

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

**Response to Comments
City of Scotts Valley
Storm Water Management Program October 2008**

March 19-20, 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 Scotts Valley (City) Storm Water Management Plan (SWMP) and Water Board staff's Draft Table of Required Revisions. Water Board staff received comments from the following organizations and individuals:

- City of Scotts Valley
- 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
- Grey Hayes

II. Comments by the City of Scotts Valley

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 24, 2008 Draft Table of Required Revisions. In conjunction with this first set of comments, the City submitted a revised SWMP, which includes the modifications the City has made in response to Water Board staff's November 24, 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. 3 through 10, 12, 13, 15, 16, 18, 27, 31, 32, and 34 through 41 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.

Comment 1: Regarding Required Revision No. 1, the format of the implementation year tables have been modified to clearly show the beginning and continuation of the BMP's.

Response 1: Required Revision No. 1 specifies that the City must identify each year a best management practice (BMP) will be implemented, not just the first year of implementation. While the revised January 2009 SWMP largely addresses the required revision by identifying every year of implementation for most BMPs, two BMPs (2-1 and 4-2) still appear to have inadequate implementation schedules. For BMP 2-1, the SWMP indicates that design standards will only be implemented in year 3, when they should be implemented every year following development. For BMP 4-2, the SWMP indicates the inspection checklist will only be used in year 2, when it should be used consistently each year after it is developed. Due to these inadequacies, Water Board staff has added language to Required Revision No. 1 to ensure continued implementation of these BMPs.

Comment 2: Regarding Required Revision No. 2, bullets numbered 1, 2, 3 are principles of social based marketing. Bullet number 4 has been added to regularly assess the education methods and "consider" social based marketing as specifically requested by Water Board staff.

Response 2: Required Revision No. 2 specifies that the City must assess and incorporate, where appropriate, community-based social marketing techniques into its education program. However, the bullets referred to in the comment are the City's education goals; they are not methods or strategies to be used for development and implementation of educational BMPs. In addition, the goals cited by the City do not reflect the standard community-based social marketing principles of removing barriers to a desired activity while simultaneously enhancing the desired activity's benefits. Moreover, the City has included its discussion of community-based social marketing as a goal, rather than a BMP, as specified by the required revision. Such an approach does not ensure implementation. Further, the City states that it will "consider" community-based social marketing methods, rather than "assess" the methods, as the required revision specifies. As such, Water Board staff has retained the language of Required Revision No. 2. Water Board staff will review the City's final SWMP submission to ensure it includes a BMP to assess community-based social marketing strategies and incorporate them into the City's program where appropriate.

Comment 3: Regarding Required Revision No. 11, language was added to the previous draft discussing the City's current practices under "source control inspections." SWMP states "the City's current source control inspector regularly inspects restaurants, automobile and industrial businesses...." As these are the high risk businesses needing inspection, and it is current practice, that BMP was removed.

Response 3: Required Revision No. 11 requires the City to reinstate its previous BMP committing to inspection of high risk businesses. The City responds that business inspections are addressed elsewhere in the SWMP, so the BMP is unnecessary. However, the discussion of "source control inspections" that the City claims addresses high risk business inspections is not presented as a BMP in the SWMP, does not include a measurable goal, and is missing an implementation schedule. As such, the "source control inspection" discussion in the SWMP is noncommittal and inadequate for addressing business inspections. For this reason, Water Board staff has further clarified the required revision to ensure the City commits to an adequate business inspection program. Water Board staff will review the final SWMP submittal to ensure it includes a

BMP for inspections of high risk businesses, together with associated measurable goals and implementation schedules.

Comment 4: Regarding Required Revision No. 14, inspection checklist required in BMP #4-2 and goals.

Response 4: While the City has added a BMP to develop and use a construction site inspection checklist, it has failed to commit to using it annually following its development. For this reason, Water Board staff has modified Required Revision No. 14 to ensure the checklist will be used consistently following development.

Comment 5: Regarding Required Revision No. 17, "and implement" added to BMP #5-6, goal #1, and year two of Table 5-2.

Response 5: Required Revision No. 17 requires the City to develop and implement interim hydromodification control criteria within one year of enrollment under the Statewide Phase II General Municipal Stormwater Permit (General Permit). This Water Board staff requirement is consistent for all Phase II municipalities currently being enrolled throughout the region. The City's response is insufficient. BMP 5-1 states the City will amend its ordinances with post-construction hydromodification and low impact development requirements in year 4. BMP 5-6 states the City will develop hydromodification criteria in year 2 and implement associated BMPs in year 3. Despite the apparent inconsistencies, none of these timelines are in accordance with the required revision. Water Board staff has retained the language of the required revision and will review the final revised SWMP to ensure it includes development and implementation of interim hydromodification control criteria within one year of enrollment under the General Permit.

Comment 6: Regarding Required Revision No. 19, the City will proceed to meet the intent of the alternative criteria development plan previously approved by the RWQCB Water Board staff. We cannot, however, commit to providing hydromodification criteria as specified in your comment letter dated November 24, 2008.

Response 6: Please see Response 5.

Comment 7: Regarding Required Revision No. 20, the City will proceed to meet the intent of the alternative criteria development plan previously approved by the RWQCB Water Board staff. We cannot, however, commit to providing hydromodification criteria as specified in your comment letter dated November 24, 2008.

Response 7: Required Revision No. 20 is intended to provide municipalities with the flexibility to develop their own interim hydromodification control criteria appropriate for the conditions within their jurisdictions. The criteria included in the required revision were designed 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 other Santa Cruz County municipalities have proposed criteria and methodology similar to that recently pursued

by the City of Santa Maria and approved by Water Board staff. As such, Required Revision No. 20 has been modified 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.

Comment 8: Regarding Required Revision No. 21, the City will proceed to meet the intent of the alternative criteria development plan previously approved by the Water Board staff. We cannot, however, commit to providing hydromodification criteria as specified in your comment letter dated November 24, 2008.

Response 8: Required Revision No. 21 requires the City to identify development and implementation of interim hydromodification control criteria as a specific BMP in the SWMP. While the SWMP discusses hydromodification criteria, it does not mention interim hydromodification control criteria; nor does it provide a sufficient implementation schedule for interim hydromodification control criteria development and implementation. Due to the importance of this criteria in protecting healthy functioning watersheds, its development and implementation must be specifically called out in the SWMP as a BMP. For this reason, Water Board staff has retained the language of Required Revision No. 21. Water Board staff will review the final revised SWMP to ensure development and implementation of interim hydromodification control criteria is included in the SWMP as a specific BMP.

Comment 9: Regarding Required Revision No. 22, language added to BMP #5-1 using language required by Water Board staff.

Response 9: Required Revision No. 22 specifies that the City 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. While the language inserted by the City in the SWMP states that new conditions will be applied to new development and redevelopment proposals immediately upon adoption of the ordinance, it does not identify which proposals will be subject to the new conditions. As such, the City's proposed language does not address the issue raised by Required Revision No. 22. For this reason, Water Board staff has retained the language of Required Revision No. 22, and will review the final revised SWMP to ensure it identifies 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.

Comment 10: Regarding Required Revision No. 23, the City will proceed to meet the intent of the alternative criteria development plan previously approved by the Water Board staff. We cannot, however, commit to providing hydromodification criteria as specified in your comment letter dated November 24, 2008.

Response 10: Required Revision No. 23 specifies that the City must commit to having long term hydromodification control criteria in place and implemented within five years of enrollment under the General Permit. The "alternative criteria development plan" referred to by the City in its comment addresses interim hydromodification control

criteria, not long-term hydromodification control criteria. As such, the City's comment is not responsive to Required Revision No. 23. Long term hydromodification control criteria must be implemented within five years to ensure impacts from increased flows resulting from new development and redevelopment are addressed in a timely manner. Many other communities throughout California, such as San Diego County municipalities, are developing similar criteria on shorter schedules. As such, Water Board staff has retained the language of Required Revision No. 23, and will review the revised final SWMP to ensure long term hydromodification control criteria will be developed and implemented within five years of the City's enrollment under the General Permit.

Comment 11: Regarding Required Revision No. 24, the City will proceed to meet the intent of the alternative criteria development plan previously approved by the Water Board staff. We cannot, however, commit to providing hydromodification criteria as specified in your comment letter dated November 24, 2008.

Response 11: Required Revision No. 24 specifies that the City's long term hydromodification control criteria must be based on a technical assessment of the City's watersheds. The required revision also requires the City to identify the process the City will use to develop the criteria. As noted in Response 10, the "alternative criteria development plan" referred to by the City in its comment addresses interim hydromodification control criteria, not long-term hydromodification control criteria. Interim hydromodification control criteria is meant to be developed quickly, while long-term hydromodification control criteria requires a more rigorous scientific basis. As such, the City's proposal to only use the interim hydromodification control criteria is insufficient. Long term criteria, which is expressly designed to address the City's watershed conditions, is also needed to ensure effectiveness of the criteria over the long term. As such, Water Board staff has retained the language of Required Revision No. 24, and will review the revised final SWMP to ensure long term hydromodification control criteria will be developed and implemented according to a technical assessment of watershed conditions and a detailed criteria development process.

Comment 12: Regarding Required Revision No. 25, the City is reviewing language to be submitted to Water Board staff addressing long term watershed protection. The language will be submitted prior to the public hearing requested by the City.

Response 12: Required Revision No. 25 calls for the City to develop quantifiable measures that indicate how the City's watershed protection efforts achieve desired watershed conditions. Quantifiable measures are necessary in order to assess the effectiveness of watershed protection efforts. Without assessment of the effectiveness of these efforts, the City will not know if the efforts are successful, which could lead to continued degradation of watershed conditions. For this reason, as well as the lack of a proposal from the City, Water Board staff has largely retained the language of Required Revision No. 25, and will review the final revised SWMP to ensure it includes an adequate commitment to long term watershed protection, including identification of quantifiable measures that indicate how the City's watershed protection efforts achieve desired watershed conditions. However, Water Board staff acknowledges that identification of quantifiable measures may not be feasible in all cases, and has

therefore added language reflecting that quantifiable measures only need to be developed where feasible.

Comment 13: Regarding Required Revision No. 26 and 28, the City is reviewing language to be included in the SWMP addressing attachment 4 requirement.

Response 13: The General Permit Attachment 4 requirements are measures that new development and redevelopment projects must implement in order to achieve the maximum extent practicable (MEP) standard. The requirements are based on State Board Order WQ 2000-11. As such, they are almost ten years old and represent a minimum; typically more must be done for the MEP standard to be achieved. Since the Attachment 4 requirements are basic minimum BMPs that must be applied to all new development and redevelopment projects in order for MEP to be achieved, Water Board staff has retained the language of Required Revision Nos. 26 and 28. The revised final SWMP will be reviewed to ensure the City's program will be in compliance with Attachment 4 of the General Permit.

Comment 14: Regarding Required Revision No. 29, 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. The language included in the City of Scotts Valley Storm Water Management Plan was taken directly from the implementing resolution R3-2008-001 of March 20-21, 2008 adopting pathogens TMDL of Camp Evers Creek and Carbonera Creek and implementation actions of resolution R3-2002-0063 adopting sediment TMDL for Carbonera Creek.

Response 14: Required Revision No. 29 specifies that the City must include in the SWMP the goal of achieving wasteload allocations in watersheds where Total Maximum Daily Loads (TMDLs) have been adopted. The SWMP currently only states that the goal of TMDL implementation is to achieve the MEP standard. Wasteload allocation attainment standards are necessary to *protect water quality*, which is a separate and distinct standard for stormwater programs, in addition to the MEP standard. The federal regulations for Phase II municipal stormwater state that SWMPs must be designed to reduce the discharge of pollutants "to the maximum extent practicable, to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act."¹ The General Permit reiterates this requirement, stating: "The Permittee shall maintain, implement, and enforce an effective SWMP designed to reduce the discharge of pollutants from the regulated Small MS4 [municipal separate storm sewer system] to the MEP and to protect water quality."² Likewise, Attachment 4 of the General Permit states: "Discharges shall not cause or contribute to an exceedance of water quality standards contained in a Statewide Water Quality Control Plan, the California Toxics Rule (CTR), or in the applicable RWQCB [Regional Water Quality Control Board] Basin Plan."³ Since protection of receiving water quality standards is a separate and equal standard to the MEP standard, attainment of wasteload allocations designed to protect receiving water quality must be included as a goal in the SWMP. Therefore, Water

¹ 40 CFR 122.34

² SWRCB. 2003. Water Quality Order No. 2003-0005-DWQ. Section D.

³ SWRCB. 2003. Water Quality Order No. 2003-0005-DWQ. Attachment 4, section A.1.

Board staff has modified Required Revision No. 29 to clarify that a long-term goal of the SWMP is to achieve wasteload allocations, while a short-term goal can be to eliminate controllable sources associated with the storm drain system to the maximum extent practicable.

Comment 15: Regarding Required Revision No. 29, 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. The language included in the City of Scotts Valley Storm Water Management Plan was taken directly from the implementing resolution R3-2008-001 of March 20-21, 2008 adopting pathogens TMDL of Camp Evers Creek and Carbonera Creek and implementation actions of resolution R3-2002-0063 adopting sediment TMDL for Carbonera Creek.

Response 15: Carbonera Creek and its tributaries have been identified as impaired and not meeting water quality standards. As a result, TMDLs have been developed 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 has been 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, for the fecal indicator bacteria impairment, the TMDLs set forth the expectation that the City achieve its wasteload allocation within 13 years of approval of the TMDL by the Office of Administrative Law. This approach stands in contrast to the typical regulatory approach applied to municipal storm water, which calls for implementation of 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 a wasteload allocation within 13 years, necessitates a detailed 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 and *protect water quality*" (emphasis added).⁴ 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."⁵

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, Water Board staff believes that attainment of wasteload allocations is unlikely. This belief is supported by the contents of the City's SWMP. For example, the City's SWMP does not identify BMPs to be implemented to

⁴ SWRCB. 2003. Order No. 2003-0005-DWQ. P. 8.

⁵ 64 FR 68753

attain its wasteload allocations. Nor is the process that will be used to identify BMPs identified. It is unclear if BMPs will be developed and implemented to address all of the issues identified in the TMDL. 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 provides no evidence that it will eventually 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 significant 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 the 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.⁶

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 allocation increases when more and more TMDLs are adopted.

However, Water Board staff acknowledges that application of Wasteload Allocation Attainment Programs on a jurisdiction-wide scale could be beneficial to the City by

⁶ USEPA. 2008. *Draft TMDLs to Stormwater Permits Handbook*. Chapters 5 and 6.

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. 30 to acknowledge uncontrollable sources and allow for jurisdiction-wide Wasteload Allocation Attainment Programs.

Comment 16: Regarding Required Revision No. 33, new paragraph added under introduction discussing current adopted Integrated Pest Management Policy (IPM).

Response 16: Required Revision No. 33 specifies that the City must identify the pollution prevention and other BMPs the City will use during landscaping, lawn care, and other grounds maintenance, including integrated pest management and postponement of pesticide/herbicide application prior to predicted rain. The City's response is a brief discussion in the SWMP introduction, rather than a BMP commitment. As such, Water Board staff has retained the language of Required Revision No. 33 and will review the final revised SWMP to ensure an adequate response by the City.

III. Legal Comments by the City of Scotts Valley

The City submitted additional comments which primarily address legal issues concerning 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 (Attachment 8) for the original comments and sequencing.

A. Flexibility to Address Local Conditions

Comment 17: 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 17: 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 were originally referenced in staff's 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, has been found to be a sound means for achieving effective stormwater management programs. For example, 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."⁷

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."⁸

⁷ TetraTech. 2006. Assessment Report of Tetra Tech's Support of California's Municipal Stormwater Program. P. 22.

⁸ National Research Council. 2008. Urban Stormwater Management in the United States. P. 92.

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.

B. Technical Basis and Effectiveness of Hydromodification Criteria

Comment 18: 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. The City also states the required revisions ignore prior Water Board staff approval of the Santa Cruz County municipalities' interim hydromodification control criteria development approach.

Response 18: The interim hydromodification control criteria included in Required Revision No. 20 were chosen 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 were 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. 20 were designed as 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, Required Revision No. 20 has been modified to match the language used for the City of Santa Maria. This provides further flexibility to the City, in that provides the City 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.

The additional option for development of interim hydromodification control criteria that has been added to Required Revision No. 20 is expected to 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.

C. Existing Program Sufficiency

Comment 19: 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.

Response 19: 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 Carbonera Creek 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 Bean 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.⁹ 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%.¹⁰ 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 than or equal to 25%.¹¹ 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 potential impacts.

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

Comment 20: 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 WAAP 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 20: Please see Response 15.

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

Comment 21: 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 21: 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

⁹ 64 FR 68725

¹⁰ Ibid.

¹¹ Ibid.

acre...by ensuring that controls are in place that prevent or minimize water quality impacts."¹² 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."¹³ As such, the 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

¹² State Water Resources Control Board. 2003. Order No. 2003-0005-DWQ. P. 11.

¹³ 40 CFR 122.34(b)(5)(iii)

indicates that controlling hydromodification through, among other approaches, implementation of low impact development principles, is technically feasible, practicable, and cost-effective (see Response 22 below). 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.

F. Cost Considerations

Comment 22: 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.

Response 22: 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."¹⁴ 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

¹⁴ SWRCB. 1993. Memorandum: Definition of Maximum Extent Practicable.

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 projects [...]"¹⁵ 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."¹⁶ 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."¹⁷ 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."¹⁸

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 \$50,000-100,000.¹⁹ 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 Geosyntech²⁰ 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 to cost approximately \$200,000-300,000 for the first watershed studied, and \$70,000-100,000 for each watershed studied thereafter.²¹

¹⁵ SWRCB. 2003. Order No. 2003-0005-DWQ. P. 11.

¹⁶ 40 CFR 122.34(b)(5)(iii)

¹⁷ Ibid.

¹⁸ 64 FR 68753

¹⁹ Sara Agahi, County of San Diego, personal communication June 12, 2008.

²⁰ Geosyntech was a primary consultant in developing the hydromodification control criteria currently used in Santa Clara County.

²¹ 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.

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.²² Dividing these costs among five municipalities over five years, annual costs to develop long-term hydromodification control criteria over five years are estimated at \$4,000-20,000. In light of the 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 Scotts Valley 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 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

²² Ibid.

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.

G. Public Acceptance

Comment 23: 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. The City also states that there is no evidence to support the notion that the residents and taxpayers of the City are willing to financially support the required revisions being contemplated by the Water Board. The City points out that recent efforts by the City to raise funds for other programs have been unsuccessful, exhibiting its inability to generate additional funds.

Response 23: 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 66 required revisions regarding the City's SWMP; the City is now only contesting eight 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 stand in support of the Board staff's Required Revisions to the plan as outlined in the November 24th 2008 letter sent to the City."

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.

H. Unfunded Mandate

Comment 24: 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 24: The required revisions do not constitute an unfunded state mandate. The contention that National Pollutant Discharge Elimination System (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."²³ 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

²³ 64 FR 68761

allocations].”²⁴ 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 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. 4th 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.

²⁴ USEPA. 2002. Memorandum: Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAAs.

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

Comment 25: 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 25: 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.

Comment 26: 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 26: 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 entirely beneficial. 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.

Comment 27: 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 27: 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 in order 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.

Comment 28: 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 28: 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. 24 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.

V. Comments by Monterey Coastkeeper

Comment 29: I am writing to offer commentary on the Scotts Valley draft Stormwater Management Plan (SWMP), which was posted for public review in November of 2008. The Monterey Coastkeeper opposes the approval of this draft, which we feel is overly vague, missing major components, and therefore does not meet the Maximum Extent Practicable (MEP) on several levels.

Even recognizing the limitations of a small city in putting together and implementing an effective stormwater management program, we feel that the City of Scotts Valley could make a much more targeted effort that would identify the specific areas of concern and address them appropriately. The SWMP in its current form is ambiguous and lacks specificity; a combination which we fear will lead to a vague and unambitious effort towards curbing stormwater pollution.

Response 29: Water Board staff's review of the SWMP and development of required revisions have been designed to result in a SWMP that sufficiently identifies specific BMPs and associated measurable goals for implementation in accordance with the

General Permit and the MEP standard. The Table of Required Revisions reflects this effort. The majority of the 40 required revisions address the issue of specificity and measurable goals.

Comment 30: In addition to the weakness of language that prevents the inclusion of specific implementation details and goals, the existing plan lacks specific components required by the National Pollution Discharge Elimination Systems (NPDES) permit that mandates it. Missing components include: measurable goals.

Response 30: As noted in Response 29, Water Board staff has reviewed the SWMP to ensure measurable goals are identified for each BMP. Where measurable goals have not been identified, Water Board staff has developed required revisions specifying that measurable goals be identified (see Required Revision Nos. 4, 9, 16, 27, and 35). However, in some cases, BMPs do not lend themselves to being measured. In those cases, Water Board staff has ensured the detail included in the BMP description is adequate to provide for effective implementation.

Comment 31: In addition to the weakness of language that prevents the inclusion of specific implementation details and goals, the existing plan lacks specific components required by the National Pollution Discharge Elimination Systems (NPDES) permit that mandates it. Missing components include: a clear and timely implementation plan.

Response 31: Water Board staff has reviewed the SWMP to ensure that each BMP includes an implementation schedule. Where implementation schedules have not been provided or are inadequate, Water Board staff has developed required revisions specifying that an adequate implementation schedule be identified (see Required Revision Nos. 1, 12, 17, 19, 20, 23, 36, 37, and 40).

Comment 32: In addition to the weakness of language that prevents the inclusion of specific implementation details and goals, the existing plan lacks specific components required by the National Pollution Discharge Elimination Systems (NPDES) permit that mandates it. Missing components include: the inclusion of responsible parties for actionable items.

Response 32: The General Permit requires that the "SWMP must identify the person or persons who will implement or coordinate the SWMP, as well as each Minimum Control Measure."²⁵ The SWMP does not include this information. As such, Water Board staff has added Required Revision No. 41 to the Table of Required Revisions, specifying that the position(s) or department(s) responsible for implementing the SWMP and minimum control measures be identified.

Comment 33: In addition to the weakness of language that prevents the inclusion of specific implementation details and goals, the existing plan lacks specific components required by the National Pollution Discharge Elimination Systems (NPDES) permit that mandates it. Missing components include: a commitment to effectiveness assessment,

²⁵ SWRCB. 2003. Water Quality Order No. 2003-0005-DWQ. Section D.4.

a commitment to suitable hydromodification criteria, the application of Design standards that meet the requirements of Attachment 4 to the General Permit, or the development and implementation of Wasteload Allocation Attainment Plans to address the City's impaired water bodies.

Response 33: Water Board staff requires the SWMP include a commitment to effectiveness assessment at Required Revision Nos. 36 through 40. Water Board staff requires hydromodification control criteria and other design standards for new development and redevelopment at Required Revision Nos. 17 through 28. Water Board staff addresses Wasteload Allocation Attainment Programs at Required Revision No. 30.

Comment 34: Even with the required revisions enacted, we question the plan's ability to meet the MEP. For example, only three BMPs are selected for important minimum control measures such as Illicit Discharge Connection Investigation and Abatement.

Response 34: While the SWMP lists three BMPs for Illicit Discharge Detection and Elimination, several of these BMPs are essentially groups of categorized BMPs. For example, the Illicit Discharge/Connection Investigation and Abatement BMP discusses assessment of illicit discharge potential, investigation of open drainages, tracking of illicit discharges, and enforcement. In addition, Water Board staff has required expansion of the Illicit Detection and Elimination Component at Required Revision Nos. 5 through 8. Water Board staff finds that the BMP discussions included in the SWMP, combined with the required revisions, achieve the MEP standard for illicit discharge detection and elimination.

Comment 35: Furthermore, the City's commitment to public education is limited to publishing three brochures and informing schools of the availability of field trips to a Waste Water Treatment plant which does not currently address stormwater. These (and other) actions seem passive at best, and we doubt that they are truly the maximum extent practicable.

Response 35: In addition to the education efforts cited in the comment, the City commits to active education efforts such as conducting classroom presentations and incorporating a stormwater pollution prevention component into local events. The City also commits to adding stormwater information to its website. In addition, Required Revision Nos. 2 through 6 require expansion and improvement of the City's education program. For example, Required Revision No. 2 requires the City to assess community-based social marketing techniques, and incorporate them into their program where appropriate. Water Board staff finds that the BMPs described in the SWMP, combined with the required revisions, achieve the MEP standard.

Comment 36: We stand in support of the Board staff's Required Revisions to the plan as outlined in the November 24th 2008 letter sent to the City. However, we are concerned with the schedule by which the plan will be reviewed. The nature of the required revisions are such that once they are written into the plan, the document will be virtually a new SWMP. For this reason, we chose not to give the level of detailed commentary that we have engaged in over other SWMPs in the region.

Response 36: The City will be provided 60 days to update its SWMP in accordance with the required revisions. Upon receipt of the City's updated SWMP, Water Board staff will review the SWMP for compliance with the Table of Required Revisions. If the SWMP does not meet the requirement of the Table of Required Revisions, Water Board staff will follow-up with the City as appropriate.

Comment 37: For this reason, the Monterey Coastkeeper would like to request a hearing on the Scotts Valley SWMP, with the intention of reserving the right to participate in the discussion on the future of the Scotts Valley SWMP. If an agreement between Board staff and the City is reached that is acceptable to the Monterey Coastkeeper, we will rescind our request for a hearing. The Monterey Coastkeeper shares the Regional Board's desire to see stormwater programs approved and implemented in a timely fashion, however we would like to ensure that the plans that are given Board approval are truly up to the task of improving water quality throughout the Monterey and Santa Cruz region, where challenges abound.

Response 37: Comment noted.

VI. Comments by Grey Hayes

Comment 38: We write these comments with regard to the City of Scotts Valley Storm Water Management Plan from October 2008. In summary, we find the plan to be lacking in many important regards, largely putting off to the future details for monitoring and managing the City's stormwater. Many of the measures lack adequate enforcement measures, goals, or ways of adaptively managing the program to improve storm water.

Response 38: The SWMP and required revisions are designed to require monitoring over the SWMP's five year cycle. Required Revision No. 30 requires the City to develop and implement monitoring programs in watersheds where wasteload reductions are required as part of TMDLs. Likewise, the SWMP's effectiveness assessment discussion commits the County and City to assessing BMP effectiveness in terms of runoff and receiving water quality. Effectiveness assessments of this type will necessitate runoff and receiving water monitoring. Water Board staff has not required the details of the pending monitoring programs to be included in the SWMP presently in order to provide the City with time to develop the program following development of the effectiveness assessment strategy. Time is needed to develop monitoring and other aspects of the program because of the scale and complexity of storm water management. This approach of phasing in SWMP implementation is consistent with the General Permit, which states the "SWMP shall be fully implemented by the expiration of this General Permit, or within five years of designation for Smalls MS4s designated subsequent to Permit adoption, with reasonable progress made towards implementation throughout the term of the General Permit."²⁶

In addition, Water Board staff's review of the SWMP and development of required revisions have been designed to result in a SWMP that sufficiently identifies specific

²⁶ Ibid. Section D.

BMPs and associated measurable goals for implementation in accordance with the General Permit and the MEP standard. The Table of Required Revisions reflects this effort. The majority of the 43 required revisions address the issue of specificity and measurable goals.

Adaptive management is incorporated into the SWMP through the effectiveness assessment strategy. Effectiveness of BMPs is to be assessed annually, eventually linking BMP implementation with improvement in runoff and receiving water conditions. Where BMPs are not demonstrated to be effective, Water Board staff will require improved BMPs to ensure the MEP standard is achieved and water quality protected.

Comment 39: We support the Regional Board's suggestions:

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 (1%) 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 preconstruction 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.

As the board states, we also support the following actions:

- 1) Rainfall surface runoff at pre-development levels,
- 2) Watershed storage of runoff, through infiltration, recharge, baseflow, and interflow, at pre-development levels,
- 3) Watercourse geomorphic regimes within natural ranges (stream banks are stable within natural range; sediment supply and transport within natural ranges), and
- 4) Optimal riparian and aquatic habitats.

As such, we are concerned that the City has not taken the following Board's suggestions:

- 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.

We strongly suggest numeric goals and scientific monitoring to assure improved water quality.

Response 39: Water Board staff has modified Required Revision No. 20 to provide the City with several options for developing interim hydromodification control criteria. Each

of these options are consistent with the criteria cited in the comment. Water Board staff finds that use of these options will result in criteria that will optimize infiltration and control runoff rates and durations to prevent increased potential for erosion or other significant adverse impacts to beneficial uses.

Comment 40: BMP 2-3: Effectiveness of interagency cooperation should be measured in outcomes of new programs initiated with interagency collaboration. The outcome as stated is a meeting, not a measurable outcome with regard to saving public money or guaranteeing clean water outcomes. How will this BMP result in cleaner water? How can the City of Scotts Valley better address measurable outcomes for interagency collaboration towards this end?

Response 40: The measurable goals included in the SWMP are designed to identify the City's scope and magnitude of effort. The City's commitment to participating in semi-annual meetings achieves this. However, Water Board staff agrees that effectiveness of interagency coordination should be further assessed. The "Program Effectiveness" section of Chapter 2 (Public Participation/Involvement) of the SWMP, together with Chapter 7 (Program Effectiveness Assessment) of the SWMP, address this issue. These discussions commit the City to developing an effectiveness assessment strategy that will assess BMP implementation (including interagency coordination) "in terms of regulatory compliance, changing awareness, changing behavior, pollutant load reductions and runoff and receiving water quality." Assessment of this type will determine if the BMP is successful in eliciting meaningful change. Water Board staff will require BMPs that are not demonstrated to be effective to be improved upon or changed in order to meet the MEP standard. Water Board staff finds this process of assessment and modification will ensure effective interagency coordination.

Comment 41: BMP 3-3: "Field screenings" are mentioned, though many illicit discharges cannot be visually measured. For instance, discharges of many toxins, such as oil, gas, pesticides, etc., cannot be visually detected at all times of the year. Can the City implement scientific monitoring measures of major sources of illicit discharges that assure the public that such discharges do not take place?

Response 41: Field screenings are designed to identify active illicit discharges, such as wash water or illegally dumped substances. For ease of detection, Water Board staff expects these screenings to occur during dry weather. Since essentially only stormwater should be in the MS4, Water Board staff expects the City to investigate all flows during dry weather. As such, identification of situations triggering investigations should be relatively straightforward and not necessitate sampling in all cases. However, the City does not clarify in the SWMP what conditions will be used as criteria to trigger an investigation. This information is necessary to ensure City staff are clear on when investigations are needed. As such, Water Board staff has added Required Revision No. 42 to the Table of Required Revisions, in order to ensure the City conducts needed investigations.

Regarding monitoring for pollutants found in stormwater runoff (as opposed to illicit discharges), the SWMP and required revisions are designed to result in increased and improved monitoring over the SWMP's five year cycle. Required Revision No. 30 requires the City to develop and implement monitoring programs in watersheds where

wasteload reductions are required as part of TMDLs. Likewise, the SWMP's effectiveness assessment discussion commits the City to assessing BMP effectiveness in terms of runoff and receiving water quality. Effectiveness assessments of this type will necessitate runoff and receiving water monitoring. Water Board staff expects these monitoring efforts will focus on the City's identified pollutants of concern, including fecal indicator bacteria and sediment.

Comment 42: BMP 4-2: Site inspections should take place during major rain events when it is most possible to visually determine adequacy of BMPs. It is often difficult to locate problems with BMPs without adequate runoff. Can the City ensure the efficacy of BMPs during high flow events by inspecting the BMPs when there is no runoff?

Response 42: The City commits to inspecting construction sites larger than one acre on a monthly basis during the winter. However, this inspection schedule could result in all inspections being conducted during dry weather, which would lead to uncertainty regarding the effectiveness of implemented BMPs during storm events. To demonstrate that the BMPs being required during inspections are effective, some wet weather inspections must be conducted. For this reason, Water Board staff has added Required Revision No. 43 to the Table of Required Revisions, specifying that a portion of the construction site inspections be conducted during wet weather.

Comment 43: BMP 4-2: There is no fine associated with noncompliance, and so there may not be adequate motivation for following this BMP. We recommend that a fine be instituted to further motivate people to follow this BMP. Why has the City not detailed a system of punitive fines for violations?

Response 43: The City has committed to withholding permits and signoffs on projects that have stormwater violations. This approach is consistent with USEPA guidance, which provides examples of sanctions to ensure compliance, including "non-monetary penalties, fines, bonding requirements and /or permit denials for non-compliance."²⁷ As such, Water Board staff is not requiring additional enforcement measures be included in the SWMP. However, Water Board staff agrees that fines can provide the necessary incentive to achieve compliance in some cases, and recommends the City develop a system to apply fines at construction sites with recurrent violations.

S:\Stormwater\Stormwater Facilities\Santa Cruz Co\Municipal\City of Scotts Valley\2008-2009 Enrollment\Board Hearing\Responses to Scotts Valley Comments.doc

²⁷ 40 CFR 122.34(b)(4)(iii)