



Linda S. Adams  
Agency Secretary

# California Regional Water Quality Control Board

## Central Coast Region



Arnold Schwarzenegger  
Governor

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April 14, 2009

Ms. Suzanne Healy  
City of Santa Cruz  
809 Center Street, Room 201  
Santa Cruz, CA 95060

Dear Ms. Healy:

### **NOTICE OF ENROLLMENT – NPDES SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS GENERAL PERMIT; CITY OF SANTA CRUZ, SANTA CRUZ COUNTY, WDI # 3 44MS03018**

The Central Coast Regional Water Quality Control Board (Water Board) received a Notice of Intent, Storm Water Management Plan (SWMP), map, and fee for the City of Santa Cruz's (City's) Municipal Separate Storm Sewer System (MS4). These items are required to enroll in the National Pollutant Discharge Elimination System General Permit for the Discharge of Storm Water from Small Municipal Separate Storm Sewer Systems, Order No. 2003-0005-DWQ (General Permit).

Water Board staff reviewed the City's SWMP and found it, combined with a number of specific revisions described in Attachment 1, to be in compliance with the General Permit and to meet the maximum extent practicable (MEP) standard set forth in the General Permit. The City's SWMP was available to the public for a 60-day comment period, and we received comments from stakeholders. Water Board staff responded to all comments received. These comments and responses are contained in Attachment 2. The comment letters are contained in Attachment 3.

The public did not request a hearing for the Water Board to consider approval of the SWMP and enrollment of the City under the General Permit. We also understand that the City, upon receipt of this amended Notice of Enrollment, will withdraw its request for a hearing. The General Permit states that if no hearing is necessary, the Water Board Executive Officer will notify the regulated MS4 that it has obtained permit coverage only after Water Board staff has reviewed the SWMP and has determined that the SWMP meets the MEP standard established in the General Permit.

I am hereby approving the City's SWMP with the following condition:

Pursuant to Water Code Section 13383, the City of Santa Cruz is required to amend the SWMP no later than **June 15, 2009**, to include all the changes shown in the "Final Table of Required Changes," Attachment 1 to this letter. Per Water Code Section 13385, failure to make these revisions may subject the City of Santa Cruz to Administrative Civil Liability for up to \$10,000 for each day of violation. The City must provide a copy of the revised pages of the SWMP to the Water Board no later than **June 15, 2009**.

As of the date of this letter, discharges from the City's MS4 are authorized by the General Permit. The City is required to implement the SWMP and comply with the General Permit. The City's first

*California Environmental Protection Agency*



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annual reporting period ends June 30, 2010. The City's first annual report is due to the Water Board on September 15, 2010 (75 days after the reporting period ends), and shall cover the period from April 10, 2009 through June 30, 2010.

In addition, the SWMP includes several program components that will be fully developed over the course of several years, most notably interim hydromodification control criteria for new development and re-development, Wasteload Allocation Attainment Programs, long-term hydromodification plans and criteria, effectiveness assessment strategy, and measures for long-term watershed protection. The Water Board Executive Officer will notify the dischargers and other interested persons of the acceptability of the dischargers' submittals regarding these issues. If the Water Board staff proposes new requirements that exceed the requirements of the existing Storm Water Management Program with respect to interim hydromodification control criteria for new and re-development, Wasteload Allocation Attainment Programs, long-term hydromodification plans and criteria, effectiveness assessment strategy, or measures for long-term watershed protection, the Water Board will provide interested persons an opportunity for written comments and a hearing before the Water Board, if requested in a timely manner, prior to final Water Board action.

Thank you for your cooperation and efforts to enroll the City under the General Permit. If you have questions regarding this matter, please contact **Phil Hammer at (805) 549-3882, or [phammer@waterboards.ca.gov](mailto:phammer@waterboards.ca.gov)** or Lisa McCann at (805) 549-3132.

Sincerely,



Roger W. Briggs  
Executive Officer

cc: Municipal Stormwater Interested Party List (by electronic mail)

Attachment 1: Final Table of Required Revisions

Attachment 2: Response to Comments

Attachment 3: Comment Letters Received during 60-day Public Comment Period

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**ATTACHMENT 1**

**FINAL TABLE of REQUIRED REVISIONS  
City of Santa Cruz Storm Water Management Program**

Acronyms/Abbreviations:

- BMP - Best Management Practice
- City - City of Santa Cruz
- FIB - Fecal Indicator Bacteria
- LID - Low Impact Development
- MS4 - Municipal Separate Storm Sewer System
- SWMP - Storm Water Management Plan
- TMDL - Total Maximum Daily Load
- Water Board - Central Coast Regional Water Quality Control Board

<b>Item Number</b>	<b>SWMP Section</b>	<b>Subject</b>	<b>Issue</b>	<b>Required Revisions</b>
1	Municipal Facilities and Site Specific Operations	Inspections	The SWMP discusses inspections of municipal operations and facilities, but does not confirm that the inspections ensure adequate implementation of all applicable storm water BMPs.	Clarify that all inspections of municipal operations and facilities will ensure adequate implementation of all applicable storm water BMPs.
2	BMP # PP-2	Measurable Goals	The SWMP discusses the City initiating contact with several business groups and associations, but is unclear regarding the frequency of the contact. Table 3-1 mentions "annual contact," but it is not clear if each of these groups and associations will be contacted annually or if just some subset will be contacted annually.	Clarify in BMP # PP-2 the frequency of contact the City will conduct for each of the business groups and associations listed.
3	BMP # PE-5	BMP Brochures	The SWMP does not state how the City will distribute BMP brochures	Explain in BMP # PE-5 how the City will distribute BMP brochures addressing

Item Number	SWMP Section	Subject	Issue	Required Revisions
			addressing restaurants and post-construction BMPs.	restaurants and post-construction BMPs.
4	BMP # PE-18	Surveys	The SWMP is unclear regarding the type, number, and frequency of surveys the City will conduct.	Identify in BMP # PE-18 the type, number, and frequency of surveys the City will conduct.
5	BMP # CON-1	Inspections	The SWMP states that construction projects will be inspected following rain events. However, inspections conducted after rain events are too late to ensure adequate BMPs are in place while rain events are occurring. Inspections conducted prior to well-forecasted rain events are more likely to be effective in ensuring adequate BMP implementation during rain events.	Include in BMPs # 4-3 and 4-4 a statement that the City will conduct inspections prior to well-forecasted rain events at high priority construction projects.
6	BMP # PC-3	Alternative Interim Hydromodification Criteria	The schedule for developing alternative interim hydromodification criteria does not specify time for Water Board staff review. The SWMP also does not identify the goals and expected effectiveness of the alternative interim hydromodification criteria.	<p>Modify the SWMP to include the development of interim hydromodification criteria using one of the options listed below:</p> <p>Option 1: The proposed criteria may include the following types of requirements which provide a high degree of assurance of effective hydromodification control without regard to the nuances of individual watersheds:</p> <ul style="list-style-type: none"> <li>For new and re-development projects, Effective Impervious Area<sup>1</sup></li> </ul>

<sup>1</sup> Effective Impervious Area is that portion of the impervious area that drains directly to a receiving surface waterbody via a hardened storm drain conveyance without first draining to a pervious area. In other words, impervious surfaces tributary to pervious areas are not considered Effective Impervious Area.

Item Number	SWMP Section	Subject	Issue	Required Revisions
				<p>shall be maintained at less than five percent (5%) of total project area.</p> <ul style="list-style-type: none"> <li>• For new and redevelopment projects that create and/or replace 5,000 square feet or more of impervious surface, the post-construction runoff hydrographs shall match within one percent (1%) the pre-construction<sup>2</sup> runoff hydrographs, for a range of events with return periods from 1-year to 10-years.</li> <li>• For projects whose disturbed project area exceeds two acres, preserve the pre-construction drainage density (miles of stream length per square mile of watershed) for all drainage areas serving a first order stream<sup>3</sup> or larger, and ensure that post-project time of concentration is equal or greater than pre-project time of concentration.</li> </ul> <p>OR</p> <p>Option 2: The City may use the following process to develop interim criteria as effective as the above criteria. "As effective as" means the City may use other approaches (including</p>

<sup>2</sup> Pre-construction condition is defined as undeveloped soil type and vegetation.

<sup>3</sup> A first order stream is defined as a stream with no tributaries.

Item Number	SWMP Section	Subject	Issue	Required Revisions
				<p>other variables or numeric criteria, different than Option 1 criteria, appropriate for the City's watershed(s)) to control hydromodification and protect the biological and physical integrity of the City's watershed(s). Other acceptable approaches to develop interim criteria that are as effective as Option 1 include:</p> <p>A. Adopt and implement hydromodification criteria developed by another local municipality and approved by Board staff, such as the criteria the Water Board adopted for the City of Salinas, as interim criteria;</p> <p>OR use the following methodology to develop interim criteria:</p> <p>B. Include a BMP to develop interim hydromodification criteria, including a period of no less than three (3) weeks to allow for Water Board staff's review of the proposed criteria. The BMP shall state:</p> <p>The City shall develop interim flow control and infiltration criteria. These interim criteria shall be developed within one year of the City enrollment. For the interim criteria, the City shall:</p>

Item Number	SWMP Section	Subject	Issue	Required Revisions
				<ul style="list-style-type: none"> <li>• Identify a range of runoff flow rates for which post-project runoff flow rates and durations shall not exceed pre-development runoff rates and durations, where the increased discharge rates and durations will result in off-site erosion or other significant adverse impacts to beneficial uses. Pre-development refers to the soil type, vegetation and amount of impervious surface existing on the site prior to the development project.</li> <li>• Establish numeric criteria for development projects to maximize infiltration on-site and approximate natural infiltration levels to the maximum extent practicable and to effectively implement applicable low-impact development strategies.</li> <li>• Identify the projects, including project type, size and location, to which the City will apply the interim criteria. The projects to which the City will apply the interim criteria will include all those projects that will cause off-site erosion or other significant adverse impacts to beneficial uses.</li> <li>• Identify methods to be used by project proponents to demonstrate</li> </ul>

Item Number	SWMP Section	Subject	Issue	Required Revisions
				<p>compliance with the interim discharge rate and duration criteria, potentially including continuous simulation of the entire rainfall record.</p> <ul style="list-style-type: none"> <li>Identify methods to be used by project proponents to demonstrate compliance with the interim infiltration criteria, including analysis of site imperviousness.</li> </ul>
7	BMP # PC-3	Alternative Interim Hydromodification Criteria	The SWMP is unclear regarding when the City will begin applying the alternative interim hydromodification criteria to new development and redevelopment projects.	Include a statement in BMP # 5-2 that the City will begin applying the alternative interim hydromodification criteria to new development and redevelopment projects within one year of approval of the SWMP by the Water Board.
8	Post-Construction	Application of New Design Standards	The SWMP does not identify the stage in the project planning, design, and funding process that the City will use as the cut-off point to determine which projects in the development review pipeline will be subject to new design requirements, such as alternative interim hydromodification criteria.	Identify the stage in the project planning, design, and funding process that the City will use as the cut-off point to determine which projects in the development review pipeline will be subject to new design requirements. For projects in the planning, design, and funding process at the time the new design requirements take effect, the cut-off point must be chosen in order to apply the new design requirements to as many projects as is feasible.
9	BMP # PC-4	Hydromodification Management Plan	The SWMP does not commit the City to having long-term hydromodification criteria in place and implemented by the end of Year 5.	Include a statement in the SWMP committing the City to having long-term hydromodification criteria in place and implemented by the end of Year 5.

Item Number	SWMP Section	Subject	Issue	Required Revisions
10	BMP # PC-4	Hydromodification Management Plan	While the SWMP discusses development of alternative interim hydromodification criteria, it does not clearly describe the process the City will follow to develop long-term hydromodification criteria as part of a Hydromodification Management Plan.	<p>Include a BMP describing how and when the City will develop long-term hydromodification criteria and control measures as part of a Hydromodification Management Plan that will be based on a technical assessment of the impacts of development on the City's watersheds. An adequate technical assessment will address the following:</p> <ul style="list-style-type: none"> <li>• Hydrograph modification (flow volume, duration, and rate);</li> <li>• A wide range of flow events and continuous flow modeling;</li> <li>• Effects of imperviousness;</li> <li>• Evaluation of downstream effects (stream stability);</li> <li>• Buffer zone requirements; and</li> <li>• Water quality impacts.</li> </ul> <p>The assessment should result in:</p> <ul style="list-style-type: none"> <li>• Numeric criteria for runoff rate, duration, and volume control for development and redevelopment projects;</li> <li>• Numeric criteria for stream stability impacts for development and redevelopment projects;</li> <li>• Identification of areas within the City where these criteria must be met;</li> <li>• Specific performance and monitoring criteria for installed hydromodification control infrastructure;</li> </ul>

Item Number	SWMP Section	Subject	Issue	Required Revisions
				<ul style="list-style-type: none"> <li>• Riparian buffer zone requirements; and</li> <li>• Appropriate hydromodification control measures such as LID concepts, on-site hydrologic and water quality controls, and in-stream controls.</li> </ul> <p>Identify the key steps in the process that will be used to develop the Hydromodification Management Plan. Examples of steps that should be considered include:</p> <ul style="list-style-type: none"> <li>• Development of problem statement and objectives;</li> <li>• Review of literature and data availability;</li> <li>• Characterization of watershed and future development patterns;</li> <li>• Determination of assessment methodology;</li> <li>• Development of criteria and guidance; and</li> <li>• Development of an implementation strategy.</li> </ul>
11	BMP # PC-5	Long-Term Watershed Protection	While the SWMP discusses long-term watershed protection within the context of the General Plan, it does not discuss incorporating long-term watershed protection into other planning processes (land use policies, plans, ordinances, guidance manuals, development project review procedures, etc.). To ensure the	<p>Include in BMP # PC-5 a discussion stating how and when the City will:</p> <ul style="list-style-type: none"> <li>• Develop where feasible quantifiable measures that indicate how the City's watershed protection efforts relative to stormwater management achieve desired watershed conditions;</li> <li>• Evaluate existing watershed</li> </ul>

Item Number	SWMP Section	Subject	Issue	Required Revisions
			goal of long-term watershed protection is achieved, the City must develop quantifiable measures for watershed protection as part of this planning.	<p>protection planning efforts, including: land use policies, plans, ordinances, guidance manuals, development project review procedures, etc.; and</p> <ul style="list-style-type: none"> <li>Adapt or change the existing efforts as needed to achieve long-term watershed protection.</li> </ul>
12	Addressing TMDLs in the SWMP	Program Goals	<p>The SWMP states that a “goal of the SWMP is not to target BMPs to specific geographic areas but to implement the BMPs throughout the management area in order to reduce controllable sources of sediment and pathogens associated with the storm drain system to the maximum extent practicable.”</p> <p>However, the SWMP must also acknowledge another goal, which is to achieve wasteload allocations in watersheds where TMDLs have been adopted. The City may need to implement targeted BMPs to achieve this goal.</p>	<p>Include in the SWMP the long term goal of achieving wasteload allocations, as feasible, in watersheds where TMDLs have been adopted. The short term goal can be to eliminate to the maximum extent practicable controllable sources of pollutants for which TMDLs have been adopted that are associated with the storm drain system.</p>
13	Addressing TMDLs in the SWMP	Wasteload Allocation Attainment Programs	<p>The SWMP contains a significant commitment to develop many components of Wasteload Allocation Attainment Programs for sediment and pathogens TMDLs within the City. However, the SWMP does not include commitments to implement several critical components of Wasteload Allocation Attainment Programs. The</p>	<p>Include a BMP committing the City to develop, submit, and implement Wasteload Allocation Attainment Programs for the TMDLs within the City’s jurisdiction. Clarify that the Wasteload Allocation Attainment Programs will be developed to address controllable sources associated with the stormwater system, but may be watershed-specific or jurisdiction-wide. Identify the</p>

Item Number	SWMP Section	Subject	Issue	Required Revisions
			<p>City must commit to implementing these Wasteload Allocation Attainment Program components in order to help ensure wasteload allocations will be achieved within the specified timeframe.</p> <p>We strongly recommend compiling all aspects of the Wasteload Allocation Attainment Programs in a single location within the SWMP, to better support reporting and review of progress towards achieving wasteload allocations.</p>	<p>specific items that the Wasteload Allocation Attainment Programs will address, including:</p> <ul style="list-style-type: none"> <li>• An implementation and assessment strategy;</li> <li>• Source identification and prioritization;</li> <li>• BMP identification, prioritization, implementation (including schedule), analysis, and assessment;</li> <li>• Monitoring program development and implementation (including schedule);</li> <li>• Reporting and evaluation of progress towards achieving wasteload allocations;</li> <li>• Coordination with stakeholders; and</li> <li>• Other pertinent factors.</li> </ul>
14	BMPs # TMDL-3 and 8	Non-Committal Language	The SWMP indicates that critical aspects of these BMPs will <i>possibly</i> be implemented. Such language does not provide incentive for implementation of the BMPs and fails to ensure that the BMPs will be implemented.	Remove the words <i>possible</i> and <i>possibly</i> from the BMP descriptions.
15	SWMP Program Management	Effectiveness Assessment	The SWMP states that an effectiveness assessment strategy will be developed in Year 4, but does not commit to continuing assessment of Level 1 outcomes during that time. At a minimum, Level 1 outcomes must continue to be assessed while an effectiveness assessment strategy is	Include a statement that the City will continue to assess Level 1 outcomes during Year 4.

Item Number	SWMP Section	Subject	Issue	Required Revisions
16	SWMP Program Management	Effectiveness Assessment	developed. The SWMP includes a commitment by the City to use Level 1 outcomes, but does not identify the extent to which Level 1 outcomes will be used for assessment.	Include a statement that the City will use Level 1 outcomes to assess the effectiveness of all applicable BMPs.
17	SWMP Program Management	Effectiveness Assessment	The SWMP includes a commitment by the City to use the California Stormwater Quality Association's <i>Municipal Stormwater Program Effectiveness Assessment Guidance</i> as the basis for its effectiveness assessment strategy, but does not discuss integrated assessments, which are a critical component of the guidance. Integrated assessment, or the establishment of links between BMP/program implementation and improvement in water quality and beneficial use conditions, is necessary in order to have confidence that activities being implemented are having a positive effect on water quality and beneficial uses.	Include a statement that the effectiveness assessment strategy will seek to identify links between BMP/program implementation and improvement in water quality and beneficial use conditions.
18	Multiple	Non-Committal Language	The SWMP states that the City will develop several BMPs depending upon budget conditions. Such language does not provide incentive for implementation of the BMPs and fails to ensure that the BMPs will be implemented.	Remove the language <i>budget dependent</i> and similar language from BMPs # MO-3, MO-8, PE-17, PE-18, PC-7, and other BMPs where the language appears.

Item Number	SWMP Section	Subject	Issue	Required Revisions
19	BMP # PC-1	Wetland Buffers	The SWMP is unclear regarding the application of buffer areas to City development projects that may impact wetlands.	Include language stating that on City owned property, no new City development projects shall be permitted within 30 feet of a wetland without an approved project-specific habitat management plan and a site-specific water quality management plan.
20	Long-Term Watershed Protection	Stream Restoration	The SWMP does not identify stream restoration as a long-term goal of the City.	Include language stating: To allow for the possible future-restoration of streams where sections have been placed in underground culverts, the City will encourage the restoration of these sections to a continuous state, over the long term. Developed gaps along such corridors should be acquired and restored, when feasible.

**REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL COAST REGION**

**Response to Comments  
City of Santa Cruz  
Storm Water Management Program October 2008**

**April 14, 2009**

**I. Introduction**

This document includes Regional Water Quality Control Board, Central Coast Region (Water Board) staff responses to the comments received during the Water Board's 60-day public comment period (November 25, 2008 – January 26, 2009) for the City of Santa Cruz (City) Storm Water Management Program (SWMP) and Water Board staff's Draft Table of Required Revisions. Water Board staff received comments from the following organizations:

- City of Santa Cruz
- Resource Conservation District Santa Cruz County, Ecology Action, Coastal Watershed Council, Save Our Shores, Pajaro Valley Water Management Agency, Soquel Creek Water District (as a group)
- Monterey Coastkeeper
- Monterey Bay National Marine Sanctuary
- Sierra Club

**II. Comments by the City of Santa Cruz**

Water Board staff received two sets of comments from the City regarding the SWMP. Water Board staff responds to the first set of City comments in this section; these comments address each required revision included in Water Board staff's November 13, 2008 Draft Table of Required Revisions. The City's second set of comments, which primarily question the legality of the required revisions, are addressed in section III below.

Water Board staff has reviewed the City's comments and intended SWMP modifications regarding each required revision. Water Board staff finds the City's comments and SWMP modifications addressing Required Revision Nos. 1 through 5, 7, 8, 11, 12, and 14 through 18 to meet the intent of those required revisions. Water Board staff concurs with the comments and does not propose any changes to these required revisions. However, Water Board staff prepared responses to the City's comments regarding the remaining required revisions.

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Comment 1: Regarding Required Revision No. 6, the City's approach to development of alternative interim hydromodification management criteria will build upon the existing

base of technical knowledge, combined with knowledge of local watershed and stream conditions, to create a management plan and criteria that are technically sound and appropriate for the City. A comprehensive plan will be developed that is not just focused on site-level controls, but includes consideration of land use planning policies, stream riparian buffer zone protection, and stream susceptibility to erosive forces. The City will also hold stakeholder meetings to encourage public involvement in the process and incorporate public input into the plan.

The City will update the BMP to include reference to our alternative criteria development plan previously approved by the RWQCB and will include this alternative plan as an appendix to the SWMP. The text will also be updated to state that our proposed alternative criteria will 1) provide numeric thresholds that demonstrate optimization of infiltration in order to approximate natural infiltration levels, and 2) achieve post-project runoff discharge rates and durations that do not exceed pre-project levels, where increased discharge rates and durations will result in increased potential for erosion or other significant adverse impacts to beneficial uses.

The City will not commit to providing hydromodification criteria as specified in the bulleted items contained in your comment #6.

Response 1: Water Board staff intended Required Revision No. 6 to provide municipalities with the flexibility to develop their own criteria appropriate for the conditions within their jurisdictions. Water Board staff designed the criteria included in the required revision as a "backstop," to be used only in the event municipalities fail to develop their own protective interim hydromodification control criteria. The plan discussed by the City in its comment is in line with this approach. Indeed, the City's plan is similar to one recently pursued by the City of Santa Maria and approved by the Water Board Executive Officer. As such, Water Board staff has modified Required Revision No. 6 to match the language used for the City of Santa Maria. This allows the City to pursue its approach for developing interim hydromodification control criteria, while also providing assurance that the criteria developed will be effective and consistent with previously approved methods.

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Comment 2: Regarding Required Revision Nos. 9 and 10, as described in Chapter 6 of the SWMP the City anticipates that our proposed alternative interim hydromodification criteria will become our long term hydromodification control criteria with revisions and updates made over time based on effectiveness assessments and general industry knowledge. This long term criteria will be in place and implemented by the end of year 5.

Response 2: Nothing is preventing the City from revising and updating its interim hydromodification control criteria so that it becomes its long term hydromodification control criteria. However, the long term hydromodification control criteria must be based on a technical assessment of the impacts of development on the City's watersheds, so that the criteria is protective of the watershed conditions within the City. Likewise, to help ensure appropriate and effective criteria are developed, the City must identify the key steps in the process it will be following to develop the criteria as part of a Hydromodification Management Plan (HMP). As such, Water Board staff has retained the language of Required Revision Nos. 9 and 10 and will review the City's final SWMP submittal for compliance with the required revisions.

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Comment 3: Regarding Required Revision No. 13, the City's SWMP has been developed specifically to implement recommendations and address the controllable stormwater related sources identified in the TMDL implementation plans and supporting documents. These documents already contain most of the elements of wasteload allocation attainment plans. The remaining elements will be provided through the effectiveness assessment of the Stormwater Program and through the triennial review of overall TMDL implementation conducted by the water board and local staff.

Response 3: The Water Board has identified several water bodies within the City as impaired and not meeting water quality standards. As a result, the Water Board has developed Total Maximum Daily Loads (TMDLs) to restore these water bodies. The TMDLs identify the City's municipal separate storm sewer system (MS4) as a source contributing to the impairments and assigns the City wasteload allocations designed to help restore the water bodies' water quality and beneficial uses. Since the City's MS4 is documented as a source of impairment, the City's SWMP must be held to a high standard to ensure the City ultimately achieves its wasteload allocations and no longer contributes to these water body impairments. Indeed, the TMDLs set forth the expectation that the City achieve its wasteload allocations within specified timeframes. This approach stands in contrast to the typical regulatory approach applied to municipal storm water, which calls for implementation of best management practices (BMPs) according to an iterative process of continual improvement, with no associated timelines for achieving water quality standards. The City's contribution to the impairment of these water bodies, combined with the expectation that it achieve its wasteload allocations within specified timeframes, necessitates a systematic approach to implementation of the SWMP as it relates to the discharge of pollutants associated with impairments.

The General Permit and federal regulations indicate that such an approach is appropriate. The General Permit requires that SWMPs be "designed to reduce the discharge of pollutants from the permitted MS4 to MEP [maximum extent practicable] and *protect water quality*" (emphasis added).<sup>1</sup> Where water quality is not protected, as is the case where TMDLs have been developed, the SWMP must be specifically tailored to correct the impairments. The Preamble to the Phase II federal storm water regulations states: "Small MS4 permittees should modify their programs if and when available information indicates that water quality considerations warrant greater attention or prescriptiveness in specific components of the municipal program."<sup>2</sup>

Water Board staff developed the Wasteload Allocation Attainment Programs as a means to systematically guide municipalities towards attainment of their wasteload allocations. Without a systematic approach of this type, attainment of wasteload allocations is unlikely. This belief is supported by the contents of the City's SWMP. For example, the City's SWMP typically identifies basic BMPs to be implemented to attain its wasteload allocations. While some of these BMPs are likely to be beneficial, the connection between others and wasteload reductions is unclear. In addition, it appears that many of these BMPs are currently implemented, yet impairments continue, indicating that greater efforts are warranted. Moreover, these BMPs do not address all of the issues identified in the TMDL, such as monitoring. Finally, the City's list of BMPs does not include numerous other BMPs that can control fecal indicator bacteria and associated

<sup>1</sup> SWRCB. 2003. Order No. 2003-0005-DWQ. P. 8.

<sup>2</sup> 64 FR 68753

pathogens, such as targeting enforcement in popular dog walk areas; discouraging congregation of wildlife caused by humans; constructing runoff treatment systems in problem areas; reducing dry weather flows; implementing grease control programs; and dumpster and trash can management to prevent congregation of wildlife. The insufficient BMP discussion included in the SWMP indicates that a more systematic approach, as represented by the Wasteload Allocation Attainment Programs, is warranted.

On a broader scale, the SWMP does not exhibit the rationale used for BMP selection or draw connections between those BMPs selected and eventual wasteload allocation attainment. Without this level of planning, the challenge of achieving wasteload allocations within specified timeframes is not likely to be met. The Wasteload Allocation Attainment Program requirements are expressly designed to ensure adequate planning is conducted so that the City's TMDL implementation efforts are effective. The main steps to be followed for Wasteload Allocation Attainment Program development and implementation are activities that are basic to successfully correcting water quality problems. The Wasteload Allocation Attainment Program requirements specify that the City address in its SWMP the following items as they apply to TMDLs: (1) An implementation and assessment strategy; (2) source identification and prioritization; (3) BMP identification, prioritization, implementation (including schedule), analysis, and assessment; (4) monitoring program development and implementation (including schedule); (5) reporting and evaluation of progress towards achieving wasteload allocations; and (6) coordination with stakeholders. The United States Environmental Protection Agency (USEPA) forwards similar approaches for TMDL implementation in its *Draft TMDLs to Stormwater Permits Handbook*, which discusses BMP review and selection, establishing linkages between BMP implementation and load reductions, effectiveness assessment, and BMP/outfall/receiving water monitoring.<sup>3</sup>

Ultimately, the Wasteload Allocation Attainment Programs place the responsibility for program development, assessment, improvement, and success on the municipalities. Placement of responsibility on the municipalities is appropriate, since the municipalities are the parties contributing to the water quality impairment. This approach is also consistent with the Water Board's approach of requiring plans for control of pollutants from other sources identified by TMDLs, such as sanitary sewer collection and treatment systems and domestic animal discharges. The Water Board will collectively assess the progress of the various sources towards achieving receiving water quality standards as part of its triennial review, but each source must be responsible for assessing its own progress towards achieving its wasteload allocation. Without progress by each responsible party, the Water Board will not be able to demonstrate progress towards correcting the impairment. The process of planning, assessment, and refinement outlined by the Wasteload Allocation Attainment Programs helps ensure continual improvement and ultimate attainment of water quality standards at impaired receiving waters. Since the City's SWMP is the regulatory mechanism through which the City's wasteload allocations must be attained, inclusion of the Wasteload Allocation Attainment Programs in the SWMP is appropriate. This will be especially important as the complexity of achieving wasteload allocations increases when more and more TMDLs are adopted.

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<sup>3</sup> USEPA. 2008. *Draft TMDLs to Stormwater Permits Handbook*. Chapters 5 and 6.

However, Water Board staff agrees that application of Wasteload Allocation Attainment Programs on a jurisdiction-wide scale could be beneficial to the City by simplifying management efforts and reducing reporting. In addition, such an approach could be beneficial to water quality in areas outside those addressed by TMDLs. Water Board staff also understands that some sources (such as wildlife) that contribute to impairments may not be controllable. For these reasons, Water Board staff has modified Required Revision No. 13 to acknowledge uncontrollable sources and allow for jurisdiction-wide Wasteload Allocation Attainment Programs.

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### **III. Legal Comments by the City of Santa Cruz**

The City submitted additional comments which primarily challenge the legality of the required revisions. Water Board staff has grouped these comments into eight main categories in order to decrease repetitiveness of responses. Due to the length of the comments, the comments are summarized here. Please refer to the City's original comment letter for the original comments and sequencing.

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#### ***A. Flexibility to Address Local Conditions***

Comment 4: The City comments that the required revisions associated with interim hydromodification control criteria, long-term hydromodification control criteria, long-term watershed protection, and Wasteload Allocation Attainment Plans are inappropriate because they are inflexible and are typically region-wide, rather than site specific. The City further comments that the required revisions do not reflect the characteristics of the City and are therefore inefficient, possibly ineffective, and wasteful of public and private resources. In addition, the City states that the required revisions are inconsistent with the maximum extent practicable (MEP) standard and associated State Water Resources Control Board (State Water Board) and United States Environmental Protection Agency (USEPA) guidance, which emphasize that MEP is meant to be a flexible and site specific standard.

Response 4: The City has challenged required revisions associated with interim hydromodification control criteria, long-term hydromodification control criteria, long-term watershed protection, and Wasteload Allocation Attainment Programs. Each of these required revisions provide the City with ample opportunity to develop components of their program that are site specific and directly tailored to the climate, hydrology, soil, and other conditions within the City and its surrounding watersheds. The required revisions identify standards that the City's SWMP must achieve, but do not dictate how the City's SWMP must be formulated in order to achieve those standards. This approach is designed to provide the City flexibility in developing the components of its program, while maintaining minimum standards that are crucial for ensuring an accountable and effective program.

For example, the required revisions state that the City's interim hydromodification control criteria must be as effective as Water Board staff's criteria, which staff originally referenced in its February 15, 2008 letter. The City is free to choose its own criteria, provided it can demonstrate that the criteria are reasonably equivalent to the Water Board staff's criteria. The flexibility of this approach is demonstrated by recent interim hydromodification control proposals from the City of Santa Barbara and the City of Santa

Maria. Both of these cities developed acceptable interim hydromodification control criteria (or methodology for development of such criteria) that are appropriate for their specific jurisdictions, while differing from the Water Board's criteria. The required revision for long-term hydromodification control criteria incorporates a similar approach, identifying the information that must be assessed during criteria development, while providing *recommendations* regarding form, content, and development methodology for the criteria. It is worth also pointing out that the entire exercise of developing long-term hydromodification control criteria is designed to ensure that the criteria developed by the City are tailored to be protective of the City's unique receiving water conditions. Similarly, the required revision addressing long-term watershed protection only states that the City's SWMP must describe how and when it will develop important aspects of its long-term watershed protection measures, leaving the City free to choose its approach for updating its planning processes consistent with long-term watershed protection. Finally, the Wasteload Allocation Attainment Program required revision only outlines a process for the City to follow to achieve its wasteload allocation. The City is free to target sources, implement BMPs, develop assessment methodology, and conduct monitoring in a manner appropriate for its jurisdiction, provided that the efforts can be reasonably expected to achieve progress towards wasteload allocation attainment.

Water Board staff's approach of creating minimum standards, while providing flexibility in achieving those standards, is a sound means for achieving effective stormwater management programs. United States Environmental Protection Agency (USEPA) contractor TetraTech, recommends:

"One factor for the state to consider when writing permit language is to be clear enough to set appropriate standards and establish required outcomes, but still allow permittees to be creative and innovate solutions to stormwater management that are appropriate for their situations."<sup>4</sup>

Likewise, the National Research Council finds clear standards to be an integral part of effective stormwater management programs when it states:

"If local or state governments required mandatory monitoring or more rigorous and less ambiguous SCMs [stormwater control measures], they would make considerable progress in developing a more successful stormwater control program."<sup>5</sup>

Finally, application of these required revisions does not constitute use of a "one size fits all" approach. On the contrary, the required revisions allow the City to use a broad array of different methodologies and BMPs to achieve the specified standards. Approaches that allow for multitudes of compliance strategies do not comprise rigid "one size fits all" requirements.

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## ***B. Technical Basis and Effectiveness of Hydromodification Criteria***

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<sup>4</sup> TetraTech. 2006. Assessment Report of Tetra Tech's Support of California's Municipal Stormwater Program. P. 22.

<sup>5</sup> National Research Council. 2008. Urban Stormwater Management in the United States. P. 92.

Comment 5: The City comments that the required revision addressing interim hydromodification control criteria has not been demonstrated by the Water Board to be effective or technically feasible, in contravention to the MEP standard and associated State Water Board guidance. The City provided a review by the consulting firm Eisenberg, Olivieri and Associates, Incorporated of the Water Board's three interim hydromodification control criteria in its comment letter. The consultants present concerns with the effectiveness, technical feasibility, and lack of a scientific basis for the criteria. The City also makes the point that other municipalities and interested parties have also questioned the effectiveness and technical feasibility of the Water Board's interim hydromodification control criteria.

The City further comments that the requirement that the City's criteria be "as effective as" the Water Board's criteria is flawed because there has been no discussion or explanation of what it means to be "as effective as" the Water Board's criteria. The City states that it is not feasible to demonstrate criteria being developed by the City will be as effective as Water Board's criteria. The City also questions the Water Board's criteria because they have not been developed or tested locally, and ignore infill and redevelopment issues.

Response 5: Water Board staff chose the interim hydromodification control criteria included in Required Revision No. 6 to be protective across the wide range of watershed conditions present in the Central Coast region. In light of the uncertainty involved with developing criteria applicable to disparate watershed conditions, Water Board staff selected conservative criteria. Water Board staff chose conservative criteria as an appropriate response to hydromodification impacts observed throughout the region.

However, Water Board staff's hydromodification control criteria are intended to provide municipalities with the flexibility to develop their own criteria appropriate for the conditions within their jurisdictions. The criteria of Required Revision No. 6 are a "backstop," to be used only in the event municipalities failed to develop their own protective interim hydromodification control criteria. To help ensure the municipalities develop adequate interim hydromodification control criteria, Water Board staff developed a required revision calling for the municipalities' interim hydromodification control criteria to be "as effective as" the Water Board's criteria. How Water Board staff would review the effectiveness of the City's interim hydromodification control criteria was described in Water Board staff's November 12, 2008 letter to the City, which stated that Water Board staff would:

"Review interim hydromodification control criteria developed by MS4s to ensure that they: (1) Provide numeric thresholds that demonstrate optimization of infiltration in order to approximate natural infiltration levels (such as would be achieved by implementation of appropriate low-impact development practices), and (2) Achieve post-project runoff discharge rates and durations that do not exceed estimated pre-project levels, where increased discharge rates and durations will result in increased potential for erosion or other significant adverse impacts to beneficial uses."

Water Board staff articulated this clarification to provide municipalities with flexibility in developing their interim hydromodification control criteria, while providing assurance that the criteria will be effective. Indeed, City of Santa Maria pursued this route and developed their own SWMP language for interim hydromodification control criteria

development. Water Board staff concurred with the City of Santa Maria's proposal, and enrolled the City of Santa Maria with alternative interim hydromodification control criteria language in their SWMP.

To alleviate the City's concerns regarding assessment of the effectiveness of the City's pending interim hydromodification control criteria, staff has modified Required Revision No. 6 to match the language used for the City of Santa Maria. This provides further flexibility to the City, in that it provides the City with another option for development of interim hydromodification control criteria. Water Board staff expects this modification to provide adequate flexibility to the City to pursue the Santa Cruz County municipalities' interim hydromodification control criteria development approach. Moreover, the language is crafted in a manner that allows the City to develop interim hydromodification control criteria that does not necessitate comparison to Water Board staff's criteria.

This additional option for development of interim hydromodification control criteria should be an effective means for controlling hydromodification. It mirrors the approach implemented by other successful storm water programs, including those in the San Francisco Bay Area and San Diego County. As part of those processes, the approach underwent an extensive review process to ensure its appropriateness and effectiveness.

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### ***C. Existing Program Sufficiency***

Comment 6: The City comments that unlike the contested required revisions, the City's existing Storm Water Management Program is effective, technically feasible, can be implemented with existing limited resources, and enjoys broad community support. The City provides examples of its ordinances that relate to stormwater issues.

Response 6: While the City is to be commended for doing many positive things as part of its stormwater management program, the City's receiving waters do not meet the water quality standards necessary to support beneficial uses. For several of these water quality problems, discharges from the City's MS4 have been identified as contributing to the problem. For example, in the San Lorenzo River Sediment and Fecal Indicator Bacteria TMDLs, the City is identified as a responsible party. Additional documented receiving water impairment potentially attributable to the City include sedimentation in Branciforte Creek. Water Board staff anticipates the Wasteload Allocation Attainment Program and other required revisions will result in improvement in the conditions of these water bodies.

In addition, hydromodification impacts resulting from increased flows from new development and redevelopment have been well documented. Studies have shown that the level of imperviousness in an area strongly correlates with the quality of nearby receiving waters.<sup>6</sup> One comprehensive study, which looked at numerous areas, variables, and methods, revealed that stream degradation occurs at levels of imperviousness as low as 10 – 20%.<sup>7</sup> Stream degradation is a decline in the biological integrity and physical habitat conditions that are necessary to support natural biological diversity. For instance, few urban streams can support diverse benthic communities with imperviousness greater

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<sup>6</sup> 64 FR 68725

<sup>7</sup> Ibid.

than or equal to 25%.<sup>8</sup> As a City with recent rapid growth, water bodies within the City are susceptible to these impacts. Water Board staff has designed the required revisions associated with hydromodification control criteria and long-term watershed protection to prevent these impacts.

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***D. Total Maximum Daily Load Implementation and Wasteload Allocation Attainment Programs***

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Comment 7: The City comments that the Wasteload Allocation Attainment Plans have not been demonstrated to be necessary or effective, in contravention to the MEP standard and associated State Water Board guidance. The City states that many elements of the Wasteload Allocation Attainment Plans have already been addressed in the SWMP. The City also points out that TMDLs are watershed-scale programs that involve multiple land uses, not just those associated with an MS4. As such, the City proposes that TMDL program effectiveness should be accomplished through a comprehensive program that includes all contributing land uses, such as the Water Board's TMDL triennial review process.

Response 7: Please see Response 3.

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***E. Compliance with Federal Regulations and California Water Code Section 13241***

Comment 8: The City comments that the required revisions are not required under the General Permit, which only requires implementation of six minimum control measures. The City also states that the required revisions for hydromodification are not required under the federal regulations, which only recommend control of runoff flows. The City then asserts that the Water Board must comply with Water Code section 13241 when adopting the required revisions, since the required revisions exceed federal requirements.

Response 8: Per the General Permit, SWMPs must describe BMPs and Measurable Goals that will fulfill the requirements of six Minimum Control Measures. Water Board staff recognizes Minimum Control Measures as minimums, above which additional control measures may be required to achieve the MEP and water quality protection standards of the General Permit. The Post-Construction Storm Water Management in New Development and Redevelopment Minimum Control Measure requires the City to "develop, implement, and enforce a program to address storm water runoff from new development and redevelopment projects that disturb greater than or equal to one acre...by ensuring that controls are in place that prevent or minimize water quality impacts."<sup>9</sup> Water Board staff's requirement that the City develop hydromodification controls is consistent with the intent of this Minimum Control Measure, since hydromodification controls specifically address water quality impacts from volume and rate of runoff on downstream water bodies. Indeed, USEPA recommends in the federal regulations that BMPs "attempt to maintain pre-development conditions."<sup>10</sup> As such, the

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<sup>8</sup> Ibid.

<sup>9</sup> State Water Resources Control Board. 2003. Order No. 2003-0005-DWQ. P. 11.

<sup>10</sup> 40 CFR 122.34(b)(5)(iii)

required revisions do not exceed the requirements of the federal regulations, the General Permit, or the MEP standard. The purpose of the proposed required revisions related to hydromodification is to ensure the City's SWMP includes BMPs that will attempt to maintain pre-development runoff conditions.

The City also misapplies the requirements of Water Code section 13241. Water Code section 13241 sets forth factors to be considered in establishing water quality objectives, including the beneficial uses of water, environmental characteristics of the hydrographic unit, water quality conditions that could reasonably be achieved through the coordinated control of all factors that affect water quality, economic considerations, the need for housing, and the need for recycled water. The Water Board is only required to consider the 13241 factors in adopting an National Pollutant Discharge Elimination System (NPDES) permit, where the Water Board orders requirements that are more stringent than federal regulations or guidance. The proposed required revisions do not go beyond federal regulations or guidance, nor is the Water Board adopting a permit (the State Water Board already adopted the statewide permit). The required revisions are necessary to reduce the discharge of pollutants to the MEP standard and to protect water quality. Note that when the Water Board is required to consider the factors, such consideration is not a balancing test; the Water Board must assure that the beneficial uses of waters of the state are protected.

Although not required, the Water Board has considered all of the factors listed in Water Code Section 13241 in reviewing the City's SWMP. The Water Board considered past, present, and probable future beneficial uses of water, which are set forth in the Basin Plan, and found the required revisions to be necessary to attain water quality standards and minimize water quality impacts, as required in the federal regulations. The Water Board considered environmental characteristics of the hydrographic unit in which the City is located (the Big Basin Hydrologic Unit), including the quality of water available thereto and found the required revisions to be appropriate. The proposed required revisions will allow the City up to a year after approval of the SWMP to develop the specific hydromodification controls that will be most effective for the hydrologic unit. The Water Board considered water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area. The Water Board has been addressing the need for hydromodification controls within the Central Coast Region for more than two years. The Water Board has a comprehensive monitoring program, which has provided significant information on the quality of waters within this hydrologic unit. The Water Board has been evaluating the various options for control of water quality conditions affected by post-construction stormwater discharges and has concluded that controlling hydromodification typically associated with urbanization is reasonably achievable and practicable. Without the required revisions, the MEP and water quality protection standards of the General Permit may not be met. The Water Board considered economics and found that the best information available indicates that controlling hydromodification through, among other approaches, implementation of low impact development principles, is technically feasible, practicable, and cost-effective. The Water Board considered the need for developing housing within the region and found that the required revisions will not affect regional housing supply. Hydromodification controls have been applied in this and neighboring regions with no demonstrated effect on housing availability. The use of hydromodification controls will protect water quality, which is necessary to support housing. The Water Board considered the need to develop and use recycled water and found the required revisions would not interfere with development and use of recycled water.

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### **F. Cost Considerations**

Comment 9: The City comments that State Water Board guidance dictates that cost must be considered when applying the MEP standard. The City provides cost estimates for development and implementation of hydromodification criteria, Wasteload Allocation Attainment Plans, and effectiveness assessments, and states that it does not have adequate funding for these efforts or additional staffing needed for implementation. The City also points out that significant costs would also be incurred due to additional engineering analysis and reviews, reduction in developable areas, and incorporation of LID practices into project design. The comment that the effectiveness and benefit to be received from the Water Board staff's "required revisions" has not been demonstrated is also made by the City. In addition, the City cites USEPA regarding limited information on the costs and effectiveness of LID measures.

The City also states that the level of implementation required by the required revisions is in contravention to State Water Board and USEPA guidance found in the Fact Sheet to the General Permit and the federal regulations. As such, the City suggests the Water Board should wait before adopting the required revisions for the State Water Board to develop a new General Permit and USEPA to evaluate the Phase II stormwater program. The City also states that in approving Measure E, the City's residents desire actions that directly improve water quality, rather than planning actions or studies.

Response 9: The required revisions are consistent with the MEP and water quality protection standards of the General Permit. Regarding the MEP standard, the State Water Board states: "To achieve the MEP standard, municipalities must employ whatever BMPs are technically feasible (i.e., are likely to be effective) and are not cost prohibitive. The major emphasis is on technical feasibility."<sup>11</sup> Each of the required revisions contested by the City is technically feasible. Interim and/or long-term hydromodification control criteria have been developed in many locations throughout the country, including the San Francisco Bay Area and San Diego County. In addition, the required revision addressing interim hydromodification control criteria has been revised to provide additional development options which further assure technical feasibility. The Center for Watershed Protection's *Managing Stormwater in Your Community: A Guide to Building an Effective Post-Construction Program* (Chapter 3) is full of examples of implementation of long-term watershed protection concepts. The required revision for Wasteload Allocation Attainment Program development simply requires the City to follow standard steps in addressing its contributions to impaired water bodies, consistent with approaches and examples forwarded by USEPA in its *Draft TMDLs to Stormwater Permits Handbook*.

Likewise, the required revisions at question conform with USEPA and State Water Board requirements and guidance, further indicating their appropriateness and consistency with the MEP standard. The required revisions addressing interim and long-term hydromodification control criteria and long-term watershed protection conform with the General Permit requirement that the Permittee must: "Develop, implement, and enforce a program to address storm water runoff from new development and redevelopment

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<sup>11</sup> SWRCB. 1993. Memorandum: Definition of Maximum Extent Practicable.

projects [...]”<sup>12</sup> Section B.2.a of Attachment 4 of the General Permit also requires “Post-development storm water runoff discharge rates shall not exceed the estimated pre-development rate for development where in increased peak storm water discharge rate will result in increased potential for downstream erosion.” USEPA expands on this requirement, stating that municipalities should “attempt to maintain pre-development runoff conditions.”<sup>13</sup> USEPA also addresses long-term watershed protection concepts, recommending municipalities “adopt a planning process that identifies the municipality’s program goals [...]” and assess “existing ordinances, policies, programs and studies that address storm water runoff quality.”<sup>14</sup> The required revisions addressing Wasteload Allocation Attainment Programs are also consistent with USEPA guidance, which states: “Small MS4 permittees should modify their programs if and when available information indicates that water quality considerations warrant greater attention or prescriptiveness in specific components of the municipal program.”<sup>15</sup>

While technically feasible and in line with USEPA and State Water Board requirements and guidance, the required revisions are also affordable, further exhibiting their appropriateness and consistency with the MEP standard. San Diego County municipalities recently developed countywide interim hydromodification control criteria for approximately \$50,000-100,000.<sup>16</sup> Assuming a similar effort by the Santa Cruz County municipalities, with costs divided among the five municipalities, this equates to \$10,000-20,000 per municipality. This estimate is most likely higher than necessary for Santa Cruz County, due to the size of San Diego County and the rigorous methodology used there for criteria development. In addition, the City has been provided the option in Required Revision No. 20 of using interim hydromodification control criteria that has been developed by other cities and previously approved by the Water Board. Use of this option for interim hydromodification control criteria should minimize expenditures significantly.

Consulting firm Geosyntech<sup>17</sup> has estimated the cost for developing long-term hydromodification control criteria using an approach including field work, developing an Erosion Potential ratio standard, developing flow rate and duration control criteria, and writing a supporting technical report as approximately \$200,000-300,000 for the first watershed studied, and \$70,000-100,000 for each watershed studied thereafter.<sup>18</sup> Assuming three representative areas or watersheds would require study in Santa Cruz County, such a scenario could result in costs estimated to be \$340,000-500,000. However, costs to develop a Hydromodification Management Plan for the Suisun/Fairfield area are reported to have cost less (approximately \$100,000), in part due to cost savings realized through the use of previously developed methodologies.<sup>19</sup> Dividing these costs among five municipalities over five years, annual costs to develop long-term hydromodification control criteria would be \$4,000-20,000. In light of the

<sup>12</sup> SWRCB. 2003. Order No. 2003-0005-DWQ. P. 11.

<sup>13</sup> 40 CFR 122.34(b)(5)(iii)

<sup>14</sup> Ibid.

<sup>15</sup> 64 FR 68753

<sup>16</sup> Sara Agahi, County of San Diego, personal communication June 12, 2008.

<sup>17</sup> Geosyntech was a primary consultant in developing the hydromodification control criteria currently used in Santa Clara County.

<sup>18</sup> San Diego Regional Water Quality Control Board. 2006. Updated Preliminary Responses to Questions on Tentative Order No. R9-2006-0011 From the Building Industry Association of San Diego County. P. 11.

<sup>19</sup> Ibid.

threat posed to beneficial uses by hydromodification, Water Board staff finds these costs to be reasonable. However, it is important to note that efforts to assist the municipalities in hydromodification control criteria are underway. The Central Coast Low Impact Development Center is currently pursuing Proposition 84 grant funding to assist with development of long-term hydromodification control criteria for the entire Central Coast region. Water Board staff expects this effort, if funded, to greatly reduce costs to municipalities for development of hydromodification control criteria. Water Board staff understands the City of Santa Cruz and the other Santa Cruz County municipalities have agreed to join this collaborative effort.

Moreover, Water Board staff does not anticipate additional review of development permit applications to be cost prohibitive. While additional training of review staff will be necessary, numerous municipalities throughout the country and state have implemented similar measures, indicating that such efforts are practicable. Costs to development projects can also be minimized through implementation of low impact development measures. For example, USEPA's December 2007 study, *Reducing Stormwater Costs Through LID Strategies and Practices*, found that;

"...applying LID [low impact development] techniques can reduce project costs and improve environmental performance. In most cases, LID practices were shown to be both fiscally and environmentally beneficial to communities. In a few cases, LID project costs were higher than those for conventional stormwater management practices. However, in the vast majority of cases, significant savings were realized due to reduced costs for site grading and preparation, stormwater infrastructure, site paving, and landscaping. Total capital cost savings ranged from 15 to 80 percent when LID methods were used, with a few exceptions in which LID project costs were higher than conventional stormwater management costs.... in all cases, there were benefits that this study did not monetize and did not factor into the project's bottom line. These benefits include improved aesthetics, expanded recreational opportunities, increased property values due to the desirability of the lots and their proximity to open space, increased total number of units developed, increased marketing potential, and faster sales."

Similarly, the required revisions addressing TMDL implementation and Wasteload Allocation Attainment Program development are not cost prohibitive. The steps required for Wasteload Allocation Attainment Program development are standard planning efforts necessary to address a known water quality problem. Water Board staff anticipates that these efforts can be implemented in-house at the City. For example, City staff can identify and prioritize locations of sources within the jurisdiction, and identify and prioritize BMPs to address those sources. City staff can also conduct literature research and use California Stormwater Quality Association (CASQA) effectiveness assessment approaches to exhibit the connection between BMP implementation and wasteload allocation attainment. Likewise, numerous resources are available to help City staff with development of a monitoring program. As mentioned above, CASQA guidance is also available to aid City staff with development of methodology for assessing the effectiveness of measures to be implemented. Since the timeline that has been discussed for development of the Wasteload Allocation Attainment Program is three years, Water Board staff does not find the efforts discussed above to be an undue burden or cost prohibitive. For example, suppose the above efforts could be completed by one person working full time for one month. Assuming the City spends \$100,000

annually on that person, and the month's worth of effort is spread over three years, the cost would be approximately \$2,800 annually. In light of the ongoing impairments within the City, Water Board staff finds this cost to be reasonable in order to have a detailed plan and schedule for correcting the impairment. Moreover, the City has argued that several of the efforts related to Wasteload Allocation Attainment Program development have already been conducted, further reducing any costs that may be incurred.

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### ***G. Public Acceptance***

Comment 10: The City comments that the required revisions have not gained public acceptance, in contravention to the MEP standard and associated State Water Board guidance. The City cites a joint letter from several community groups and water agencies to exhibit the level of public support garnered by the City's version of the SWMP.

Response 10: Water Board staff has conducted a substantial public participation process in its efforts to develop the required revisions and enroll the City under the General Permit. Starting in December 2007, staff presented to the Water Board and the public its strategy for enrollment of Phase II municipalities. As part of the enrollment strategy, Water Board staff incorporated two time periods where the public could review and comment on the draft SWMP and draft required revisions. A public "water quality assessment" meeting was also held by Water Board staff on May 16, 2008, during which the public was encouraged to provide input on the City's pollutants of concern; information which was later used in the shaping of the required revisions.

The success of these efforts has been demonstrated by the significant reduction in the number of contested required revisions. Water Board staff initially developed 48 required revisions regarding the City's SWMP; the City is now only contesting four required revisions. In addition, while the City continues to contest some of the required revisions, Water Board staff's required revisions are not without public support. For example, Monterey Coastkeeper states: "We fully support the inclusion of the language included in the Board staff's Required Revisions from the November 13, 2008 letter, item no. 6, in which the goals and expected effectiveness of the alternative interim hydromodification criteria are stated explicitly."

It is also worth noting that for many of the required revisions, Water Board staff has agreed to lengthy timeframes for developing the program components. For example, Water Board staff has concurred with a five-year schedule for development of a Hydromodification Management Plan, a four-year schedule for development of a complete effectiveness assessment strategy, and a three-year schedule for development of Wasteload Allocation Attainment Programs. These extended timelines provide the City with ample time to develop any further needed consensus on the implementation of these program components.

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### ***H. Unfunded Mandate***

Comment 11: The City considers the required revisions to be an unfunded state mandate because the City believes the required revisions exceed federal requirements. The City cites the Government Code and court cases to support its position.

Response 11: The required revisions do not constitute an unfunded state mandate. The contention that NPDES permits and their requirements are unfunded state mandates has been repeatedly heard and denied by the State Water Board (see State Water Board Order Nos. WQ 90-3 and WQ 91-08). The State Water Board addressed the unfunded state mandate argument relative to stormwater when it considered the appeal of the Regional Water Quality Control Board, Los Angeles Region's (Los Angeles Water Board) Standard Urban Stormwater Mitigation Plan (SUSMP) requirements. The Los Angeles Water Board's SUSMP requirements are municipal storm water permit requirements for new development and redevelopment that are similar to many of the required revisions. The unfunded state mandate argument was summarily rejected by the State Water Board in that instance (State Water Board Order WQ 2000-11).

The required revisions are not an unfunded state mandate for several reasons. First, the required revisions do not exceed the requirements of federal law. All of the required revisions are necessary to comply with federal law mandates. The Clean Water Act requires that MS4s reduce the discharge of pollutants to the MEP. The Phase II municipal storm water regulations require development of SWMPs that will reduce the discharge of pollutants to the maximum extent practicable and protect water quality. All the required revisions are necessary to achieve the MEP standard and protect water quality, and therefore do not exceed federal law.

Any discretion exercised by the Water Board in implementing federal law in the required revisions is in accordance with federal law and guidance. For example, required revisions regarding hydromodification are consistent with the Preamble to the Phase II federal NPDES storm water regulations, which states: "Consideration of the increased flow rate, velocity, and energy of storm water discharges following development unavoidably must be taken into consideration in order to reduce the discharge of pollutants, to meet water quality standards, and to prevent the degradation of receiving streams. EPA recommends that municipalities consider these factors when developing their post-construction storm water management program."<sup>20</sup> Likewise, the required revisions related to TMDL implementation (Wasteload Allocation Attainment Programs) are consistent with USEPA guidance, which states: "NPDES permit conditions must be consistent with the assumptions and requirements of available WLAs [wasteload allocations]."<sup>21</sup> The required revisions, issued to implement a federal program, do not become an unfunded state mandate simply because the Water Board appropriately exercised its discretion in defining the particulars. The Water Board's implementation of a federal program according to federal law and guidance does not constitute an unfunded state mandate.

Second, the required revisions are not an unfunded state mandate because the City has the authority to levy service charges, fees, or assessments to fund their efforts to comply with the required revisions. Government Code section 17556(d) provides that an unfunded state mandate will not be considered in such instances. Municipalities have ample governmental authority to levy service charges, fees, or assessments to pay for stormwater management programs that reduce pollutants to the MEP. Municipalities also have the authority to levy taxes to provide adequate funding for storm water

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<sup>20</sup> 64 FR 68761

<sup>21</sup> USEPA. 2002. Memorandum: Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs.

management programs. Lack of political determination to impose taxes or fees for storm water management does not constitute lack of authority.

Third, the required revisions are not an unfunded state mandate because they implement a federal program, rather than a state program. State subvention is not required when the federal government imposes the costs of a new program or a higher level of service. (Cal. Const. Art XIII B). Citing case law, the City attempts to assert that any use of discretion on the part of the Water Board in implementing a federal program constitutes a state mandate. This is a misrepresentation of the case law. In *Hayes v. Commission on State Mandates*, the Court only contemplates whether participation itself in a federal program is "a matter of true choice" in order to determine if an unfunded state mandate has occurred. It does not contemplate whether any use of discretion on the part of a regulatory agency in implementing the necessary details of a federal program constitutes an unfunded state mandate. Therefore, the case does not support the City's claims.

Finally, a central purpose of the principle of state subvention is to prevent the state from shifting the cost of government from itself to local agencies. (*Hayes v. Commission on State Mandates*, 11 Cal. App. 4<sup>th</sup> 1564, 1581 (1992)). In this instance, no such shifting of the cost of government has occurred. The responsibility and cost of complying with the Clean Water Act and Phase II NPDES municipal storm water regulations lies squarely with the local agencies which own and operate MS4s, not with the State. The State cannot shift responsibilities and costs to local agencies when the responsibilities and costs lie with the local agencies in the first place.

As exhibited, the City's claim that the required revisions are an unfunded state mandate fails on many fronts. The required revisions do not necessitate subvention to the City by the State.

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#### **IV. Comments by the Resource Conservation District Santa Cruz County, Ecology Action, Coastal Watershed Council, Save Our Shores, Pajaro Valley Water Management Agency, Soquel Creek Water District**

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Comment 12: Reducing hydromodification, promoting watershed restoration, protecting riparian corridors and promoting groundwater recharge are all elements that have been a priority of the municipalities and the local community for many years and are well addressed in the general plans, policies, ordinances and stormwater programs of the municipalities. There have been over 15 watershed assessments and plans for Santa Cruz County for which these municipalities have participated on TACs and Steering Committees and have committed staff and local match resources.

We have identified the need for a regional hydromodification effort for Santa Cruz County to better address our needs to protect and restore hydrologic function. Based on our extensive local knowledge of our watersheds we believe that something similar to the Stream Channel Mapping and Classification Systems: Implications for Assessing Susceptibility to Hydromodification Effects in Southern California may be a productive approach. We are also evaluating the watershed restoration/enhancement potential for exchanging "hydromodification credits". Restoration of hydrologic functions in some parts of the watershed while promoting infill and smart growth in other parts will likely be

a key component of overall ecological and hydrologic watershed restoration while at the same time addressing land use practices that reduce vehicle miles and reduce greenhouse gas emissions.

We look forward to evaluating and strengthening our cooperative efforts through implementation of the proposed stormwater plans. We are already working closely with the municipalities to implement programs to provide more public education, outreach and technical assistance to property owners regarding, erosion control, runoff reduction and low impact development. Stormwater management and recharge protection are key elements of our Integrated Regional Water Management Plan and are component projects funded by our current Prop 50 IRWM grant. Recommendation: Utilize regional hydromodification study results to clearly define appropriate adaptive management strategies over time.

Response 12: The required revisions provide adequate flexibility to allow for the hydromodification control approaches suggested in the comment. The required revision addressing interim hydromodification control criteria allows municipalities to develop their own criteria, provided it is as effective as Water Board staff's proposed criteria. In addition, this required revision has been modified to increase flexibility by providing additional options for developing the criteria. This modification clearly allows for municipalities to develop applicability criteria, which can be used to implement a "hydromodification credit" system. Likewise, the required revision for development of long-term hydromodification control criteria only specifies the type of technical assessment and processes which must be used to develop the criteria, together with recommendations for the form the criteria should take. This provides ample flexibility for municipalities to use an approach similar to the one being developed by the Southern California Coastal Water Research Project. Finally, nothing in the required revisions prevents the municipalities from utilizing regional hydromodification study results to clearly define appropriate adaptive management strategies over time.

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Comment 13: The Santa Cruz County working group (Santa Cruz Watershed Action Group) comprised of municipalities, water agencies and environmental non-profits are working together to develop and promote a watershed-based approach to low impact development (LID) in Santa Cruz County. We have already recognized that in our county, focusing on LID in urbanized areas will not provide the long-term watershed scale benefits that both our community and your Board seek. As such, we are evaluating options for programs that will address LID across multiple land use types. We believe that property owner education and assistance is a key if we are to restore hydrologic function throughout our various watersheds. Recommendation: Consider a watershed based cap and trade model that will maximize watershed scale benefits for water quality, water quantity and hydrologic function.

Response 13: Opportunity exists for application of significant levels of low impact development (LID) techniques to most development and redevelopment projects. However, for some urban infill and redevelopment projects, Water Board staff acknowledges that wide-scale LID application in these cases may not be feasible or cost effective. Similarly, retrofit of existing development to incorporate LID approaches may not always be technically feasible or cost effective. In these cases, a "credit system" or "cap and trade" approach for LID and hydromodification control implementation may be appropriate, provided the approach is implemented in a manner that will achieve healthy

functioning watersheds. The required revisions provide adequate flexibility for the municipalities to pursue these approaches. Water Board staff also intends to continue working with the municipalities to flesh out the details of any such potential program.

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Comment 14: The municipalities have also taken the initiative to work with us in an effective and responsive manner to conduct studies, develop plans and begin implementation of efforts that have subsequently served as the basis for the sediment, pathogen and nutrient TMDLs in the County. We have no doubt of the agencies' intent to achieve the TMDL wasteload allocations to the maximum extent practicable, while at the same time addressing priority pollutants in the other county waters that are not necessarily subject to a TMDL. It should be kept in mind that stormwater management is just one component of most TMDLs, and the agencies have a good history of addressing all aspects and adapting their approaches as needed and as new technology or approaches become available.

While we concur with the overall objectives represented by Wasteload Allocation Attainment Plans (WAAPs), we agree with the municipalities that the requirement for separate WAAPs for each TMDL and each stormwater program detracts from a comprehensive watershed approach and would be an unnecessary and redundant effort. Many of the elements of the WAAPs have been addressed through the preparation of the stormwater plans, the TMDLs and/or the supporting studies that lead to the TMDLs. Ongoing assessment of program effectiveness will be accomplished through the stormwater program effectiveness monitoring and the Regional Board's triennial review of TMDL implementation. Our working group also intends to apply adaptive management to all of our watershed restoration efforts, including the stormwater programs. Recommendation: Build on ongoing efforts to comprehensively and realistically address TMDLs and priority pollutants originating from all sources in all watersheds.

Response 14: The Wasteload Allocation Attainment Programs do not prevent municipalities from comprehensively addressing TMDLs on a watershed basis. They simply serve to ensure that the municipal stormwater component of the TMDL is adequately addressed. This is appropriate, since municipal stormwater is often a principal source of impairment. Wasteload Allocation Attainment Programs can be developed on a watershed or jurisdiction-wide basis, which can alleviate the need for development of multiple Wasteload Allocation Attainment Programs for one pollutant type. Moreover, Wasteload Allocation Attainment Programs are consistent with Water Board staff approaches for addressing other sources, such as sanitary sewer collection and treatment systems and domestic animal discharges. Plans addressing each source identified by a TMDL can be interwoven to serve as a comprehensive watershed-based framework for correcting a water body impairment.

Nor are Wasteload Allocation Attainment Programs redundant. While TMDL implementation plans identify broad categories of sources of impairment, they do not identify specific locations of sources within municipalities' jurisdictions. Likewise, while some special studies may identify potential actions that can be taken to address a TMDL, they do include commitments or a schedule to implement the actions. The municipalities' SWMPs themselves do not close these and other gaps. Many of the BMPs identified as addressing a particular TMDL are standard BMPs, with no discussion provided of how the BMP will address the pollutant of concern or impaired watershed. In addition, the BMPs identified in the SWMPs often do not address all of the

implementation activities previously identified as necessary in the TMDL, such as monitoring. Moreover, the SWMPs do not exhibit the rationale used for BMP selection, or draw connections between those BMPs selected and eventual wasteload allocation attainment.

The comprehensive regulatory approach represented by Wasteload Allocation Attainment Programs is needed to ensure municipal stormwater wasteload allocations will be achieved. TMDLs identify a wasteload allocation to be achieved within a specified timeframe, as opposed to the more typical municipal stormwater regulatory approach of reducing pollutant discharges to the maximum extent practicable without associated timelines for achieving water quality protection. Existence of wasteload allocations and compliance schedules, combined with situations where municipalities are known sources causing or contributing to water quality impairments, exhibits the need for the Wasteload Allocation Attainment Programs' thorough regulatory approach.

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Comment 15: We are concerned that climate change does not appear to be a consideration in the Board's approach to stormwater management. We are concerned that restoring and retaining healthy watersheds requires that climate change be taken into account. This appears especially true when dealing with hydromodification, LID and the changes in rainfall intensity that may result from climate change.

The Board is suggesting that municipalities use long-term historical precipitation records as the basis for developing hydromodification standards and plans. Climate models indicate that the use of such historical data will not necessarily provide an accurate portrayal of future precipitation patterns or events. Basing future standards on historical weather patterns may not be the best approach for restoring and retaining healthy watersheds. To the extent feasible, we would like to see flexibility and adaptive management strategies incorporated.

Increases in sea level will likely have an effect on the hydrology and ecology of many of our local waterbodies. With significant existing development in this county located in low-lying areas close to the coast, it is critical that we carefully evaluate hydromodification standards and BMPs. Implementing standards and BMPs that apply to current conditions may be inappropriate or even deleterious to the affected watersheds and communities in the future.

Increased air and water temperatures will likely affect a number of endangered species (aquatic and terrestrial). The long-term survival of these genetically unique populations may well require special consideration in terms of land use and water management policies and practices. The possible extirpation of local steelhead populations is an example of one such organism, where innovative watershed-scale approaches to stormwater management may need to be developed. Recommendation: Avoid prescriptive requirements for use of historical rainfall data in hydromodification and LID sizing calculations, and allow for flexibility in such calculations to account for the predicted effects of climate change.

Response 15: The required revisions provide sufficient flexibility for the impacts of climate change to be considered during the development of hydromodification control criteria. Required Revision No. 10 states that an adequate technical assessment of the impacts of development on the City's watersheds will address continuous flow modeling,

which typically involves use of the historical rainfall record, but nothing prevents the municipalities from also incorporating climate change considerations into their assessment. While climate change considerations are important, assessment of historical rainfall patterns are also appropriate.

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## V. Comments by Monterey Coastkeeper

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Comment 16: The Monterey Coastkeeper has been involved in the public process surrounding stormwater in Santa Cruz since mid 2008. We have made every effort to keep an open dialogue with the agencies applying for coverage under the NPDES General Permit in an effort to express our concerns early enough to be productive. The City of Santa Cruz has been especially receptive to our comments and suggestions. We are, for the most part, supportive of the City's stormwater program; we consider it to be one of the more progressive programs out of the plans in the Santa Cruz region. We furthermore would like to note that the City has proactively sought out funding for their program through the passage of Measure E in the November 2008 election—a clear sign from the voting public that stormwater pollution is a priority that needs to be addressed.

Given this mandate, along with the existing requirements of federal and state law, we believe that the City of Santa Cruz has the resources and the public support to enact an effective and widespread stormwater program that includes not only the basics of stenciling storm drains and passing out brochures, but a more comprehensive approach to watershed management that includes strict language committing the City to smart, low impact development, good municipal and industrial practices, and other tangible items that will prevent pollution at the core.

Response 16: The City's SWMP, with required revisions, incorporates a comprehensive watershed management approach that commits to implementing effective measures for control of runoff pollutants and flows. For example, Required Revision Nos. 6 and 10 require development of interim and long-term hydromodification control criteria. Required Revision No. 11 calls for development of long-term watershed protection measures. In addition, Required Revision Nos. 15 through 17 require the City to assess the effectiveness of its BMPs, better ensuring implementation of BMPs that will achieve tangible results.

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Comment 17: For the most part, the Santa Cruz SWMP is thorough and informative. The authors of the plan have clearly made an effort to make the plan tangible and implementable. We particularly appreciate the inclusion of cross referenced ordinances and information, such as a list of department contacts, a thorough series of attachments which include all referenced BMPs, and other documents relevant to the program. This is incredibly helpful, and suggests a welcome transparency. Furthermore, we note a marked improvement on the quality of the SWMP's measurable goals from former drafts; the goals are now, for the most part, quantitative and appropriate indicators of success.

Response 17: Comment noted.

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Comment 18: That said we have several remaining concerns with the draft plan. Our first concern is the omission of the specific required language committing the City to the interim hydromodification criteria put forth by Board staff. While we appreciate the City's commitment to "minimize the alteration of natural watercourses...the impact of new developments or remodeling projects...and water quality impacts from post-construction runoff," (draft SWMP, Chapter 6, page 1) we are concerned by the omission of any language committing the City to technical hydromodification criteria. We fully support the inclusion of the language included in the Board staff's Required Revisions from the November 13, 2008 letter, item no. 6, in which the goals and expected effectiveness of the alternative interim hydromodification criteria are stated explicitly:

- For new and re-development projects, Effective Impervious Area shall be maintained at less than five percent (5%) of total project area.
- For new and redevelopment projects that create and/or replace 5,000 square feet or more of impervious surface, the post-construction runoff hydrographs shall match within one percent the pre-construction runoff hydrographs, for a range of events with return periods from 1-year to 10-years.
- For projects whose disturbed project area exceeds two acres, preserve the pre-construction drainage density (miles of stream length per square mile of watershed) for all drainage areas serving a first order stream or larger, and ensure that post-project time of concentration is equal or greater than pre-project time of concentration.

While we accept the extension of time given to the City to develop locally acceptable hydromodification standards, and acknowledge the inclusion of a timetable, we support Board staff in requiring the inclusion of more stringent language committing the City to interim criteria, and the development of permanent criteria.

Response 18: Water Board staff has retained Required Revision No. 6 in order to ensure the City develops effective interim hydromodification control criteria. However, Water Board staff has modified the required revision to provide the City with greater flexibility in developing its criteria. Water Board staff has added an additional option for criteria development, which outlines a methodology to be followed during development of the criteria. Water Board staff expects this additional option for development of interim hydromodification control criteria to lead to effective hydromodification controls. It mirrors the approach implemented by other successful storm water programs, including those in the San Francisco Bay Area and San Diego County. As part of those processes, the approach underwent an extensive review process to ensure its appropriateness and effectiveness.

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Comment 19: Next, I would like to address the necessity for minimum buffer zones of 30 feet for developments along riparian corridors and wetlands. This is a minimum standard that the Board has upheld in the past; we believe that the Board should continue to uphold this standard. The City's City-Wide Creeks and Wetlands Management Plan, designed to protect riparian areas, wetlands and their buffer-zones is comprehensive; however Attachment 4 of the General Permit states that in the occasion where Design Standards conflict with local practices, "the Permittee may continue the local practice...except that to the extent that the standards in the Design Standards are more stringent than those under local codes or other regulatory mechanism, such more stringent standards shall apply." (NPDES Permit, Attachment 4) While we encourage the

continued use of Santa Cruz's comprehensive program, we request that Board continue to uphold a 30 foot minimum buffer zone for development alongside a riparian corridor or wetland.

Response 19: Water Board staff agrees that the City's City-Wide Creeks and Wetlands Management Plan is comprehensive. The plan provides for 30-foot buffer areas for all riparian conditions where they are applicable, and often provides for larger buffer areas. However, the plan is less clear regarding buffer areas for wetlands and potential restoration opportunities. To address these issues, Water Board staff added Required Revision Nos. 19 and 20 to the Table of Required Revisions.

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Comment 20: Lastly, we support Board staff's directive to address TMDLs in the SWMP. We encourage the Board to ensure that Required Revision #13, which requires that the applicant commit to implementing all components of the required Wasteload Allocation Attainment Plan (WAAP). In spite of the City's existing programs, we believe there is still a substantial gap in data that could be addressed regarding water quality and pollution sources; we feel that the Board is being reasonable in requiring that this aspect of the plan be included prior to the approval of the SWMP.

Response 20: Water Board staff has retained Required Revision No. 13 specifying development of Wasteload Allocation Attainment Programs. However, Water Board staff has modified the required revision to address concerns raised by the City. Water Board staff has agreed with the City that application of Wasteload Allocation Attainment Programs on a jurisdiction-wide scale could be beneficial to the City by simplifying management efforts and reducing reporting. In addition, such an approach could be beneficial to water quality in areas outside those addressed by TMDLs. Water Board staff also understands that some sources (such as wildlife) that contribute to impairments may not be controllable. For these reasons, Water Board staff has modified Required Revision No. 13 to acknowledge uncontrollable sources and allow for jurisdiction-wide Wasteload Allocation Attainment Programs.

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## **VI. Comments by Monterey Bay National Marine Sanctuary**

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Comment 21: The Sanctuary commends the County and City staff for their proactive efforts to reduce non-point source pollution in urban runoff. For the last ten years the County and Cities have been implementing many of the Storm Water Management Plan's (SWMP) Control Programs prior to having an approved NPDES permit issued by the Central Coast Regional Water Quality Control Board. Examples include: the Industrial Waste Discharge program, illicit discharge detection, Municipal Operations programs and adoption/enforcement of multiple storm water ordinances. The Storm Water Management Plans reflect many of the ongoing efforts to reduce non-point source pollution in urban runoff as well as new requirements to fulfill the Phase II NPDES General Permit for Discharges of Storm Water from Small Municipal Separate Storm Sewer Systems.

Response 21: Comment noted.

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Comment 22: The Plans concentrate on two pollutants of concern; sediment and fecal indicator bacteria (FIB). While we understand there are existing TMDLs that have been established on local rivers for sediment and FIB; there are other pollutants of concern that should not be overlooked. They include metals, nutrients, and trash. Many of the listed management measures address these contaminants and as such, we feel they should be listed as pollutants of concern for the entire region covered by these plans.

Response 22: Water Board staff has identified fecal indicator bacteria and sediment as primary pollutants of concern for the City of Santa Cruz based on a water quality assessment conducted by staff that identified documented water quality problems within the City. Water Board staff finds the targeting of primary pollutants concern that are causing or contributing to documented water quality problems to be an appropriate approach for applying limited stormwater resources. Water Board staff also identified copper and zinc and toxicity as concerns for the City, which the SWMP notes at page 9. The SWMP explains how these and other pollutants of concern are addressed: "The other pollutants of concern will also be addressed in the SWMP program through the measures and BMPs detailed in the six required and two optional control programs" (page 6). As such, the SWMP does not overlook the other pollutants of concern, but rather addresses them through the various BMPs included throughout the SWMP. In addition, a broad list of pollutants of concern the SWMP is designed to address, including those pollutants mentioned in the comment, is provided at page 6 of the SWMP. Moreover, each chapter of the SWMP identifies the pollutants of concern it is designed to address.

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Comment 23: As mentioned above, there have been storm water ordinances and pollution prevention efforts in effect for many years in Santa Cruz. MBNMS staff would like to see more emphasis placed on determining effectiveness of these efforts. Each plan describes how an Effectiveness Assessment Strategy will be developed in Year 3 or 4 of the permit. While the jurisdictions should not be penalized for their proactive efforts, it would seem effectiveness assessments of these ongoing programs should be initiated immediately. The majority of the management measures listed have been implemented for years and are planned for implementation each year of the permit. It would seem that the jurisdictions would want to assess the effectiveness of these programs sooner than later. This will aid in better identification of realistic measurable goals, achievement in reaching those goals, and documentation of improved water quality.

Response 23: While development of the full Effectiveness Assessment Strategy will begin in Years 3 or 4, lower level effectiveness assessment will begin in Year 1 and continue through the life of the permit. For example, the SWMP and Required Revision No. 15 ensure that Level One Outcomes will be used for effectiveness assessment in Years 1 through 4. Though use of Level One Outcomes is a relatively simplistic means of assessing effectiveness, achievement of all Level One Outcomes by the City can serve to indicate some level of program effectiveness. Water Board staff finds this level of effectiveness assessment to be appropriate for the first several years of program implementation for the following reasons: (1) stormwater program effectiveness assessment is a relatively new and evolving field, making strategy development a lengthy process; (2) stormwater effectiveness assessment involves the complex task of making linkages between BMP implementation and changes in water quality, which will take time to develop; and (3) the City will be focusing on other important tasks the first

few years of program implementation, such as hydromodification control criteria development. As such, Water Board staff recommends retaining the currently proposed Effectiveness Assessment Strategy schedule.

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Comment 24: On a similar point, the plans should strive to ensure that the measurable goals lead to improved water quality. An excellent example is in the Watsonville plan regarding street sweeping. This program has been implemented for several years and they are able to quantify the amount of metals, oil, sediment and trash that are collected off the streets and parking lots so as to not end up in local surface waters. The plan is very specific about sweeping schedules, frequency and miles of curb cleaned.

Response 24: In implementing the SWMP, the City must strive to demonstrate BMPs lead to improved water quality. Required Revision No. 17 states: "Include a statement that the effectiveness assessment strategy will include efforts to identify links between BMP/program implementation and improvement in water quality and beneficial use conditions."

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Comment 25: Because there are five storm water plans within Santa Cruz County and many watersheds that overlap jurisdictional boundaries, we recommend some description in each plan as to how the plans will integrate with each other. The Santa Cruz County plan describes a Countywide Stormwater Information Exchange but the other plans do not. It is not clear which organizations/jurisdictions participate in this coordination and how the plans integrate across watershed boundaries.

Response 25: While Water Board staff agrees interagency collaboration is beneficial to water quality and watershed protection, it is not essential in order for the SWMP to meet the maximum extent practicable and water quality protection standards of the General Permit. As such, rather than developing a specific required revision addressing the issue, Water Board staff recommends that the City incorporate into the SWMP a discussion of how the City collaborates with the other Santa Cruz County municipalities to integrate Storm Water Management Program implementation across watershed boundaries.

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Comment 26: We support the comments described in the letter dated January 5, 2009 from the Resource Conservation District of Santa Cruz County, Ecology Action and other local partners. Santa Cruz County is fortunate that it has many local conservation organizations that work collaboratively to protect and preserve the natural environment. Local jurisdictions have demonstrated leadership and support of these efforts, including the City and County of Santa Cruz. The development of these SWMPs is an example of that effort to achieve "healthy watersheds". The Sanctuary supports the need for a regional hydromodification effort for Santa Cruz County, a watershed based approach for Low Impact Development, and flexible strategies regarding climate change as it relates to storm water issues. The letter itself is testimony that organizations with differing mandates are committed to work together to find solutions to very challenging issues.

Response 26: The required revisions provide ample flexibility for the City to pursue a regional hydromodification effort for Santa Cruz County, a watershed based approach

for Low Impact Development, and flexible strategies regarding climate change as it relates to storm water issues. Please see Responses 12 through 15 for further detail.

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## VI. Comments by Sierra Club

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Comment 27: The draft plans attempt to address important issues such as the elimination of illicit discharges, prevention of runoff from construction sites, pollution prevention in municipal operations, as well as prevention through public education and through specific preventive measures applicable to new development projects. While these activities are necessary and valuable components of an overall plan, they do not address directly the existing primary runoff pollution problems in urban areas.

We believe that it is widely recognized that in urbanized areas the largest source of polluted runoff comes from highways, roads, parking lots, and other hardscape sites: The accumulated oil residues, metal and chemical particles, toxins, bacterial waste, as well as solid debris constitute the largest component of urban runoff and pose the major threat to water quality in our rivers and ocean.

Because these pollutants flow to water courses and to catch basins that empty directly into the ocean, we request that your Agency, in reviewing these draft plans, place the highest priority on the identification, planning, and scheduling of specific projects that remove these toxins through natural filtration and engineered filtration devices.

In the area of natural filtration there are well known examples of projects undertaken elsewhere in the country that catch stormwater runoff from adjacent paved areas and redirect it towards natural drainage systems such as lagoons and seasonal wetlands. Other examples have utilized golf courses, large public open spaces, portions of urban parks and playgrounds, and other special opportunities to use natural filtration. These types of solution need to be identified through each watershed as part of each area's Stormwater Management Plan (SWMP).

In the area of engineered filtration devices, we request that a multi year program be developed by each jurisdiction to install and maintain engineered filtration devices in each catch basin/storm drain. Filtration devices must be supported by ongoing programs to clean, maintain and replace these devices, and also an ongoing program to clean out solid debris from storm drains before it flows to the ocean. There should also be a program to retrofit, gradually over a specific time period, large parking lots and other large hardscape areas with sedimentation and filtration solutions similar to those proposed for new large developments.

Response 27: The SWMP is designed to reduce the discharge of pollutants to the maximum extent practicable and protect water quality. This is achieved through the implementation of BMPs. BMPs are frequently categorized in terms of source control and treatment BMPs. Source control BMPs are often used as a first line of defense, with treatment BMPs used for augmentation when source control BMPs are found to be insufficient. This is especially true regarding existing development, where installation of treatment BMPs can involve complicated and extensive retrofitting. The SWMP includes implementation of a full suite of source control BMPs addressing pollutants in runoff coming from existing roads and parking lots. These source control BMPs include street

sweeping, municipal parking lot cleaning, catch basin inlet cleaning, and stormwater pump station cleaning. Following implementation of these source control BMPs, where evidence exhibits that they are inadequate and water quality degradation is occurring, additional BMPs will be required.

Please note that the SWMP also includes requirements for application of treatment BMPs at redevelopment projects, including redevelopment projects that create or replace more than 5,000 square feet of impervious surface. Redevelopment is an opportunity to incorporate treatment BMPs into project designs, while avoiding the difficulties associated with retrofit projects. Over time, as redevelopment occurs, the amount of roadway and parking lot runoff that receives treatment will increase. The SWMP also includes measures to ensure these treatment BMPs are adequately maintained.

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Comment 28: There are existing natural filtration areas that have fallen into disrepair and are no longer functioning optimally. There is an obvious need and opportunity to identify these, and to develop and schedule specific repair projects as one of the highest priorities in each SWMP.

Response 28: The SWMP includes provisions to assess and maintain the MS4. To the extent that these natural infiltration areas are part of the municipalities' MS4s, they must be included in this assessment and maintenance. Natural infiltration areas that are not part of the MS4 are subject to the municipalities' ordinances and policies. Where activities causing disrepair of natural infiltration areas violate the municipalities' ordinances and policies, the municipalities must take corrective actions.

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Comment 29: Another major concern that does not seem to be addressed in the draft SWMPs is the runoff in non-urban, forested areas which comprise a large portion of our county. The rampant building of logging roads in the watersheds, the removal of riparian vegetation and other inappropriate logging practices cause huge amounts of silt to run off into the creeks, thereby ruining their habitat.

Response 29: To the extent that non-urban, forested areas do not drain to an MS4, the runoff from these areas is not regulated by the General Phase II Municipal Storm Water Permit. In general, impacts resulting from logging practices are addressed by the Water Board's timber harvesting program and other resource agencies' regulatory programs. However, when a road is owned or operated by the City and includes a drainage system, it is part of the MS4 and must be addressed by the City, since the City is within the designated urbanized area.

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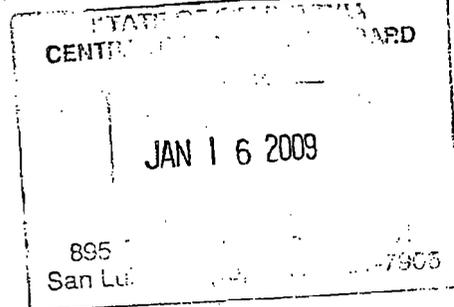
Comment 30: Lastly we want to stress the apparently missed opportunity to manage runoff with the aim of maximizing its potential as a source of aquifer recharge. In each SWMP there is a need to identify areas most in need of recharge, most able to absorb it, and to match these with runoff that can be redirected towards them. In this County, the need to bring together runoff management and recharge planning is an apparent, unmet need.

Response 30: The SWMP includes provisions that will improve groundwater recharge conditions. In the Table of Required Revisions, the Water Board has required the SWMP to include requirements for new development and redevelopment to optimize infiltration on site. As redevelopment continues to occur, this requirement will lead to improved recharge conditions. In addition, the SWMP and Table of Required Revisions include BMPs for assessment of existing ordinances and policies in terms of long-term watershed protection. Ordinances and policies found to be inadequate must be modified by the municipalities. Water Board staff's July 10, 2008 letter to the municipalities characterized long-term watershed protection to include "watershed storage of runoff, through infiltration, recharge, baseflow, and interflow, at pre-development levels." As such, the City's efforts to assess and modify their ordinances and policies to ensure long-term watershed protection will be required to result in improved watershed storage of runoff.

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PUBLIC WORKS DEPARTMENT  
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January 14, 2009

Mr. Roger Briggs  
Executive Officer  
Central Coast Regional Water Quality Control Board  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401-7906

SUBJECT: City Of Santa Cruz Storm Water Management Plan – City Comments to RWQCB's  
11/13/08 letter

Dear Mr. Briggs:

Thank you very much for your November 13, 2008 letter to the City of Santa Cruz (City) entitled "Water Board staff comments on draft Storm Water Management Program dated October 24, 2008, City of Santa Cruz, Santa Cruz County." Your letter identifies revisions that the City must make to our draft October 24, 2008 Storm Water Management Program (SWMP), Revision #4, in order for you to recommend approval of the City's SWMP to the Regional Water Quality Control Board (RWQCB).

The City agrees with the majority of revisions requested in your November 13, 2008 letter and will make the revisions described below to our SWMP once the SWMP is approved by the RWQCB. However, there are a few items in your November 13, 2008 letter that the City cannot commit to at this time. These items are also summarized below. A detailed analysis of our position concerning these items is contained in the attached supplemental letter.

### **Planned Revisions to the Draft SWMP**

A summary of the revisions that the City will make to the draft SWMP are as follows:

- Item #1:** In Chapter 1, Municipal Operations, the following language will be added: "Inspections of municipal facilities will ensure adequate implementation of all applicable storm water BMPs."
- Item #2:** In BMP #PP-2 and in the Chapter 3 text, language will be added to clarify the frequency of contacts that the City will make with several business groups and associations. The following language will be added: "Staff will make annual contact with the Downtown Association and will contact the Chamber of Commerce and local trade associations on an "as needed" basis." As mentioned in this chapter and several other chapters, all food service and vehicle service facilities are inspected annually.

**Item #3:** In BMP #PE-5, language will be incorporated to clarify how the City will distribute BMP brochures addressing restaurants and post-construction BMPs. In bullets #1 and 2, the wording will be changed to read as follows:

“1. Distribute brochures at 100% of new food and vehicle service facilities during the initial site visit by the Environmental Compliance Inspector.

2. Distribute brochures at 100% of food and vehicle service facilities once during the 5 year Permit period either during the annual site visit by the Environmental Compliance Inspector or by mail.”

Regarding how the Post-Construction BMPs, entitled *BMPs for Development and Remodeling Projects*, will be distributed, this information is provided in detail in Chapter 6, Post-Construction Storm Water Management, under the section “BMP Brochure for Development and Remodeling Projects.” Thus, a sentence will be added to the text in Chapter 4, Public Education, under the “Outreach Information for Businesses” section as follows: “Please refer to Chapter 6 for information regarding the distribution of the *BMPs for Development and Remodeling Projects*.”

**Item #4:** In BMP #PE-18, the City will add the following language: “A baseline evaluation survey will be conducted in Year 4 and an evaluation survey will be repeated every 5 years thereafter.”

**Item #5:** In BMP #CON-1, the following language will be added: “Inspections will be conducted prior to well-forecasted rain events at high priority construction projects.”

**Item #7:** In BMP#PC-3, the following language will be added: “The City will begin applying the alterative interim hydromodification criteria to new development and redevelopment projects, whose applications for permitting have not been deemed complete, beginning one year after the date of SWMP approval by the RWQCB.”

**Item #8:** In Chapter 6, Post-Construction Storm Water Management, under the section “Development and Adoption of Hydromodification Control Standards,” language will be added to clarify the stage in the development project planning and design process that the City will use as the cut-off point to determine which projects in the development review pipeline will be subject to the new design requirements such as alternative interim hydromodification criteria. In addition, depending upon the applicability criteria, there may be projects that will be subject to the new design requirements but do not need to obtain a Discretionary Permit and only need to receive a Building Permit. Thus, the City has developed a cut-off point for these projects too.

In summary, the City will add the following language to the "Development and Adoption of Hydromodification Control Standards" section to identify when the new design requirements will take effect:

- All Applicable Projects: During the first year after SWMP approval by the RWQCB, City staff will educate the public/developers/architects about the new regulations and encourage compliance. Beginning one year after the date of SWMP approval by the RWQCB, the new design requirements will be mandatory for projects that apply on or after this date.
- Applicable Discretionary Project Applications: Beginning one year after the date of SWMP approval by the RWQCB, any discretionary project that is not yet complete will be subject to the new design requirements.
- Applicable Building Permit Applications: Beginning one year after the date of SWMP approval by the RWQCB, any new Building Permit application will be subject to the new design requirements.

**Item #11:** In Chapter 6, Post-Construction Storm Water Management, under the "Long-Term Watershed Protection" section, language will be added as follows: "The City will develop quantifiable measures, where feasible, for watershed protection as part of the planning process to achieve long-term watershed protection."

In BMP#PC-5, the following language will be added: "Quantifiable measures that indicate how the City's watershed protection efforts achieve desired watershed conditions will be developed, where feasible, in Year 5." In the next permit cycle the City will evaluate existing watershed protection efforts by conducting a comprehensive review of all programs and comparing them to the quantifiable measures developed in year 5. Existing efforts may need to be changed based on that review.

**Item #12:** The City will add the following statement to Chapter 9 "One goal of the SWMP is to meet the TMDLs that have been adopted by the RWQCB."

**Item #14:** The City will remove the words "possibly" and "possible" from BMPs TMDL-3 and TMDL-8, respectfully.

**Item #15:** In Chapter 10, Program Management, the following language will be added: "Level 1 outcomes will continue to be assessed in Year 4."

**Item #16:** In Chapter 10, Program Management, the following language will be added: "Level 1 outcomes will be used to assess the effectiveness of all applicable BMPs."

**Item #17:** In Chapter 10, Program Management, the following language will be added: "The Effectiveness Assessment Strategy will seek to identify links between BMP/program implementation and improvement in water quality and beneficial use conditions."

**Item #18:** The City will remove the wording "budget dependent" and other similar language from the following BMPs and related text: BMP #MO-3, #MO-8, #PE-17, #PE-18, and #PC-7 as requested. The City will also remove the wording "budget dependent" from the following BMPs and related text: BMP #ID-6, #PE-14/PC-11, and #PC-4.

**Items That the City Cannot Agree To At This Time**

At this time, the City cannot commit to the wording in the "Required Revisions" Table for the following items: Item #6, Item #9, Item #10 and Item #13. Thus, the City respectfully requests that further discussions be conducted between the City and RWQCB staff on these items so that these issues may be resolved prior to the RWQCB hearing on the City's SWMP, which is currently scheduled for March 20, 2009. A summary of the City's response to these items is below with a more detailed presentation is contained in the City's Supplemental Comment letter (attached).

**Item #6:** The City's approach to development of alternative interim hydromodification management criteria will build upon the existing base of technical knowledge, combined with knowledge of local watershed and stream conditions, to create a management plan and criteria that are technically sound and appropriate for the City. A comprehensive plan will be developed that is not just focused on site-level controls, but includes consideration of land use planning policies, stream riparian/buffer zone protection, and stream susceptibility to erosive forces. The City will also hold stakeholder meetings to encourage public involvement in the process and incorporate public input into the plan.

The City will update the BMP to include reference to our alternative criteria development plan previously approved by the RWQCB and will include this alternative plan as an appendix to the SWMP. The text will also be updated to state that our proposed alternative criteria will 1) provide numeric thresholds that demonstrate optimization of infiltration in order to approximate natural infiltration levels, and 2) achieve post-project runoff discharge rates and durations that do not exceed pre-project levels, where increased discharge rates and durations will result in increased potential for erosion or other significant adverse impacts to beneficial uses.

The City will not commit to providing hydromodification criteria as specified in the bulleted items contained in your comment #6.

**Item #9:** As described in Chapter 6 of the SWMP the City anticipates that our proposed alternative interim hydromodification criteria will become our long term hydromodification control criteria with revisions and updates made over time based on effectiveness assessments and general industry knowledge. This long term criteria will be in place and implemented by the end of year 5.

**Item #10:** See response to Comment No. 9.

**Item #13:** The City's SWMP has been developed specifically to implement recommendations and address the controllable stormwater related sources identified in the TMDL implementation plans and supporting documents. These documents already contain most of the elements of wasteload allocation attainment plans. The remaining elements will be provided through the effectiveness assessment of the Stormwater Program and through the triennial review of overall TMDL implementation conducted by the water board and local staff.

#### **Request for a Hearing**

In the past, City staff has worked cooperatively with RWQCB staff to resolve any differences of opinion on how to structure programs intended to improve water quality. Unfortunately, at this time agreement on all of the items in your November 13, 2008 letter has not yet been reached between your staff and the City. Thus, in order to preserve its legal rights, the City of Santa Cruz requests a hearing before the RWQCB prior to the RWQCB making its final determination as to the exact nature and form of "required revisions" which will be imposed on the City of Santa Cruz. The City requests 20 minutes for a presentation and 15 minutes to provide rebuttal testimony to RWQCB comments.

#### **Cooperative Efforts With Local Municipalities and Environmental Groups**

The City of Santa Cruz strives to work cooperatively with the other municipalities in Santa Cruz County and also local environmental organizations and water agencies on common issues and projects relating to the improvement of water quality. These cooperative efforts have included, for example, participation in the Integrated Watershed Restoration Program, the Blue Circle, the Integrated Regional Water Management Program, the Green Business Program, and Eco Cruz-- the environmental online guide for Santa Cruz County. The City also partners with several local environmental groups on common goals such as public education regarding pesticide management, beach cleanups, and volunteer water quality monitoring.

We are attaching a joint letter from several local Santa Cruz environmental organizations and water agencies, dated January 5, 2009, that was sent to you in order to demonstrate that City of Santa Cruz and the other municipalities within Santa Cruz County have a good record of working cooperatively with local groups to improve water quality. The following excerpt from their letter highlights their support:

"We have confidence that through the proposed municipal storm water management programs the municipalities will continue to work with the RWQCB and our agencies to evaluate program effectiveness and modify or expand those programs as needed in the future to ensure that water quality protection and hydromodification are adequately addressed. The municipalities have a good track record and long experience successfully implementing practical resource protection efforts in Santa Cruz County."

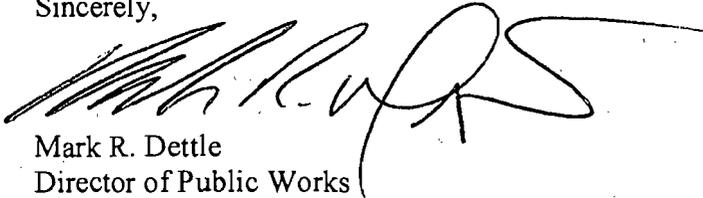
#### **Conclusions**

In conclusion, the City of Santa Cruz is strongly committed to implementing a SWMP that reduces storm water pollution, protects wetlands and riparian areas, and supports the ultimate goals of improved water quality, cleaner beaches, and healthy watersheds. The City strives to do this by utilizing programs that are technically feasible, effective and well thought out, and within existing resources. While the City agrees with the ultimate objectives sought by the RWQCB, the City believes that its proposed SWMP does achieve these goals by establishing programs that will protect and improve water quality to the maximum extent practicable.

As additional resources become available to the City, the City will continue its proactive approach to improve water quality and continue to serve as good stewards of the environment. We look forward to continuing to work with you to achieve our mutual goals of improved water quality and environmental protection.

Lastly, we would like to thank Mr. Phil Hammer, of your staff, who has worked with us during the past year regarding our draft SWMP. We have greatly appreciated his time and assistance in this process. If you have any questions or comments regarding the information contained in the City's SWMP, please contact Steve Wolfman at (831) 420-5428 or Suzanne Healy at (831) 420-5131.

Sincerely,



Mark R. Dettle  
Director of Public Works

Attachments: City Supplemental Comments on RWQCB's letter dated 11/13/08  
January 5, 2009 letter entitled "Support for Santa Cruz Municipalities Stormwater Programs."

cc: City Manager and City Council  
City Attorney  
Mr. Steve Jesberg, City of Capitola  
Ms. Rachel Fatoohi, County of Santa Cruz  
Mr. Ken Anderson, City of Scotts Valley  
Mr. Robert Ketley, City of Watsonville  
Steve Wolfman, Associate Engineer  
Suzanne Healy, Environmental Programs Analyst



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Roger Briggs  
Executive Officer  
California Regional Water Quality Control Board  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401-7906

**Subject: City Supplemental Comments on Regional Board's letter dated November 13, 2008 concerning City of Santa Cruz Stormwater Management Program**

Dear Mr. Briggs:

The City of Santa Cruz (City) has reviewed the Central Coast Regional Water Quality Control Board (Regional Board) letter dated November 13, 2008 which commented on and "required revisions" to the October 24, 2008 City of the Santa Cruz Draft Stormwater Management Program, Revision 4 (SWMP). This letter provides a detailed basis for the City's request that several of the "required revisions" mandated by the Regional Board in the November 13, 2008 letter not be imposed. This letter is summarized below and discussed in the sections that follow.

Section 1: Summarizes the City's overall concerns with the Regional Board's approach to the creation of the City SWMP. The Regional Board's "required revisions" fail to reflect the unique physical and political characteristics of the City and the programs the City has already implemented to improve storm water quality. The Regional Board staff has failed to demonstrate sufficient flexibility in reviewing the City SWMP. The City questions the technical basis of the Regional Board's development of hydrograph modification criteria (hydromodification) and the need for additional assessments and studies that may not improve water quality.

Section 2: Describes the City's existing water quality and storm water management program protections, that, unlike the "required revisions", have been in place for many years and have been demonstrated to be effective, technically feasible, developed through an iterative process with input from affected stakeholders, implemented within existing resources, and enjoy broad community support.

Section 3: Identifies the "required revisions" of greatest concern to the City and discusses the legal criteria Regional Board staff must consider in reviewing and approving a SWMP. This Section discusses the Federal standards and guidance provided by Congress and the Environmental Protection Agency (EPA), and the California standards and guidance provided by the legislature, State Water Resources Control Board, its General

Counsel and the State General Permit provisions. These standards and guidance all describe how to determine whether the City's efforts meet the Maximum Extent Practical (MEP) standard. They stress the need for consideration of local conditions including an analysis of the effectiveness of the proposed "required revisions", whether the "required revisions" comply with the Federal and State regulatory framework, whether the "required revisions" enjoy local support, an assessment of the costs and benefits associated with the "required revisions", and whether the "required revisions" are technically feasible to implement.

Section 4: Application of Maximum Extent Practical (MEP) Criteria considering the five key factors identified in Section 3 above, as they apply to the "required revisions" of the City SWMP. An analysis of the criteria leads to the conclusion that the Regional Board must demonstrate more flexibility in its review of the City SWMP than it has demonstrated to date.

The City and its consultants Eisenberg, Olivieri and Associates, Incorporated (EOA, Inc.) question the effectiveness of and need for the Effectiveness Assessments (EAs), wasteload allocation attainment plans (WAAP), and hydromodification criteria identified in the "required revisions". The City contends that the "required revisions" are not federally required, and fail to properly consider State mandated criteria, including the financial condition of the City. As demonstrated by the attached letters of support from local environmental agencies, the City has experience working collaboratively with environmental and other community groups and organizations to develop public acceptance of new water quality programs. The "required revisions" have not been demonstrated to be cost effective and significantly increase the financial burden on the City and private development efforts.

The City and its consultants join the chorus of other local jurisdictions that question the technical basis of the local hydromodification criteria. The City consultants, EOA, Inc states:

"It is not feasible to demonstrate that the alternative hydromodification criteria being developed by the City will be as effective as the Regional Board's interim criteria without further documentation from the Regional Board. The technical basis for, and the effectiveness of, the interim criteria are unknown at this time. The Regional Board put forth detailed interim hydromodification criteria in letters dated February 2008 and July 2008. These criteria are now listed as required changes for the SWMP (comment 6). However, neither of the letters, attached references, or other correspondence from the Regional Board provides the scientific basis of the interim criteria."

The City's approach to development of alternative interim hydromodification management criteria will build upon this existing base of technical knowledge, combined with knowledge of local watershed and stream conditions, to create a management plan and criteria that are technically sound and appropriate for the City. A comprehensive plan will be developed that is not just focused on site-level controls, but includes consideration of land use planning policies, stream riparian/buffer zone protection, and

stream susceptibility to erosive forces. The City will also hold stakeholder meetings to encourage public involvement in the process and incorporate public input into the plan.”

Section 5: Notes the City hopes, as it has in the past, to resolve any differences with Regional Board staff over the “required revisions”, but should it be unable to reach agreement, it requests a hearing before the Regional Board.

## **Section 1. Introduction**

**The City has agreed to the vast majority of “required revisions” mandated by the Regional Board staff. We agree with most of the conceptual elements that the Regional Board is requiring, including hydromodification and effectiveness monitoring. We also agree with the objectives of the WAAPs. However, we disagree with the prescriptive nature of the requirements, which are inefficient, ineffective, wasteful of public and private resources, and do not reflect the unique soils, hydrology, and existing programs of the City. It is the City’s intention to continue implementation of a comprehensive, cost effective storm water pollution control program to protect and improve water quality in the City that we believe will also meet all of the legal standards and objectives sought by the Regional Board.**

As previously noted by our staff, the City remains deeply concerned with the lack of flexibility being imposed on the draft SWMP as it is currently reflected in some of the “required revisions” presented by Regional Board staff. The City is also concerned with the lack of documentation provided to the City by Regional Board staff to support the interim Hydromodification criteria being relied on and applied by the Regional Board to all jurisdictions in the region. The widespread use of such criteria with questionable technical basis, and without consideration of local conditions constitutes flawed policy making, and is inconsistent with the legal standard to which SWMPs must comply, which is to reduce the discharge of pollutants to the maximum extent practical (MEP).

## **2. Existing City Programs**

**The City’s existing City Storm Water Management Program is effective, technically feasible, and was developed through an iterative process with input from affected stakeholders, implemented within existing limited resources, and enjoys broad community support. The City draft SWMP as submitted is a significant expansion of that program.**

As a Phase II small municipal stormwater program operator (MS4), the City does not enjoy many of the financial and other advantages available to the larger Phase 1 jurisdictions. Despite these limitations, the City has long pioneered the development and implementation of innovative storm water management environmental protection practices that serve to improve the beneficial uses of the waters in this City.

The City strives to be a leader in implementing programs that protect the environment and, in spite of our limited resources, we have moved forward with various measures, plans, and ordinances that serve to improve the beneficial uses of waters within the City of Santa Cruz. The City has been implementing its SWMP since 2002 when it was submitted to the Regional Board even though we have not yet received coverage under the State's Phase II General Permit (MS4) for Storm Water.

The City has numerous policies, plans, mandatory Best Management Practices, and ordinances that were developed in order to prevent storm water pollution and/or protect receiving water quality, riparian corridors, open space, and wetlands. For example, mandatory Best Management Practices have been developed and are currently being enforced for the following business facilities or activities: Food Service Facilities, Vehicle Service Facilities, Retail and Commercial Facilities, Industrial Facilities, Municipal Operations, Construction Work, and Development and Remodeling Projects.

The following ordinances are used to prevent polluted discharges and/or to protect natural resources and the environment:

#### Storm Water Ordinance

The City's Storm Water Ordinance, entitled "Storm Water and Urban Runoff Pollution Control," is Chapter 16.19 of the City's Municipal Code. As part of the City's efforts to proactively take effective measures to reduce storm water pollution, the ordinance was initially adopted on April 28, 1998, and became effective on May 28, 1998. The ordinance established the legal authority to prohibit illicit connections and pollutant discharges to the City storm drain system. The ordinance also provides the City with the legal authority to conduct inspections and sampling. In addition, the ordinance contains a provision requiring the implementation of BMPs, as published by the Public Works Department, by certain types of facilities and specific language regarding BMPs for construction activity.

The City revised the Storm Water Ordinance in July 2003 in order to update the ordinance and incorporate new Phase II storm water regulations, and to keep it comparable with the City's Sanitary Sewer Ordinance. The revisions included an increase in monetary penalties to equivalent amounts specified in the Sewer Use Ordinance for violations of the Municipal Code.

#### Creeks and Wetlands Ordinance

The purpose of the Creeks and Wetlands Ordinance is to carry out the goals of the City-Wide Creeks and Wetlands Management Plan (*Management Plan*) by applying development standards to lands adjacent to watercourses within the City of Santa Cruz that will enhance and protect watercourse functions and values. The *Management Plan* was developed to identify and map the watercourses and known wetlands within the City limits, identify appropriate development setbacks, recommend management actions which promote the preservation of riparian and wetland resources, define development guidelines and standards for areas where development adjacent to watercourses may be appropriate, and provide a framework for permitting development adjacent to

watercourses. The *Management Plan* presents a strategic approach to stream corridor management that is intended to result in better protection, enhancement, and management of the City's riparian and wetland resources and water quality, while providing consistency and predictability of the City's permitting process.

The *Management Plan* and the Creeks and Wetlands Ordinance were adopted by the City Council on February 28, 2006 and certified as a Local Coastal Program (LCP) amendment by the California Coastal Commission (CCC) in October of 2007. Modifications to the *Management Plan* requested by the CCC were approved by the City Council in March of 2008 and a final reading was approved by the City Council in April of 2008. The Creeks and Wetlands Ordinance is included in the City's Zoning Ordinance under Chapter 24.08 Part 21: Watercourse Development Permit. This part of the zoning title is also part of the Local Coastal Implementation Plan.

#### Grading Ordinance

The Grading Ordinance, officially titled "Chapter 18.45 Excavation and Grading Regulations, is a subset of Municipal Code, Title 18, Buildings and Construction. The ordinance provides technical regulations on grading and excavation in order to:

- Safeguard life, health, safety and the public welfare.
- Protect fish and wildlife, riparian corridors and habitats, water supplies, and private and public property.
- Protect the environment from the effects of flooding, accelerated erosion and/or deposition of silt.

The ordinance accomplishes this by providing guidelines, regulations, and minimum standards for the following:

- Clearing, excavation, cuts, fills, earth moving, grading operations (including cumulative grading), water runoff and sediment control.
- Administrative procedures for issuance of permits
- Approval of plans and inspections during construction and subsequent maintenance.
- Installation of erosion control measures and establishment of special requirements for winter grading.

Enforcement of the Grading Ordinance is authorized and conducted in accordance with the Grading Ordinance and Title 4 of the City's Municipal Code, which is described later.

The City revised the Grading Ordinance in April 2004 in order to strengthen the ordinance regarding implementation of BMPs, including those for erosion and sediment control both prior to commencing construction activities and for the duration of the construction project. Modification of the Grading Ordinance included a requirement that all construction projects abide by the City's mandatory BMPs. In addition, the City included a provision that erosion and sediment control BMPs be in place and implemented, as appropriate, prior to commencing construction activity including grading or vegetation removal.

The City also added the most important BMPs from the City's mandatory BMPs for Construction Work to the "Excavation and Grading Regulations" section of the Grading Ordinance. In addition, the Grading Ordinance was modified to include a requirement that Post-Construction BMPs, in accordance with the City's mandatory BMPs for Development and Remodeling Projects, be in place upon completion of a construction project.

#### Zoning Ordinance

The Zoning Ordinance, officially known as Title 24 of the Municipal Code, currently contains provisions to ensure that new developments or remodeled sites are designed and constructed in a manner that limits alteration of drainage patterns, prevents erosion, and minimizes long-term impacts on water quality. The provisions pertaining to erosion control are applicable to both construction and post-construction storm water management. For example, the ordinance requires that site development be fitted to the topography and soil so as to create the least potential for erosion. Vegetation removal is limited to the amount necessary and according to the project's approved erosion control plans. Temporary vegetation, sufficient to stabilize the soil, is required to be established on all disturbed areas as needed and as each phase of grading is completed while the permanent vegetation is maturing. Measures such as jute netting, mulching, fertilizing, and irrigation is required to protect new plantings.

In addition, the ordinance requires that land be developed in increments of workable size that can be completed in a single construction season. Erosion and sediment control measures must be coordinated with a sequence of grading, development, and construction operations. Erosion control measures are required prior to the onset of the next inclement period.

Unlike some of the "required revisions" proposed by Regional Board staff, these measures have been in place for many years and have been demonstrated to be effective, technically feasible, developed through an iterative process with input from affected stakeholders, implemented within existing limited resources, and enjoy broad community support.

### **Section 3. Legal Standards and Guidance**

Several of the **Regional Board's "required revisions" fail to consider local conditions, lack technical basis, and exceed the Maximum Extent Practical (MEP) Standard.** The City has chosen to amend its SWMP to include most of your staff's "required revisions". Among the eighteen (18) "required revisions" contained in the Regional Board's letter dated November 13, 2008, the City is most concerned with the Regional Board's "required revisions" numbered 6, 9, 10 and 13. Additional detailed comments addressing each "required revision" are described below and summarized in the City's cover letter.

Item 6 would require the City to revise its SWMP to include a schedule for developing interim hydromodification control criteria within one year of enrollment and further require that the criteria shall be as effective as the following:

1. For new and redevelopment projects, Effective Impervious Area (EIA) shall be maintained at less than five percent (5%) of total project area.
2. For new and redevelopment projects that create and/or replace 5,000 square feet or more of impervious surface, the post construction runoff hydrographs match within one percent (1%) of the preconstruction (defined as undeveloped soil type and vegetation) runoff hydrographs, for a range of events with return periods from 1 year to 10 years.
3. For projects whose disturbed project area exceeds two acres, preserve the preconstruction drainage density (miles of stream length per square mile of watershed) for all drainage areas serving a first order stream (with no tributaries) or larger, and ensure the post project time of concentration is equal or greater than pre-project time of concentration.

Items 9 and 10 require development of long-term criteria and control measures as part of a hydromodification management plan that will be based on a technical assessment of the impact of development on the City's watersheds. The required elements of the assessment and steps the City must take are further detailed in the Regional Board's November 13, 2008 letter.

Item 13 requires the City to develop a Wasteload Allocation Attainment Plan (WAAP).

Regional Board staff contend that these "required revisions" are necessary for the City's SWMP to be considered as meeting MEP.<sup>1</sup> The City disagrees. As discussed further below, MEP is a flexible, site-specific standard.<sup>2</sup> As proposed, the "required revisions" fail to provide the necessary flexibility in their implementation, and they are not site-specific. For example, the Regional Board staff is attempting to implement the exact same standards throughout the entire region. Further, the "required revisions" at issue go well beyond those being imposed on even the larger Phase I jurisdictions at this time. Finally, these requirements are unfunded mandates imposed in a time of severely eroding public resources.

#### **Federal Guidance stresses that MEP be flexible in order to fit local conditions**

The federal Environmental Protection Agency (EPA) deliberately avoided concretely defining MEP in order "... to allow the permitting authority *and the regulated MS4s maximum flexibility* in their interpretation of it as appropriate."<sup>3</sup> Although there is no legally binding definition of MEP, the EPA provides the following guidance for its interpretation and implementation as a legal standard.

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<sup>1</sup> See Supplemental Sheet No. 3 or Regular Meeting of October 17, 2008, Response to comments on Staff Report for City of Lompoc Storm Water Management Plan Approval at pp. 1-2.

<sup>2</sup> See, e.g., 64 Fed. Reg. 68722, 68732, 68755 (Dec. 8, 1999).

<sup>3</sup> Storm Water Phase II Compliance Assistance Guide, EPA 833-R-00-002 (March 2000), at pp 4-17-emphasis added.

“...[The] EPA expects Phase II permittees (such as Santa Cruz City) to develop and update their Stormwater Management Plans and their BMPs to fit the particular characteristics and needs of the permittee and the areas served by its MS4”.<sup>4</sup>

Further, “it is important to recognize that many BMPs are climate specific, and not all BMPs are appropriate in every geographic area.”<sup>5</sup> The EPA notes, “...as with almost all such projects, site specific factors influence project outcomes...”<sup>6</sup>

Contrary to this guidance from the EPA, the Regional Board has chosen to apply the same standards on a region-wide basis ignoring the fact that Santa Cruz City has conditions different than San Benito, Monterey, and San Luis Obispo or Ventura MS4 jurisdictions. Even jurisdictions within Santa Cruz County have different conditions. The soils near Watsonville are different from those in Scotts Valley. The soil conditions and population densities for unincorporated areas of the County on the San Lorenzo River and Soquel Creek differ from the soils conditions and population densities in the cities of Santa Cruz and Capitola. Rainfall amounts, a major contributor to erosion, also differ among the jurisdictions even in an area as small as Santa Cruz County. One size does not and cannot fit all.

**The California Water Board interpretation of Maximum Extent Practical (MEP) establishes the need for consideration of local conditions including effectiveness, regulatory compliance, local support, costs and technical feasibility of proposed “required revisions”**

As you are aware, State Water Board Order WQ 2000-11 and state guidance also emphasize the flexible, site-specific nature of the MEP standard. The State Water Board has determined that where a

“...permittee employs all applicable BMPs except where it can show that they are not technically feasible in the locality, or whose costs would exceed any benefit to be derived, it would have met the standard”.<sup>7</sup>

The Regional Board fails to follow the precedent of State Water Board orders. In this case, the Regional Board intends to impose requirements that have not been put to a strenuous review and analysis by the “real world” experiences of the MS4s. All data reviewed by the City from other jurisdictions as well as studies cited by the Water Board leads us and our consultants to conclude that the proposed criteria for Hydromodification and low impact development (LIDs) have not yet been fully analyzed nor put to a strenuous “real world” test, especially as applied locally.

<sup>4</sup> Stormwater Phase II Final Rule, Federal and State operated MS4s; Program implementation, EPA 833-f-00-012 (December 2005), at page 2. - (emphasis added)

<sup>5</sup> Id.

<sup>6</sup> Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices, EPA Document 841-F-07-006 dated December 2007 – (emphasis added)

<sup>7</sup> (State Water Board order WQ 2000-11, p.20).

The Office of the Chief Counsel of the State Water Board has stated that selecting BMPs to achieve MEP means:

“...choosing effective BMPs, and rejecting applicable BMPs only where other effective BMPs will serve the same purpose, the BMPs are not technically feasible, or the costs would be prohibitive”.<sup>8</sup>

There is no evidence in the record to support the Regional Board staff's imposition of the criteria in question. The Regional Board staff has not produced documentation to show that the recommended criteria are technically feasible in Santa Cruz or are reasonably cost effective. Staff's proposal would have the City embark on an expensive exercise to test the Regional Board assumption that “one size fits all”.

The 1993 memorandum from State Water Board Chief Counsel E. Jennings recommends consideration of the following site-specific factors to determine whether a jurisdiction would achieve MEP in a given situation:

1. Effectiveness: will the BMP address a pollutant of concern?
2. Regulatory compliance: Is the BMP in compliance with Stormwater regulations as well as other environmental regulations?
3. Public acceptance: Does the BMP have public support?
4. Costs: Will the cost of implementing the BMPs have a reasonable relationship to pollution control benefits to be achieved?
5. Technical feasibility: Is the BMP technically feasible considering, soils, geography, water resources, etc.?

Each of the factors identified by the State Water Board Chief Counsel is analyzed in Sections 4A through 4E that follow (on the next page).

**Relevant State General Permit Provisions also emphasize flexibility, costs, effectiveness and local acceptance as the State General Permit describes MEP as “...an ever evolving, flexible, and advancing concept, which considers technical and economic feasibility.”<sup>9</sup> It goes on to state that:**

“Permittees must conduct and document evaluation and assessment of each relevant element of its program and revise activities, control measures, BMPs and measurable goals, as necessary to meet MEP.”<sup>10</sup>

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<sup>8</sup> (Memorandum from E. Jennings, State Water Board Office of the Chief Counsel, to A. Mathews, State Water Board Division of Water Quality, (Feb.11, 1993)).

<sup>9</sup> State General Permit

<sup>10</sup> State General Permit pg 4.

Consistent with federal and state interpretations, the General Permit goes on to state that **cost** is a factor to consider in the development of BMPs that achieve MEP:

“In choosing BMPs, the major focus is on technical feasibility, but **costs, effectiveness, and public acceptance are also relevant**. . . 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>11</sup>

#### **4. Application of Maximum Extent Practical Criteria**

Consideration of MEP factors articulated by the EPA, State Water Board, Chief Counsel for the State Water Board and the General Permit as it applies to the City SWMP all require more flexibility by Regional Board staff than has been previously demonstrated.

##### **A. Effectiveness**

It has not been demonstrated that the specific effectiveness assessment requirements, hydromodification criteria or WAAPs are needed and will be effective in the City.

Regional Board staff has included numerous “required revisions”, namely hydromodification and WAAPs, which result in costly new monitoring and reporting requirements that may not improve water quality. Numerous other jurisdictions have already questioned the effectiveness of the Regional Board’s plan to develop local hydromodification criteria.

##### **Hydromodification**

The City and its consultants join the other professionals that question the effectiveness of the proposed interim hydromodification criteria. At the City of Lompoc hearing in October 2008, testimony from local building representatives and consultants questioned the effectiveness of the local hydromodification criteria. Santa Barbara representatives and their consultants made similar arguments and have stated the difficulties associated with designing projects to meet the proposed criteria. Santa Barbara jurisdictions noted an increased cost of doing business in their jurisdictions because of these new requirements.

Further, the effectiveness of local hydromodification criteria has been debated in the San Francisco Bay without arriving at consensus of a common approach that should be used.<sup>12</sup>

As a result of the Lompoc hearing the Regional Board has revised its position to permit local jurisdictions to develop local hydromodification criteria that are “as effective as” the criteria proposed by regional staff. However, a significant flaw remains in that there

<sup>11</sup> General Permit Fact Sheet at pg 9.- emphasis added.

<sup>12</sup> (See letter to Roger Briggs from California Stormwater Quality Association dated June 27, 2008 at pg 2).

has been no discussion or explanation of what it means to be “as effective as” the interim “numeric” criteria proposed by Regional Board staff. By establishing numerical criteria, the Regional Board staff has effectively curtailed the City’s options

The EPA notes:

“Although the increase in application of these practices is growing rapidly, data regarding both the **effectiveness** of these practices and their costs **remain limited.**”<sup>13</sup>

As outlined in further detail below in Section 5, consultants retained by the City (EOA, Inc.) have concluded that further documentation from the Regional Board is required to demonstrate that the alternative hydromodification criteria being developed by the City will be “as effective as” the Regional Board’s interim criteria. The effectiveness of interim criteria is unknown at this time.

### **Wasteload Allocation Attainment Plan**

The City has concerns about the need for additional assessments and plans from the City. The City has taken the initiative to work with community groups to conduct studies, develop plans and begin implementation of efforts that have subsequently served as the basis for the sediment and pathogen TMDLs in the City. The City intends to achieve the TMDL wasteload allocations, to the maximum extent practicable, while at the same time addressing other pollutants in other City waters, which are not necessarily subject of a TMDL. It should be kept in mind that stormwater management is just one component of most TMDLs and the City has a good history of addressing all aspects and adapting their approaches as needed and as new technology or approaches become available.

While the City concurs with the overall objectives represented by Wasteload Allocation Attainment Plans (WAAPs), we disagree with the requirement for separate WAAPs for each TMDL and each stormwater program. This detracts from a comprehensive watershed approach and would be an unnecessary and redundant effort, costing the City as much as \$200,000. Many of the elements of the WAAPs have been addressed through the preparation of the stormwater plans, the TMDLs, and/or the supporting studies that lead to the TMDLs. Ongoing assessment of program effectiveness will be accomplished through the stormwater program effectiveness monitoring and implementation and the Regional Board’s TDML triennial review.

The City efforts to reduce pollutants in its watershed have been effective and it has considered and taken into account local conditions and constraints.

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<sup>13</sup> Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices, EPA Document 841-F-07-006 dated December 2007 – emphasis added

## B. Regulatory Compliance

**The “required revisions” on MS4s are not federally required, are inconsistent with the State general permit, do not consider Water Code mandated factors and are the result of an inappropriate policy making process.**

The “required revisions” are not a necessary component of a SWMP under the General Permit. On pages 8 to 12, the General Permit requires permittees to describe BMPs and associated measurable goals in order to fulfill requirements for the six minimum control measures identified. At most, the “required revisions” are consistent with the guidance in the federal regulations for post-construction minimum control measures. That guidance describes BMP activities that EPA **encourages** but does not require.<sup>14</sup> The federal regulations do not require the permittee to achieve the “required revisions” established by the Regional Board but instead:

“EPA recommends that the BMPs chosen be appropriate for the local community; minimize water quality impacts and attempt to maintain predevelopment runoff conditions.”<sup>15</sup>

Significantly, Regional Board staff has taken EPA’s general, nonbinding guidance and extrapolated new SWMP requirements beyond those required by the General Permit.

The “required revisions” for hydromodification also violate the intent of the federal regulations, which defer compliance with minimum control measures until EPA can review and evaluate the effectiveness of the small MS4 regulations after December 2010.<sup>16</sup> The “required revisions”, at most, reflect EPA guidance and are not required by the regulatory scheme for Phase II jurisdictions.

There are a number of policy and legal issues raised by the City’s comments. All stormwater permits challenged to date have been Phase I permits for large MS4s. The legal challenges to date have not specifically addressed the issues and concerns presented here. In California, the controlling law includes not just the federal Clean Water Act, but if the standards proposed exceed federal standards then the Porter-Cologne Water Quality Control Act (Porter-Cologne Act) must also be considered.

The Porter-Cologne Act’s goal is

“...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, and **social, economic, tangible and intangible.**”<sup>17</sup>

<sup>14</sup> (See 40 C.F.R. Section 122.34(b)(5)(iii).

<sup>15</sup> 40 C.F.R. Sections 122.34(e)(2) and 122.37.

<sup>16</sup> 40 C.F.R. Sections 122.34(e)(2) and 122.37.

<sup>17</sup> Water Code Section 13000.

The Porter-Cologne Act at Water Code Section 13241 states:

Each regional board shall establish such water quality objectives in water quality control plans as in its judgment will ensure the reasonable protection of beneficial uses and the prevention of nuisance; however, it is recognized that it may be possible for the quality of water to be changed to some degree without unreasonably affecting beneficial uses. Factors to be considered by a regional board in establishing water quality objectives shall include, but not necessarily be limited to, all of the following:

- (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.” (emphasis added.)

In 1998 the City of Burbank challenged the Los Angeles Regional Board’s issuance of a wastewater permit contending the board had not considered the factors contained in Water Code section 13241. In 2005 the Supreme Court<sup>18</sup> held that whether the regional board should have complied with Water Code Sections 13263 and 13241 by taking into account “economic considerations,” such as the costs the permit holder would incur to comply with the numeric pollutant restrictions set out in the permits, depended on whether those restrictions met or exceeded the requirements of the federal Clean Water Act, 33 U.S.C. § 1251 et seq. The court noted that California law could not authorize California’s regional boards to allow the discharge of pollutants into the navigable waters of the United States in concentrations that would exceed the mandates of federal law, but also noted that the federal Clean Water Act did not prohibit a state, when imposing effluent limitations that were more stringent than required by federal law, from taking into account the economic effects of doing so.<sup>19</sup>

If the “required revisions” were “federally required” as Regional Board staff contend, then every jurisdiction in the United States would be required to implement hydromodification criteria as proposed in the “required revisions”. Since the requirements are more stringent than required by federal law, State law requires the Regional Board to consider economics and other public interest factors prior to adoption of the required revisions.<sup>20</sup> This position also finds support in Water Code sections

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<sup>18</sup> *City of Burbank v. State Water Resources Control Board* (2005) 35 Cal 4<sup>th</sup> 613, 627

<sup>19</sup> *ibid*

<sup>20</sup> Water Code Sections 13241 and 13263(a), and *City of Burbank v. State Water Resources Control Board* (2005) 35 Cal 4<sup>th</sup> 613, 627). Early in 2008 eighteen cities in the Los Angeles Basin prevailed in an Orange County Superior Court against the Regional Board attempt to impose water quality control standards. The trial judge issued a writ of mandate compelling the state to among other things consider the factors in the Water Code before imposing conditions on local jurisdictions.

13000 and 13241, which require consideration of economic and social factors (both tangible and intangible) in making decisions.

**The financial condition of the City is significantly constrained and like most public entities in California and throughout the nation, the City faces unprecedented budgetary constraints.** Over the last few years the City Council has reduced the workforce by almost 110 positions and has authorized the closing of the city swimming pool, two museums, and the Beach Flats Community Center. Given the weakening economy, the collapse of the financial markets and the spiral downward in home prices, it is anticipated that additional significant reductions will be needed by the City to balance its budget before the end of this fiscal year in June. The City has already imposed a hiring freeze, and limits on expenditures for overtime with limited exceptions for health and public safety purposes. The City Manager expects virtually no increase in property tax revenues and a significant reduction in sales tax revenues in the coming year.

Due to our dependence on sales and property tax revenues, the City Manager is unable to determine the exact nature of the cuts necessary until the state budget crisis is addressed. In his most recent address to the City Council on the state of the projected City budget he stated that:

The most optimistic forecasts we can find call for a resumption of very modest growth sometime in mid to late 2009, which would have little material effect on the deficit we are describing above. Indeed, we will need to see an improvement in tax receipts in Fiscal Year 2010 to avoid even further reductions. Many forecasters think that modest growth may not resume until 2010 or later:

*and*

In the best of circumstances, even if the City's employees prove to be extraordinarily accommodating, it does not seem possible that the City could emerge from this recession providing the full list of services it provided before. Employees report from every quarter that they feel challenged now. It is not realistic to think that the institution can make even further cuts and maintain the same programs and services as if nothing has changed. The landscape of City services must be reduced; there is simply no way to avoid it.<sup>21</sup>

The requirements being imposed by the Regional Board on the small MS4s are more restrictive than requirements currently considered in permits for large MS4s. As a matter of policy it is inappropriate to impose more restrictive requirements on these small MS4s, which have fewer available resources. The fact sheet for the General Permit notes, "it is anticipated that this general permit term will serve as a "ramping up" period and that programs implemented by Phase II communities will not necessarily conform to programs implemented by Phase I communities".<sup>22</sup>

<sup>21</sup> Santa Cruz City Council Budget Update Agenda December 9, 2008. Item number 21: "Fiscal Year 2009 Budget Balancing Plan (Phase 9) Copy Attached.

<sup>22</sup> General Permit fact sheet, pg. 9.

Congress has also acknowledged this distinction. The EPA continues to stress in its guidance that until the Phase II program is evaluated after December 2010, EPA strongly recommends:

No 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 or equivalent analysis provides adequate information to develop more specific control measures to protect water quality".<sup>23</sup>

Therefore until such time as the State undertakes and completes its process to develop a new General Permit for small MS4s and EPA evaluates the Phase II program after December 2010, the Regional Board is premature to require new criteria related to hydromodification and LIDS on financially strapped Phase II jurisdictions.

### C. Public Acceptance

**The City has experience working collaboratively with environmental and other community groups to develop public acceptance of new water quality programs and attached to this letter is a joint letter from several local Santa Cruz environmental organizations and water agencies that attest to the fact that the City of Santa Cruz and other the other local jurisdictions have in the past worked cooperatively with local groups to improve water quality.** The City has a long history of working closely with organizations and other stakeholders to promote watershed protection and restoration in an effective manner that also maximizes the leverage of limited public and private funding. These past efforts have included participation in the Watershed Restoration program, the Blue Circle, the Integrated Regional Water Management program, Eco Cruz, Green Business Program, and the Clean Ocean Business Program.

The letter from the local groups states

"We are concerned that to some degree the current SWMP approach as advocated by the RWQCB will divert limited resources away from the important water quality, ecosystem and climate change issues we are trying to address. The municipalities are active and critical partners in these efforts. *We strongly recommend that the RWQCB work with us to collaboratively achieve the "healthy watersheds" we all seek.*"<sup>24</sup>

<sup>23</sup> 40 C.F.R. section 122.34(e)(2). emphasis added

<sup>24</sup> See letter dated Jan 10,2009, Support for Santa Cruz Municipalities stormwater programs signed by representatives of Resource Conservation District of Santa Cruz County, Ecology Action, Coastal Watershed Council, Save Our Shores Pajaro Valley Water Management Agency, and Soquel Creek Water District--pg 1-emphasis added.

The letter concludes:

“We have confidence that through the proposed municipal stormwater management programs the municipalities will continue to work with the RWQCB and our agencies to evaluate program effectiveness and modify or expand those programs as needed in the future to ensure that water quality protection and hydromodification are adequately addressed. *The municipalities have a good track record and long experience successfully implementing practical resource protection efforts in Santa Cruz County.*”<sup>25</sup>

The City voters passed Measure E on the November 4, 2008 ballot which established a Clean River, Beaches and Ocean Special Parcel Tax to be collected from owners of taxable property parcels in the City of Santa Cruz. This created a dedicated source of funding to pay for water quality programs that will prevent pollution from reaching our waterways, beaches and the Monterey Bay National Marine Sanctuary. The City plans to use Measure E funds to implement the SWMP as submitted to the Regional Board. The measure passed with the following promise of increased effort by the City:

- Regularly clean City storm drain pipes and street inlets to keep trash and pollutants from reaching our waterways and beaches. The City has 50 miles of storm drain pipes and over 1,000 storm water inlets. Estimated additional annual cost: \$300,000
- Provide increased education and outreach activities to teach children, residents, businesses and visitors why and how to prevent water pollution. Changing human behaviors to prevent pollution is critical. The City plans to contract with local organizations to assist with education and outreach programs. Estimated additional annual cost: \$150,000
- Monitor water quality in our creeks and the San Lorenzo River and assess effectiveness of programs in meeting State standards. Estimated additional annual cost: \$100,000
- Increase inspections of construction projects and new developments to prevent polluted runoff, including erosion. Estimated annual cost: \$50,000
- Increase programs to reduce pollution by businesses and industry, such as the Green Business Certification Program. Estimated annual cost: \$25,000
- Repair, upgrade and construct improvements to the storm water collection system to prevent pollution from reaching waterways. This could include systems to divert highly polluted summer runoff to the wastewater treatment plant. Catch-basin filters or other engineered systems. Estimated annual cost: \$100,000

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<sup>25</sup> Ibid, page 3

This work is included in our SWMP and has been promised to City residents. Polling indicated that more reports and studies were not how people wanted their money spent. Therefore, as you see, the work promised and contained in our SWMP focuses on efforts that will be seen and felt in the community. There is no money for new unfunded mandates being contemplated by the Regional Board that frankly will focus on studying the problem instead of acting on the problem and actually cleaning the waters of the State.

#### **D. Costs**

**The provisions in the "Required Revisions" are not cost effective and significantly increase the financial burden on the City and private development efforts.** From a practical standpoint, the development and adoption of local standards for hydromodification will require the expenditure of significant public and private resources. Santa Cruz City staff has estimated implementation of the "required revisions" to the SWMP may require an additional expenditure of as much as \$800,000 by the City over the five-year life of the SWMP. Given the extensive nature of the "required revisions" that budget could easily increase with no end in sight. The City does not have the funding available to finance all of the "required revisions" and the ensuing liability associated with failure to implement these "required revisions".

Unless the Regional Board is willing to consider changes to its rigid universal interim hydromodification criteria, landowners, developers and the City itself will all be adversely affected. We examined several recent development applications to evaluate what additional information/improvements could be required based on our current understanding of the interim hydromodification criteria. We concluded that imposition of the Board's interim criteria would result in: additional costly engineering analysis and reviews, reduction in developable areas, incorporation of Low Impact Development practices into project design, conflicts with Smart Growth which may lead to "hyper sprawl"<sup>26</sup>, and establishment of unattainable criteria given the innate uncertainty of stormwater design.

**The City also considers the imposition of the Interim Hydromodification Criteria requirements to be an unfunded state mandate.** Because the "required revisions" in question exceed requirements as mandated by federal law, the provisions are an unfunded state mandate<sup>27</sup>. Furthermore, even if a program is required in response to a federal mandate, a subvention of state funds may be in order. For example, Government Code section 17556(c) provides that if a requirement was mandated by federal law or regulation, but the [state] "statute or executive order mandates costs that exceed the mandate in that federal law or regulation" a subvention of funds is authorized. Even if the costs were mandated to implement a federal program, if the "state freely chose to impose the costs upon the local agency as a means of implementing" that federal

<sup>26</sup> Beach, Dana. "Coastal Sprawl: The Effects of Urban Design on Aquatic Ecosystems in the United States". The Pew Oceans Commission. (8 April 2002). 11 June 2008.

<sup>27</sup> See *County of Los Angeles v. Commission on State Mandates* (2007) 150 Cal. App.4<sup>th</sup> 898, 907.

program, "the costs are the result of a reimbursable state mandate regardless whether the costs were imposed upon the state by the federal government."<sup>28</sup>

As noted above, the effectiveness and benefit to be received from the Regional Board staff's "required revisions" have not been demonstrated. The City understands that at the Regional Board's October 17<sup>th</sup> hearing on the City of Lompoc SWMP, the City of Lompoc and the City of Santa Barbara testified that they expended in excess of \$250,000 to develop local hydromodification criteria. Thus, the "required revisions" are onerous and costly and may not provide any environmental benefit by actually improving water quality, or at least at a level that is commensurate with the cost.

Based on our previous experience with TDML development in our City and limited review of effectiveness assessment guides it is estimated that the addition of these tasks would cost the City \$100,000-200,000 over the five year term of the permit. As noted by local environmental groups:

"While we concur with the overall objectives represented by Wasteload Allocation Attainment Plans (WAAPs), we agree with the municipalities that the requirement for separate WAAPs for each TMDL and each stormwater program detracts from a comprehensive watershed approach and would be an unnecessary and redundant effort. Many of the elements of the WAAPs have been addressed through the preparation of the stormwater plans, the TMDL's, and/or the supporting studies that lead to the TMDL's. Ongoing assessment of program effectiveness will be accomplished through the stormwater program effectiveness monitoring and the Regional Board's triennial review of TMDL implementation."<sup>29</sup>

Even references cited by Regional Board staff state that:

"Despite the fact that LID technologies have been promoted and studied since the early 1990's for many Stormwater managers and developers, LID is still a new and emerging technology. As with most new technologies, installation and other **costs of LID are highest during the early phases** of development and adoption. Over time, as practitioners learn more about the technology, as the number of suppliers of inputs expands, and as regulations adapt to new technology, costs will **likely decline**"<sup>30</sup>

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<sup>28</sup> Hayes v. Commission on State Mandates (1992) 11 Cal.App.4th 1564, 1577-78)

<sup>29</sup> Ibid pg 2

<sup>30</sup> ECONorthwest. The Economics of Low Impact Development: A Literature review p iii. -emphasis added

The EPA further notes that:

“Although the increase in application of these practices is growing rapidly, **data regarding both the effectiveness of these practices and their costs remain limited.**”<sup>31</sup>

Finally, the EPA goes on to caution:

At this point, monetizing the economic and environmental benefits of LID strategies is **much more difficult** than monetizing traditional infrastructure costs or changes in property values due to improvements in existing utilities or transportation systems.<sup>32</sup>

As a matter of public policy it makes little sense in these times of dwindling resources to require small MS4s with limited funds to refine criteria that should be developed as part of the upcoming Phase II process.

#### **E. Technical Feasibility**

**The Criteria established by the Regional Board staff may not be technically feasible to achieve.** The Regional Board has already heard testimony from other jurisdictions questioning the technical feasibility of achieving the criteria required by the Regional Board. In its response to the City of Lompoc’s proposed SWMP the Regional Board staff stated:

“There are several small MS4s within the region that are already proceeding to the 12 month schedule (the City of Santa Maria and the Santa Cruz County municipalities are examples).”<sup>33</sup>

As evidenced by the comments made here, this statement is not totally accurate. Further, we understand that the City of Santa Maria recently questioned both the timelines and the substance of the “required revisions” proposed by the Regional Board staff.

Technical experts in the field have already stated to Regional Boards throughout the State the difficulty of developing a blanket hydromodification standard. For example, one interim criterion that requires new and redevelopment projects to maintain an EIA of less than 5%, mirrors a proposed requirement in the draft phase I MS4 permit for the County of Ventura, and incorporated cities within Ventura County. That requirement has been the subject of much debate and controversy.

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<sup>31</sup> Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices, EPA Document 841-F-07-006 dated December 2007-emphasis added.

<sup>32</sup> Ibid at page 6-emphasis added

<sup>33</sup> Regional Board Staff Supplemental Sheet no. 2 for regular meeting of October 17, 2008 item 9, pg 1.

Speaking on behalf of the County of Ventura, GeoSyntec expressed its concerns with the technical feasibility of a blanket hydromodification criterion. GeoSyntec stated that while the requirement was presumably based on existing literature, the use of this information was premature because it has not been developed and tested locally<sup>34</sup>. GeoSyntec also concluded that this blanket requirement is not needed in all cases and that such a requirement:

“...ignores the need to promote urban infill, redevelopment and dense districts in new development projects as identified in the smart growth principles”<sup>35</sup>

Later in its memo GeoSyntec states:

“Interim criteria requirements for post construction runoff hydrographs may be impractical as applied to redevelopment projects, and in particular, redevelopment projects for industrial areas. Requiring the site to match predevelopment runoff hydrographs will hinder redevelopment projects that are industrial in nature, and by virtue of the industry require significant impervious areas (e.g. trucking and shipping facilities)”<sup>36</sup>.

As previously noted, even the literature cited by the Regional Board in its comments to other jurisdiction's SWMPs caution against the blanket use of LIDs and by implication the new hydromodification criteria. In its comments to the City of Lompoc SWMP, Regional Board staff cites the ECONorthwest's report of the review of literature<sup>37</sup> and EPA Documents cited above<sup>38</sup>. Both these documents advise against reading too much into past studies to justify the use of LIDS.

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<sup>34</sup> See memorandum to Mark Grey, CICWQ, from Lisa Austin, Donna Bodine and Erick Strecker, GeoSyntec Consultants dated March 7, 2007, at pg 9

<sup>35</sup> Ibid, at pages 9 and 10

<sup>36</sup> Ibid

<sup>37</sup> See City of Lompoc Board hearing materials, page 4 of supplemental sheet 3, item 9 dated October 17, 2008

<sup>38</sup> EPA 841-F-07-006 dated December 2007

Consultants retained by the City and the County of Santa Cruz (EOA, Inc.) are of the opinion that:

"It is not feasible to demonstrate that the alternative hydromodification criteria being developed by the County will be as effective as the Regional Board's interim criteria without further documentation from the Regional Board. The technical basis for, and the effectiveness of, the interim criteria are unknown at this time. The Regional Board put forth detailed interim hydromodification criteria in letters dated February 2008 and July 2008. These criteria are now listed as required changes for the SWMP (comment 39). However, neither of the letters, attached references, or other correspondence from the Regional Board provides the scientific basis of the interim criteria."<sup>39</sup>

Comment 39 referred to in the quote above is contained in the letter from the RWQCB to the County of Santa Cruz. The City received an identical comment as Comment 6 in the RWQCB letter to the City.

Without having had the opportunity to thoroughly review any documentation of the basis of the Regional Board's criteria, here is a summary of what we know based on a review of existing hydromodification control approaches across the State.

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<sup>39</sup> EOA, Inc. Email of 12/18/08, Lori Pettegrew, References reviewed included materials from the July 2008 Regional Board Letter (item numbers below refer to the numbering in that letter)

5. Beach, Dana. "Coastal Sprawl: The Effects of Urban Design on Aquatic Ecosystems in the United States". The Pew Oceans Commission. (8 April 2002). 11 June 2008.
9. Coleman, Derrick, et al. "Effect of Increases in Peak Flows and Imperviousness on the Morphology of Southern California Streams." Southern California Coastal Water Research Project. Technical Report 450 (2005).
11. Draft NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities." California State Water Resources Control Board. (18 March 2008): 29 June 2008.
14. "Draft Tentative Order, Ventura County Municipal Separate Storm Sewer System Permit." Los Angeles Regional Water Quality Control Board. (29 April 2008): 9 June 2008.
16. GeoSyntec Consultants. Memorandum to Mark Grey, Building Industry Association of Southern California: Review of Investigation of the Feasibility and Benefits of Low Impact Site Design Practices for Ventura County. 28 May 2008.

Other References reviewed include:

1. Letter to Dr. Xavier Swamikannu, Los Angeles Regional Water Quality Control Board, from the Building Industry Association of Southern California et al., Re: Comments from Construction Industry Representatives Concerning the April 2008 Draft Tentative NPDES Permit No. CAS004002 - Ventura MS4, May 29, 2008.
2. Letter to Mr. Roger Briggs, Central Coast Regional Water Quality Control Board, from the California Stormwater Quality Association, Re: 2/15/08 Letter regarding Notification to Traditional Small MS4s on Process for Enrolling under the State's General NPDES Permit for Storm Water Discharges, June 27, 2008.

A. Requirement to limit the Effective Impervious Area (EIA) to less than 5% of the project area –

This requirement appears to have come from the draft Ventura County stormwater permit, the language of which is quite controversial and has not yet been adopted<sup>40</sup>. Dr. Richard Horner, a researcher from the Pacific Northwest and consultant to NRDC, proposed the EIA limit, however, two of the references provided in the July 2008 RWQCB letter as support for the EIA limit are actually in disagreement with a 5% EIA. Reference 16 is a memorandum prepared by GeoSyntec Consultants, a leader in the LID and hydromodification management field, that evaluated Dr. Horner's assumptions in a memorandum prepared for the Building Industry Association of Southern California (BIASC) (reference 16 to the July 2008 RWQCB letter)<sup>41</sup>. The memorandum concluded that an EIA limit of 5% is not a feasible or appropriate criterion. In its report entitled "Coastal Sprawl" (reference 5 to the July letter), the Pew Oceans Commission also did not support an EIA limit at the project site level<sup>42</sup>. They contend that an impervious limit can lead to "hypersprawl" and they recommend a "New Urbanist/Smart Growth" approach that considers the effects of land use changes at the regional, neighborhood, and site scale.

B. Requirement for post-construction hydrographs to match within 1% the pre-construction hydrographs for return periods from 1-year to 10-years

This requirement appears to be a hybrid of the hydrograph matching criteria proposed in the report by Coleman et al for the Southern California Coastal Water Resources Program (SCCWRP) (reference 9 to the July letter) and the matching tolerance proposed in the draft Ventura permit<sup>43</sup>. The SCCWRP report studied the effects of peak flows and levels of watershed imperviousness on Southern California streams (which are very different from Central Coast Region streams), but did not provide any technical basis for the effectiveness of matching the 1- to 10-year hydrographs (a management recommendation that seemed to be added at the end of the report). In fact, hydrograph matching is considered less protective of streams than flow duration matching, as demonstrated in the Santa Clara Valley Urban Runoff Program hydromodification studies, and matching the 1-

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<sup>40</sup> "Draft Tentative Order, Ventura County Municipal Separate Storm Sewer System Permit." Los Angeles Regional Water Quality Control Board. (29 April 2008): 9 June 2008.

<sup>41</sup> GeoSyntec Consultants. Memorandum to Mark Grey, Building Industry Association of Southern California: *Review of Investigation of the Feasibility and Benefits of Low Impact Site Design Practices for Ventura County*. 28 May 2008.

<sup>42</sup> Beach, Dana. "Coastal Sprawl: The Effects of Urban Design on Aquatic Ecosystems in the United States". The Pew Oceans Commission. (8 April 2002). 11 June 2008.

<sup>43</sup> Coleman, Derrick, et al. "Effect of Increases in Peak Flows and Imperviousness on the Morphology of Southern California Streams." *Southern California Coastal Water Research Project. Technical Report 450 (2005). and Draft Tentative Order, Ventura County Municipal Separate Storm Sewer System Permit.* Los Angeles Regional Water Quality Control Board. (29 April 2008): 9 June 2008.

year storm and greater ignores the effects of smaller, more frequent storms that may cumulatively have significant erosive effects on stream channels.

In addition, the requirement to match a pre-construction hydrograph within 1% does not make sense technically, given the level of uncertainty of the data used to generate the hydrograph and the ability to accurately calculate or simulate the actual pre-construction hydrograph in the first place.

C. Requirement to preserve the pre-construction drainage density for all drainage areas serving a first order stream or larger, and ensure that post-project time of concentration is greater than or equal to pre-project time of concentration

This requirement seems to be taken from the draft Construction General permit, and no reference for its technical basis has been provided in this permit. In its comments on the draft Permit, the California Stormwater Quality Association (CASQA, June 11, 2008) stated that:

“Preserving the drainage density for all projects is exceptionally restrictive and greatly limits site uses. There are many effective BMPs, including Low Impact Development (LID) approaches that can be used to meet performance goals such as runoff volume reduction and pollutant load reduction. Maintaining existing drainage density will tend to encourage sprawl and increase the cost of development without benefiting water quality beyond what other equally effective approaches could provide. Further, without more detailed information regarding how the pre-project time of concentration criteria is to be applied, there is no assurance that it will have a benefit.”

GeoSyntec Consultants also submitted comments on the hydromodification management requirements of the draft Construction General Permit, on behalf of BIASC, and concluded that:

1. Decrease in runoff travel time is characteristic of urban hydrology; however, it is possible to show the same or even longer travel time for a project, while still increasing the erosivity of runoff; and
2. No recommendation was found in any of the publications they reviewed to prohibit an alteration to drainage divides at this scale as an effective hydromodification management tool.

Without technical or scientific basis, field studies or peer review, the effectiveness of the interim criteria is unknown. Therefore, it is not feasible, nor does it make sense for the City to expend significant resources, to demonstrate that any alternative criteria is “as effective as” the Regional Board’s interim criteria.

Further investigation of hydromodification criteria currently being used throughout the State and in existing Phase I stormwater permits also did not provide technical support for the interim criteria proposed by the Regional Board and listed in the required SWMP revisions. It appears that interim criteria put forth in the required SWMP revisions are untested and have not received any level of peer review or discussion.

A review of hydromodification management requirements throughout the State indicates that most stormwater programs have a general requirement that post-project runoff peaks, volumes, and/or durations shall not exceed those for the pre-project condition. Project size thresholds vary, but most programs also have exemptions for discharges to streams or channels where potential for erosion is small (e.g. hardened or engineered channels, tidal areas, enclosed pipes, etc.). What's important to note about these existing hydromodification management programs is that the majority of them have developed criteria based on extensive technical studies, and have been peer reviewed by noted geomorphologists and independent technical experts. These criteria have been demonstrated to be effective at reducing hydromodification and protecting beneficial uses."

The City's approach to development of alternative interim hydromodification management criteria will build upon this existing base of technical knowledge, combined with knowledge of local watershed and stream conditions, to create a management plan and criteria that are technically sound and appropriate for the City. A comprehensive plan will be developed that is not just focused on site-level controls, but includes consideration of land use planning policies, stream riparian/buffer zone protection, and stream susceptibility to erosive forces. The City will also hold stakeholder meetings to encourage public involvement in the process and incorporate public input into the plan."

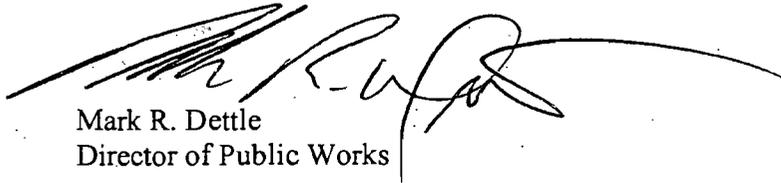
## **5. Request for a Hearing**

The City staff has worked cooperatively with Regional Board staff in the past to resolve differences of opinion on how to structure programs intended to improve water quality. Unfortunately, at this time agreement has not yet been reached between Regional Board staff and the City. Thus, in order to preserve its legal rights, the City requests a hearing before the Regional Board prior to the Regional Board making its final determination as to the exact nature and form of "required revisions" it will impose. The City requests 20 minutes for a presentation and 15 minutes to provide rebuttal testimony to Regional Board comments.

## Conclusion

Santa Cruz City seeks to implement programs that are technically feasible, effective, enjoy broad public support and actually improve water quality, rather than fighting over "required revisions" to its SWMP. The City does not disagree with the ultimate objectives sought by the Regional Board. The City believes that its proposed SWMP achieves those goals by establishing programs that will improve water quality within existing resources. As additional resources become available to the City, the City will continue its proactive approach to improve water quality and continue to serve as good stewards of the natural environment.

Yours very truly,



Mark R. Dettle  
Director of Public Works

Enclosure:

Santa Cruz City Council Budget Update from December 9, 2008

Cc: County of Santa Cruz, Department of Public Works  
City of Watsonville, Department of Public Works  
City of Scotts Valley, Department of Public Works  
City of Capitola, Department of Public Works  
City Manager / City Council  
City Attorney  
Steve Wolfman, Associate Civil Engineer  
Suzanne Healy, Environmental Projects Analyst



## MEMORANDUM

DATE: December 4, 2008

TO: Mayor and City Council

FROM: Richard C. Wilson, City Manager

SUBJECT: Budget Update: The Big Picture

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The recession that started in December of 2007 is taking its toll on thousands of employers as they struggle to maintain operations in the face of declining income. The City of Santa Cruz is no exception.

The City began the recession with reasonable cash reserves, but those reserves are quickly being depleted. As we reported to the City Council at its November 25, 2008 meeting, we forecast a deficit of \$7 million for the current fiscal year. The actions taken by the Council on November 25 were a start at addressing the problem, but only a start.

The remaining deficit is \$4.2 million on a recurring annual basis. The City of Santa Cruz cannot sustain such a deficit, and it dare not deplete the funds available for general government, tax-supported services. The City has no choice but to cut spending, and cut it now.

The original budget plan had been to implement a set of cuts in December of 2008, and a second set in June 2009. It was a reasonable plan when it was adopted, or so it seemed. But the economy has rendered that plan woefully inadequate. We are calling the cuts proposed in the accompanying report "emergency cuts," but we have no idea when and if the City's revenues would permit restorations of what is being cut. Nor can we be sure that we have hit bottom; it may very well be that the economy will get worse and we will find it necessary to cut more.

The most optimistic forecasts we can find call for a resumption of very modest growth sometime in mid to late 2009, which would have little material effect on the deficit we are describing above. Indeed, we will need to see an improvement in tax receipts in Fiscal Year 2010 to avoid even further reductions. Many forecasters think that modest growth may not resume until 2010 or later.

We have prepared a menu of options. It includes two categories of cuts. The first category includes cuts the City Council can make on its own authority. Outright cuts and furloughs are in this category. The second category includes cuts the City Council could propose to employee bargaining units, but could not unilaterally implement. A variety of ways to decrease compensation costs are in this category. Usually the second category remains outside public purview, but given the extraordinary circumstances at hand, we thought it advisable to identify the possibilities.

The key question for the City's employees and their bargaining units will be how much of the deficit the workforce is willing to absorb. The more that can be done by measures spread widely across the workforce (the second category), the less will have to be done through outright cuts



January 5, 2009

Mr. Roger Briggs, Executive Officer  
Regional Water Quality Control Board  
895 Aerovista Place, Suite 101  
San Luis Obispo, California 93401-7906

Dear Mr. Briggs:

**RE: Support for Santa Cruz Municipalities Stormwater Programs**

We are writing to express our strong support for the submitted stormwater management programs (SWMPs) of Santa Cruz municipalities (Santa Cruz County, Capitola, Santa Cruz City, Watsonville and Scotts Valley). The municipalities have a long history of working closely with our organizations and other stakeholders to promote watershed protection and restoration in an effective manner that also maximizes the leverage of limited public and private funding. These partnerships have been borne out over the years through participation in the Integrated Watershed Restoration Program, the Blue Circle, the Integrated Regional Water Management Program and EcoCruz, the environmental online guide for Santa Cruz County.

We are concerned that to some degree the current SWMP approach as advocated by the RWQCB will divert limited resources away from the important water quality, ecosystem and climate change issues we are trying to address. The municipalities are active and critical partners in these efforts. We strongly recommend that the RWQCB work with us to collaboratively achieve the "healthy watersheds" we all seek. A brief overview of our preferred approach to critical watershed issues is provided below.

**Hydromodification**

Reducing hydromodification, promoting watershed restoration, protecting riparian corridors and promoting groundwater recharge are all elements that have been a priority of the municipalities and the local community for many years and are well addressed in the general plans, policies, ordinances and stormwater programs of the municipalities. There have been over 15 watershed assessments and plans for Santa Cruz County for which these municipalities have participated on TACs and Steering Committees and have committed staff and local match resources.

We have identified the need for a regional hydromodification effort for Santa Cruz County to better address our needs to protect and restore hydrologic function. Based on our extensive local knowledge of our watersheds we believe that something similar to the *Stream Channel Mapping and Classification Systems: Implications for Assessing Susceptibility to Hydromodification Effects in Southern California* may be a productive approach. We are also evaluating the watershed restoration/enhancement potential for exchanging "hydromodification credits". Restoration of hydrologic functions in some parts of the watershed while promoting infill and smart growth in other parts will likely be a key component of overall ecological and hydrologic watershed restoration while at the same time addressing land use practices that reduce vehicle miles and reduce greenhouse gas emissions.

We look forward to evaluating and strengthening our cooperative efforts through implementation of the proposed stormwater plans. We are already working closely with the municipalities to implement programs to provide more public education, outreach and technical assistance to property owners regarding, erosion control, runoff reduction and low impact development. Stormwater management and recharge protection are key elements of our Integrated Regional Water Management Plan and are component projects funded by our current Prop 50 IRWM grant. **Recommendation:** Utilize regional hydromodification study results to clearly define appropriate adaptive management strategies over time.

### **Low Impact Development**

The Santa Cruz County working group (Santa Cruz Watershed Action Group) comprised of municipalities, water agencies and environmental non-profits are working together to develop and promote a watershed-based approach to low impact development (LID) in Santa Cruz County. We have already recognized that in our county, focusing on LID in urbanized areas will not provide the long-term watershed scale benefits that both our community and your Board seek. As such, we are evaluating options for programs that will address LID across multiple land use types. We believe that property owner education and assistance is a key if we are to restore hydrologic function throughout our various watersheds. *Recommendation: Consider a watershed based cap and trade model that will maximize watershed scale benefits for water quality, water quantity and hydrologic function.*

### **TMDLs**

The municipalities have also taken the initiative to work with us in an effective and responsive manner to conduct studies, develop plans and begin implementation of efforts that have subsequently served as the basis for the sediment, pathogen and nutrient TMDLs in the County. We have no doubt of the agencies' intent to achieve the TMDL wasteload allocations to the maximum extent practicable, while at the same time addressing priority pollutants in the other county waters that are not necessarily subject to a TMDL. It should be kept in mind that stormwater management is just one component of most TMDLs, and the agencies have a good history of addressing all aspects and adapting their approaches as needed and as new technology or approaches become available.

While we concur with the overall objectives represented by Wasteload Allocation Attainment Plans (WAAPs), we agree with the municipalities that the requirement for separate WAAPs for each TMDL and each stormwater program detracts from a comprehensive watershed approach and would be an unnecessary and redundant effort. Many of the elements of the WAAPs have been addressed through the preparation of the stormwater plans, the TMDLs and/or the supporting studies that lead to the TMDLs. Ongoing assessment of program effectiveness will be accomplished through the stormwater program effectiveness monitoring and the Regional Board's triennial review of TMDL implementation. Our working group also intends to apply adaptive management to all of our watershed restoration efforts, including the stormwater programs. *Recommendation: Build on ongoing efforts to comprehensively and realistically address TMDLs and priority pollutants originating from all sources in all watersheds.*

### **Climate Change**

We are concerned that climate change does not appear to be a consideration in the Board's approach to stormwater management. We are concerned that restoring and retaining healthy watersheds requires that climate change be taken into account. This appears especially true when dealing with hydromodification, LID and the changes in rainfall intensity that may result from climate change.

The Board is suggesting that municipalities use long-term historical precipitation records as the basis for developing hydromodification standards and plans. Climate models indicate that the use of such historical data will not necessarily provide an accurate portrayal of future precipitation patterns or events. Basing future standards on historical weather patterns may not be the best approach for restoring and retaining healthy watersheds. To the extent feasible, we would like to see flexibility and adaptive management strategies incorporated.

Increases in sea level will likely have an effect on the hydrology and ecology of many of our local waterbodies. With significant existing development in this county located in low-lying areas close to the coast, it is critical that we carefully evaluate hydromodification standards and BMPs. Implementing standards and BMPs that apply to current conditions may be inappropriate or even deleterious to the affected watersheds and communities in the future.

Increased air and water temperatures will likely affect a number of endangered species (aquatic and terrestrial). The long-term survival of these genetically unique populations may well require special consideration in terms of land use and water management policies and practices. The possible extirpation of local steelhead populations is an example of one such organism, where innovative watershed-scale approaches to stormwater management may need to be developed. *Recommendation: Avoid prescriptive requirements for use of historical rainfall data in hydromodification and LID sizing calculations, and allow for flexibility in such calculations to account for the predicted effects of climate change.*

**Conclusion**

We have confidence that through the proposed municipal stormwater management programs the municipalities will continue to work with the RWQCB and our agencies to evaluate program effectiveness, and modify or expand those programs as needed in the future to ensure that water quality protection and hydromodification are adequately addressed. The municipalities have a good track record and long experience successfully implementing practical resource protection efforts in Santa Cruz County.

We strongly support the goals of the RWQCB's stormwater program and want to work with the RWQCB and our local partners to successfully achieve "healthy watersheds." Thank you for this opportunity to comment and we look forward to our continued partnership with the RWQCB and our local community to address these priorities.

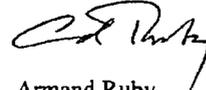
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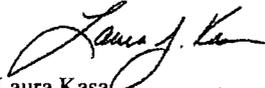
Karen Christensen  
Executive Director of  
RCD Santa Cruz County



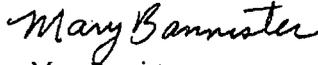
Virginia Johnson  
Executive Director of  
Ecology Action



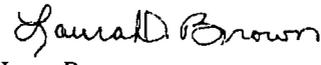
Armand Ruby  
Executive Director of  
Coastal Watershed Council



Laura Kasa  
Executive Director  
Save Our Shores

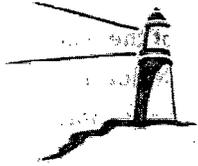


Mary Bannister  
Interim General Manager  
Pajaro Valley Water  
Management Agency



Laura Brown  
General Manager  
Soquel Creek Water District

Cc: Betsey Herbert, San Lorenzo Valley Water District  
Bill Kocher, City of Santa Cruz  
Bridget Hoover, AQWA  
Charles McNeish, Scotts Valley Water District  
John Ricker, Santa Cruz County  
Kate Goodnight, Coastal Conservancy  
Kris Beall, Watsonville Wetlands Watch  
Rachel Fatoohi, Santa Cruz County  
Robert Ketley, City of Watsonville  
Sarah Corbin or Richard Ferdinand, Surfrider  
Steve Jesberg, City of Capitola  
Steve Shimek, Monterey Coastkeeper  
Suzanne Healy, City of Santa Cruz



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Mr. Roger Briggs  
Executive Officer  
RWQCB, Central California Region  
896 Aerovista Place, Suite 101  
San Luis Obispo, CA 9340

CC: Ms. Suzanne Healy, City of Santa Cruz

January 18, 2009

**Re: Monterey Coastkeeper Comments on the draft Stormwater Management Plan dated October 2008 for the City of Santa Cruz**

Dear Mr. Briggs,

Thank you for the opportunity to offer comments regarding the City of Santa Cruz's draft Stormwater Management Plan, posted in November 2008.

The Monterey Coastkeeper has been involved in the public process surrounding stormwater in Santa Cruz since mid 2008. We have made every effort to keep an open dialogue with the agencies applying for coverage under the NPDES General Permit in an effort to express our concerns early enough to be productive. The City of Santa Cruz has been especially receptive to our comments and suggestions. We are, for the most part, supportive of the City's stormwater program; we consider it to be one of the more progressive programs out of the plans in the Santa Cruz region. **We furthermore would like to note that the City has proactively sought out funding for their program through the passage of Measure E in the November 2008 election—a clear sign from the voting public that stormwater pollution is a priority that needs to be addressed.**

Given this mandate, along with the existing requirements of federal and state law, we believe that the City of Santa Cruz has the resources and the public support to enact an effective and widespread stormwater program that includes not only the basics of stenciling storm drains and passing out

brochures, but a more comprehensive approach to watershed management that includes strict language committing the City to smart, low impact development, good municipal and industrial practices, and other tangible items that will prevent pollution at the core.

For the most part, the Santa Cruz SWMP is thorough and informative. The authors of the plan have clearly made an effort to make the plan tangible and implementable. We particularly appreciate the inclusion of cross referenced ordinances and information, such as a list of department contacts, a thorough series of attachments which include all referenced BMPs, and other documents relevant to the program. This is incredibly helpful, and suggests a welcome transparency. Furthermore, we note a marked improvement on the quality of the SWMP's measurable goals from former drafts; the goals are now, for the most part, quantitative and appropriate indicators of success.

That said we have several remaining concerns with the draft plan. Our first concern is the omission of the specific required language committing the City to the interim hydromodification criteria put forth by Board staff. While we appreciate the City's commitment to "minimize the alteration of natural watercourses...the impact of new developments or remodeling projects...and water quality impacts from post-construction runoff," (draft SWMP, Chapter 6, page 1) we are concerned by the omission of any language committing the City to technical hydromodification criteria. We fully support the inclusion of the language included in the Board staff's Required Revisions from the November 13, 2008 letter, item no. 6, in which the goals and expected effectiveness of the alternative interim hydromodification criteria are stated explicitly:

- For new and re-development projects, Effective Impervious Area shall be maintained at less than five percent (5%) of total project area.
- For new and redevelopment projects that create and/or replace 5,000 square feet or more of impervious surface, the post-construction runoff hydrographs shall match within one percent the pre0construction runoff hydrographs, for a range of events with return periods from 1-year to 10-years.
- For projects whose disturbed project area exceeds two acres, preserve the pre-construction drainage density (miles of stream length per square mile of watershed) for all drainage areas serving a first order stream or larger, and ensure that post-project time of concentration is equal or greater than pre-project time of concentration.

While we accept the extension of time given to the City to develop locally acceptable hydromodification standards, and acknowledge the inclusion of a timetable, we support Board staff in requiring the inclusion of more stringent language committing the City to interim criteria, and the development of permanent criteria.

Next, I would like to address the necessity for minimum buffer zones of 30 feet for developments along riparian corridors and wetlands. This is a minimum standard that the Board has upheld in the past; we believe that the Board should continue to uphold this standard. The City's City-Wide Creeks and Wetlands Management Plan, designed to protect riparian areas, wetlands and their buffer-zones is comprehensive; however Attachment 4 of the General Permit states that in the occasion where Design

Standards conflict with local practices, "the Permittee may continue the local practice...except that to the extent that the standards in the Design Standards are more stringent than those under local codes or other regulatory mechanism, such more stringent standards shall apply." (NPDES Permit, Attachment 4) While we encourage the continued use of Santa Cruz's comprehensive program, we request that Board continue to uphold a 30 foot minimum buffer zone for development alongside a riparian corridor or wetland.

Lastly, we support Board staff's directive to address TMDLs in the SWMP. We encourage the Board to ensure that Required Revision #13, which requires that the applicant commit to implementing all components of the required Wasteload Allocation Attainment Plan (WAAP). In spite of the City's existing programs, we believe there is still a substantial gap in data that could be addressed regarding water quality and pollution sources; we feel that the Board is being reasonable in requiring that this aspect of the plan be included prior to the approval of the SWMP.

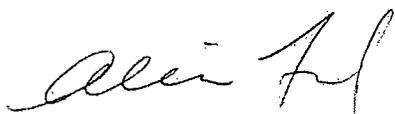
**In summary, we feel that the City of Santa Cruz's draft SWMP should be approved on the following conditions:**

- 1. All of the required revisions from Board staff's November 13, 2008 letter should be incorporated into the plan**
- 2. Language that clearly commits the City to interim hydromodification criteria should be included in the plan**
- 3. The inclusion of minimum 30 foot buffer zones for development in riparian areas alongside the Creeks and Wetlands Management Plan**
- 4. A commitment to address TMDL through the development of a more thorough Wasteload Allocation Attainment Plan**

If these changes were made, the Monterey Coastkeeper would be pleased to recommend the approval of the City's SWMP. However, we are concerned that the City, along with its partnering permit applicants, will refute the Required Revisions, particularly regarding hydromodification criteria and the inclusion of the WAAP. For this reason, I would like to request a hearing before the Board. If acceptable agreement is reached between parties, this request will be rescinded.

That concludes our commentary. Thank you for the opportunity to participate.

Sincerely,



Allison Ford

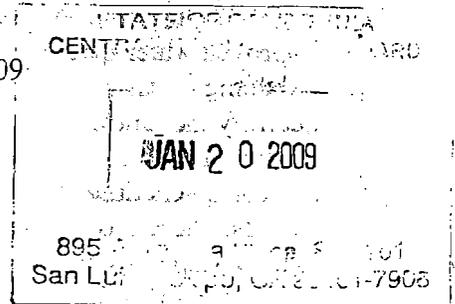
Program Manager



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
National Ocean Service  
Monterey Bay National Marine Sanctuary  
299 Foam Street  
Monterey, CA 93940

January 14, 2009

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



**SUBJECT: Storm Water Management Plans for Santa Cruz County**

Dear Mr. Briggs,

Staff of the Monterey Bay National Marine Sanctuary (MBNMS) has reviewed the Storm Water Management Plans for Santa Cruz County (County) and the Cities of Santa Cruz and Watsonville (3 plans). The MBNMS reviewed these plans under its authority defined at 15 CFR Sections 922.49 and 922.134(b), and procedures defined in Section V.E of the Memorandum of Agreement on water quality protection within the Sanctuary (June 1992).

The Sanctuary commends the County and City staff for their proactive efforts to reduce non-point source pollution in urban runoff. For the last ten years the County and Cities have been implementing many of the Storm Water Management Plan's (SWMP) Control Programs prior to having an approved NPDES permit issued by the Central Coast Regional Water Quality Control Board. Examples include; the Industrial Waste Discharge program, illicit discharge detection, Municipal Operations programs and adoption/enforcement of multiple storm water ordinances. The Storm Water Management Plans reflect many of the ongoing efforts to reduce non-point source pollution in urban runoff as well as new requirements to fulfill the Phase II NPDES General Permit for Discharges of Storm Water from Small Municipal Separate Storm Sewer Systems.

While the Sanctuary encourages and supports adoption of these SWMPs, we have several comments listed below:

- 1) The Plans concentrate on two pollutants of concern; sediment and fecal indicator bacteria (FIB). While we understand there are existing TMDLs that have been established on local rivers for sediment and FIB; there are other pollutants of concern that should not be overlooked. They include metals, nutrients, and trash. Many of the listed management measures address these contaminants and as such, we feel they should be listed as pollutants of concern for the entire region covered by these plans.
- 2) As mentioned above, there have been storm water ordinances and pollution prevention efforts in effect for many years in Santa Cruz. MBNMS staff would like to see more emphasis placed on determining effectiveness of these efforts. Each plan describes how an Effectiveness Assessment Strategy will be developed in Year 3 or 4 of the permit. While the jurisdictions should not be penalized for their proactive efforts, it would seem effectiveness assessments of these ongoing programs should be initiated immediately. The majority of the management measures listed have been implemented for years and are planned for implementation each year of the



- permit. It would seem that the jurisdictions would want to assess the effectiveness of these programs sooner than later. This will aid in better identification of realistic measureable goals, achievement in reaching those goals, and documentation of improved water quality.
- 3) On a similar point, the plans should strive to ensure that the measureable goals lead to improved water quality. An excellent example is in the Watsonville plan regarding street sweeping. This program has been implemented for several years and they are able to quantify the amount of metals, oil, sediment and trash that are collected off the streets and parking lots so as to not end up in local surface waters. The plan is very specific about sweeping schedules, frequency and miles of curb cleaned.
  - 4) Because there are five storm water plans within Santa Cruz County and many watersheds that overlap jurisdictional boundaries, we recommend some description in each plan as to how the plans will integrate with each other. The Santa Cruz County plan describes a Countywide Stormwater Information Exchange but the other plans do not. It is not clear which organizations/jurisdictions participate in this coordination and how the plans integrate across watershed boundaries.
  - 5) We support the comments described in the letter dated January 5, 2009 from the Resource Conservation District of Santa Cruz County, Ecology Action and other local partners. Santa Cruz County is fortunate that it has many local conservation organizations that work collaboratively to protect and preserve the natural environment. Local jurisdictions have demonstrated leadership and support of these efforts, including the City and County of Santa Cruz. The development of these SWMPs is an example of that effort to achieve "healthy watersheds". The Sanctuary supports the need for a regional hydromodification effort for Santa Cruz County, a watershed based approach for Low Impact Development, and flexible strategies regarding climate change as it relates to storm water issues. The letter itself is testimony that organizations with differing mandates are committed to work together to find solutions to very challenging issues.

Thank you for the opportunity to review these stormwater plans and the Waterboard's efforts to reduce non-point source pollution entering surface waters and the Sanctuary. If you have any questions regarding our comments please contact Ms. Bridget Hoover in the MBNMS office by phone at 831-647-4217 or via email at [bridget.hoover@noaa.gov](mailto:bridget.hoover@noaa.gov). Thank you for your cooperation with the Monterey Bay National Marine Sanctuary.

Sincerely,



Paul Michel  
Superintendent



SIERRA  
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SANTA CRUZ COUNTY GROUP

Of The Ventana Chapter

P.O. Box 604, Santa Cruz, CA 95061 phone (831) 426-4453

e-mail: scscrg@cruzio.com

CENTRAL CO. www.ventana.org

NOV 7 2008

November 5, 2008

895 Aerovista Place, Ste. 101  
San Luis Obispo, CA 93401-7906

Roger Briggs, Executive Officer  
California Regional Water Control Board  
Central Coast Region  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401

Re: Draft Storm Water Management Plans  
City of Santa Cruz, County of Santa Cruz

Dear Mr. Briggs:

We have reviewed the Draft Storm Water Management Plans submitted by the County of Santa Cruz and by the City of Santa Cruz. We are concerned these draft plans do not seem to place sufficient emphasis or priority on these areas: 1) the actual removal of the major pollutants in stormwater runoff generated in the urbanized portions of the area, 2) siltation in the forested areas, and 3) the opportunity to integrate runoff management with aquifer recharge.

The draft plans attempt to address important issues such as the elimination of illicit discharges, prevention of runoff from construction sites, pollution prevention in municipal operations, as well as prevention through public education and through specific preventive measures applicable to new development projects. While these activities are necessary and valuable components of an overall plan, they do not address directly the existing primary runoff pollution problems in urban areas.

We believe that it is widely recognized that in urbanized areas the largest source of polluted runoff comes from highways, roads, parking lots, and other hardscape sites. The accumulated oil residues, metal and chemical particles, toxins, bacterial waste, as well as solid debris constitute the largest component of urban runoff and pose the major threat to water quality in our rivers and ocean.

Because these pollutants flow to water courses and to catch basins that empty directly into the ocean, we request that your Agency, in reviewing these draft plans, place the highest priority on the identification, planning, and scheduling of specific projects that remove these toxins through natural filtration and engineered filtration devices.

In the area of natural filtration there are well known examples of projects undertaken elsewhere in the country that catch stormwater runoff from adjacent paved areas and redirect it towards natural drainage systems such as lagoons and seasonal wetlands. Other examples have utilized golf courses, large public open spaces, portions of urban parks and playgrounds, and other special opportunities to use natural filtration. These

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types of solution need to be identified throughout each watershed as part of each area's Stormwater Management Plan (SWMP). Also, there are existing natural filtration areas that have fallen into disrepair and are no longer functioning optimally. There is an obvious need and opportunity to identify these, and to develop and schedule specific repair projects as one of the highest priorities in each SWMP.

In the area of engineered filtration devices, we request that a multi year program be developed by each jurisdiction to install and maintain engineered filtration devices in each catch basin/storm drain. Filtration devices must be supported by ongoing programs to clean, maintain and replace these devices, and also an ongoing program to clean out solid debris from storm drains before it flows to the ocean. There should also be a program to retrofit, gradually over a specific time period, large parking lots and other large hardscape areas with sedimentation and filtration solutions similar to those proposed for new large developments.

Another major concern that does not seem to be addressed in the draft SWMPs is the runoff in non-urban, forested areas which comprise a large portion of our county. The rampant building of logging roads in the watersheds, the removal of riparian vegetation and other inappropriate logging practices cause huge amounts of silt to run off into the creeks, thereby ruining their habitat.

Lastly we want to stress the apparently missed opportunity to manage runoff with the aim of maximizing its potential as a source of aquifer recharge. In each SWMP there is a need to identify areas most in need of recharge, most able to absorb it, and to match these with runoff that can be redirected towards them. In this County, the need to bring together runoff management and recharge planning is an apparent, unmet need.

In conclusion, we urge you to require that specific projects dealing with pollutant load reductions, both through natural filtration and engineered solutions, be identified, quantified, and scheduled as the highest priority in SWMPs. Toxic pollution removal from runoff, prevention of siltation and maximizing aquifer recharge opportunities are the three areas that require the most improvement in SWMPs.

Thank you for considering these preliminary comments. We will submit more detailed comments during the 60-day public comment period when it is announced.

Sincerely,

*Aldo Giacchino*

Aldo Giacchino, Chair  
Sierra Club—Santa Cruz County Group