



Linda S. Adams  
Agency Secretary

# California Regional Water Quality Control Board

## Central Coast Region



Arnold Schwarzenegger  
Governor

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November 12, 2008

Mr. Robert Ketley  
City of Watsonville  
P.O. Box 50,000  
Watsonville, CA 95077

Dear Mr. Ketley:

### **WATER BOARD STAFF COMMENTS ON DRAFT STORM WATER MANAGEMENT PLAN DATED OCTOBER 22, 2008, CITY OF WATSONVILLE, SANTA CRUZ COUNTY**

On October 21, 2008, the Central Coast Water Quality Control Board (Water Board) received the City of Watsonville (City) Stormwater Management Plan (SWMP). Water Board staff has reviewed the October 2008 SWMP and we have identified improvements the City must make for us to recommend approval of the SWMP. Please see the attached draft Table of Required Revisions. Please respond with a further revised SWMP, or comments describing further revisions to the SWMP, prior to the Water Board's final review and consideration of public comment.

The following sequence of events describes an optimal process for final review of the SWMP.

Water Board staff plans to:

- 1) Post the attached draft Table of Required Revisions on or prior to November 13, 2008, on the same webpage where the SWMP will be posted for the 60-day public comment period. Water Board staff will announce the web posting, including web address, to all known interested persons by email.
- 2) At the close of the 60-day public comment period on approximately January 12, 2009, Water Board staff will review comments received on the SWMP from the public, including comments from the City describing their revisions to the SWMP.
- 3) Water Board staff will prepare a final Table of Required Revisions and a final recommendation on the adequacy of the SWMP. Staff will also prepare a response to comments received during the 60-day public comment period.
- 4) If Water Board staff recommends approval of the SWMP, the Water Board's Executive Officer may approve the SWMP and coverage under the General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (General Permit), contingent on the City making the required revisions to its SWMP by a date certain (generally within 60 days of the approval letter). The Executive Officer will post the approval letter with required revisions on the Water Board website.
- 5) Alternatively, if a member of the public or the City requests a Water Board hearing during the 60-day public comment period, Water Board staff will provide recommendations to the Water Board on the City's SWMP (with the required revisions) at the March 20, 2009 Water Board Meeting.

***California Environmental Protection Agency***



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### **Developing Interim Hydromodification Control Criteria as Effective as Water Board Staff's Proposed Criteria**

In this letter, we are also providing clarification regarding how interim hydromodification control criteria developed by the City will be reviewed by Water Board staff. At the recent Water Board public hearing for approval of the City of Lompoc's SWMP, Water Board staff was directed by the Water Board to ensure that any interim hydromodification control criteria developed by the City of Lompoc be as effective as the interim hydromodification control criteria we presented in our February 15, 2008 letter. Those criteria are as follows:

- 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 pre-construction drainage density (miles of stream length per square mile of watershed) for all drainage areas serving a first order stream or larger, and ensure that post-project time of concentration is equal or greater than pre-project time of concentration.

Based on the Water Board's direction regarding the City of Lompoc's SWMP, Water Board staff has determined it appropriate to require similar language in other municipalities' SWMPs. Therefore, Water Board staff has included language in the attached draft Table of Required Revisions requiring your interim hydromodification criteria to be as effective as the criteria outlined above. Water Board staff expects that implementation of these criteria, together with other planning efforts that contribute to long-term watershed protection, will promote the following desired conditions of healthy watersheds:

- 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.

Interim hydromodification control criteria primarily focus on items 1 and 2 above. Therefore, Water Board staff will 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.

At the public hearing on the City of Lompoc SWMP, the Water Board also directed Water Board staff to provide an opportunity for comment on Water Board staff's eventual determination regarding the City of Lompoc's pending interim hydromodification control criteria, and a hearing, if requested, if any party is aggrieved by the determination. In other words, the criteria of the February 15, 2008 letter may only be used as a default set of criteria if the City of Lompoc does



not, within one year, develop approvable interim hydromodification control criteria of their own that we agree are as effective as our stated interim criteria. If the City of Lompoc's proposed criteria are not as effective and we must further condition our approval (either to the exact numerics of our interim criteria or something in-between), AND, the City of Lompoc still finds those conditions unacceptable, the City of Lompoc and other parties will have an opportunity for a Water Board hearing. Water Board staff has determined that this process is beneficial and should be expanded to other municipalities. Therefore, we intend to follow this process during review and approval of the City of Watsonville's SWMP. We have included language to this effect in the draft Table of Required Revisions and request you include it in your SWMP.

If you have questions regarding this matter, please contact **Phil Hammer** at (805) 549-3882, or Matt Thompson at (805) 549-3159.

Sincerely,



 Roger W. Briggs  
Executive Officer

cc: Steve Shimek, Monterey Coastkeeper (by electronic mail)

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**DRAFT TABLE OF REQUIRED REVISIONS**  
**City of Watsonville SWMP**

Acronyms/Abbreviations:

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

Item Number	SWMP Section	Subject	Issue	Required Revisions
1	Introduction	Effectiveness Assessment	The SWMP states that an effectiveness assessment strategy will be developed in Years 3 and 4, but does not commit the City to continuing assessment of Level 1 outcomes during that time. At a minimum, the City must continue to assess Level 1 outcomes while an effectiveness assessment strategy is developed.	Include a statement that the City will continue to assess Level 1 outcomes during Years 3 and 4.
2	Introduction	Effectiveness Assessment	The SWMP includes a commitment by the City to use Level 1 outcomes, but does not identify the extent to which the City will use Level 1 outcomes for assessment.	Include a statement that the City will use Level 1 outcomes to assess the effectiveness of all applicable BMPs.
3	Introduction	Effectiveness Assessment	The SWMP includes a commitment by the City to use the California Stormwater Quality Association's <i>Municipal Stormwater Program Effectiveness Assessment Guidance</i> as the basis for its effectiveness assessment strategy, but does not discuss integrated assessments, which	Include a statement that the effectiveness assessment strategy will seek to identify links between BMP/program implementation and improvement in water quality and beneficial use conditions.

Item Number	SWMP Section	Subject	Issue	Required Revisions
4	BMP # 3-8	Non-Storm Water Discharges	<p>are a critical component of the guidance. Integrated assessment, or the establishment of links between BMP/program implementation and improvement in water quality and beneficial use conditions, is necessary in order to have confidence that activities being implemented are having a positive effect on water quality and beneficial uses.</p>	<p>Clearly state in BMP # 3-8 that the City will conduct an analysis of allowable non-stormwater discharges to determine if any of the discharges are a significant source of pollutants. Also clarify that allowable non-stormwater discharges that are determined to be a significant source of pollutants will be prohibited, or required to be addressed by BMPs. Commit to identifying the BMPs that the City will require, where applicable. Also ensure that for those discharges that are not determined to be a significant source of pollutants, the rationale for the determination will be provided.</p>
5	BMPs # 4-3 and 4-4	Inspections	<p>The SWMP states that the City will inspect construction projects following rain events. However, inspections conducted after rain events are too late to ensure adequate BMPs are in place while rain events are occurring. Inspections conducted prior to well-forecasted rain events are more likely to be effective in ensuring adequate BMP implementation during rain events.</p>	<p>Include in BMPs # 4-3 and 4-4 a statement that the City will conduct inspections prior to well-forecasted rain events at high priority construction projects.</p>

Item Number	SWMP Section	Subject	Issue	Required Revisions
6	Table 4, BMP # 4-3	Inspections	The main text of the SWMP states that inspections will occur on October 15 <sup>th</sup> and after rain events. Table 4 states that inspections will occur on October 15 <sup>th</sup> and/or after rain events.	Remove the word <i>or</i> from Table 4.
7	BMP # 4-3	Inspection Checklist	Table 4 indicates that the City will only develop and use an inspection checklist during Year 2. The inspection checklist should be used in all years following Year 2.	Clarify in Table 4 that the City will use the inspection checklist in all years following Year 2.
8	BMP # 4-3	Training of Municipal Staff	The SWMP states that the City will train municipal staff regarding construction issues and requirements, but does not indicate the percentage of applicable municipal staff that the City will train.	Identify in BMP # 4-3 the percentage of applicable municipal staff that the City will train.
9	BMP # 4-3	Education of Development Community	While the SWMP discusses training of municipal staff regarding construction issues and requirements, the SWMP does not discuss education targeting the development community, such as developers, contractors, etc.	Include a BMP for education targeting the development community regarding construction storm water issues and requirements.
10	BMP # 5-1	Exempted Projects	The SWMP states that affordable housing projects will be exempt from the Storm Water Land Development Standards. Rather than being completely exempt from these standards, affordable housing projects should only be exempt from those standards that are demonstrated to be infeasible for the project. For example, while many affordable housing projects may not be able to implement a full suite of low-impact development BMPs, some low-impact development BMPs	Modify BMP # 5.1 to require low-impact development BMPs for affordable housing projects where feasible. Commit to establishment of criteria to aid in identifying affordable housing project conditions where low-impact development BMPs are feasible.

Item Number	SWMP Section	Subject	Issue	Required Revisions
11	BMP # 5-1	Education	<p>are likely to be feasible for the project. Low-impact development BMPs that are feasible for a project should be required.</p> <p>This BMP discusses education of municipal staff, but does not discuss the form and content of the education to be conducted.</p>	<p>Identify in BMP # 5.1 the form and content of the education the City will conduct for municipal staff.</p>
12	BMP # 5-1	Applicability Criteria	<p>The text of the SWMP states that the City will revise applicability criteria to conform with Attachment 4 of the general storm water permit. However, this activity is not reflected in Table 5. This activity should be specified in Table 5 to better ensure it will be completed.</p>	<p>Specify in Table 5 that the City will revise applicability criteria to conform with Attachment 4 of the general storm water permit.</p>
13	BMP # 5-2	Alternative Interim Hydromodification Criteria	<p>The SWMP does not include the schedule the City will follow to develop the alternative interim hydromodification criteria. The SWMP also does not identify the goals and expected effectiveness of the alternative interim hydromodification criteria.</p>	<p>Revise the SWMP to include a schedule for developing interim hydromodification control criteria, including a period of no less than three (3) weeks to allow for Water Board staff's review of the proposed criteria. The revised SWMP shall state that any interim hydromodification control criteria (numeric and non-numeric) proposed by the City will be submitted within one year of enrollment and should take into account the ability to maximize infiltration of clean storm water, minimize runoff volume and rate, serve as a useful quantifiable measure of healthy watersheds, and be consistent with the intended goals of the Water Board including, but not limited to, healthier and more sustainable watersheds by 2025. The revised SWMP shall state the proposed criteria will be as effective as the following:</p>

Item Number	SWMP Section	Subject	Issue	Required Revisions
				<ul style="list-style-type: none"> <li>• For new and re-development projects, Effective Impervious Area<sup>1</sup> shall be maintained at less than five percent (5%) of total project area.</li> <li>• For new and redevelopment projects that create and/or replace 5,000 square feet or more of impervious surface, the post-construction runoff hydrographs shall match within one percent (1%) the pre-construction<sup>2</sup> runoff hydrographs, for a range of events with return periods from 1-year to 10-years.</li> <li>• For projects whose disturbed project area exceeds two acres, preserve the pre-construction drainage density (miles of stream length per square mile of watershed) for all drainage areas serving a first order stream<sup>3</sup> or larger, and ensure that post-project time of concentration is equal or greater than pre-project time of concentration.</li> </ul> <p>The SWMP should also explain the following: The Water Board Executive Officer will notify the City and other interested persons of the acceptability of the City's proposed interim</p>

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

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

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

Item Number	SWMP Section	Subject	Issue	Required Revisions
14	BMP # 5-2	Alternative Interim Hydromodification Criteria	The SWMP is unclear regarding when the City will begin applying the alternative interim hydromodification criteria to new development and redevelopment projects.	hydromodification control criteria for new and re-development. The Water Board shall provide interested persons the opportunity for comment and a hearing, if requested, before the Water Board if any party is aggrieved by the Water Board staff's determination, prior to Water Board action being final.
15	Table 5, BMP # 5-2	Alternative Interim Hydromodification Criteria	The SWMP states that the City will develop alternative interim hydromodification criteria "budget/grant dependent." Such language does not ensure that alternative interim hydromodification criteria will be developed and implemented.	Remove the language "budget/grant dependent" from Table 5, BMP # 5-2.
16	Post-Construction	Application of New Design Standards	The SWMP does not identify the stage in the project planning, design, and funding process that the City will use as the cut-off point to determine which projects in the development review pipeline will be subject to new design requirements, such as alternative interim hydromodification criteria.	Identify the stage in the project planning, design, and funding process that the City will use as the cut-off point to determine which projects in the development review pipeline will be subject to new design requirements. For projects in the planning, design, and funding process at the time the new design requirements take effect, the cut-off point must be chosen in order to apply the new design requirements to as many projects as is feasible.
17	Post-Construction	Hydromodification Management Plan	The SWMP does not commit the City to having long-term hydromodification	Include a statement in the SWMP committing the City to having long-term

Item Number	SWMP Section	Subject	Issue	Required Revisions
18	Post-Construction	Hydromodification Management Plan	<p>criteria in place and implemented by the end of Year 5.</p> <p>While the SWMP discusses development of alternative interim hydromodification criteria, it does not clearly describe the process the City will follow to develop long-term hydromodification criteria as part of a Hydromodification Management Plan.</p>	<p>hydromodification criteria in place and implemented by the end of Year 5.</p> <p>Include a BMP describing how and when the City will develop long-term hydromodification criteria and control measures as part of a Hydromodification Management Plan that will be based on a technical assessment of the impacts of development on the City's watersheds. An adequate technical assessment will address the following:</p> <ul style="list-style-type: none"> <li>• Hydrograph modification (flow volume, duration, and rate);</li> <li>• A wide range of flow events and continuous flow modeling;</li> <li>• Effects of imperviousness;</li> <li>• Evaluation of downstream affects (stream stability);</li> <li>• Buffer zone requirements; and</li> <li>• Water quality impacts.</li> </ul> <p>The assessment should result in:</p> <ul style="list-style-type: none"> <li>• Numeric criteria for runoff rate, duration, and volume control for development and redevelopment projects;</li> <li>• Numeric criteria for stream stability impacts for development and redevelopment projects;</li> <li>• Identification of areas within the City where these criteria must be met;</li> <li>• Specific performance and monitoring criteria for installed hydromodification control infrastructure;</li> <li>• Riparian buffer zone requirements;</li> </ul>

Item Number	SWMP Section	Subject	Issue	Required Revisions
19	Post-Construction	Long-Term Watershed Protection	While the SWMP discusses long-term watershed protection, it does not include a specific BMP to collectively enact long-term watershed protection.	<p>Identify the key steps in the process that will be used to develop the Hydromodification Management Plan. Examples of steps that should be considered include:</p> <ul style="list-style-type: none"> <li>• Development of problem statement and objectives;</li> <li>• Review of literature and data availability;</li> <li>• Characterization of watershed and future development patterns;</li> <li>• Determination of assessment methodology;</li> <li>• Development of criteria and guidance; and</li> <li>• Development of an implementation strategy.</li> </ul> <p>Include a BMP stating how and when the City will:</p> <ul style="list-style-type: none"> <li>• Develop quantifiable measures that indicate how the City's watershed protection efforts achieve desired watershed conditions;</li> <li>• Evaluate existing watershed protection planning efforts, including: land use policies, plans, ordinances, guidance manuals, development project review procedures, and BMPs; and</li> </ul>

Item Number	SWMP Section	Subject	Issue	Required Revisions
20	Post-Construction	Treatment BMPs	The SWMP does not include requirements for new development and redevelopment projects to implement BMPs to treat runoff and reduce pollutant discharges.	<ul style="list-style-type: none"> <li>Adapt or change the existing efforts if warranted.</li> </ul>
21	Post-Construction	Treatment BMPs	The SWMP does not identify numeric volume- and flow-based sizing criteria for BMPs treating runoff from applicable new development and redevelopment projects.	Identify in the SWMP the numeric volume- and flow-based sizing criteria for BMPs treating runoff from applicable new development and redevelopment projects.
22	Post-Construction	Treatment BMPs	The SWMP does not include requirements ensuring treatment BMPs are effective at removing new development and redevelopment projects' pollutants of concern.	Include a BMP that describes how the City will ensure treatment BMPs are effective at removing new development and redevelopment projects' pollutants of concern.
23	Post-Construction	Project Review Process	The SWMP does not describe the project review process the City will use to apply runoff quality and quantity control requirements to new development and redevelopment projects.	Describe the project review process the City will use to apply runoff quality and quantity control requirements to new development and redevelopment projects.
24	BMP # 6-4	Integrated Pest Management and Nutrient Management	The SWMP discusses BMP implementation for landscaping, but does not identify integrated pest management and nutrient management as approaches the City will use to control pollutants associated with landscaping. In light of the City's pollutants of concern, implementation of integrated pest management and nutrient management should be expressly identified in the SWMP.	Include in BMP # 6-4 a commitment to develop and implement integrated pest management and nutrient management BMPs.

Item Number	SWMP Section	Subject	Issue	Required Revisions
25	BMPs # 6-4 and 6-6	Landscaping BMPs	The SWMP states that a series of fact sheets dealing with pollutants associated with landscaping and hazardous material storage will be developed and disseminated to municipal employees. However, it is unclear whether the City will require municipal employees to implement the BMPs identified in these fact sheets.	In BMPs # 6-4 and 6-6, confirm that the City will require municipal employees to implement the BMPs identified in the fact sheets.
26	BMP # 6-5	BMP Detail	The SWMP does not confirm that the City implements pollution prevention and source control BMPs at the Municipal Service Center.	Confirm in BMP # 6-5 that the City implements pollution prevention and source control BMPs at the Municipal Service Center. Identify the BMPs or types of BMPs that are implemented.
27	BMP # 6-8	BMP Detail	The SWMP does not identify the specific BMPs that the City will implement for street, city utility, and bridge maintenance. Such detail is needed to ensure that adequate BMPs are implemented. A listing of BMPs may be sufficient.	Identify in BMP # 6-8 the specific BMPs the City will implement for street, city utility, and bridge maintenance.
28	Total Maximum Daily Load Programs	Wasteload Allocation Attainment Plans	The SWMP does not address development of a Wasteload Allocation Attainment Plan for the Watsonville Slough Pathogens TMDL. Due to the significant challenge of meeting the Watsonville Slough Pathogens TMDL wasteload allocation, the City must use a comprehensive planning approach for addressing this TMDL, as represented by a Wasteload Allocation Attainment Plan.	<p>Include a BMP committing to develop, submit, and implement a Wasteload Allocation Attainment Plan for the Watsonville Slough Pathogens TMDL. Identify the specific items that the Wasteload Allocation Attainment Plan will address, including:</p> <ul style="list-style-type: none"> <li>• An implementation and assessment strategy;</li> <li>• Source identification and prioritization;</li> <li>• BMP identification, prioritization, implementation (including schedule),</li> </ul>

Item Number	SWMP Section	Subject	Issue	Required Revisions
29	Total Maximum Daily Load Programs	Program Goals	<p>for the Pajaro River Sediment and Nitrate TMDLs are not necessary at this time, since these TMDLs do not necessitate MS4 wasteload reductions.</p> <p>The SWMP states that a "goal of the SWMP is not to target BMPs to specific TMDLs or geographic areas, but to implement the BMPs throughout the management area in order to reduce controllable sources of sediment, FIB, and nutrients associated with the storm drain system to the maximum extent practicable." However, the SWMP must also acknowledge another goal, which is to achieve wasteload allocations in watersheds where TMDLs have been adopted. The City may need to implement targeted BMPs to achieve this goal.</p>	<p>analysis, and assessment;</p> <ul style="list-style-type: none"> <li>• Monitoring program development and implementation (including schedule);</li> <li>• Reporting and evaluation of progress towards achieving wasteload allocations;</li> <li>• Coordination with stakeholders; and</li> <li>• Other pertinent factors.</li> </ul> <p>Include in the SWMP the goal of achieving wasteload allocations in watersheds where TMDLs have been adopted.</p>