O. BOX 8001, LOMPOC, CA 93438-8001  
PHONE (805) 736-1261 FAX: (805) 736-5347



May 10, 2013

Mayor:  
CHUCK DELLA SALA

Councilmembers:  
LIBBY DOWNEY  
ALAN HAFFA  
NANCY SELFRIDGE  
FRANK SOLLECITO

City Manager:  
FRED MEURER

Kenneth A. Harris, Jr.  
Interim Executive Officer  
Central Coast Regional Water Quality Control Board  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401

Submitted electronically to: [r3\\_stormwater@waterboards.ca.gov](mailto:r3_stormwater@waterboards.ca.gov)

**Subject: "Post-Construction Requirements Comments"**

Dear Mr. Harris,

We appreciate the opportunity to review and provide written comments on the Draft Resolution No. R-13-2013-0032 – Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast Region (PCRs). The purpose of this letter is to express continued concerns related to the application of the PCRs to "ministerial" development applications.

The current "ministerial" language found on page 3 of the "Regulated Projects" section of the PCRs reads:

"(2) Ministerial Projects – If the project is only subject to ministerial approval, the Permittee shall apply the Post-Construction Requirements to those projects that have not received any ministerial approvals. If the ministerial project receives multiple ministerial approvals, the Permittee shall apply the Post-Construction Requirements to the first ministerial approval. Ministerial approvals include, but are not limited to, building permits, site engineering improvements, and grading permits."

This same exact "ministerial" verbiage was placed within, and then later completely struck from, the entirety of the Phase II Permit Order (adopted by the State Water Resources Control Board on February 2013). In fact, the Phase II Permit Order contains no references to "ministerial" projects, though it does refer to "discretionary permit projects" on page 51 as follows:

"Effective Date for Applicability of Low Impact Development Runoff Standards to Regulated Projects: By the second year of the effective date of the permit, the Permittee shall require these Post-Construction Standards be applied on applicable new and redevelopment Regulated Projects, both private development requiring municipal permits and public projects, **to the extent allowable by applicable law. These include discretionary permit projects that have not been deemed complete for processing and discretionary permit projects without vesting tentative maps that have not requested and received an extension of previously granted approvals. Discretionary projects that have been deemed complete prior to the second year of the effective date of this**

**Order are not subject to the PostConstruction Standards herein. For the Permittee's Regulated Projects, the effective date shall be the date their governing body or designee approves initiation of the project design." [Bold emphasis added.]**

The California Environmental Quality Act (CEQA) delineates ministerial projects as being subject to fixed standards/objective measurements with little or no judgement to be exercised by local agency or staff. "Ministerial" actions are also not subject to CEQA. As currently written, the PCRs may allow ministerial permit applications be subject to varying levels of PCR implementation. This exercise of discretionary judgment by local agency staff on a ministerial application may propel these projects into the realm of needing CEQA review and determination.

#### **Legal Implications of Requiring Discretionary or Subjective Standards to Water Quality Control Measures for Ministerial Projects**

As we have previously expressed, because of the subjectivity in some of the standards proposed in the Central Coast Regional Water Quality Control Board (Regional Board) PCR rulemaking, this action has troubling implications for local agencies' ability to continue issuing ministerial development approvals without having to first subject those projects to environmental review.

Section 21080 of the Public Resources Code establishes that CEQA "shall apply to discretionary projects<sup>1</sup> proposed to be carried out or approved by public agencies," and shall not apply to ministerial projects. [Public Resources Code, § 21080, subdivisions. (a) & (b)(1); CEQA Guidelines, § 15268, subd. (a).] Ministerial projects "involve[] only the use of fixed standards or objective measurements, and the public official cannot use personal, subjective judgment in deciding whether or how the project should be carried out." (CEQA Guidelines, § 15369; see also *Friends of Juana Briones House v. City of Palo Alto* (2010) 190 Cal.App.4th 286 (*Friends of Juana Briones House*) [finding that the approval of a demolition permit was ministerial under the governing municipal code provision, which did not give the city authority to impose permit conditions].) Each public agency can make a determination of what is ministerial "based upon its analysis of its own laws" and "either as part of implementing regulations or on a case-by-case basis." (CEQA Guidelines, § 15268, subd. (a); *Friends of Davis v. City of Davis* (2000) 83 Cal.App.4th 1004, 1015 ["Under well-established law, an agency's view of the meaning and scope of its own ordinance is entitled to great weight unless it is clearly erroneous or unauthorized"].)

The key question in determining whether a proposed agency approval would be a ministerial action within the meaning of CEQA is whether whatever arguable discretion a governing statute, regulation, or ordinance gives the agency includes the power or authority to "shape the project in a way that would respond to concerns raised in an"

<sup>1</sup> Discretionary projects involve the "exercise of judgment or deliberation when the public agency or body decides to approve or disapprove a particular activity." (Cal. Code Regs., tit. 14, div. 6, ch. 3 ("CEQA Guidelines"), § 15357.

environmental document. (*Mountain Lion Foundation v. Fish & Game Com.* (1997) 16 Cal.4th 105, 117 (*Mountain Lion Foundation*); see also *Friends of Westwood, Inc. v. City of Los Angeles* (1987) 191 Cal.App.3d 259, 272 [agency action is not discretionary for CEQA purposes unless the agency could “lawfully deny the permit or condition it in any way which would mitigate the *environmental* damage in any significant way”] [*italics added*].) In other words, the obligation to comply with CEQA is not triggered by the existence of *any* discretion in the governing body of law an agency must apply; rather, CEQA does not apply unless such discretion gives the agency the authority to address *environmental* concerns either by denying a proposed project or by imposing conditions that can somehow reduce the severity of environmental impacts.

A relatively recent CEQA precedent illustrating these points is *Health First v. March Joint Powers Authority* (2009) 174 Cal.App.4th 1135, 1144 (*Health First*), in which the court found that the respondent public agency’s approval of a design plan application was not subject to CEQA review because the agency had “acted ministerially.” In 2006, a British grocer had submitted a design plan application to the March Joint Powers Authority for the development of a large warehouse distribution facility on the former March Air Force Base. (*Id.* at p. 1137.) Prior CEQA review had already been completed twice for general land uses in the area, first in 1999 for the general plan to redevelop the March property, and again in 2003 for the March Business Center’s specific plan, which the court found to encompass the proposed distribution facility. (*Id.* at pp. 1138-1139.) With respect to the design plan application, the court concluded that no further environmental review was necessary because the Authority “accomplished its review [of the distribution facility] by completing a checklist of about 125 yes-or-no questions,” and “exercised no discretion.” (*Id.* at p. 1144.) Furthermore, the court found that the Authority had not and could not require mitigation measures “in a discretionary fashion,” and was instead restricted to conditioning approval upon the implementation of mitigation measures included in the 2003 specific plan. (*Id.* at pp. 1145-1146.) Therefore, approval of the design plan application was ministerial and not subject to CEQA. In short, although the agency had imposed a series of conditions on the project, the agency did so based on criteria developed previously, and thus had no need to exercise any discretion with respect to the design plan application.

In contrast, in the Regional Board’s proposed rules that it urges local agencies to incorporate into their own zoning ordinances, several of the water quality control measures are vaguely framed or suggest the exercise of discretion is required on the part of the agency official making determinations of whether proposed projects will comply with the standards. If these standards are required to be applied even to ministerial approvals, as the currently proposed rulemaking indicates, compliance with these rules would therefore require local building officials to exercise discretion on a case-by-case basis to determine whether the proposed project meets the standards or not or to suggest additional ways the project could be modified or conditioned in order to meet the standards. Those standards would therefore remove the objectivity and fixed standards that are the distinctive characteristic that defines “ministerial” approvals and transform

them into discretionary actions that then potentially trigger the need to undertake environmental review under CEQA.

CEQA review is an important and necessary step in the consideration and approval of discretionary projects, but it does have the potential to add significant costs and delay to the administrative process. The City fears that if the Regional Board's standards are not either revised to provide more objective or quantifiable standards applicable to ministerial approvals or to exclude ministerial approvals entirely, it could be significantly more exposed to the threat of delaying and costly litigation under CEQA for its handling of ministerial approvals, either from the developers who expect a high level of certainty in the standards for ministerial approvals or from project opponents who could assert the need to treat ministerial projects as discretionary and therefore subject to CEQA. Thus, the regulations, as proposed, place the City and other local agencies in a difficult position, legally and practically speaking.

#### **Recommendation**

The City therefore urges the Board to remove ministerial applications/projects from inclusion in the PCRs "Regulated Projects" category at this time. If the Board desires to capture ministerial applications in the future, we recommend and support the following steps:

- **Engage with California Building Standards Commission (CBSC):** We recommend the Regional Board/staff engage the CBSC about possible inclusion of post-construction storm water design standards into the CalGreen/Building Code and/or International Building Code. The building standards developed through the Commission receive public review and are adopted for statewide use for ministerial applications like building permit applications. Incorporating reasonable standards into the Building Code would allow for equal application of and objective standards for ministerial projects statewide, and remove risk to local agencies with the currently envisioned PCR "regulated project" path for ministerial projects.
- **Establish Stakeholders to Assist in Developing Draft Statewide Post-Construction Storm Water Building Standards for Ministerial projects:** The Regional Board could establish a stakeholder group that may include Building Officials, contractors, planners, engineers, and developers familiar with and involved in daily use of California Building Code, development and landuse applications, CEQA, etc. A Regional Board-led stakeholder group could assist in developing draft verbiage for submittal to and consideration by the CBSC for a future CalGreen revision.

The City understands that the above recommendations differ from the current path envisioned by the Regional Board. They are steps, though, that we feel could adequately and legally substantiate the desired application of the PCRs to ministerial projects.

We greatly appreciate your and the Regional Board's consideration of our concerns, and others raised by our counterparts throughout the Central Coast and as a part of this public review process to "reconsider" the PCRs as prescribed by the SWRCB.

Sincerely,

A handwritten signature in black ink, appearing to read "Fred Meurer". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Fred Meurer  
City Manager

**Presser, Tamara@Waterboards**

---

**From:** John Falkenstien <JFalkenstien@prcity.com>  
**Sent:** Friday, May 10, 2013 12:19 PM  
**To:** WB-DWQ-r3\_stormwater  
**Cc:** Patti Gwathmey; Matt Thompson  
**Subject:** Draft Resolution No. R3-2013-0032

Jeffrey Young  
Chairman  
Central Coast Water Board

The City of Paso Robles supports its sister agencies in their request for consistency in the timing of implementation of Post-Construction Requirements. The draft language of the PCRs states “within 365 days of Central Coast Water Board approval.” We support continued inclusion of this language resulting in implementation in July, 2014. The City of Paso Robles is prepared and on course to implement the PCRs by September 6, 2013, however it appears other agencies may not be. More importantly, the September date is not consistent with requirements for other neighboring agencies just beyond the boundaries of Region 3.

There is still so much to be learned. We are currently practicing LID to the extent we can through an interim basis. We find particular bio-retention soils are still not available to us on the Central Coast, yet we’re only months away from implementing regulations requiring its installation. Local engineers still have much to learn regarding design practices.

We believe it is in the best interests of success of the program that timing of implementation is unified beyond Region 3.

John Falkenstien  
City Engineer  
805 237 3860  
[jfalkenstien@prcity.com](mailto:jfalkenstien@prcity.com)



# City of Santa Barbara

## Parks and Recreation Department

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Santa Barbara, CA

93102-1990

May 9, 2013

Kenneth A. Harris, Jr.  
Interim Executive Officer  
California Regional Water Quality Control Board  
Central Coast Region  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401

**Subject: City of Santa Barbara Comment Letter - Post Construction Requirements**

Dear Mr. Harris,

We appreciate the opportunity to review and provide written comments on the Draft Resolution No. R-13-2013-0032, Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast Region (PCRs). The City of Santa Barbara (City) supports the PCR's goals of protecting and improving storm water quality, and appreciates the Central Coast Regional Water Quality Control Board's effort in developing the requirements.

The purpose of this letter is to express the City's concerns with the implementation schedule included in the PCRs, given the amount of time necessary for City ordinance development, review, and approval upon adoption of the final binding Resolution and revised PCRs.

The Water Board's past direction and expectation for municipalities to expend time and resources to revise and approve enforceable mechanisms for the PCRs before they have been adequately reconsidered and re-adopted by the Board has been a concern. The Draft Resolution requires that municipalities begin implementation of the PCRs to all regulated projects by September 6, 2013. This proposed schedule provides less than two months from the scheduled Public Hearing date of July 12, 2013 for municipalities to revise codes and/or adopt other enforceable mechanisms to implement the PCRs. This is an unrealistic timeline.

Therefore, it is the City of Santa Barbara's recommendation that the Board allow at least six months from the date of Regional Board adoption of the final Resolution and PCRs to begin enforcement of the PCRs. This will allow sufficient time to codify the storm water management requirements in the City Municipal Code.

**Item No. 18, Attachment 3**

**July 12, 2013**

**Post-Construction Stormwater Management Requirements**

The City of Santa Barbara appreciates the opportunity to provide comments to your staff and looks forward to working together on implementing successful post-construction requirements for storm water management. If you have any questions, please do not hesitate to contact me.

Sincerely,



Cameron Benson, Manager

*Creeks Restoration/ Water Quality Improvement Division*

Cc: Jim Armstrong, *City Administrator*  
Paul Casey, *Assistant City Administrator/ Community Development Director*  
Nancy Rapp, *Parks and Recreation Director*  
Christine Andersen, *Public Works Director*  
Stephen Wiley, *City Attorney*



CITY OF SANTA MARIA  
UTILITIES DEPARTMENT  
Business Services • Regulatory Compliance  
Solid Waste Services • Water Resources

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May 10, 2013

Mr. Kenneth Harris, Executive Officer  
California Regional Water Quality Control Board  
Central Coast Region  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401

**SUBJECT: COMMENTS ON THE DRAFT RESOLUTION R3-2013-0032  
APPROVING POST-CONSTRUCTION STORMWATER  
MANAGEMENT REQUIREMENTS FOR DEVELOPMENT  
PROJECTS IN THE CENTRAL COAST REGION**

Dear Mr. Harris:

The City of Santa Maria ("City") appreciates this opportunity to comment on the aforementioned subject ("Draft Resolution") and Attachment 1 to the Draft Resolution containing the Post-Construction Stormwater Management Requirements ("Post-Construction Requirements"). The City has been involved in the development of the Post-Construction Stormwater Management Requirements with Regional Water Quality Control Board ("Regional Board") staff since efforts first commenced.

- **Santa Maria Valley Watershed Characterization**

The Santa Maria Valley watershed is unique to the entire Central Coast Region 3. The valley is characterized by a very slight ground slope from east to west and highly permeable soils. Storm water moves slowly through the valley as it infiltrates the groundwater. The 288-square mile groundwater basin below Santa Maria is estimated to hold between two and three-million acre feet of water. Any water that percolates, whether in the eastern portion of the valley or the western portion, replenishes the same groundwater basin.

The Santa Maria River begins where the Sisquoc and Cuyama Rivers converge. Both rivers are fed by water from the large watershed that drains from areas

above the Cuyama Valley and Santa Maria Valley. The Santa Maria River flows westward to the Pacific Ocean for approximately 20 miles.

Much of the upper Cuyama watershed is made up of naturally erosive sedimentary marine deposits. As a result, the river carries a heavy sediment load. The Twitchell Reservoir, completed in 1958, is located on the Cuyama River six miles above the confluence with the Sisquoc River. The dam traps much of the sediment contained in the Cuyama River flows, preventing the sediment from reaching the Santa Maria River.

The Santa Maria Valley is a broad, flat valley protected from flooding by the Santa Maria River via levees and a series of flood control channels and basins. The river has a very sandy, braided channel. It is a "losing" stream, meaning surface waterflow tends to rapidly infiltrate underlying permeable layers. The Santa Maria River is a major source of recharge to the Santa Maria groundwater basin. Urban runoff also tends to infiltrate, rather than flow to, the Santa Maria River. (CCAMP 2000).

Because of highly permeable soils and the basin system built and maintained by the City for decades, it can be demonstrated that very few rain events produce enough flow to reach the Pacific Ocean. Due to this unique watershed that includes engineered flood control, the actuality of hydromodification occurring in the Santa Mara Valley is minimal.

- **Urban Sustainability Areas (USAs)**

PCR Section C.3. allows the establishment of "Urban Sustainability Areas" (USAs) by municipalities. The City commends the Regional Board for including this option in the Post-Construction Requirements. USAs will smooth the road for infill development and "smart growth." The City and other cities in Region 3 have "urban centers" that will be well-served by this. The criteria for Regional Board approval of USAs is unclear in the Post-Construction Requirements and needs to be further refined through coordination with the Joint Effort Review Team to provide clear guidance to municipalities that are interested in designating a USA.

- **Performance Requirement No. 2: Water Quality Treatment**

It is well established that water quality control measures are most economical and efficient when they target small, frequent storm events that over time produce more total runoff than the larger, infrequent storms targeted for design of flood control facilities. Capturing this additional incremental volume beyond the 85<sup>th</sup> percentile has not been demonstrated to be more protective of water quality. This performance requirement should be revised accordingly.

- **Pre-development watershed processes protect the ecosystem**

Performance Requirement No. 3 requires volume retention of the 95<sup>th</sup> percentile event. This standard's intent is to "protect watershed processes so that beneficial uses of receiving waters are maintained and, where applicable, restored." An event-based volume retention standard is not a well-developed or proven approach for hydromodification control. It is very important for the downstream ecosystem to receive runoff post construction similar to the pre-development runoff.

The City recommends Regional Board staff continue working with the JERT and Central Coast municipalities to develop sizing and design criteria in Performance Requirement No. 3, consistent with appropriate hydrologic analysis methods that optimize onsite retention to reflect actual rainfall/runoff relationships for the project site.

- **Performance Requirement No. 5: Special Circumstances**

Performance Requirement No. 5 allows projects to be subject to "Special Circumstances" based on certain site and/or receiving water conditions that were not captured at the regional scale of analysis. Post-Construction Requirements Section B.6. states: "The Special Circumstances designation exempts a Regulated Project from Runoff Retention and/or Peak management Performance Requirements where those Performance Requirements would be ineffective to maintain or restore beneficial uses of receiving waters." The City maintains because the entire Santa Maria Valley watershed overlies the same groundwater basin, whether the water percolates on site or within the Santa Maria River, the ideal site for percolation for this particular watershed, that Runoff Retention should not be applicable in these Special Circumstances for Watershed Management Zones 1 and 4 (if overlying a designated Groundwater Basin) any more than the other Zones specified in B.6.b)ii).

Presumably, if a Project's receiving water is not susceptible to hydromodification impacts, maintaining watershed processes via hydromodification controls per Performance Requirement No. 3 would be ineffective for maintaining beneficial uses of those receiving waters. Furthermore, implementation of hydromodification controls per Performance Requirement No. 3 will not restore beneficial uses in existing hardened channels. The watershed processes (i.e. watershed hydrology) are just one consideration in channel restoration projects.

Projects subject to these Special Circumstances should only be required to implement Performance Requirement No. 2: Water Quality Treatment. The City recommends removal of Performance Requirement No. 3: Runoff Retention for Highly Altered Channel and/or Intermediate Flow Control Facility Special Circumstances as shown below:

6) b) *Performance Requirements for Highly Altered Channel and/or Intermediate Flow Control Facility Special Circumstances:*

*i) For Regulated Projects that: 1) create and/or replace >22,500 square feet of impervious surface; 2) are located in WMZs 1, 2, 5, and 8, and those portions of WMZs 4, 7, and 10 that overlie a designated Groundwater Basin:*

*(1) Water Quality Treatment (Performance Requirement No. 2)*

~~*(2) Runoff Retention (Performance Requirement No. 3)*~~

In closing, thank you for consideration of these comments. The City looks forward to continuing to work with the Central Coast Regional Water Quality Control Board on this important issue.



**RICHARD G. SWEET, P.E.**  
Director of Utilities



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May 10, 2013

Kenneth A. Harris, Jr.  
Interim Executive Officer  
California Regional Water Quality Control Board  
Central Coast Region  
895 Aerovista Place, Suite 101  
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**Subject: Post Construction Requirements Comments**

Dear Mr. Harris,

The County submits the following comments on the R3-2013-0032 Draft Post Construction Stormwater Requirements (PCRs). Also attached as part of the County's comments is a technical memorandum from our consultant, Dan Cloak, concerning his assessment of the PCRs.

Please accept both on behalf of the County of Santa Barbara.

**TIME EXTENSION**

The PCRs are complex and unprecedented in scope. Even Water Board staff recognize they are not perfect and will take some time to fully implement. The complexity and the design uncertainty of Attachment D have been the subject of many hours of review by members of the Joint Effort Review Team, who focused only on interpreting the existing language. For example, the Joint Effort Review Team recommended the proposed draft modifications to SCM sizing criteria in March. The County of Santa Barbara was a participant on that team. It was a substantial endeavor to develop recommended revisions, which are reflected in part in the April draft PCRs.

The County prepared for the upcoming permit requirements by applying for a Proposition 84 grant from State Water Resources Control Board, "Implementing the Joint Effort". Although the grant was awarded in July 2012, it wasn't until April 2013 that the Water Board executed the grant agreement. We had hoped to start work with the consultant in the fall, with the critical task to develop the Technical Guide for assisting both Permittees and developers implementing the PCRs. Regardless, it would be inappropriate for the County to move too far ahead using State funds before the PCRs are final. Up until now, they have been somewhat of a moving target. At this point, the County has an extremely limited timeframe for executing clear and effective technical guidance.

Although the County is prepared to implement the PCRs in good faith starting September 6, 2013, an extension would allow us to

- Develop better technical guidance,
- Refine design information needed, and therefore improve the quality of submittals we receive from applicants for development approvals,
- Conduct outreach and training for land development professionals and municipal reviewers,
- Complete any necessary code revisions for Board of Supervisor's approval.

**Recommendation:** Extend implementation date by six (6) months from the date of Regional Board adoption of the final Resolution and PCRs.

#### **GOALS OF JOINT EFFORT AND 95<sup>TH</sup> PERCENTILE STORM**

When the Water Board initiated the Joint Effort, the goal was to protect watershed processes in urban areas from further impacts due to new development, and to some degree, restore lost watershed processes from existing development.

The first outcome was analysis of landforms and runoff patterns based on field observation, mapped geology, and slope. Watershed Management Zones were then developed, defined by their watershed process character in relation to geology and slope. Water Board staff then took the narrative descriptions of Watershed Management Zones and interpreted that *no runoff would occur* from a single frequency storm event, the 85<sup>th</sup> or 95<sup>th</sup> percentile.

Obviously, that cannot happen in all cases. There are entirely different soil types and rainfall patterns throughout the Watershed Management Zones and too much variability to assume 1) all zones have the same rainfall/runoff pattern, and 2) runoff only occurs from the 85<sup>th</sup> or 95<sup>th</sup>

percentile event. This approach is not supported by any technical analysis or model that actually demonstrates a rainfall/runoff pattern. Verification should have been provided in the original technical analysis with the assembled consultant team.

Because of the oversimplified approach, Water Board staff had to make various adjustments for site conditions. As a result, the PCRs' one-size fits all threshold needs significant adjusting to accommodate the ill-fitting situations.

As an example, all of the urban areas of Santa Barbara County are in a Watershed Management Zone that requires infiltration of runoff of the 95<sup>th</sup> percentile storm event (with few small exceptions on the south coast). Therefore, a project in Orcutt - a somewhat flat area with predominantly infiltrative soils, which mostly drains into Orcutt Creek and infrequently flows into its downstream confluence with Santa Maria - must infiltrate a 1.5" rainfall depth. In contrast, a project in Goleta, Montecito, or Carpinteria, with type D soils and steep slopes, which may discharge very near the ocean, has to infiltrate up to a 2.5" runoff event.

The consequence is this: a development in Orcutt might easily be able to accommodate the infiltration requirement, maybe even undersize retention compared to pre-development conditions, whereas a similar development on the south coast would be highly challenged to infiltrate that volume, and either over-size retention compared to pre-development natural conditions, or apply the reduction credit of 10% effective impervious surface area for retention-based BMPs.

Because the 85<sup>th</sup>/95<sup>th</sup> volume criteria is a static blunt instrument, the PCRs are peppered with reductions, offramps, and exceptions to compensate for awkward outcomes due to site variability.

According to Water Board staff, the criterion to retain the 95<sup>th</sup> percentile runoff event is taken from USEPA's 2009 "Technical Guidance on Implementing Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act (EISA)."

Implementation of the criterion for applicable Federal facilities is required to the "maximum extent technically feasible," and there is no penalty or requirement for off-site mitigation if the criterion cannot be achieved. The USEPA document also provides the option of using site-specific hydrologic analysis to establish predevelopment hydrology performance design objectives—an option that the Region 3 Permittees have requested but staff has not included in the PCRs. Finally, it should be noted that the USEPA guidance includes eight hypothetical case studies showing the requirement to retain the 95<sup>th</sup> percentile storm volume. None of the case

studies are in California or in other any other region that has a semi-arid climate. Seven of the eight case studies were applied to sites assumed to have relatively infiltrative soils. On one case study with Hydrologic Soil Group "D" (clay) soils, it was found technically infeasible to achieve the criterion. There, the Maximum Extent Technically Feasible was achieved with only three-quarters of the 95<sup>th</sup> percentile event managed onsite.

If it is shown that the 95<sup>th</sup> percentile is the event threshold where no runoff would occur in an undeveloped condition, then it is the correct approach. Until then, the County proposes the following revision.

**Recommendation:** Revise sizing criteria to allow for matching pre-development hydrology.

vi) Hydrologic Analysis and Structural Stormwater Control Measure Sizing – To determine Stormwater Control Measure sizing and design, Permittees shall require Regulated Project applicants to use one of the following: 1) the hydrologic analysis and sizing methods as outlined in Attachment D, or 2) a locally/regionally calibrated continuous simulation model that **results in an equally protective method for matching pre-development hydrology, proposed by the Permittee and equivalent optimization of on-site runoff volume retention**; or 3) hydrologic analysis and sizing methods, **equally effective in optimizing on-site retention of the runoff generated by the rainfall event specified in Section B.4.c, that have been approved by the Central Coast Water Board Executive Officer.**

#### **PRE-EXISTING PROGRAMS**

It is unclear why pre-existing post-construction programs that were deemed equivalent to the PCRs (e.g. Cities of Lompoc, Santa Barbara) cannot be used by other Permittees. If it was an acceptable program 30 days after September 6, 2012, why wouldn't it be an acceptable program for Permittees now?

We recommend that a Permittee be given the option, at any time, to implement an equivalent post-construction program as long as the Water Board approves it.

**Recommendation:** Allow Permittees to adopt an approved post-construction program.

#### **G. ~~Pre-existing~~ Other Equivalent Programs**

a) A Permittee may propose, for Central Coast Water Board Executive Officer approval, implementation of **equivalent ~~pre-existing~~** post-construction stormwater management

requirements for development projects in the Permittee's jurisdictional coverage area, in place of implementing the requirements set forth in the Post-Construction Requirements. To be eligible for consideration and approval, the proposal must demonstrate the following:

- i) The Permittee's ~~pre-existing~~ **equivalent** post-construction stormwater management requirements are as effective as the Post-Construction Requirements in maintaining watershed processes, impacted by stormwater management, that are necessary to protect water quality and beneficial uses;
  - ii) ~~The Permittee was implementing its pre-existing post-construction stormwater management requirements prior to Central Coast Water Board approval of the Post-Construction Requirements; and~~
  - iii) The Permittee's **equivalent** ~~pre-existing~~ post-construction stormwater management requirements include LID site design and runoff reduction measures, numeric runoff treatment controls, numeric runoff retention controls, numeric runoff peak management controls, and project applicability thresholds as effective as those included in the Post-Construction Requirements.
- b) A Permittee must submit its proposal ~~within 30 days of adoption of the Post-Construction Requirements by~~ to the Central Coast Water Board. The Central Coast Water Board Executive Officer will approve or deny the proposal within 90 days of receipt of a proposal.
- c) If the Central Coast Water Board Executive Officer denies a Permittee's proposal, the Permittee shall **continue to** adhere to the Post-Construction Requirements provisions and deadlines.

#### **TIMING AND APPLICABILITY**

The timing to implement the PCRs on new projects is very awkward. The PCRs apply to projects that have not yet "received first discretionary/ministerial approval". This is a cumbersome point for both the Permittee, in the timing of application review, and for the developer, in project design. Much planning effort has already gone into design and review, with missed opportunities for site design measures. It will create challenges for the hundreds of projects affected.

Timing would be clear and vastly more realistic if the PCRs applied at time of application submittal.

Also, properties rebuilding after disasters should be exempt from the proposed regulations as these measures are not needed to insure public health and safety.

**Recommendation:** Revise to apply PCRs at time of application submittal.

~~(1) Discretionary Projects— The Permittee shall apply the Post-Construction Requirements to **all new applications for both discretionary and ministerial permits.** these projects that have not received the first discretionary approval of project design.~~

~~(2) Ministerial Projects— If the project is only subject to ministerial approval, the Permittee shall apply the Post-Construction Requirements to those projects that have not received any ministerial approvals. If the ministerial project receives multiple ministerial approvals, the Permittee shall apply the Post-Construction Requirements to the first ministerial approval. Ministerial approvals include, but are not limited to, building permits, site engineering improvements, and grading permits.~~

**Recommendation:** Revise as follows.

Under B(1) Regulated Projects (p. 1), add provision for disaster rebuilds.

b) Regulated Projects do not include:

- xii. **Properties rebuilding after disasters that are within the same footprint and have no increase in impervious area**

#### **SPECIAL CIRCUMSTANCES**

Projects that discharge into a concrete-lined, continuously armed, or continuous underground storm drain system all the way to a large lake, river, or the ocean, are provided certain exemptions. Similar exemptions are provided for projects that discharge into an “Intermediate Flow Control Facility” such as a groundwater recharge basin, which regulates flow volumes and durations to levels that protect beneficial uses of receiving water.

The purpose of the exception is this:

The Special Circumstances designation exempts a Regulated Project from Runoff Retention and/or Peak Management Performance Requirements where those

Performance Requirements would be ineffective to maintain or restore beneficial uses of receiving waters.

These exceptions make sense. However, the exceptions are limited to projects in certain Watershed Management Zones. Some projects would have to retain volume where the downstream receiving water would not be affected. In these cases, the requirements would be “ineffective to maintain or restore beneficial uses”.

The only reason to require retention on projects designated as Special Circumstances might be the *possibility* of some future instream project, such as a channel restoration plan, that would remove the hardened channel or pipe. However, there’s no possible benefit for projects that discharge to an “Intermediate Flow Control Facility”.

Retention will be managed under Performance Requirement No. 2 for Water Quality Treatment. That requirement mandates retention-based measures to treat storm water quality as top priority. Therefore, there is no benefit to watershed processes “to maintain or restore beneficial uses” by including the retention requirement in addition to the water quality treatment, regardless of the project size.

**Recommendation:** Exempt retention requirements for all Regulated Projects with Special Circumstances (and make appropriate formatting revisions). Remove language referring to project size and Watershed Management Zone.

b) Performance Requirements for Highly Altered Channel and/or Intermediate Flow Control Facility Special Circumstances:

i) ~~For Regulated Projects that:~~

~~1) create and/or replace >22,500 square feet of impervious surface; 2) are located in WMZs 1, 2, 5, and 8, and those portions of WMZs 4, 7, and 10 that overlie a designated Groundwater Basin:~~

~~(1) Water Quality Treatment (Performance Requirement No. 2)~~

~~(2) Runoff Retention (Performance Requirement No. 3)~~

ii) ~~For Regulated Projects that:~~

~~1) create and/or replace >22,500 square feet of impervious surface; and 2) are located in WMZs 3, 6, and 9, and those portions of WMZs 4, 7, and 10 that do not overlie a designated Groundwater Basin;~~

(1) Water Quality Treatment (Performance Requirement No. 2).

Sincerely,



Joy Hufschmid

Project Clean Water Manager

County of Santa Barbara

To: **Cathleen Garnand  
County of Santa Barbara**

From: Dan Cloak

Subject: **Proposed Post-Construction Stormwater Management  
Requirements for Development Projects in the Central Coast Region  
(draft released 8 April 2013)**

Date: 9 May 2013

### **Summary**

The Post Construction Requirements (PCRs) contain significant technical flaws. Many of the requirements are ambiguous and subject to interpretation. Because of these technical flaws and ambiguities, the PCRs are likely to be, overall, less effective in controlling the impacts of development on streams and other receiving waters than the requirements now in effect (for Phase I municipalities) in some other regions of the state. The PCRs are also likely to be less effective, overall, in preserving watershed processes than the requirements of Provision E.12 in the statewide Phase II municipal stormwater NPDES permit.

### **Issue #1: The criteria for on-site retention do not allow Permittees to take into account differing pre-development hydrology of proposed development sites.**

Following a well-intentioned—but misdirected—aim of simplicity, the PCRs are written to mandate retention of runoff equal to the volume of either the 85<sup>th</sup> percentile or 95<sup>th</sup> percentile storm. These criteria are applied without regard to the pre-project or pre-development hydrologic or geologic characteristics of the specific development site. This is counter to the intent of the Joint Effort, which sought to develop a program that would preserve or restore pre-development watershed processes.

The PCR criteria yield anomalous results. For example, under the PCR criteria it may be easier, and less expensive, to develop highly permeable sites than to locate development on less-permeable soils. This is because, by some of the allowed methods of calculation, a smaller facility would be needed to infiltrate the volume of an 85<sup>th</sup> or 95<sup>th</sup> percentile storm on a highly permeable site, and a larger facility would be needed on a site with less-permeable soils.

This is the opposite result from that of hydromodification management requirements in effect for Phase I municipalities in Region 2 (San Francisco Bay Area), in Region 9 (San Diego), and Region 5 (Central Valley). In those criteria, differences in pre-project or pre-development runoff volume, rates, and durations are taken into account. Continuous

simulation analysis of pre-project and post-project flows are conducted and facilities are sized so that post-project flow rates and durations are kept within the flow rates and durations that existed in the pre-project or pre-development condition. This requires more infiltration on sites with permeable soils and less infiltration (allowing more runoff) on sites with less-permeable soils.

Provision E.12 in the statewide Phase II municipal stormwater permit takes a simpler approach, but also accounts for differing pre-project or pre-development conditions. Provision E.12.e.ii.(f) includes a mandate that bioretention facilities be sized consistently by *area*—that is, facilities must have an area roughly equal to 4% of tributary equivalent impervious area. This area-based criterion takes into account that in permeable soils, the facility will infiltrate relatively more runoff, and in less-permeable soils will infiltrate less runoff, in each case trending toward a match with the pre-project or pre-development condition. In this way, the Provision E.12 criteria passively adapt the facility performance to consider site-specific contributions to pre-development watershed processes. Importantly, the 4% criterion is implementable with a minimum of exceptions (See Issue #3, below).

In Section B.4.d.vi of the PCRs, “Hydrologic Analysis and Structural Stormwater Control Measure Sizing,” it appears to have been intended to allow, as an alternative, a “locally/regionally calibrated continuous simulation model that results in equivalent optimization of on-site runoff volume retention.” The purpose of continuous simulation is to facilitate analysis of the entire range of storm sizes and antecedent conditions over a long period (30 years or more). This allows comparison of a site’s pre- and post-project hydrologic characteristics and the resulting influence on watershed processes over time. The language in PCRs Section V.4.d.vi. is obviated by the language in PCRs Section B.4.c., which mandates retention of the volume of a specific storm (85<sup>th</sup> percentile or 95<sup>th</sup> percentile) regardless of whether a specific site in its pre-development condition has highly permeable soils or impermeable soils.

**Issue #2: The allowable methods for calculating facility sizes will yield highly uncertain and variable results.**

Attachment D to the PCRs allows a “routing method” for sizing retention facilities. Under the routing method, the response of an infiltration facility to the runoff hydrograph produced by a design storm (85<sup>th</sup> percentile or 95<sup>th</sup> percentile storm) is tracked in 6-minute increments. For each time increment, the routing method tracks the volume of inflow to the facility, the volume stored within the facility, and the volume infiltrated into the ground. The calculation is iterated to find the minimum storage volume required to hold and then infiltrate the design storm.

Under this method, facility sizes will be very sensitive to the rate at which runoff infiltrates into the ground. This is especially true for less-

permeable soils, where estimates and test results can vary by 50%-100%. For example, in a site with clay soils, infiltration rate tests and estimates from the same site could vary from 0.05 to 0.1 inch/hour. The resulting facility size calculation would likewise vary by a factor of 2. This creates substantial uncertainty for applicants and will require municipal staff to make judgments under pressure.

**Issue #3: The exceptions to sizing requirements are poorly targeted.**

The facility sizes that will result from the PCR criteria will be onerous to developers and will limit much-needed economic development, particularly in already-urbanized areas where land values are higher. Special consideration is needed for already-urbanized areas, lest the PCRs create strong disincentives for development within existing urban boundaries and unintentionally promote sprawl.

The PCR requirements generally oversize retention facilities, and the PCR's special exceptions for already-urbanized areas are clearly needed. However, as written, the special exceptions in the PCRs are arbitrary and poorly targeted, and in some cases render the PCRs less protective than requirements in effect in other regions—and also less effective than the requirements that will be in effect statewide under Provision E.12.

This is a poor trade-off. Large storms are infrequent and represent only a small proportion of total runoff volume, total pollutant load, hydromodification impacts, and overall impacts on watershed processes. As shown by continuous-simulation modeling and verified by *in situ* monitoring, for bioretention facility sizes larger than about 4% of tributary area, the incremental additional storage and infiltration capacity is used infrequently. Therefore incrementally larger facility sizes yield progressively diminishing returns. As sizes increase far beyond 4% of tributary area, the difficulty of fitting the facility into the development site increases, and the environmental costs of mining gravel and sand (and trucking these materials to the development site) also increase, without proportional increases in the effectiveness of runoff control.

The PCRs would be more effective in protecting watershed processes if the facility sizes were more reasonable and the exceptions and loopholes less prevalent. Examples follow.

PCR Section B.3.a. allows a “reduced impervious area credit” for redevelopment projects that have post-project impervious area less than pre-project impervious area. Instead of discharging runoff from these areas without treatment, the runoff could be routed to reasonably sized treatment and retention facilities—if reasonably sized facilities were allowed by the PCRs.

Further, Section B.3 allows the use of non-LID treatment systems on development projects with up to 15,000 square feet of impervious area, stating only a “preference” that LID be used. In contrast, Provision E.12 requires LID treatment and baseline hydromodification management for

all projects with 5,000 square feet or more of impervious area, and includes no “reduced impervious area credit.”

PCR Section B.4.b.i. allows a reduction of 50% in the amount of runoff retained for runoff from replaced, rather than new, impervious surfaces. The facility sizing mandated in the following Section B.4.b.i.c. results in facilities which may be oversized to a greater or lesser degree; the 50% reduction in this volume will result in facility sizing which could still be, in some cases, larger than what would be required under Provision E.12—and in other cases will be substantially smaller. Instead of undersizing some facilities on redevelopment sites, the Section B.4.b.i.c. criteria could be better optimized so that facilities in general are not oversized. Then the arbitrary 50% reduction could be dispensed with.

PCR Section B.4.b.ii. eliminates the retention requirement for redevelopment projects within “Urban Sustainability Areas” (USAs), requiring only that existing on-site retention be maintained. The Urban Sustainability Area “may only encompass redevelopment in high density urban centers... that are pedestrian-oriented and/or transit-oriented development projects intended to promote infill of existing urban areas,” but must be proposed by the Permittee and approved by the Executive Officer. Notably, the Permittees’ USA proposals need not include restrictions on the size of projects or parcels eligible for elimination of the retention requirement. This is considerably more uncertain and unwieldy than the corresponding requirement in the Phase II permit, and is likely to result in a higher prevalence of non-retention-based, non-LID facilities in Region 3 than in the rest of the state. Provision E.12.e.ii.i. in the Phase II permit limits such exceptions to “projects creating or replacing an acre or less of impervious area, and located in a pedestrian-oriented commercial district... and having at least 85% of the entire project site covered by permanent structures.... [and] Facilities receiving runoff solely from existing (pre-project) impervious areas; and.... [and] Historic sites, structures or landscapes....” which is a much more restrictive set of criteria.

PCR Section B.4.e. allows an “off-ramp” if it is technically infeasible to retain the volume produced by the 85<sup>th</sup> or 95<sup>th</sup> percentile storm. In this case a development project may comply with the PCRs if it dedicates “no less than ten percent of the Regulated Project’s Equivalent Impervious Surface Area to retention-based Stormwater Control Measures.” However, neither Section B.4.e. nor the referenced Attachment E state what a definition of the term “retention-based Stormwater Control Measures.” Apparently, it would be possible for a development project to comply by incorporating facilities to retain some arbitrary lesser volume and by meeting the 10% area requirement with depressed landscaped areas, pervious pavement, and the like. Again, by this measure the PCRs are a poor substitute for the clearer and less loophole-ridden requirements of the Phase II permit’s Provision E.12.

**Issue #4: The PCR criteria for bioretention treatment systems are not as effective the Provision E.12 criteria for bioretention treatment systems.**

Specifically, Provision E.12.e.ii.(f) sets a clear standard for LID by specifying that stormwater treatment measures and baseline hydromodification management measures must be “at least as effective as a bioretention system with the following design parameters....” The design parameters are spelled out in detail. The basis for demonstrating equivalent effectiveness to this design is also spelled out: equivalent effectiveness means an equal or greater amount of runoff infiltrated or evapotranspired, equal or lower pollutant concentrations in runoff that is discharged, equal or greater protection against shock loadings or spills, and equal or greater accessibility and ease of inspection and maintenance.

PCR Section 3.b. borrows much language from Phase II permit Provision E.12.e.ii.(f) but omits the specific standard for equivalent effectiveness. Also, PCR Provision 3.b. incorporates a preference for facilities “designed to retain stormwater runoff equal to the volume of runoff generated by the 85<sup>th</sup> percentile 24-hour storm,” without including or referencing design standards for this preferred option. Experience throughout California has demonstrated the difficulty of ensuring proper design and construction of stormwater management facilities. Because the PCRs do not specify a design standard and a basis for demonstrating equivalence, the PCRs will likely be less successful than Provision E.12 when it comes to ensuring installation of effective stormwater management facilities in the field.

PCR Section 3.b.ii.(3) also specifies a minimum planting media depth of 24 inches, as compared to an 18-inch depth required in Phase I permits in Region 2, Region 8, and Region 9, and by Provision E.12 in the statewide Phase II permit. The additional depth appears to be arbitrary, and a review of literature cited in the Technical Support Document does not make a convincing case that additional depth would provide additional water quality benefit when applied to new development controls on California’s Central Coast.

**Issue #5: The Allowance for Pre-Existing Programs Creates Inconsistencies**

The burdensome nature of the PCR criteria also fostered a need to allow some municipalities to seek the Executive Officer’s permission to exempt themselves from the PCRs, as allowed in PCRs Section G, on the basis that their pre-existing post-construction stormwater management requirements are as effective as the PCRs in maintaining watershed processes. For the reasons presented above, the relative effectiveness of the PCRs in maintaining watershed processes is uncertain and difficult to ascertain. Regardless of relative effectiveness, the inconsistencies themselves—developments on opposite sides of the same street could

have radically different post-construction requirements—tend to undermine regionwide implementation. It would make more sense to revise the PCR criteria to be less burdensome, while still achieving the objective of maintaining watershed processes. The less-burdensome criteria could then be implemented consistently throughout the Region.

**Conclusion**

When the PCRs were first conceived (5 to 6 years ago), it was known that reissuance of the statewide Phase II Municipal Stormwater NPDES permit would be delayed, and it was unknown what the new development requirements in that permit might be. Since that time, development of the PCRs and of the Phase II requirements have proceeded on parallel tracks, with both documents going through significant changes with each iteration. The Phase II requirements have been adopted by the State Water Board and are to be implemented throughout the state by July 1, 2015.

To date, there has been no review or technical analysis of whether Provision E.12 in the Phase II permit fully meets the objectives of the Joint Effort in the Central Coast Region, or of whether simple incremental changes to Provision E.12 would meet those objectives.

Given the technical flaws in the PCRs as currently drafted, and the benefits of statewide consistency, the Central Coast Water Board should be encouraged to direct that such a review be conducted before the Board takes further action on the PCRs.



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May 10, 2013

Kenneth A. Harris, Jr.  
Interim Executive Officer  
Central Coast Regional Water Quality Control Board  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401

**Subject: Post Construction Requirements Comments – Justification  
for Modifying the Watershed Management Zone Split on the  
Campus of the University Of California at Santa Barbara**

Dear Mr. Harris,

We appreciate the opportunity to review and provide written comments on the Draft Resolution No. R-13-2013-0032 – Post Construction Stormwater Management Requirements for Development Projects in the Central Coast Region (PCRs).

On behalf of the University of California at Santa Barbara (UCSB) we respectfully request that a portion of the UCSB main campus be reclassified as Watershed Management Zone 4.

Please review the brief synopsis below of the various conditions including the existing campus geology and the existing campus watersheds that contribute to the reason for the requested Watershed Management Zone (WMZ) revision.

## Background

According to the *Attachment E Methods and Findings of the Joint Effort for Hydromodification Control in the Central Coast Region of California dated June 14, 2012 of the Post Construction Stormwater Management Requirements for Development Projects in the Central Coast Region*, there are several attributes to consider when determining the location and boundaries of each WMZ. Included in the determination is the examination of the existing watershed processes, the physical landscape and underlying geology, the effects of urbanization, and the assessment of the receiving waters.

The Characteristics of the WMZs are summarized in Section 2.5.2 of Appendix E defining the WMZs. In the *Summary Characteristics of the Watershed Management Zones*:

- WMZ 1 “drains to stream or wetland; underlain by Quaternary and late Tertiary deposits 0-40%, and early to Mid-Tertiary sed. 0-10%”. Management strategies should minimize overland flow and promote infiltration particularly into deeper aquifers if overlying a groundwater basin in its recharge area.
- WMZ 4 “drains to lake, large river, or marine nearshore; underlain by all types 0-10%, and Quaternary and late Tertiary deposits 10-40%”. Focus on infiltrative management strategies is only necessary for those parts of this WMZ that overlie a groundwater basin.

#### **UCSB Main Campus Geology – as it relates to WMZ’s**

- The Goleta Slough (wetland) bounds the campus to the north and the Pacific Ocean and UCSB Campus Lagoon bound the campus to the south and the east – Refer to Exhibit A showing wetlands locations as identified by U.S. Fish and Wildlife Survey.
- The campus lies south of the Santa Barbara Municipal Airport on a portion of land elevated roughly 40-50 feet above the Pacific Ocean. The bulk of the main campus is underlain by marine terrace deposits and Sisquoc bedrock formation. The marine terrace deposits “rest on elevated marine wave cut platforms and form single terraces or flights of terraces” and are identified as Quaternary. The Sisquoc formation is “distinguished by thick beds of conglomerate containing angular clasts derived from the Monterey Formation”, and is identified as Tertiary. The result is that infiltrated water is perched on the highly impermeable deposits/formations and slowly seeps in part through the layer of soil above the Sisquoc visibly noticeable along the marine bluffs resulting in on going bluff retreat threatening University access and ultimately buildings. Refer to Exhibit B for U.S. Geological Survey.
- The nearest groundwater basin as derived from the U.S. Geological Survey lies to the north of the main campus. Infiltrated water within the campus is unable to reach the aquifer due to the previously described geological formations. Refer to Exhibit B for location of nearest groundwater basin.

#### **Campus Drainage**

- Detailed existing topography indicates that overland drainage for the main campus splits near the northerly area of campus with a small portion draining north toward the Goleta Slough and a larger portion draining south to the Pacific Ocean and the UCSB Campus Lagoon. Refer to Exhibit C for overland drainage split.
- Current watershed delineation as a result of urbanization is that the majority of overland runoff within the main campus area is captured in underground conduits, treated and discharged to the existing UCSB Campus Lagoon to the south – the urbanized watersheds are identified in Exhibit C for reference.

Watershed locations were developed from drainage studies performed throughout the campus and are available upon request. A detailed topographic map of the region can also be provided upon request.



### Analysis and Recommendations

In analyzing the existing attributes of the main campus, the following summarizes the reasons for the WMZ limit revision:

- The current watershed limits show the bulk of the campus as identified in Exhibit C drains to the UCSB Campus Lagoon and Pacific Ocean to the south. Neither are considered "stream or wetland" as indicated in the WMZ 1 characteristics.
- The UCSB Campus Lagoon is identified as an Estuarine and Marine Deepwater by the US Fish and Wildlife Services national wetlands inventory, classified as a Marine nearshore (see Exhibit A).
- As indicated by Exhibit B there is no ground water basin that lies directly under the main UCSB campus.
- The campus site resides on a unique geological setting in which infiltrated runoff ends up perched on highly impermeable marine terrace deposits and Sisquoc bedrock formation where it can be visibly witnessed seeping through the soil layer adjacent to the Sisquoc on the marine bluffs.

Since the majority of the campus drains to a marine nearshore and not a stream or wetlands, is not underlain by a groundwater basin, and resides over a geological setting in which infiltrated water is unable to reach a groundwater basin; it better fits the description of WMZ 4 as characterized in Section 2.5.2 in Appendix E of the Post Construction Requirements and not WMZ 1.

Therefore we believe the WMZ limits should be revised to follow the watershed boundary as indicated by Exhibit C and portrayed in Exhibit D with that portion of the campus currently identified within WMZ 1 shifted to WMZ 4.

Thank you for your consideration.

Very truly yours,

PENFIELD & SMITH



Michael C. Hamilton, P.E.  
Senior Engineer  
RCE 62,696



Craig A. Steward, P.E., CFM  
Principal Engineer  
RCE 37,253

### Enclosures

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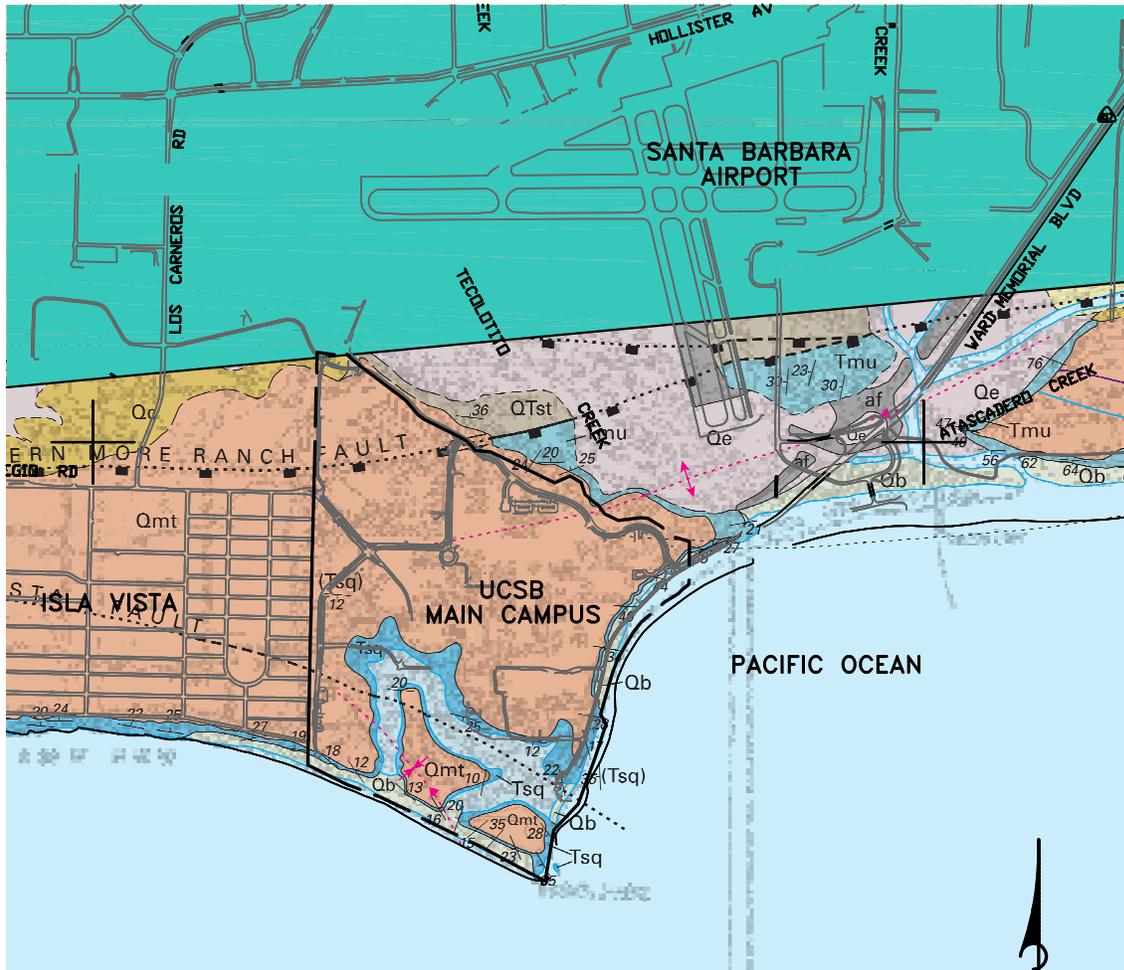




**EXHIBIT A**  
**NATIONAL WETLANDS INVENTORY**  
**U.S. FISH AND WILDLIFE**  
 UNIVERSITY OF CALIFORNIA, SANTA BARBARA



20988.01 USFW WETLAND INVENTORY N.T.S.



**LEGEND**



EXISTING GROUNDWATER BASIN LOCATION DERIVED FROM U.S. GEOLOGICAL SURVEY.



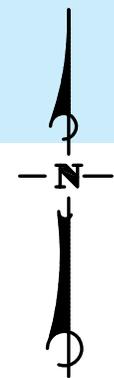
PROPERTY LINE



**Qmt** Marine terrace deposits (upper Pleistocene)—Basal (~1 m) weakly to moderately consolidated, variably stratified, fossiliferous gravel, sand, and silt deposited as marine intertidal, beach, and estuarine deposits and overlying nonmarine eolian, alluvial, and colluvial deposits. Marine terrace deposits rest on elevated marine wave-cut platforms and form single terraces or flights of terraces ranging in elevation from 10 to 90 m (30–300 ft) and in age from 45 ka (oxygen-isotope substage 3a) to 105 ka (substage 5c). Maximum exposed thickness about 20 m



**Tsq** Sisquoc Formation (lower Pliocene and upper Miocene)—Marine, tan-to white-weathering, diatomaceous mudstone and shale, conglomerate, and subordinate dolomite. Unit distinguished by thick beds of conglomerate containing angular clasts (commonly up to 1 m across; some blocks as large as 10 m) derived from the Monterey Formation. Both base and top of Sisquoc consist of erosional unconformities. Maximum preserved thickness of 300 m in sea cliffs

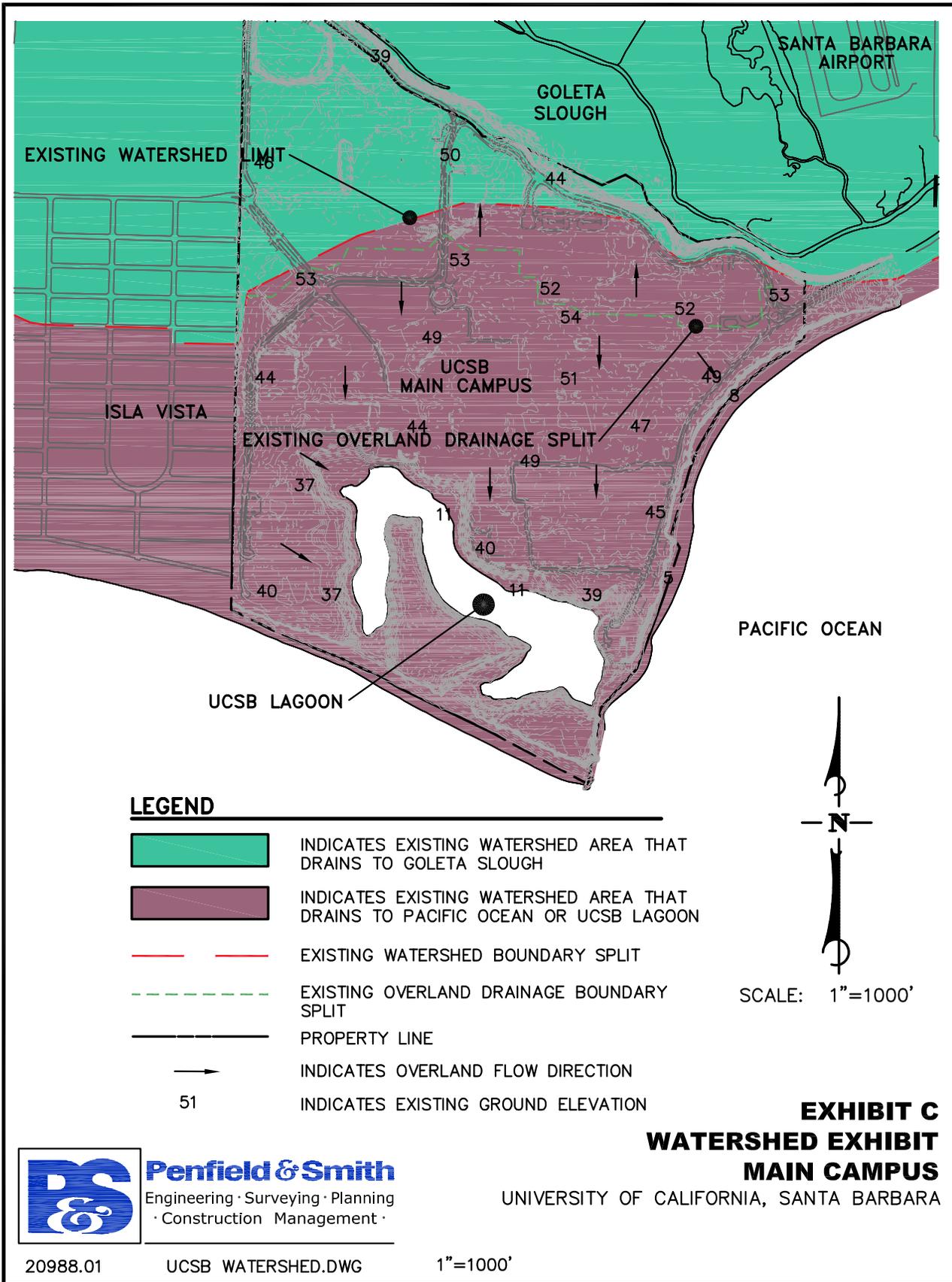


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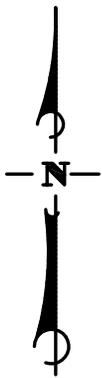
**EXHIBIT B**  
**GROUNDWATER BASIN LOCATION**  
**U.S. GEOLOGICAL SURVEY**  
 UNIVERSITY OF CALIFORNIA, SANTA BARBARA

20988.01 GW BASIN.DWG 1"=2000'



**LEGEND**

-  INDICATES EXISTING WATERSHED AREA THAT DRAINS TO GOLETA SLOUGH
-  INDICATES EXISTING WATERSHED AREA THAT DRAINS TO PACIFIC OCEAN OR UCSB LAGOON
-  EXISTING WATERSHED BOUNDARY SPLIT
-  EXISTING OVERLAND DRAINAGE BOUNDARY SPLIT
-  PROPERTY LINE
-  INDICATES OVERLAND FLOW DIRECTION
- 51 INDICATES EXISTING GROUND ELEVATION

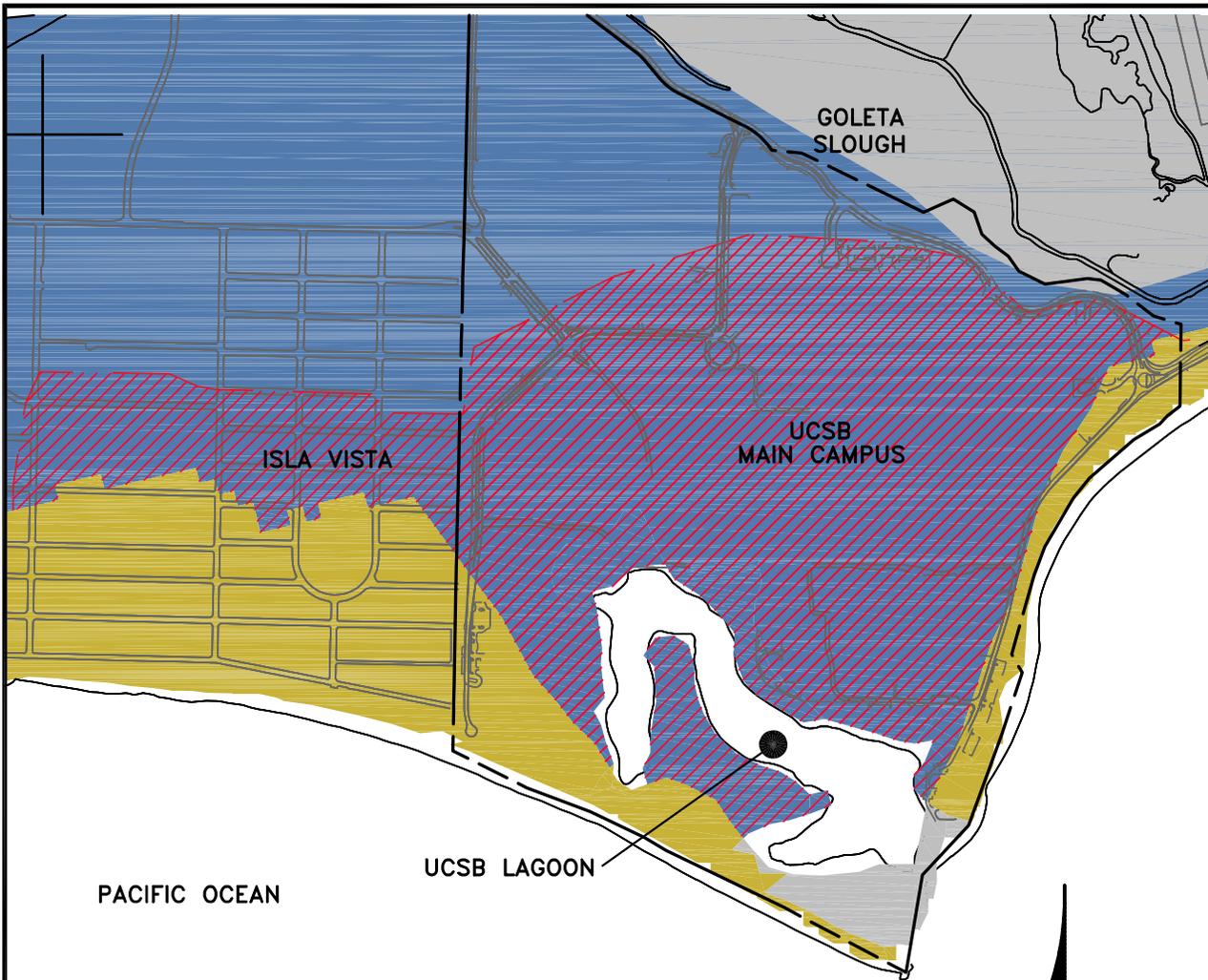


SCALE: 1"=1000'

**EXHIBIT C  
WATERSHED EXHIBIT  
MAIN CAMPUS**

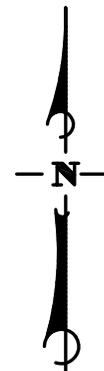
UNIVERSITY OF CALIFORNIA, SANTA BARBARA





**LEGEND**

-  INDICATES WATERSHED MANAGEMENT ZONE 1
-  INDICATES WATERSHED MANAGEMENT ZONE 4
-  INDICATES WATERSHED MANAGEMENT ZONE 10
-  INDICATES PROPOSED REVISION FROM WMZ1 TO WMZ4
-  PROPOSED WMZ LIMIT LINE
-  PROPERTY LINE



SCALE: 1"=1000'

**EXHIBIT D  
REVISED WMZ LIMIT EXHIBIT  
MAIN CAMPUS**

UNIVERSITY OF CALIFORNIA, SANTA BARBARA



20988.01

UCSB WATERSHED.DWG

1"=1000'

# AIA California Council

The American Institute of Architects



May 30, 2013

Kurt T. Cooknick, Associate AIA  
*Director, Regulation and Practice*

California Regional Water Quality Control Board  
Central Coast Region  
895 Aerovista Place, Suite 101  
San Luis Obispo, California 93401

RE: POST-CONSTRUCTION REQUIREMENTS COMMENTS

On behalf of The American Institute of Architects, California Council (AIACC), a statewide organization representing the interest of more than 21,000 California licensed architects, I am writing to comment and express our concerns over portions of the revised Post-Construction Rules contained in Draft Resolution No. R3-2013-0032.

For design professionals clarity and consistency in building codes and regulations is critical to achieving a successful project. The AIACC has a long history of supporting this principal marked by its role in sponsoring AB 47 (Eastin) in 1991. AB 47 reestablished the role of the California Building Standard Commission to bring all building code development in California into one location – not to control the process, but rather for the expressed purpose of assuring a coordinated process. And I am pleased to say that more than 20 years later the process has been an unequivocal success.

How this relates to the Post-Construction Rules contained in Draft Resolution No. R3-2013-0032, and what is particularly troubling about the process being implemented, is that they are being drafted as regulations, but are in fact building codes, without benefit of the building code adoption process. It is our concern that because they are being developed in this manner there is an almost certain possibility that this will lead to conflicts with the California Building Code.

Building code conflicts are not just an issue of concern to design professionals; they are of a significant concern to their clients as well. Conflicts cause delays, and delays come at the expense of both time and money. On a local level, delay translates into lost employment opportunities for the community. It was for these very reasons that AB 47 became law, insuring that California's building codes would be created and coordinated in a manner that assured they were for the public good.

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<http://www.aiacc.org>

Building standards submitted to the California Building Standards Commission for approval are required, by Health and Safety Code Subsection 18930(a), to be accompanied by an analysis which will, to the satisfaction of the Commission, justify their approval. The approval of these proposed building standards is justified as follows:

- 1) The proposed building standards do not conflict with, overlap, or duplicate other building standards.
- 2) The proposed building standards are within the parameters established by enabling legislation, and are not expressly within the exclusive jurisdiction of another agency.
- 3) The public interest requires the adoption of the building standards.
- 4) The proposed building standards are not unreasonable, arbitrary, unfair, or capricious, in whole or in part.
- 5) The cost to the public is reasonable, based on the overall benefit to be derived from the building standards.
- 6) The proposed building standards are not unnecessarily ambiguous or vague, in whole or in part.
- 7) The applicable national specifications, published standards, and model codes have been incorporated therein as provided in this part, where appropriate. (Health and Safety Code Section 18930 requires a statement of inadequacy of a national specification, published standard, or model code if it does not adequately address the goals of the state agency, OR a statement informing the Commission that no national specification, published standard, or model code that is relevant to the proposed building standards exists.)
- 8) The format of the proposed building standards is consistent with that adopted by the Commission.
- 9) The proposed building standards, if they promote fire and panic safety as determined by the State Fire Marshal, have the written approval of the State Fire Marshal.

These straightforward requirements have served to level the field, ensuring that individual members of the public, as well as publicly traded corporations, are treated as equals with each having equal opportunity to participate in the code development process.

May 30, 2013  
California Regional Water Quality Control Board  
Central Coast Region  
Page 3

Underscoring the importance of local input, I have been provided a copy of AIA Monterey Bay's Post-Construction Requirements Comments. AIA Monterey Bay is one of the AIACC's 22 state-components and we are honored to support them in their efforts.

In addition to voicing concerns similar to the AIACC's, AIA Monterey Bay has also identified several items of concern within the proposed Post-Construction Rules, which give specific and further credence to why coordination between local regulations and existing building codes, and this matter should be thoroughly vetted.

It is my hope that based on the comments of the AIACC, and especially those of the AIA Monterey Bay, that the CRWQCB Central Coast Region will give careful consideration when considering adoption of Draft Resolution No. R3-2013-0032.

Thank you for the opportunity to comment. Should you have any questions please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, reading "Kurt T. Cooknick". The signature is written in a cursive, flowing style.

Kurt T. Cooknick, Assoc. AIA



# AIA Monterey Bay

A Chapter of The American Institute of Architects

May 9, 2013

## Re: **POST-CONSTRUCTION REQUIREMENTS COMMENTS**

The Monterey Bay Chapter of the American Institute of Architects (AIAMB), which covers all of Monterey, San Benito, and Santa Cruz counties, is located in Region 3 of the CRWQCB, and its membership will be affected by the Post-Construction Rules. As such, our AIAMB Chapter has been endeavoring to understand these rules, as well as to how they can practically be applied in the field.

The AIAMB membership is comprised primarily of licensed architects in the State of California. We are formed as a non-profit and have been in existence for well over 50 years. Our goals include qualitative improvements to our communities and, in particular, to our built environments.

It is with this background and expertise that we provide the following comments to the revised Post-Construction Rules, specifically, these are comments to:

DRAFT RESOLUTION NO. R3-2013-0032

American Institute of Architects Monterey Bay Chapter (AIAMB) General comments:

### *General Concerns:*

1. The AIA has long stood for having clear and understandable codes. There is a well-established process for Code Adoption, which is through the Building and Standards Commission, often referred to as the "Code Adoption Process". These proposed regulations appear as building codes, yet they are coming into existence as regulation rather than through the tried and true code adoption process. This creates the situation where this regulation could be in conflict with either the current Building Codes, or with future Building Codes. Also, by not being in the Codes, additional confusion is created to owners and in the marketplace. In fact, there is a likelihood that these regulations WILL BE in conflict with Code, at some point. This is the main reason why it is so dangerous to pass building codes as regulation. These types of future inconsistencies can ultimately compromise the structural integrity of structures, potentially risking life safety. Life safety is traditionally the number one concern in the practice of architecture, and should also be a top concern for the Regional Board.
2. Unnecessary complexity. These proposed rules are very complex, difficult to understand, and difficult to know how to implement properly.
3. Conflict with other Federal, State, Regional, and Local plans and policies. An example of this would be the extraordinary measures that are required of urban infill lots. Even though there may be development all around one of these lots, or that the lot itself may be being re-

developed to meet a local plan policy, these proposed rules require the redevelopment to implement potentially very costly measures. In fact, the required measures *may not even be possible* to implement on that project site, which may require the payment of fees to a jurisdiction in the hope that the jurisdiction can implement a program in that sub-watershed area. These Urban Sustainability Areas (USA's) do not currently exist, nor do any of them have the Region 3's Regional Board approval, all of which is required in order to establish one.

All of this should be kept in mind when deciding if these proposed rules help or hinder the implementation of existing General Plans and other adopted urban development policies. It would be difficult to make a rational argument that urban infill or urban redevelopment is enhanced when and if these proposed rules come into effect.

4. We are very concerned for the public health, safety, and welfare. Standard practice in the industry has been to de-water built-up sites so that water does not cause any number of potential problems. Examples of issues that could occur if water is now required to remain on-site include:
  - a. Differential settlement of foundations due to water softening the ground on one part of a site,
  - b. Water can trigger ancient landslides. Particularly in the complex geology of the Central Coast, there are many known ancient landslides and, we are sure, many unknown ancient landslides. Introducing water back into a site could have serious consequences and cause the failure of certain soils, potentially risking human life and safety.
5. For any part of these Rules which require any "discretionary" action, these Rules should NOT apply to ministerial projects. It is poor public policy to turn things that are currently ministerial into discretionary projects. Furthermore, this would have a potentially large impact on private property rights as well as local zoning codes, and would add tremendous complexity to a generally very cumbersome process.

*Specific Comments:*

1. We believe that these rules could be drastically simplified. An example is that if a Project site is less than 50% 'Site Coverage', then the requirements can be met on that site via prescriptive BMP's. As such, this would require certain practices to become the standard, and would negate the necessity of having ongoing monitoring or other costly ongoing expenses to a project. This example, of using a "Site Coverage" calculation as a method for being able to determine if a project site is likely to be able to meet the intent of these proposed rules, and then allowing a series of prescriptive BMP's to meet that requirement, is just one of several ways to simplify these complex proposed rules.

At a public forum our AIAMB chapter held on these regulations, where Dominic Roques was kind enough to come up here and present, there seemed to be agreement that this

methodology is a rational and easy to implement methodology that would meet the intent of these regulations.

We believe a simple addition of this type of calculation, and then a simple checklist of items to be prescriptively applied, would both meet the intent of the rules and also add simplicity.

One way to achieve this is to add to the definition of "Low-Impact Development" (LID), any development which has a Site Coverage of 50% or less of the site. One place to insert this language would be to Item 18, on Page 4.

When you think about it, having these regulations be entirely based on size of impervious area, and to not factor in the size of the entire site, seems to separate these regulations from common sense. This percentage of development is an important factor when trying to maintain a certain hydrology for a site.

2. We appreciate the elimination of the seemingly arbitrary added factor that was in the first draft. Not only did this factor seem to appear out of nowhere, but it also had the effect of negating what otherwise seemed like, at least, a rational methodology. We believe it was very wise of you to remove this factor, the 1.963 number, entirely.
3. We have serious concerns with the comments in Item 20 on Page 5. Here the draft Resolution states, in part, "...and 4) ensuring that each drainage feature is adequately maintained *in perpetuity*." (emphasis added)

In a perfect world this may be arguable, however in the real world there are a bundle of goals that need to be carefully balanced. While it is admirable that these regulations consider themselves so urgent that they not only avoid the "Code Adoption Process", which could cause conflicts and potential negative impacts to Life-Safety, but they are so critical that they must be assured of full operation *forever*.

This goal creates a whole series of problems. First is the precedent setting nature of it: If stormwater retention must be ensured to be maintained in perpetuity, what about other elements of a site and structures? Should the appliances be checked annually for not only operations but that they haven't lost any of their original efficiency? What about insulation....shouldn't that be verified that it has maintained its advertised R-value in perpetuity? How about the Landscaping requirements... should not the plants and trees be guaranteed they will always be there?

Furthermore, the method that would typically be used to provide for some action, in perpetuity, is a recorded restriction of some kind. These are often referred to as "clouds on title" as they present often unknown costs and obligations into the real estate transaction process. This could have a rather large impact on real estate sales in the future. Also, the issue of enforceability starts to become another separate issue.

To at least be accurate, the phrase cannot be "in perpetuity" but rather "for the life of the structure". Each stormwater detention facility is responding to a project: If and when the project is replaced by another project, so too would the stormwater facilities that were tied to the first project. The concept of "in perpetuity" truly makes no sense. A more rational approach would be to have a time period, such as 10 years, for which some type of annual action is required.

4. Item 30, which talks about how this Resolution "is exempt from the provisions of the California Environmental Quality Act..." may or may not be legally correct. However, as a reality check, this Resolution will certainly have an impact on the environment, as well as potentially on life-safety. We have provided some evidence of this assertion in these comments.

#### CONCLUSION:

The Board of Directors of the AIAMB respectfully request that the Regional Board NOT adopt this Resolution. Instead, submit the stormwater rules into the normal Code Adoption Process via the Building and Standards Commission. In this manner the appropriate rules can become part of the Building Code, which includes the new California Green Building Code, known as CALGREEN.

If the Regional Board decides it must adopt this Resolution, please consider adding a simple compliance method for projects which have a **50% or less "Site Coverage"**. We believe we can all agree that it should be simple and straightforward to keep the 85th percentile storm waters on a site that is no more than 50% disturbed.

Also, we strongly encourage the Regional Board to remove references to "in perpetuity" for a number of reasons, but in particular to not negatively impact the real estate transaction process by clouding title, and to not create yet another enforcement mechanism or public entity that then has to track this stuff in perpetuity. Remember, it doesn't make sense since the correct language could have been "for the life of the structure", or "as long as the structure exists on that site".

Finally, we believe this Resolution will have significant and measurable effects on both the natural and the built environments. We also believe these rules can negatively affect Life-Safety. For these reasons and others **we request that a full Environmental Impact Report (EIR) be done to properly analyze and disclose to the public and the decision-makers the various impacts that are likely from the adoption of this Resolution.**

We thank you for the opportunity to comment,

Respectfully,

Dan Curran, AIA, President, AIAMB, 2013

Michael L. Waxer, AIA, LEED AP, Governmental Affairs Director, AIAMB, 2013



## California Stormwater Quality Association®

*Dedicated to the Advancement of Stormwater Quality Management, Science and Regulation*

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May 10, 2013

Mr. Jeffrey Young, Chair  
California Regional Water Quality Control Board - Central Coast Region

Subject: Comments on Draft Resolution R3-2013-0032 Approving Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast Region

Dear Chairman Young and Board Members:

The California Stormwater Quality Association<sup>1</sup> (“CASQA”) appreciates this opportunity to comment on the subject Draft Resolution Approving Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast Region (“Draft Resolution”) and Attachment 1 of the Draft Resolution containing the Post-Construction Stormwater Management Requirements (“Post-Construction Requirements”). CASQA typically comments on regional requirements only when there is an issue of potential statewide significance. Based on its review of the Post-Construction Requirements, CASQA does find that these requirements rise to the level of statewide significance. Accordingly, we are compelled to provide specific comments on some of the provisions of the Post-Construction Requirements for the Central Coast Region.

In general, CASQA is very concerned with the apparent escalation in permit requirements being conducted by the various Water Boards’ permit writers in drafting provisions for land development. Over the last few years we have seen increasing new development requirements in each municipal separate storm sewer system (“MS4”) permit reissuance without allowing sufficient time to assess the impact/effectiveness of the prior development requirements. This lack of a cohesive approach to development standards has created an uneven playing field for communities and developers throughout the state. Furthermore, the clear absence of any consensus within the state on what are appropriate requirements for land development (particularly with respect to hydromodification management) is damaging to the credibility of the requirements.

In general, CASQA is concerned that the Post-Construction Requirements being proposed are not properly supported by evidence in the record, and there are insufficient findings that bridge the analytical gap. The Draft Resolution proposes hydromodification requirements that are not supported by adequate findings or the evidence in the record. When adopting permit requirements, the Central Coast Regional Water Quality Control Board (“Central Coast Water Board”) has a duty to “set forth findings to bridge the analytical gap between the raw evidence

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<sup>1</sup> CASQA is comprised of stormwater quality management organizations and individuals, including cities, counties, special districts, industries, and consulting firms throughout California. Our membership provides stormwater quality management services to more than 22 million people in California.

and the ultimate decision or order.”<sup>2</sup> Additionally, the findings must be supported by evidence in the record.<sup>3</sup> The Central Coast Water Board has failed to satisfy these duties in the Draft Resolution. The findings in the Draft Resolution consist of general statements and broad conclusions related to a perceived need for post-construction hydromodification criteria.<sup>4</sup> The findings do not explain the basis for each post-construction requirement proposed by the Central Coast Water Board or how they relate to Central Coast MS4s in particular. Further, the findings do not explain how the broad-scale watershed management zone (“WMZ”) designations, which are the basis for the proposed Post-Construction Requirements, account for local differences in soils, topography, and other environmental conditions. Accordingly, the findings impermissibly fail to “bridge the analytical gap between the raw evidence and the ultimate decision or order.”<sup>5</sup>

The Central Coast Water Board has attempted to satisfy the legal obligation to clearly set forth findings by incorporating a technical document. Assuming that incorporating Attachment 2 into the Draft Resolution could ever satisfy the requirement to explain the basis for regulatory requirements in the findings, the findings still fall below the legal standard. Attachment 2 generally discusses the regulatory context and environmental conditions before briefly addressing the categories of the Post-Construction Requirements, rather than discussing the many specific requirements of each category. For example, with regard to the requirement to retain runoff from events up to the 95th percentile 24-hour rainfall event, no findings explain how the requirement is technically or economically feasible for the localities in which it is being applied.<sup>6</sup> Attachment 2 directs readers to an April 8, 2013 study, which evaluated stormwater control measure sizing criteria.<sup>7</sup> This study does not contain findings explaining how the retention requirement is technically or economically feasible.

In addition to failing to bridge the analytical gap between the evidence and specific post-construction requirements, the Central Coast Water Board is proposing regulatory requirements not supported by evidence in the record. CASQA understands that starting last year, prior to adoption of Resolution No. R3-2012-0025, numerous parties submitted comments explaining the unnecessary and unattainable nature of many of the components of the Post-Construction Requirements. Unfortunately, it appears that the Central Coast Water Board has not adequately addressed these concerns, including previous concerns raised by CASQA. As such, even if the Central Coast Water Board determines that the proposed Post-Construction Requirements are adequately supported by the findings, the findings are not supported by the evidence.

Specific examples of the requirements and their lack of supportive evidence are provided here.

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<sup>2</sup> *Topanga Assn. for a Scenic Community v. County of Los Angeles* (1994) 11 Cal.3d 506, 515 (“*Topanga*”).

<sup>3</sup> *Id.* at pp. 514-515.

<sup>4</sup> Draft Resolution at pp. 1-9, Attachment 1 at pp. 1-32.

<sup>5</sup> *Topanga, supra*, 11 Cal.3d at p. 515.

<sup>6</sup> Draft Resolution, Attachment 2 at pp. 22-28.

<sup>7</sup> Draft Resolution, Attachment 2 at p. 22, and Attachment G to Attachment 2.

**1. The Requirement to Retain Runoff From Storm Events Up to the 95<sup>th</sup> Percentile 24-Hour Rainfall Event Is Not Based on Best Available Science for Hydromodification Control**

The Draft Resolution designates ten WMZs based on receiving water type, geology, and percent slope. Projects that create and/or replace 15,000 square feet of impervious surface in WMZs 1 and 2, and portions of WMZs 4, 7, and 10 that overlie designated groundwater basins, are required to retain runoff from storm events up to the 95<sup>th</sup> percentile 24-hour rainfall event. Based on Table 5 of the Draft Technical Support Document (Attachment 2 of the Draft Resolution), this requirement would apply to 72 to 86 percent of the Central Coast's urban areas (depending on the extent of the groundwater basins). Accordingly, this requirement will have a significant impact on development projects in the region.

It is well established that stormwater control measures are most economical and efficient when they target small, frequent storm events that over time produce more total runoff than the larger, infrequent storms targeted for design of flood control facilities. Typically, design criteria for water quality control best management practices ("BMPs") are set to coincide with the "knee of the curve," i.e., the point of inflection where the magnitude of the event (and corresponding cost of facilities) increases more rapidly than the number of events captured. In other words, targeting design storms larger than this point will produce volume retention gains but at considerable incremental cost.<sup>8</sup> Capturing additional incremental volume beyond the 85<sup>th</sup> percentile storm event has not been demonstrated to be more protective of water quality than Performance Requirement No. 2, which is similar to the water quality treatment standards adopted in the latest round of MS4 permits in the rest of the state. And, there is no evidence in the record to support the contention that it is more protective of water quality.

CASQA understands that the purpose of Performance Requirement No. 3 is to require volume retention of the 95<sup>th</sup> percentile event as a surrogate standard for hydromodification control, as this standard is intended to "protect watershed processes so that beneficial uses of receiving waters are maintained and, where applicable, restored." To CASQA's knowledge, which on these matters is extensive, an event-based volume retention standard is not a well-developed or proven approach for hydromodification control in any recent municipal hydromodification planning experience or in the scientific literature. It is our understanding that this highly simplistic approach was derived based on assumed watershed processes from a set of narrative descriptions of WMZs, which were in turn based on slope and geology. CASQA cannot support the event-based volume retention requirement as a universal surrogate for hydromodification control, and is concerned that the 95<sup>th</sup> percentile standard could be applied at the statewide level.

CASQA Recommendations

Due to current deficiencies associated with this approach, CASQA recommends the Central Coast Water Board continue working with the Central Coast municipalities to develop sizing and design criteria, consistent with appropriate hydrologic analysis methods that optimize on-site retention to reflect actual rainfall/runoff relationships for the project site.

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<sup>8</sup> CASQA Stormwater BMP Handbook, New Development and Redevelopment, 2003.

While CASQA has concerns with the approach overall, at the very least CASQA recommends the following revision to the Draft Resolution under Performance Requirement No. 3, Runoff Retention (p. 8):

vi) Hydrologic Analysis and Structural Stormwater Control Measure Sizing – To determine Stormwater Control Measure sizing and design, Permittees shall require Regulated Project applicants to use one of the following: 1) the hydrologic analysis and sizing methods as outlined in Attachment D, or 2) a locally/ regionally calibrated continuous simulation model that results in an equally protective method for matching pre-development hydrology, proposed by the Permittee and equivalent optimization of on-site runoff volume retention; or 3) ~~hydrologic analysis and sizing methods, equally effective in optimizing on-site retention of the runoff generated by the rainfall event specified in Section B.4.c, that have been approved by the Central Coast Water Board Executive Officer.~~

**2. The Hydromodification Management Standard in Performance Requirement No. 4 Requiring Matching Post-Project to Pre-Project Peak Flows for the 2- Through 10-Year Storm Events, in Combination With the 95<sup>th</sup> Percentile Runoff Retention Standard, Is Not Supported by the Extensive Study That has Been Completed on Hydromodification Control Elsewhere in the State**

Numerous studies have documented that matching peak flows alone for a range of storms is not protective of streams because flow durations are increased and can cause adverse erosive impacts. This fact is recognized by the Central Coast Water Board in Attachment 2 of the Draft Resolution, which states that:

Water Board staff recognizes that peak management alone is not sufficient to protect downstream receiving waters due to the extended flow durations that can still cause adverse impacts. However, Water Board staff anticipates that the Peak Management criterion, when used in combination with the Runoff Retention requirement, will achieve a broad spectrum of watershed process protection while also protecting stream channels from hydromodification impacts. Water Board staff's judgment is based on the fact that the retention requirement is expected to avoid gross changes in the distribution of runoff between surface and subsurface flow paths for smaller events, and that peak management is expected to provide critical stream protection from the larger events, starting conservatively at the 2-year storm event.

The combination standard in Performance Requirement No. 4 has not been studied as to its effectiveness in protecting streams, nor is it consistent with current approaches throughout the state that have been studied. Rather, Central Coast Water Board proposes to impose the requirement based on its "anticipation" and "judgment." However, there is no evidence in the record to support the use of Performance Requirement No. 4 in the manner as proposed here.

As stated in Attachment 2 of the Draft Resolution:

For the purposes of these Post-Construction Requirements, retaining runoff from all rain storms up to and including the 85<sup>th</sup> or 95<sup>th</sup> percentile storm is analogous to maintaining or restoring the pre-development hydrology with respect to the volume, flow rate, duration and temperature of the runoff for most sites. Retention of runoff up to these percentile storms is indicated because this storm size represents the volume that appears to best represent the volume that is fully infiltrated in a natural condition and thus should be managed onsite to maintain this predevelopment hydrology for duration, rate and volume of stormwater flows. Maintaining predevelopment runoff duration, rate, and volume provides broad support to watershed processes, including, reduced overland flow, infiltration, interflow, and groundwater recharge, and achieves reductions in urban pollutant loading of receiving waters that are non-existent under natural conditions.

Given the underlying presumption that retaining runoff from all rain storms up to and including the 85<sup>th</sup> or 95<sup>th</sup> percentile storm is analogous to maintaining or restoring the pre-development hydrology with respect to the volume, flow rate, duration and temperature of the runoff for most sites, it should not be necessary to also control peak rates, which according to the statement cited above, did not occur in the pre-developed condition and would not occur in the post-developed condition with implementation of Performance Requirement No. 3. Discrete event criteria such as these are appropriate to mitigate for potential impacts to local storm drainage systems (i.e., storm drain conveyance capacity and flood control), but should not be used for hydromodification control.

In addition, technical justification has not been provided for the application of Performance Requirement No. 4 to projects which create and/or replace greater than or equal to 22,500 square feet of impervious surface, as opposed to projects which create and/or replace greater than or equal to 15,000 square feet of impervious surface as specified in Performance Requirement No. 3. Presumably, since Performance Requirement No. 3 is intended to maintain the “dominant watershed process throughout the Watershed Management Zone,” then Performance Requirement No. 3 should be able to achieve this goal for all project sizes.

Next, as stated in Attachment 2, Performance Requirement No. 5 allows projects to be subject to “Special Circumstances” based on certain site and/or receiving water conditions that were not captured at the regional scale of analysis. The Special Circumstances designations are meant to effectively exempt projects from hydromodification control requirements (i.e., Retention and/or Peak Management Performance Requirements) where those Performance Requirements would be ineffective or inappropriate to maintaining or restoring beneficial uses of receiving waters. But the way the requirements are structured in the Draft Resolution, a project that receives Special Circumstances designation but creates and/or replaces greater than or equal to 22,500 square feet of impervious surface would still have to implement hydromodification controls in compliance with Performance Requirement No. 3.

If a project’s receiving water is not susceptible to hydromodification impacts, then maintaining watershed processes via hydromodification controls pursuant to Performance Requirement No. 3

would be ineffective for maintaining beneficial uses of those receiving waters. Furthermore, implementation of hydromodification controls pursuant to Performance Requirement No. 3 will not restore beneficial uses in existing hardened channels. The watershed processes (i.e., watershed hydrology) are only one consideration in channel restoration projects. It is inappropriate for the resolution to presuppose the outcome of a channel restoration plan.

Projects subject to these Special Circumstances should only be required to implement water quality treatment per Performance Requirement No. 2.

CASQA Recommendations

CASQA recommends that the Draft Resolution be revised to remove Performance Requirement No. 4 in its entirety. In addition, CASQA recommends removal of the hydromodification control requirements (i.e., Performance Requirement No. 3) from the Performance Requirements for Highly Altered Channel and/or Intermediate Flow Control Facility Special Circumstances.

We thank you again for the opportunity to provide our comments and we ask that the Central Coast Water Board carefully consider them. If you have any questions, please contact CASQA Executive Director Geoff Brosseau at (650) 365-8620.

Sincerely,



Richard Boon, Chair

cc: Ken Harris, Central Coast Water Board  
Dominic Roques, Central Coast Water Board  
Tom Howard, State Water Board  
Jonathan Bishop, State Water Board  
Vicky Whitney, State Water Board  
Rik Rasmussen, State Water Board  
Diana Messina, State Water Board  
Walt Shannon, State Water Board  
Greg Gearheart, State Water Board  
Eric Berntsen State Water Board  
CASQA Board of Directors and Executive Program Committee



May 10, 2013

Chair Jeffrey Young and Board Members  
Central Coast Regional Water Quality Control Board  
895 Aerovista Place, Suite 101  
San Luis Obispo, California 93401  
*Sent via Email to: [r3\\_stormwater@waterboards.ca.gov](mailto:r3_stormwater@waterboards.ca.gov)*

**RE: Support for Post-Construction Stormwater Management Runoff Retention Requirements for Development Projects in the Central Coast Region**

Dear Chair Young and Board Members:

On behalf of California Coastkeeper Alliance, a network of local Waterkeeper groups spanning the coast, including Santa Barbara Channelkeeper, San Luis Obispo Coastkeeper, and Monterey Coastkeeper, and the Natural Resources Defense Council we are writing in support of the Runoff Retention requirements contained in Draft Resolution No. R3-2013-0032, approving Post Construction Stormwater Management Requirements for Development Projects in the Central Coast Region (“Post-Construction Requirements”) to comply with the Statewide NPDES General Permit for the Discharge of Storm Water from Small Municipal Separate Storm Sewer Systems, Order NO. 2013-0001-DWQ (“Phase II MS4 Permit”). Our organizations have a vested interest in the development, adoption, implementation and enforcement of stormwater permits statewide, and have been part of the Phase II MS4 Permit reissuance process since its inception. We appreciate the opportunity to comment on the Central Coast Regional Water Quality Control Board’s (“Regional Board’s”) Post-Construction Requirements.

Stormwater runoff is a potential source of impairment for at least 72 out of the 192 impaired water segments in the Central Coast region.<sup>1</sup> In particular, the Central Coast’s marine ecosystems are highly vulnerable to land-based activities. For example, more than 50 rivers, creeks and estuaries drain into the Monterey Sanctuary and surrounding marine protected areas. Low impact development (LID) or green infrastructure practices that capture stormwater runoff are one of the most effective means for maintaining the natural hydrology of a site, for preventing stormwater pollutants from entering our waterways, and for promoting a sustainable and low-energy water supply augmentation strategy. Therefore, it is crucial that the Central Coast’s MS4 permits require LID or green infrastructure practices that address runoff at its source, reducing stormwater volume and allowing it to infiltrate into the ground to recharge local groundwater basins where feasible. In doing so, Central Coast municipalities can achieve the dual benefits of reducing polluted flows to waterways and increasing local water supplies.

We urge the Regional Board, in considering draft order R3-2013-0032, to **maintain the Runoff Retention requirements of Section B.3 of the Post-Construction Requirements, and to adopt the order without further delay.**

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<sup>1</sup> Central Coast Regional Water Board, Central Coast Water Board Comments on the November 16, 2012 Draft Phase II Municipal Stormwater Permit, pg. 2 (Dec. 2012).

I. Retention of the 95<sup>th</sup> percentile storm event protects water quality and recharges groundwater supplies, and is feasible for the vast majority of sites covered.

Over the past eight years the Regional Board has collaborated with regional stakeholders to identify 10 Watershed Management Zones (“WMZs”) that reflect the variations in watershed processes in the region. In certain WMZs, the Post-Construction Requirements would require municipalities to meet Runoff Retention requirements at new development and redevelopment projects, where feasible, to retain the 95<sup>th</sup> percentile storm event. This Runoff Retention volume must be infiltrated, evaporated/transpired, and/or harvested for later use. Retention objectives are now recognized as a superior way to address both the treatment of polluted runoff, as required by the Clean Water Act, and the recharge of groundwater basins critical to California’s water supply portfolio.<sup>2</sup> Requiring that this volume of runoff be retained will advance these critical goals.

Under Section 438 of the Energy Independence Security Act of 2007 (“EISA”), all new and redeveloped United States federal facilities over 5,000 square feet are directed to meet stormwater runoff requirements that, under guidance developed by the U.S. EPA, include as the default compliance option retention of the 95<sup>th</sup> percentile storm event onsite.<sup>3</sup> In setting this default 95<sup>th</sup> percentile standard, EPA relied on a detailed technical analysis, including assessment of multiple case studies, to demonstrate that retention of the 95<sup>th</sup> percentile storm event is technically feasible for a range of site conditions and building designs throughout the country.<sup>4</sup>

Similarly, through analyzing geology, landforms, hydrologic features, and vegetation in the region, the Regional Board has determined that retention of the 95<sup>th</sup> percentile storm is technically feasible in certain WMZs, and as a result determined to require this standard—in part “because ‘it employs natural treatment and flow attenuation methods that are presumed to have existed on the site before construction of infrastructure (e.g., building, roads, parking lots, driveways).’”<sup>5</sup> Notably, this strategy correlates the Runoff Retention standard with local hydrology; retention of the 95<sup>th</sup> percentile storm is not required in all areas covered by the Post-Construction Requirements, only in areas where infiltration is highly dominant and will facilitate retention. Since the retention of the 95<sup>th</sup> percentile storm has been demonstrated to be achievable in these areas, the Regional Board’s decision to include them in the Post-Construction Requirements properly meets the requirements of the Clean Water Act’s “maximum extent practicable” standard under 33 U.S.C. 1342(p)(3)(B)(iii), rather than exceeding it.

The Runoff Retention requirements<sup>6</sup> are designed to address the full suite of watershed processes affected by urban stormwater, including surface runoff, groundwater recharge, and the chemical and biological role of soil and vegetation in filtering runoff. Moreover, the requirement to retain the 95<sup>th</sup> percentile standard will help promote continued positive watershed processes—thereby advancing water quality and supply goals for the region.

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<sup>2</sup> National Research Council, *Urban Stormwater Management in the United States*, pg. 376 (Oct. 2008), *available at* <http://www.cacoastkeeper.org/document/urban-stormwater-management-in-the-united-states.pdf>.

<sup>3</sup> See United States Environmental Protection Agency, *Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act*, pg. 12 (Dec. 2009), *available at* <http://water.epa.gov/polwaste/nps/upload/eisa-438.pdf>.

<sup>4</sup> See *Id.* at 25-54.

<sup>5</sup> Central Coast Regional Water Quality Control Board, *Staff Report for Resolution No. R3-2012-0025*, pg. 6 (Sept. 2012); *citing* United States Environmental Protection Agency, *Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act*, pg. 12 – 13 (Dec. 2009).

<sup>6</sup> We note that the Post-Construction Requirements overall emphasize protection of areas that are less disturbed over urban areas with existing impacts, and apply requirements more rigorously to new development as compared with redevelopment in existing urban areas. While we support rigorous post-construction requirements for new development, redevelopment and even retrofits to existing buildings could and should be required to meet the 95<sup>th</sup> percentile standard.

II. Alternative compliance mechanisms are provided where retention of the 95<sup>th</sup> percentile storm is infeasible.

The Regional Board should reject claims by permittees that the Runoff Retention requirements are improper because it may not be feasible to retain the 95<sup>th</sup> percentile storm at all sites in the specified WMZs, or suggestions that a uniform, 85<sup>th</sup> percentile retention standard should be adopted instead. First, as discussed above, the 95<sup>th</sup> percentile retention standard is not required everywhere, only in those WMZs where analysis has demonstrated that retention of this volume is technically feasible. In areas outside these WMZs, an 85<sup>th</sup> percentile retention standard will apply. Second, the Runoff Retention standards limit the portion of a project site that must be dedicated to retention-based control measures, beyond which further compliance is not mandated. Third, for the small percentage of sites that are required to meet the 95<sup>th</sup> percentile standard but where it is technically infeasible to do so, the Post-Construction Requirements allow for off-site mitigation options via alternative compliance.<sup>7</sup> As the Staff Report to Order R3-2012-0025 stated, “no site [will be] required to infiltrate beyond its natural capacity to infiltrate.”<sup>8</sup>

III. The Regional Board has already committed substantial financial and staff resources to implement its Post-Construction Requirements.

The Regional Board has already committed substantial funds and staff resources to implement LID throughout the Region, and should not allow its efforts to go to waste. The Regional Board created an LID Fund in 2008 and has spent more than \$2 million providing technical support to advance the implementation of Post-Construction Requirements throughout the region. In an effort to financially assist municipalities, the Regional Board further secured funds from the State Board’s Cleanup and Abatement Account to support development of hydromodification control criteria and related Post-Construction Requirements, including creation of a methodology that led to the Runoff Retention standards in the proposed order.

Further, Regional Board staff spent substantial time over the last eight years to ensure the standards ultimately proposed are scientifically driven and reflect stakeholder concerns. This program is a direct product of staff’s continued engagement with stakeholders through both structured and informal opportunities for involvement. These efforts included:

- convening a technical review committee to review all deliverables from the technical consultants;
- conducting multiple stakeholder workshops throughout the process;
- posting project materials on a dedicated Joint Effort webpage;
- including Joint Effort items on multiple Regional Board meeting agendas;
- providing stakeholders with a mid-term status report;
- speaking at municipal stormwater manager groups throughout the region; and
- convening meetings with key environmental and building industry stakeholders.

Staff also remained actively engaged in stakeholder workshops for the Post-Construction Requirements being considered for the update to the State Board’s recently renewed Phase II MS4 Permit. In all, the

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<sup>7</sup> We note that under the Clean Water Act and State Board Order 2001-11, any site that performs off-site mitigation to meet its requirements under the Water Quality Treatment section of the Post-Construction requirements must, at minimum, use BMPs to treat the runoff produced by the 85<sup>th</sup> percentile storm onsite.

<sup>8</sup> Central Coast Regional Water Quality Control Board, Staff Report for Resolution No. R3-2012-0025, pg. 6 (Sept. 2012), available at [http://www.waterboards.ca.gov/rwqcb3/water\\_issues/programs/stormwater/docs/lid/hydromod\\_lid\\_docs/r3\\_2012\\_0025\\_staff\\_report.pdf](http://www.waterboards.ca.gov/rwqcb3/water_issues/programs/stormwater/docs/lid/hydromod_lid_docs/r3_2012_0025_staff_report.pdf).

resulting Runoff Retention standards in the Requirements represent a substantial investment by the Regional Board, one that it should affirm here.

IV. The Regional Board’s Runoff Retention requirements will inform the State Board’s adoption of similar requirements in its statewide Phase II MS4 Permit.

The Regional Board’s Runoff Retention requirements are critical to a State Board effort to develop similar requirements statewide. Staff, in fact, coordinated with the State Board to develop hydromodification control methodology, criteria, policy, and other permit requirements contained in this order. The Regional Board’s methodology to determine hydromodification control criteria overall will assist the State and Regional Boards in directing permittees to successfully develop scientifically sound and understandable criteria elsewhere. Like the Regional Board, the State Board believes that “[t]hrough the development of hydromodification measures based on watershed management zones, key watershed processes will be protected, and where degraded, restored. As a result of restored and maintained watersheds, key relationships between hydrology, channel geomorphology and biological health will be created and maintained and water quality/beneficial uses protected.”<sup>9</sup> The State Board expects to delineate WMZs during the Phase II permit’s term, and “watershed management zones will be used to identify applicable areas and to determine appropriate criteria for runoff retention and hydromodification control.”<sup>10</sup> This order, including its use of Runoff Retention requirements, will provide the foundation for WMZ evaluations statewide, and help other regional boards assess the impact of hydromodification management controls to achieve real, quantifiable, and cost-effective environmental benefits like improved surface water quality and groundwater recharge.

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California needs stormwater permits that achieve the dual benefits of sustainable water resources and fewer contaminated waterways. Stormwater capture mimics nature by using LID or green infrastructure practices such as infiltrating stormwater into groundwater basins. The result is less water pollution from stormwater runoff, reduced flooding, replenished water supplies, and more natural-looking, aesthetically pleasing cityscapes. For the aforementioned reasons, we urge the Regional Board to maintain the Runoff Retention requirements in this Order, and look forward to working with the Board to protect water quality and address resource issues throughout the region.

Sincerely,



Sean Bothwell  
California Coastkeeper Alliance



Noah Garrison  
Natural Resources Defense Council

<sup>9</sup> State Water Resources Control Board, Fact Sheet for NPDES General Permit and Waste Discharge Requirements for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems; pg. 35 (Feb. 2013), available at [http://www.waterboards.ca.gov/water\\_issues/programs/stormwater/docs/phsii2012\\_5th/fs\\_final\\_sidenote.pdf](http://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/phsii2012_5th/fs_final_sidenote.pdf).

<sup>10</sup> *Id.* at 19.



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May 9, 2013

California Regional Water Quality Control Board  
Central Coast Region  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401  
Via E-mail: [r3\\_stormwater@waterboards.ca.gov](mailto:r3_stormwater@waterboards.ca.gov)

Re: Comments on Draft Resolution R3-2013-0032 - Post Construction Stormwater Management Requirements for Development Projects in the Central Coast Region

Dear Chair Young and Members of the Board,

Thank you for the opportunity to comment on Draft Resolution R3-2013-0032 approving Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast Region (PCRs).

For the past 13 years, Santa Barbara Channelkeeper has worked to protect and restore the Santa Barbara Channel and its watersheds, including from stormwater runoff, the number one source of water pollution in our region. We have been intimately involved in the formulation and implementation of southern Santa Barbara County municipalities' Storm Water Management Programs (SWMPs) for the past several years, and we continue to be concerned about the severe impacts of stormwater runoff on water quality, beneficial uses and the biological and physical integrity of the watersheds in our region. We strongly support the proposed PCRs and urge you to adopt them at your hearing on July 12, 2013. Our detailed comments are provided below. We also hereby incorporate by reference the comments submitted by the California Coastkeeper Alliance.

The proposed PCRs constitute the minimum requirements necessary to protect water quality from the impacts of stormwater runoff from development, while providing expansive accommodation to allow for infill and redevelopment as well as significant flexibility for instances of demonstrated technical infeasibility. The PCRs fulfill and provide for the requirements to develop, adopt and implement the Low Impact Development (LID) and flow control commitments mandated in Central Coast municipalities' SWMPs.

These requirements have been under development for more than four years, with extensive input and involvement by the region's municipalities and other stakeholders and informed by an expert team of scientists who characterized the region's watersheds and helped create a methodology for developing PCRs based on that characterization. They are science-based and provide a sound alternative to the "one size fits all" approach to account for varying local conditions, as demanded by the permittees. Their volume-based approach to stormwater management is strongly endorsed by the nation's leading science and policy experts and is also being embraced by engineering practitioners.

Central Coast Regional Water Quality Control Board (RWQCB) staff have undertaken exhaustive efforts to accommodate the concerns expressed by permittees and have weakened the requirements in numerous instances to address those concerns.

**Keeping watch for clean water**

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For one, the revised PCRs have eliminated the 1.963 multiplier to determine the retention volume that stormwater control measures must be sized to accommodate for event-based approaches, and allowed for facility sizing by either the Simple Method or the Routing Method when project applicants opt to use event-based approaches.

The revised PCRs also provide flexibility and alternative options to comply with the runoff retention performance requirement in the small percentage of sites in the region where it would be technically infeasible. Where a project can demonstrate technical infeasibility to fully achieve the runoff retention performance requirement on site, it must dedicate 10 percent of the project's equivalent impervious surface area to retention-based stormwater control measures, or pursue compliance off-site through alternative compliance. This will be necessary in very few circumstances, and moreover, the RWQCB has provided funding for research on alternative compliance strategies that will provide guidance and assistance for permittees to establish alternative compliance programs for the limited cases where off-site mitigation will be necessary. Such strategies could include off-site mitigation banking to provide funding for municipal LID projects such as street or parking lot retrofits. No shortage of such potential projects exists, and we believe the proposed requirements offer municipalities a tremendous opportunity to invest in infrastructure improvements to benefit water quality and water supply in critical areas.

The revised PCRs now under consideration also provide additional relief for redevelopment projects in high-density urban areas. For projects in these areas, the replaced impervious surfaces will only have to match existing, pre-project runoff retention. As such, qualified infill projects will bear no costs to meet the runoff retention requirements if they are simply redeveloping existing impervious surfaces. This allowance for approved Urban Sustainability Areas provides a reasonable approach to accommodate urban infill projects while maintaining needed water quality protections and beneficial uses.

Finally, the PCRs also provide relief for projects subject to special circumstances, by exempting such projects from runoff retention and/or peak management performance requirements where they would be ineffective to maintain or restore beneficial uses of receiving waters, such as highly altered channels or historic lakes and wetlands.

With regard to the requirement to prevent offsite discharge from events up to the 95<sup>th</sup> percentile 24-hour rain event, this is an appropriate standard and is critical for protecting the Central Coast's sensitive waterbodies while also providing for groundwater recharge. There is precedent for the 95<sup>th</sup> percentile retention requirement - Section 438 of the Energy Independence and Security Act (EISA) requires new federal facilities to retain runoff from the 95<sup>th</sup> percentile 24-hour rain event. This is the best standard currently in use that addresses the full suite of watershed processes affected by urban runoff. Moreover, the retention runoff requirement is not required everywhere throughout the region, but only in those areas where infiltration is dominant or surface runoff is minimal.

Santa Barbara Channelkeeper applauds the RWQCB's commitment to implementing LID throughout the Central Coast region, and commends the significant financial investment (more than \$2 million) you have made to provide technical support to advance LID as a multi-beneficial and effective means of managing stormwater. This investment laid the groundwork for successful implementation of LID throughout the region, and the PCRs represent the culmination of more than four years of concerted effort by your staff to provide a reasonable and scientifically rigorous framework to address the full range of watershed processes affected by urban stormwater while also accommodating the needs and concerns of the municipalities.

The PCRs are appropriate, effective and necessary requirements for small MS4s to apply to development and redevelopment projects in order to reduce the discharge of pollutants to the Maximum Extent Practicable (MEP) and prevent stormwater discharges from causing or contributing to violations of water quality standards. They emphasize protecting and, where degraded, restoring key watershed processes so that beneficial uses of receiving waters affected by stormwater management are maintained, and where applicable, restored. The PCRs provide an effective framework for ensuring that permittees utilize LID tools to reduce discharges from new and redevelopment projects to the MEP, as required by the Clean Water Act.

These requirements were supposed to be implemented more than two years ago, but were extended numerous times to address and accommodate municipalities' concerns, thus delaying the implementation of necessary water quality protections. Now, another two years later, the revised PCRs are ready and represent a reasonable and necessary step to address the adverse environmental impacts associated with new development and redevelopment in the Central Coast region.

In addition, the State Water Resources Control Board (SWRCB) has indicated its intent to develop runoff retention and hydromodification control criteria that are keyed to watershed processes, as your staff have done, and will likely incorporate the Central Coast's process-based runoff retention and hydromodification criteria into the next Phase II MS4 permit. Given this fact and the four years of effort that has been put into developing the proposed PCRs, it would be nonsensical not to adopt them at this time. The Central Coast RWQCB has provided leadership and laid the foundation for much-needed improvements to how stormwater runoff from development and redevelopment is managed throughout California, and the time has come to take the next step and put them into practice.

Despite the predictable and pro forma protestations of the permittees, it is incumbent upon you as the regulatory agency tasked with protecting water quality in the Central Coast region to implement regulations such as the proposed PCRs to compel municipalities to meet the MEP standard and better address the widespread harm caused by stormwater runoff from development and redevelopment, which impairs water quality, impedes the achievement of beneficial uses and damages aquatic and riparian habitat in our region.

Santa Barbara Channelkeeper strongly urges you to support your staff's recommendation to adopt the revised PCRs at your July 12<sup>th</sup> hearing and to make them effective September 6, 2013. We simply cannot afford further delay in addressing the significant detrimental impacts of stormwater runoff from development and redevelopment projects on water quality and beneficial uses.

Thank you for your consideration of the above comments, and your continued commitment to protecting water quality in the Central Coast region.

Sincerely,



Kira Redmond  
Executive Director



May 10, 2013

On behalf of the Monterey County Association of REALTORS® ("MCAR"), representing REALTORS®, affiliated industry professionals and businesses and property owners throughout Monterey County, we appreciate the opportunity to present comments regarding the revised Post-Construction Rules (Draft Resolution No. R3-2013-0032).

MCAR provides the following comments:

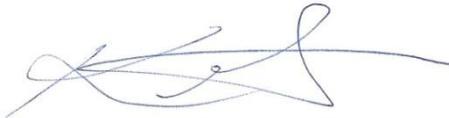
There is a well-established process for Code Adoption, which is through the Building and Standards Commission, often referred to as the "Code Adoption Process." These proposed regulations appear as building codes, yet they are coming into existence as regulation rather than through the procedural code adoption process. This creates the situation where this regulation could be in conflict with either the current Building Codes, or with future Building Codes.

We believe that these rules could be simplified. An example is that if a Project site is less than 50% 'Site Coverage', then the requirements can be met on that site via prescriptive BMP's. As such, this would require certain practices to become the standard, and would negate the necessity of having ongoing monitoring or other costly ongoing expenses to a project. This example, of using a "Site Coverage" calculation as a method for being able to determine if a project site is likely to be able to meet the intent of these proposed rules, and then allowing a series of prescriptive BMP's to meet that requirement, is just one of several ways to simplify these complex proposed rules.

The MCAR Board of Directors respectfully requests that the Regional Board NOT adopt this Resolution but instead; submit the Stormwater rules into the normal Code Adoption Process via the Building and Standards Commission. As such, the appropriate rules can become part of the Building Code, which includes the new California Green Building Code, known as CALGREEN.

We strongly encourage the Regional Board to consider elimination of the "in perpetuity" language as it has the potential to negatively impact real estate transactions and more specifically, "clouding title" on a property. Finally, we believe this Resolution will have significant and measurable effects on both the natural and the built environments. We also believe these rules can negatively affect Life-Safety. We request that a full Environmental Impact Report (EIR) be done to properly analyze and disclose to the public and the decision-makers the various potential impacts from the adoption of this Resolution.

Respectfully,

A handwritten signature in blue ink, appearing to read "Kevin Stone", with a long horizontal flourish extending to the right.

Kevin Stone  
Government & Community Affairs Director  
Monterey County Association of REALTORS®



May 10, 2013

Central Coast Regional Water Quality Control Board  
895 Aerovista Place, Ste. 101  
San Luis Obispo, CA 93401

**RE: Post Construction Requirements**

Monterey County Farm Bureau represents family farmers and ranchers in the interest of protecting and promoting agriculture throughout our County. We strive to improve the ability of those engaged in production agriculture to provide a reliable supply of food and fiber through responsible stewardship of our local resources.

We offer the following observations when considering the post construction requirements for stormwater:

- These rules are overly complex and difficult to understand. We expect widespread confusion when attempting to implement these requirements.
- As applied to urban infill projects, these requirements present a disincentive for developments that utilize existing disturbed surfaces. Some of these infill lots have limitations that make the implementation of stormwater measures virtually impossible to achieve at any price. We support redevelopment of infill areas where possible, but these new requirements will have the unintended consequences of urban sprawl and further conversion of farmlands for development.
- On site water collection causes a number of geological triggers that could ultimately undermine a project foundation and its overall stability. These are counter-intuitive to keeping water collection sources away from buildings and developed areas.
- We raise concerns that more ministerial actions are being regulated into discretionary decisions. This adds complexity to project approvals, unneeded burdens to local jurisdictions, and wasted efforts reworking project plans.

Monterey County Farm Bureau requests that these post construction requirements not be adopted at this time. Construction businesses are still recovering from the economic recession and additional burdens should not be a further obstacle to promoting economic recovery. Additionally, all business in Monterey County are facing a number of new regulations that other agencies are imposing, making the regulatory burden unsustainable for small to mid-size business owners.

Your consideration is appreciated.

Sincerely,

A handwritten signature in black ink, appearing to read 'Norman C. Groot', is written over a horizontal line.

Norman C. Groot  
Executive Director

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May 9, 2013

Kenneth A. Harris, Jr.  
Interim Executive Officer  
California Regional Water Quality Control Board  
Central Coast Region  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401

**Subject: Post Construction Requirements Comments**

Dear Mr. Harris,

We appreciate the opportunity to review and provide written comments on the Draft Resolution No. R-13-2013-0032 – Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast Region (PCRs).

The purpose of this letter is to express the concerns of Central Coast municipalities associated with the implementation schedule included in the PCRs given (1) the process necessary for local Code review, development, and approval upon adoption of the final binding Resolution and revised PCRs, and (2) technical issues and questions that should be addressed by the Joint Effort Review Team (JERT) before implementation.

**Procedural issues with PCR Implementation Schedule**

As previously stated in comments submitted at the March 14-15, 2013 Central Coast Regional Water Quality Control Board (CCRWQCB) meeting, the direction provided to us by the Board to expend valuable time and resources to approve enforceable mechanisms for the PCRs before they had been adequately reconsidered and re-adopted by the Board at public hearing, was of great concern to all Central Coast municipalities. We determined that it was not prudent use of public resources to move forward into local Code revisions and adoption of other enforceable mechanisms across the entirety of the Central Coast until all stakeholders had had an opportunity for public comment on the revised PCRs and the revised Resolution had been adopted by the Board.

The Draft Resolution requires that municipalities begin implementation of the PCRs to all regulated projects by September 6, 2013. This proposed schedule provides **less than two months** from the Public Hearing date of July 12, 2013 for municipalities to revise Codes and/or adopt other enforceable mechanisms to implement the PCRs. Although municipalities in the Central Coast have diverse procedures to revise Codes and/or adopt enforceable mechanisms to implement the PCRs, these

procedures all require municipalities to engage significant staff time and resources as well as follow proper public information procedures.

Attachment 1 provides detailed itemization of the procedures required for enforceable mechanism adoption in each municipality assuming a starting date of mid-July 2013. As shown in the attachment, meeting the September 6 deadline will be virtually impossible for most municipalities.

### **Technical Issues to Be Addressed Before PCR Implementation**

We've appreciated the efforts that Water Board staff has made to bring about greater transparency and stakeholder involvement in the development of the PCRs. As a part of the Joint Effort and PCR development, Regional Board staff has engaged the Joint Effort Review Team (JERT), a small workgroup of Central Coast permittees that have worked diligently with your staff and have been instrumental in problem-solving some broad issues.

There are several important issues and questions that are still outstanding and that should be addressed by the JERT before municipalities begin enforcing the PCRs so that their implementation can be effective and consistent throughout the region. These issues include the following:

- **Retention Facility Sizing Method:** Attachment D to the PCRs allows a "routing method" for sizing retention facilities. Under the routing method, the response of an infiltration facility to the runoff hydrograph produced by a design storm (85<sup>th</sup> percentile or 95<sup>th</sup> percentile storm) is tracked in 6-minute increments. For each time increment, the routing method tracks the volume of inflow to the facility, the volume stored within the facility, and the volume infiltrated into the ground. The calculation is iterated to find the minimum storage volume required to hold and then infiltrate the design storm. Under this method, facility sizes will be very sensitive to the rate at which runoff infiltrates into the ground. This is especially true for less-permeable soils, where estimates and test results can vary by 50%-100%. For example, in a site with clay soils, infiltration rate tests and estimates from the same site could vary from 0.05 to 0.1 inch/hour. The resulting facility size calculation would likewise vary by a factor of 2. This creates substantial uncertainty for applicants and will require municipal staff to make judgments under pressure.

Additionally, the PCRs are written to mandate retention of runoff equal to the volume of either the 85<sup>th</sup> percentile or 95<sup>th</sup> percentile storm. These criteria are applied without regard to the pre-project or pre-development hydrologic or geologic characteristics of the specific development site. This is counter to the intent of the Joint Effort, which sought to develop a program that would preserve or restore pre-development watershed processes. Under the PCR criteria it may be easier, and less expensive, to develop highly permeable sites than to locate development on less-permeable soils. This is because, by some of the allowed methods of calculation, a smaller facility would be needed to infiltrate the volume of an 85<sup>th</sup> or 95<sup>th</sup> percentile storm on a highly permeable site, and a larger facility would be needed on a site with less-permeable soils. Using a continuous simulation analysis of pre-project and post-project flows would allow sizing so that post-project flow rates and durations would be kept within the flow rates and durations that existed in the pre-project or pre-development condition. This would thus require more infiltration on sites with permeable soils and less infiltration (allowing more runoff) on sites with less-permeable soils. The language in PCRs Section B.4.d.vi. regarding continuous simulation is obviated by the language in PCRs Section B.4.c., which mandates retention of the volume of a specific storm (85<sup>th</sup> percentile or 95<sup>th</sup> percentile) regardless of whether a specific

site in its pre-development condition has highly permeable soils or impermeable soils.

The PCRs should be modified to allow the use of continuous simulation analysis of pre-project and post-project flows to allow sizing to keep post-project flow rates and durations within the flow rates and durations of predevelopment conditions. Additionally, sizing procedures included in Attachment D should be further reviewed and refined through the JERT process to arrive at defensible and manageable methods.

- **Procedures for demonstrating Technical Infeasibility:** Related to the retention facility sizing method above, PCR Section B.4.e. allows an “off-ramp” if it is “technically infeasible” to retain the volume produced by the 85<sup>th</sup> or 95<sup>th</sup> percentile storm. In this case a development project may comply with the PCRs if it dedicates “no less than ten percent of the Regulated Project’s Equivalent Impervious Surface Area to retention-based Stormwater Control Measures.” However, neither Section B.4.e. nor the referenced Attachment E state what a definition of the term “retention-based Stormwater Control Measures.” It would thus be possible for a development project to comply by incorporating facilities to retain some arbitrary lesser volume and by meeting the 10% area requirement with depressed landscaped areas, pervious pavement, and the like. Clearer guidance on technical infeasibility determination and allowed retention-based stormwater control measures needs to be developed to provide consistent implementation throughout the region.
- **Determination of Urban Sustainability Areas:** PCR Section C.3. allows the establishment of “Urban Sustainability Areas” (USAs) by municipalities and eliminates the retention requirement for redevelopment projects within USAs, requiring only that existing on-site retention be maintained. The USAs “may only encompass redevelopment in high density urban centers... that are pedestrian-oriented and/or transit-oriented development projects intended to promote infill of existing urban areas,” but must be proposed by the Permittee and approved by the Executive Officer. The criteria for Board approval of the USAs are unclear in the PCRs and need to be further refined through the JERT process in order to provide clear guidance to municipalities that are interested in designating a USA.

**Recommendation** → For the prudent use of public resources across the Central Coast, to provide legal substantiation of local Code and enforceable mechanism adoption procedures, and to allow time for the JERT to address important implementation issues and questions, we request the following timeline to begin enforcement of the PCRs at the local level:

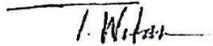
- *Six (6) months from the date of Regional Board adoption of the final Resolution and PCRs;*

Like the Water Board, municipalities in the Central Coast greatly value our waterways. We work hard to protect their water quality and share in the belief that managing them on a watershed scale is an effective approach into the future.

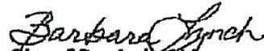
We greatly appreciate your and the Board’s consideration of our concerns. We look forward to further collaboration and problem-solving with you and your staff as we start on-the-ground implementation of the final PCRs into the long-term.

Respectfully,

  
City of Capitola



Monterey Regional Stormwater Group (including Carmel-by-the-Sea, Del Rey Oaks, Marina, Monterey, Monterey County, Pacific Grove, Sand City, and Seaside)

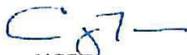
  
City of San Luis Obispo

  
County of San Luis Obispo Planning Department

  
County of San Luis Obispo Public Works Department

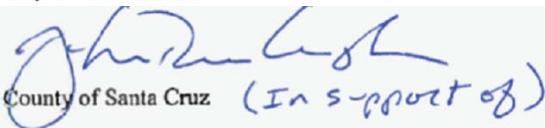
  
City of Santa Cruz

  
City of Scotts Valley

  
UCSC

  
City of Watsonville

  
City of Pismo Beach

  
County of Santa Cruz (In support of)

*Joy Hyecknick*  
County of Santa Barbara

*Matthew Linder*  
City of Solvang

*Thom HSB*  
City of Buellton

*Chavon*  
City of Carpinteria

*Steve Wagner*  
City of Goleta

*Stacey Callaway*  
University of CA, Santa Barbara

*R. Dennis Delgato*  
City of Guadalupe

Attachment 1 – Timeline for Local Adoption of Enforceable Mechanisms to Implement the  
PCRs

## MRSWMP PCR Implementation Time Schedule 2013 - 2014

**City of Carmel, City of Del Rey Oaks, City of Marina, City of Monterey, County of Monterey, City of Pacific Grove, Sand City & the City of Seaside**

General Steps to Local Code Implementation - Resolution (R3-2013-#####) and Final PCRs	2013												2014											
	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
	Receive Final Resolution & PCRs (Pending RB approval: July 11, 2013)																							
Perform code analyses/develop draft Plan and/or Code revisions for legal review <sup>1</sup>																								
Perform CEQA analyses/prepare disclosure doc/performance public review <sup>1</sup>																								
Planning Commis. - Recommendation to Council																								
City Council - First Reading																								
City Council - Second Reading																								
Code becomes law																								
Coastal Commission Review Processes (Not necessary for all entities.)																								
Local Implementation of 2013 Resolution & Final PCRs																								

<sup>1</sup> Monterey Regional Storm Water Management Program (MRSWMP) agencies vary in the process steps and timeline needed to perform necessary Code, General Plan, Specific Plan(s), and/or Local Coastal Plan(s) revisions to implement enforceable measures to support the final approved PCRs (July 2013). Due to the complexities of our eight member agencies, the earliest completion date is estimated at six (6) months, while others may need as much as one (1) year to implement enforceable mechanisms in support of the PCRs. This work also includes final overhaul of storm water program development review practices and processes to assimilate the newly approved storm water/land use and development regulations into all necessary steps of the development review process.

General Steps to Local Code Implementation - Resolution (R3-2013-0032) and Final PCRs	2013												2014											
	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Receive Final Resolution & PCRs (Pending RB approval: July 12, 2013)							START																	
Prepare Working Draft of Ordinance Language																								
Complete internal circulation and legal review																								
Assume CEQA analysis: Initial Study + Negative Declaration (or MND)																								
Hold Scoping Meeting / Stakeholder Workshop, CEQA Circulation (30 days)																								
Planning Commission Workshop																								
Prepare Final Draft Ordinance, complete internal staff and legal review																								
Stakeholder Meeting																								
Planning Commission - Recommendation to Board of Supervisors																								
Board of Supervisors - First Reading																								
Board of Supervisors - Adoption, Referral to CA Coastal Commission																								
<b>Inland PCR Ordinance Adoption Track</b>																								
Ordinance becomes law in Non-Coastal areas (30 days after adoption)																								
<b>Coastal Zone PCR Ordinance Adoption Track</b>																								
Coastal Commission - Submit Application																								
Coastal Commission - Adoption																								
Board of Supervisors - First Reading for Coastal Zone PCRs																								
Board of Supervisors - Second Reading and Adoption																								
Ordinance becomes law (30 days after adoption)																								
<b>Effective Implementation of PCR Ordinance, County-wide</b>																								



**City of San Luis Obispo**

**Joint Effort Post-Construction Criteria Pre-Implementation Work**

2013 2014

**Subject Activity** **Mar** **April** **May** **June** **July** **Aug** **Sept** **Oct** **Nov** **Dec** **Jan** **Feb** **Mar**

Enforceable Mechanism													
	<b>Regional Board approves criteria</b>												
	<b>Receive final technical guidance from Regional Board staff /JERT</b>												
	Reference & add to appendix of Engineering Standard 1010												
	Meet w/ Planning & Building on tie for their processes												
	Meet w/ Engineering to define Public project process - ROW projects												
	Prepare report & presentation												
	Present to Council												
CEQA													
	Determine best practices regarding environmental review for HM												
	Meet w/ Legal & Planning to define local process												
USA													
	Meet w/ Community Development on where we want USAs												
	Meet with Regional Board Staff to clarify requirements												
	<b>Receive final guidance on USA submittal requirements from Regional Board staff</b>												
	Develop USAs & submit - Move if extension granted												
	<b>Regional Board staff review</b>												
Training													
	Prepare presentation												
	Refine training list												
	Hold training												
	- Developer's Roundtable												
	- Planning & Architectural Review Commissions												
	- Engineering, Development Review, Building staff												
Implementation													
	Meet w/ Development Review & Building on tracking mechanism												
	Building & Development Review templates												
	Inspection templates												

## **Issues Necessitating the Extension of the Deadline for the Implementation and Enforcement of Post Construction Requirements**

- **Staffing resources.** Staffing resources are limited at the present time, due largely to economic conditions. Implementation of this program requires dedication of a substantial amount of staff hours. Extending the deadline provides the County with a small amount of flexibility in managing staffing resources.
- **Education and outreach.** The PCRs are complex, and many people are having difficulty understanding what these new requirements will mean for their projects. Additional time to provide further opportunities for education, outreach, and guidance would benefit not only our staff, but also the public.
- **Process refinement.** We anticipate many questions arising when the PCRs go into effect. The additional time afforded by an extension will provide a better opportunity for us to test the process, identify roadblocks, and develop strategies to increase efficiency.
- **Ordinance adoption process.** Because of the strict deadline on ordinance adoption, we have had to significantly alter our standard ordinance review process. For example, we typically give outside agencies 60 days to comment on an ordinance before it goes to the Planning Commission. Because of noticing deadlines and the need for the Planning Commission to take action before the ordinance goes to the Board of Supervisors, public comment and outreach has had to be substantially reduced. An additional 6 months will allow the standard ordinance review process to occur. It would also allow for potential continuances at the Planning Commission or Board of Supervisors if additional modification to the ordinance is needed.
- **Ordinance development.** The County continues to be concerned about public response to local implementation of PCRs. Extension of the deadline would give the County's Planning Commission and Board of Supervisors much needed time to develop publicly supported ordinance language and to educate and respond to constituent concerns.
- **Confusion regarding the Local Coastal Program.** We continue to receive mixed messages regarding adoption of the ordinance in the Coastal Zone portion of the County. Regional Board staff insists upon an ordinance that is effective Countywide by September. However, the Coastal Commission asserts that stormwater regulations fall under the auspices of a Local Coastal Program (LCP), and would therefore require Coastal Commission approval of an LCP amendment. This process typically takes 1-2 years. We were directed (March JERT meeting) to adopt an ordinance that is effective throughout the County, both in the Coastal Zone and inland. Staff suggested that we could implement the ordinance in the Coastal Zone, before the Local Coastal Program amendment is completed. County Counsel has advised that this is an uncommon practice, and it may take additional research to craft an ordinance that is capable of accomplishing this.

**City of Santa Cruz**

The City of Santa Cruz will incorporate the Post-Construction Requirements into our mandatory Storm Water BMPs, which are referenced in our Storm Water Ordinance. The revisions of the mandatory Storm Water BMPs will require review by our Public Works Commission and approval by City Council. The City will also be seeking the incorporation of an Urban Sustainability Area (USA) in our mandatory Storm Water BMPs; the USA is subject to RWQCB review and approval, which may take up to 6 months to complete. The City is very concerned that applying different sets of new requirements to potential projects within its dense urban core before and after USA approval will cause a great deal of confusion for permit applicants; consequently we request that the PCRs be enforced after the USA has been reviewed and approved by the RWQCB.

City of Santa Cruz Steps to Adopt Enforceable Mechanisms for Implementation of PCRs	2013								2014		
	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar
Develop draft mandatory BMP language											
Receive Final PCRs (Upon RB final approval, mid-July 2013)											
Revisions and legal review of Final BMP language based on approved Final PCRs											
Presentation at Public Works Commission Regular Meeting of BMP revision package including: revised Mandatory BMPs, revised City Standard Details and Draft USA – September 16, 2013											
Presentation to City Council of BMP revision package for approval – September 24, 2013											
Submittal of Draft USA to RWQCB for review and approval											
Stakeholder outreach on new BMP requirements											
RWQCB USA Review (4-6 months)											
Implementation of final PCRs including USA											

City of Watsonville

City of Watsonville Steps to Adopt Enforceable Mechanisms for Implementation of PCRs	2013							2014			
	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar
Develop draft mandatory BMP language											
Receive Final PCRs (Upon RB final approval, mid-July 2013)											
Revisions and legal review of Final BMP language based on approved Final PCRs											
Presentation to City Council of BMP revision package for approval											
Submittal of Draft USA to RWQCB for review and approval											
Stakeholder outreach on new BMP requirements											
RWQCB USA Review (4-6 months)											
Implementation of final PCRs including USA											

Steps to Local Code Implementation - With Resolution (R3-2013-####) and PCRs	2013												2014											
	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Receive Final PCRs (Upon RB final approval, mid-July 2013)																								
Perform code analyses/develop draft Code revisions for legal review																								
Perform CEQA analyses/prepare disclosure doc/perform public review																								
Planning Commission - Recommendation to City Council																								
City Council - First Reading																								
City Council - Second Reading																								
Code becomes law																								
Fund Technical Guidance Document based on final PCRs																								
Consultant to prepare Technical Guidance Document based on final PCRs																								
Training in use of Technical Guidance Document																								
Implementation of 2013 Resolution and final PCRs																								







City of Goleta

Steps to Local Code Implementation - With Resolution (R3-2013-####) and PCRs	2013												2014											
	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Receive Final PCRs (Upon RB final approval, mid-July 2013)																								
Perform code analyses/develop draft Code revisions for legal review <sup>1</sup>																								
Perform CEQA analyses/prepare disclosure doc/perform public review																								
Planning Commiss. - Recommendation to City Council																								
City Council - First Reading																								
City Council - Second Reading																								
Code becomes law																								
Prop 84 Grant Agreement Approved																								
Consultant to prepare Technical Guidance Document based on final PCRs																								
Training in use of Technical Guidance Document																								
Implementation of 2013 Resolution and final PCRs																								



May 10, 2013



Kenneth A. Harris, Jr.  
Interim Executive Officer  
California Regional Water Quality Control Board  
Central Coast Region  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401

Sent via email to [r3\\_stormwater@waterboards.ca.gov](mailto:r3_stormwater@waterboards.ca.gov)

Subject: Post-Construction Requirements Comments  
Draft Resolution R3-2013-0032

Dear Mr. Harris:

Wallace Group supports the Regional Board in their efforts to protect our watersheds, and we are advocates of improving water quality. Wallace Group appreciates the opportunity to submit these comments, and it is hoped that these comments assist the Regional Board in further developing the Draft Post-Construction Requirements proposed for the Central Coast Region.

We are currently participating on the Regional Board's reconvened Joint Effort Review Team (JERT2), and want to acknowledge and thank Water Board Staff for their time and effort in working with stakeholders to improve the Post-Construction Requirements. The work completed by the JERT2 to-date has resulted in positive improvement to the Post-Construction Requirements. However, there are still technical issues to be resolved, and we urge you to consider these issues prior to adopting the Requirements.

Our comments on the Draft Post-Construction Requirements are summarized below. Comments represent one of three cases:

1. Comments on new or modified material. These comments are based on items in the Draft Post Construction Requirements that were not contained in or have been modified from R3-2012-0025.
2. New comments. These comments regard material that was contained in R3-2012-0025. We have developed these comments based on our experience applying the criteria to actual projects, following Board adoption of R3-2012-0025.
3. Reiterative comments. Some comments in this letter have been provided to both the Regional Board and State Board and in our opinion have not been adequately addressed. We are repeating these comments now because we think they are critical to the success of the post-construction program.

CIVIL ENGINEERING

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## GENERAL COMMENTS TO THE POST-CONSTRUCTION CRITERIA

These comments represent “over-arching” issues that are interwoven throughout the Draft Post-Construction Criteria.

### Retention of the 85<sup>th</sup> and 95<sup>th</sup> Percentile Storm Event

We have reviewed rain gauge data for a number of locations on the Central Coast and found that the 95<sup>th</sup> percentile storm is between 1.5 to 2 times greater than the 85<sup>th</sup> percentile storm. For an undeveloped site, only extremely well draining soils or terrain with natural sump conditions will retain the 95<sup>th</sup> percentile event, and likely only in unsaturated conditions. The widespread application of this requirement on the Central Coast would result in increased infiltration beyond the natural response, which could be detrimental to the receiving streams and watershed health.

The basis for 95<sup>th</sup> percentile storm retention is Section 438 of the Energy Independence and Security Act (EISA). However, the Requirements do not reference the full text of Section 438 which lists the 95<sup>th</sup> percentile requirement as one of two options for compliance. The second option is a site specific analysis, in order to match existing hydrologic conditions. Per the EISA document:

“the performance based approach in Option 1 (Retain 95<sup>th</sup>) is intended to be a surrogate for determining the pre-development reference condition and this standard is intended to be used in cases where it is more practical, cost effective, and/or expeditious than Option 2 (Site Specific Hydrologic Analysis), or where it is difficult or infeasible to identify the relevant reference conditions for the site.” (EPA 841-B-09-001 Page 16).

““Option 2 could also be used if predevelopment runoff conditions can be maintained by retaining less than the 95th percentile rainfall event.” (EPA 841-B-09-001 Page 12)

We recommend a requirement similar to EISA Section 438, to retain a specific storm event or match existing hydrology.

### References

- The EPA Energy Independence and Security Act (EISA) provides two options for compliance with hydromodification requirements:
  - Option 1: Retain the 95<sup>th</sup> Percentile Storm Event, or
  - Option 2: Site Specific Hydrologic Analysis
- Potential negative effect of increased infiltration: *“In some locations upgradient of an ephemeral stream, increased infiltration may cause undesirable habitat type changes downstream of the site due to increased periods of base flows that result in vegetation changes. There has been a lack of consideration of the overall water balance effects that a “retention on site” requirement may have in terms of habitat.”* (Strecker and Poresky)

### Summary of Recommendation

- Prepare a cost-benefit analysis for retention of the 95<sup>th</sup> percentile storm compared to the 85<sup>th</sup> percentile storm



- Evaluate the possible detrimental effect of bioretention causing reduced surface flow to receiving streams, or increased subsurface flow to ephemeral streams
- Modify the Requirements to retain a specific storm event or match existing hydrology

### **Feasibility of Retention in Type C and D Soils**

The section on Feasibility of Achieving Retention in the Regional Board's Technical Support Document makes reference to a study by Horner and Gretz. The Horner and Gretz study provides important insight as to the practical meaning of implementing the proposed standards on various soils. Many areas of the Central Coast have Type C and D soils. Table 6 of the Support Document indicates that 46 percent of the urban areas on the Central Coast are Type C and D soils. The Horner and Gretz Study evaluated sample projects on all types of soils in various communities, with the most representative of Central Coast conditions being the Southwest Climate case study. Most areas of the Central Coast would have greater rainfall than the Southwest Climate (9.68 inches annually).

The Requirements Performance Standard No. 3 Runoff Retention requires that projects retain the runoff from either the 85<sup>th</sup> or 95<sup>th</sup> percentile storm, depending on the Watershed Management Zone (WMZ). The WMZ designations are not correlated with the surface soil types and therefore there are Type C and D (poor infiltrating) soil types that would be required to retain the 95<sup>th</sup> percentile storm.

The Horner and Gretz Study notes the following regarding Type D soils:

Pg 34: *"Standards 2 and 3 were never estimated to be met in any Type D soil case".* In the study Standard 2 is the ability to retain the 95<sup>th</sup> percentile storm – rephrasing this, the study is indicating that it is not feasible to retain the 95<sup>th</sup> percentile storm in a development on Type D soils, even when using Full ARCD (defined below).

The Horner and Gretz Study assumed the use of "Full ARCD" on Type D soils. In the study Full ARCD includes roof runoff management techniques and the report commented on how this might be done:

Pg 25: *"For retail commercial development (COMM), roof runoff management was assumed to be accomplished by harvesting, temporarily storing, and applying water to use in the building...the assumption was made that commercial development would be able to manage and would have the capacity to store and make use of the entire roof runoff volume...this particular assumption is, on its own, speculative...".* Therefore, according to the study, projects on Type D soils, and many on type C soils, would have to store their entire roof runoff, and install a dual plumbing system (rain water for non-potable use in the building), in order to partially achieve the standard. We question the cost-benefit and ability to store 100 percent of roof runoff, and whether it is widely understood that this was the basis for evaluating feasibility.

The Horner and Gretz Study also made assumptions related to the use of the pervious areas of a project. For Type D soils, the assumption is that 100 percent of pervious areas *"would be required (for bioretention) to achieve given results"* (Table 15, and footnote b Table 12). We believe that the assumption of 100 percent of pervious areas being used for bioretention is neither feasible nor cost effective.



In summary, the Horner and Gretz study, concludes the following for projects in the Southwest region:

- Retention of the 95<sup>th</sup> percentile storm **cannot** be met on Type D soils
  - Even with 100 percent storage and graywater use of roof water; combined with
  - 100 percent of pervious areas being used for bioretention.
  - Also note that the Southwest region average annual rainfall (9.68 inches) is less than most areas of the Central Coast
  
- Retention of the 85<sup>th</sup> percentile storm:
  - Can be met for the Southwest region (average annual rainfall = 9.68 inches);
  - In comparison, can be met for the South Central region (average annual rainfall = 32.67 inches) assuming 100 percent of pervious areas being used for bioretention for commercial and redevelopment projects.

In reviewing site feasibility, the Horner and Gretz Study also evaluated the effect of the proposed measures on total annual runoff. The study noted “*with effective infiltrating bioretention it is possible for post-development annual recharge to exceed the pre-development quantity*” (Pg 28), and “*one reason ... is that bioretention is set up to hold water, increasing the time for infiltration to occur instead of letting it runoff*” (Pg 28). In fact – some of their scenarios show 100 percent infiltration is possible where it does not occur naturally (Tables 8-15). The focus of the study is that the more retention the better – to further reduce pollutants - but we believe that runoff is essential to the receiving streams and that over-retention is undesirable.

We recommend that the assumptions and ramifications of the Horner and Gretz Study be carefully considered and the Requirements and Technical Support Document be modified accordingly, as summarized below.

#### Summary of Recommendation

- Relate the retention and treatment Requirements to surface soil types which control site infiltration capability
- Highlight the need for roof runoff storage and graywater systems to meet the Requirements, and evaluate the feasibility and cost-benefit
- Highlight the need for 100 percent of pervious areas being required for bioretention, and evaluate the feasibility and cost-benefit

#### **Regional vs. Parcel Scale Analysis**

We are concerned with the approach of the Requirements to specify hydromodification controls at the parcel level. The greatest level of hydromodification control, and therefore watershed protection, could be achieved by evaluating overall development potential and land use changes from a watershed scale perspective. Parcel scale analysis may not reveal cumulative effects of development, and lead to inefficiency in the design and review process. Multiple parcel scale evaluations for different sites within the same watershed may provide little to no regional information while being redundant and rigorous in nature.



Agencies need the flexibility to plan for hydromodification within and throughout designated land use zones. For example, a single mixed-use parcel could be built to maximum density, accommodating businesses and high density housing, with a nearby parcel maintained as an open space park. If approached on a parcel scale, both parcels would be developed, and two smaller open spaces would be created. The single larger open space would have a higher value for the community, as it could function as a neighborhood gathering spot within a densely developed area, and accommodate a wider variety of recreational uses.

The Requirements include provisions for permittees to submit a Watershed or Regional Plan for consideration by the Regional Board, specific to Off-Site Compliance. However, it is not clear that multiple projects could be analyzed and designed for compliance together, without the need for a full "Regional" plan.

#### Summary of Recommendation

- Include provisions for combining parcels and projects in a single evaluation, in lieu of a Regional analysis

### **COMMENTS TO SPECIFIC SECTIONS OF THE POST-CONSTRUCTION CRITERA**

The following comments apply to specific items within the Draft Post-Construction Requirements, and are organized by Page Number and Section.

#### **Page 1 Item B.1. Definition of Regulated Projects.**

The current definition of regulated projects includes upgrade from "bituminous surface treatment" to asphalt or concrete. This item should be removed, as it represents a replacement of one impervious road surface with another. Within Attachment C, the definition of impervious surface includes "oiled, macadam, or other surfaces which impede the natural infiltration of stormwater." A roadway treated with a "bituminous surface treatment" clearly fits within the Board's definition of impervious.

The current definition of regulated projects excludes "Overlaying existing asphalt or concrete pavement with asphalt or concrete without expanding the area of coverage." In some cases, asphalt or concrete must be fully replaced due to degradation or other site conditions that preclude overlayment. We recommend that this definition is modified to include either overlayment or full replacement of asphalt or concrete. This change would also make this section consistent with the definition of "Routine Road Maintenance" in Attachment C, which includes "resurfacing with in-kind material."

#### Summary of Recommendation

- Modify item B.1.a.iii as follows: "Resurfacing by upgrading from dirt to asphalt, or concrete; **or** upgrading from gravel to asphalt, or concrete; ~~or upgrading from a bituminous surface treatment ("chip seal") to asphalt or concrete.~~"
- Modify the definition of regulated projects to exclude "overlaying **or replacing** existing asphalt or concrete pavement with asphalt or concrete without expanding the area of coverage".



### **Page 2 Item B.1.c.ii. Confusing reference to Equivalent Impervious Surface Area.**

The PCRs use the term “Equivalent Impervious Surface Area” (EISA) for demonstrating compliance with the retention requirement in the case of technical infeasibility (Attachment E). This term is not included in the text for the individual Performance Requirements. However, this Section of the PCRs reads that “Water Quality Treatment, Runoff Retention, and Peak Management Performance Requirements shall apply to the Regulated Project’s entire Equivalent Impervious Surface Area for the site.” This is inconsistent with the individual Performance Requirements, which reference Tributary Area. We recommend that this Section is modified to remove reference to EISA.

#### Summary of Recommendation

- Modify this Section as follows: “Water Quality Treatment, Runoff Retention, and Peak Management Performance Requirements shall apply to the Regulated Project’s **Contributing Area** ~~entire Equivalent Impervious Surface for the site.~~”

### **Page 8 Item 4.d.iv.1 Undisturbed and Natural Landscape Areas**

This section reads that “undisturbed or areas planted with native vegetation” can be omitted from the calculation for retention volume runoff if they do not receive runoff from other areas. We recommend removing the term “native” for this requirement. There are numerous drought tolerant and LID friendly plants that could be used on a site that are not “native” to the Central Coast. For example, the recommended plant list for bioretention prepared by Central Coast Low Impact Development Initiative includes plants that are non-natives. This item should also be consistent with the Attachment E definition for contributing pervious area, which excludes “natural and undisturbed landscape areas” and areas compliant with water efficient landscape ordinances.

#### Summary of Recommendation

- Modify this Section as follows: “Undisturbed or areas planted with ~~native~~ vegetation that do not receive runoff from other areas may be considered self-treating...”

### **Page 12 Item 6.b.i.1. Performance Requirements for Highly Altered Channels and/or Intermediate Flow Control Facility Special Circumstances.**

This Section allows for the use of a pre-existing stormwater flow control facility to meet Performance Requirement 4, Peak Flow Management. However, these same existing stormwater flow control facilities may also provide retention, and therefore could also serve to meet Performance Requirement 3, Runoff Retention. The applicant would be required to demonstrate that the existing facility would provide the flow control benefit, and could demonstrate the runoff retention requirement through the same analysis.

#### Summary of Recommendation

- Allow project applicants to use existing Flow Control Facilities to meet the Runoff Retention Requirement, with demonstration of facility capacity to perform this function.

### **Page 13 Item C: Alternative (Off-site) Compliance**



Item C1.c is a list of “Technical Infeasibility” examples, describing various reasons why LID principles may not be feasible or appropriate for a site. In the case that meeting requirements onsite is infeasible, offsite compliance would be required. The natural site constraints identified as infeasibility criteria limit what can be achieved through LID site planning and design efforts. Some of the examples, such as high groundwater and low depth to an impervious soil layer, would also prevent or limit natural infiltration and associated stormwater retention on an undeveloped site. In these cases, adding retention requirements, even offsite, could result in unnatural hydrology. With the goal of the requirements being to match existing conditions, rather than requiring off-site compliance, if a site cannot meet retention criteria due to technical infeasibility, then a “maximum extent practicable” clause should apply.

Some of the constraints identified for technical infeasibility also represent site conditions where forcing infiltration could lead to geotechnical or other hazards. For example, under the current Requirements, a site with a shallow depth to bedrock would be required to either dedicate 10-percent of the site area to retention or provide the equivalent land area off-site. Forcing infiltration on such a site would not achieve the goal of natural runoff response, and could lead to instability of the surface soils and possible landslides. Therefore, the geotechnical constraints may preclude the ability to dedicate 10-percent of the site to retention and force this site into off-site compliance.

Feasibility is defined in the Requirements by limiting the land area dedicated to retention facilities to 10-percent of the site’s “Equivalent Impervious Surface Area”. However, the Requirements do not provide any scientific basis for the 10-percent value, or relate this value to the ability for a site to infiltrate. In addition, the 10-percent value is over double the 4-percent criteria used by numerous agencies in California, including the Contra Costa post-construction agencies and the City and County of San Diego.

Feasibility could also be concretely defined in the Requirements by limiting the total cost of compliance, for example by placing a cap on the cost of stormwater control measures to a percentage of overall project cost.

Examples:

- Limit requirement to the amount technically feasible: *“In cases where the facility has a defensible showing of technical infeasibility and can provide adequate documentation of site conditions or other factors that preclude full implementation of the performance design goal, the facility should still install stormwater practices to infiltrate, evapotranspire, and/or harvest and use onsite the maximum amount of stormwater technically feasible.”* (EPA 841-B-09-001 Page 18).
- Measure practicability based on cost of compliance: *“Full implementation of the HMP will be considered impracticable if the combined construction cost of both required stormwater treatment and flow control measures exceeds 2% of the project construction cost”.*( Santa Clara Valley Page 5-4)
- Infiltration exemption for tight soils: *If design infiltration rate is less than 0.25 inches per hour (measured rate of 0.50 inches per hour saturated), infiltration*



*facilities are typically not approved as a means to meet flow control or water quality treatment requirements. (City of Seattle Page 4-29)*

- Infiltration exemption for tight soils and geotechnical and other hazards: *Sites with soils that do not infiltrate (less than 2.0 inches/hour saturated infiltration rate), unstable, soils, contamination or high risk of contamination, and wellhead protection areas are exempt from the total infiltration requirement. (City of Portland Page 1-28)*

#### Summary of Recommendation

- Provide an overall MEP clause
- Identify a criterion for infiltration rates that represent technical infeasibility
- Identify the site conditions where infiltration could lead to geotechnical or other hazards and exempt these sites from the retention requirement
- Provide specific cost-based feasibility limit (i.e. percentage of total project cost)
- Conduct a cost-benefit analysis for the 10% Equivalent Impervious Surface Area Requirement

#### **Page 14 Item C.2 Approved Watershed or Regional Plan**

This Section does not include a proposed schedule for review and/or approval of proposals submitted to the Board. We recommend including language similar to item C.3.c. which includes a timeframe for review and approval or denial of applications.

#### Summary of Recommendation

- Include a specified timeframe for Water Board review and approval or denial of proposals for a Watershed or Regional Plan

#### **Page 18 item F.2.e.i Reporting Requirements for Mitigation Projects.**

This Section identifies that permittees will need to provide a description of “pollutant and flow reduction analyses (compiled from design specifications submitted by project applicants and approved by the Permittee)” comparing results of Alternative Compliance projects to the results that would otherwise have been achieved onsite. The Requirements for offsite compliance do not include an analysis of pollutant loading, nor does Performance Requirement 2 Water Quality Treatment require an analysis of pollutant removal. Therefore, it is not reasonable to assume that the permittee would have access to such information for annual reporting. We recommend modifying this section to remove reference to “pollutant analyses” and also include language to clarify the timeframe for which permittees must report on mitigation projects (other than O&M reporting which would be on-going).

#### Summary of Recommendation

- Modify Item F.2.e.i as follows “A summary description of **mitigation projects constructed during the reporting period** ~~pollutant and flow reduction analyses (compiled from design specifications submitted by the project applicants and approved by the Permittee)~~ comparing the expected aggregate results of Alternative Compliance projects to the results that would have otherwise been achieved by meeting the numeric Performance Requirements on-site.”



### **Page 24 Attachment C, Definition of “Equivalent Impervious Surface Area”**

This definition references a “surface’s runoff coefficient” which could be interpreted multiple ways based on various hydrologic calculation methods. It is recommended to include a reference to Attachment E within the definition, which includes the stated “runoff coefficient”.

#### Summary of Recommendation

- Include reference to Attachment E for definition of Equivalent Impervious Surface Area

### **Page 26 Attachment C, Definition of “Routine Road Maintenance”**

This definition should be revised to include replacement of existing curb, gutter, and sidewalk to meet ADA or other requirements. In this case, the original line and grade of the sidewalk may be altered, and therefore is excluded from the current definition.

#### Summary of Recommendations

- Revise the definition of Routine Road Maintenance as follows: “includes pothole and square cut patching; overlaying **or replacing** existing asphalt or concrete with asphalt or concrete without expanding the area of coverage; shoulder grading; reshaping/regrading drainage systems; crack sealing; resurfacing with in-kind material without expanding the road prism or altering the original line and grade and/or hydraulic capacity of the road, **replacing existing curb, gutter, and/or sidewalk to meet current standards.**”

### **Page 27 Attachment C, and Page 28 Attachment D, Definition of Tributary Area**

This definition of Tributary Area is confusing, and conflicting with use of the same term in Attachment D. For example, the definition states that “Drainage Management Areas are smaller Tributary Areas that cumulatively make up the Tributary Area for the entire site.” While in Attachment D, Item 1 states “*Tributary Area should be calculated for each individual Drainage Management Area*” and then follows with an equation where Tributary Area is based on the *Entire Project Area* minus pervious/infiltrating exceptions. Also, the term tributary area is typically used in hydrologic analyses to represent the entire area draining to a point, regardless of whether or not surfaces are pervious or impervious.

We recommend removing the definition for Tributary Area, and replacing this term with “Contributing Area” for descriptions related to post-construction requirements.

#### Summary of Recommendations:

- Remove the definition for Tributary Area from Attachment C
- Throughout the PCRs, replace the term “Tributary Area” with “Contributing Area”
- Modify the Attachment D definition of Tributary Area, as follows:

~~Tributary~~ **Contributing** Area = (~~Entire Project~~ **Drainage Management** Area) – (Undisturbed or Planted Areas)\* - (Impervious Surface Areas that Discharge to Infiltrating Areas)\*\*

### Summary

In summary, Wallace Group believes that long-term watershed protection can be accomplished through good land use planning and a regional approach to treatment and infiltration. We are advocates of both water quality protection and the move towards redevelopment and infill to create a dense urban core that minimizes effect on the environment by reducing pollutants associated with extension of the urban boundary. We believe that re-development should be encouraged where the replacement of existing impervious surfaces would result in a more efficient use of land, and that infiltration should be considered on a case-by-case basis based on surface soils and other site specific constraints rather than uniformly required for all projects.



We appreciate the effort and goals that have resulted in the Central Coast Post-Construction Requirements and the public process of review and comments. We believe that consideration of such comments is essential to achieving standards that can provide maximum benefit to receiving waters with a cost effective and practical program.

Thank you for the opportunity to provide comments on the Draft Post-Construction Requirements, and please do not hesitate to contact me should you have any questions or concerns.

Sincerely,

WALLACE GROUP

A handwritten signature in blue ink, appearing to read "Val Huff".

Valerie Huff, PE  
Senior Civil Engineer



## References

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