



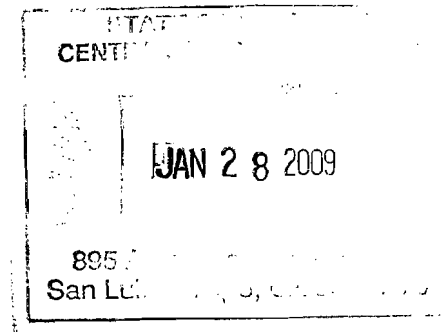
CITY OF SCOTTS VALLEY

PUBLIC WORKS DEPARTMENT

One Civic Center Dr. Scotts Valley, California 95066
Phone 831.438.5854 Facsimile 831.439.9748

January 26, 2009

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



Subject: Latest Revision to City of Scotts Valley Storm Water Management Plan dated 1/23/09

Dear Mr. Briggs:

On November 24, 2008, the City of Scotts Valley (City) received the Central Coast Regional Water Quality Control Board (Regional Board) review of and "required revisions" to the October 2008 City of Scotts Valley Stormwater Management Plan (SWMP). This letter transmits the City of Scotts Valley City Council's approved comments to the "required revisions" mandated by the Regional Board.

The City has reviewed the November 24, 2008 Water Board staff comment letter on the City SWMP and believes it can find ways to incorporate the majority of the forty (40) "required revisions." However, there are several items in your letter that the City cannot commit to at this time. These items are summarized below. A detailed discussion concerning the items to which we cannot agree is attached in the supplemental letter.

Revisions included in the attached updated SWMP:

The revisions are included in the attached updated SWMP in an underline ~~strikeout~~ format except where noted below.

Item #

1. The format of the implementation year tables have been modified to clearly show the beginning and continuation of the BMP's (not underlined).
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

Item No. 11 Attachment No. 8
March 19-20, 2009 Meeting
City of Scotts Valley SWMP

- staff.
3. Commitment language "will" added.
 4. Quantifiable goal #2 language added to BMP #1-3.
 - 5 & 6 Paragraph added to BMP #3-4 describing tracing and eliminating.
 7. New BMP #3-5 addresses sewer spills and overflow (FIB).
 8. The introduction of Chapter 3 was modeled after BMP #6.2 of the approved Santa Maria SWMP. Additional language has been incorporated, and a new BMP #3-1 added, mirroring the way Santa Maria addresses non stormwater discharge.
 9. Added language to make the single appropriate goal quantifiable.
 10. Language added to BMP #3-4.
 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.
 12. The language is reflected in Table 4-1, item number 4-2 as transmitted as part of the previous SWMP.
 13. The single word was changed in BMP #4-2.
 14. Inspection checklist required in BMP #4-2 and goals.
 15. Extensive training is required in BMP #6-5 and addresses the issue required by your comment #15.
 16. Language added to BMP #5-1 using language required by Water Board staff.
 17. "and implement" added to BMP #5-6, goal #1, and year two of Table 5-2.
 18. New BMP #5-2 added.
 22. See Item # 16 above.
 - 26 & 28. The City is reviewing language to be included in the SWMP addressing attachment 4 requirement.



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January 26, 2009 City of Scotts Valley Storm Water Management Plan Comments

Dear Mr. Briggs:

On November 24, 2008 the City of Scotts Valley (City) received the Central Coast Regional Water Quality Control Board (Regional Board) review of and “required revisions” to the October 2008 City of Scotts Valley Stormwater Management Plan (SWMP). The comments to the Regional Board’s “required revisions” are summarized below and discussed in the sections that follow.

Section 1. Introduction, summarizes the City’s overall concerns with the prescriptive character of Regional Board’s required revisions of the City SWMP. The Regional Board’s “required revisions” fail to reflect the unique physical and political characteristics of Santa Cruz County jurisdictions and the programs the City has already implemented to improve storm water quality. The Regional Board staff has failed to demonstrate sufficient flexibility in its approach to review the City SWMP. The City questions the technical basis of the Regional Board’s development of hydrograph modification criteria (hydromodification) and the need for additional assessments and studies that may not improve water quality.

Section 2. Existing City Programs, describes the City’s longtime existing water quality and storm water management program protections. Unlike the “required revisions”, these have been in place for many years and have been demonstrated to be effective, technically feasible, implemented within existing resources, and enjoy broad community support.

Section 3, Legal Standards and Guidance, identifies the “required revisions” of greatest concern to the City and discusses the legal criteria Regional Board staff must consider in reviewing and approving a SWMP. This section discusses the federal standards and guidance provided by Congress and the Environmental Protection Agency (EPA), and the California standards and guidance provided by the legislature, State Water Resources Control Board, its General Counsel and the State General Permit provisions. These standards and guidance all describe how to determine whether the City’s efforts

meet the Maximum Extent Practical (MEP) standard. They stress the need for consideration of local conditions including an analysis of the effectiveness of the proposed “required revisions”, whether the “required revisions” comply with the Federal and State regulatory framework, whether the “required revisions” enjoy local support, an assessment of the costs and benefits associated with the “required revisions”, and whether the “required revisions” are technically feasible to implement.

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

The City of Scotts Valley, Santa Cruz County and its consultants, Eisenberg, Oliveri and Associates, Inc. (EOA, Inc.) question the effectiveness of, and need for, the Effectiveness Assessments (EAs), wasteload allocation attainment plans (WAAP), and hydromodification criteria identified in the “required revisions.” The City contends that the “required revisions” are not federally required, and fail to properly consider State mandated criteria, including the financial condition of the City. As demonstrated by the attached letters of support from local environmental agencies, the City has experience working collaboratively with environmental and other community groups and organizations to develop public acceptance of water quality programs. Absent from the record is financial support from the residents and taxpayers of the City to establish new unfunded mandates being contemplated by the Regional Board. The “required revisions” have not been demonstrated to be cost effective and significantly increase the financial burden on the City and private development efforts.

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

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

The City’s approach to the development of alternative interim hydromodification management criteria will build upon this existing base of technical knowledge, combined with knowledge of local watershed and stream conditions, to create a management plan and criteria that are technically sound and appropriate for the City.

Section 5. Request for a Hearing. While the City hopes, as it has in the past, to resolve any differences with Regional Board staff over the “required revisions”, it is possible we may be unable to reach agreement. As such, the City requests a hearing before the regional board.

1. Introduction

The City has reviewed the November 24, 2008 Water Board staff comment letter on the City SWMP and believes it can find ways to incorporate the majority of the forty (40) “required revisions.” However, the City is deeply concerned with the lack of flexibility for some of the “required revisions.” The prescriptive nature of these requirements does not reflect the unique soils, hydrology or existing programs. As such, these “required revisions” are often inefficient, possibly ineffective and wasteful of public and private resources. It is the City’s intention to continue implementation of an effective, comprehensive, cost-effective storm water program that we believe will also meet all of the legal standards and objectives sought by the Regional Board.

The City is also concerned with the lack of documentation provided by Regional Board staff to support the interim hydromodification criteria being relied on and applied by the Regional Board to all jurisdictions in the region. The widespread use of such criteria, with questionable technical basis and without consideration of local conditions, constitutes flawed policy making and is inconsistent with the legal standard to which SWMPs must comply, which is to reduce the discharge of pollutants to the maximum extent practicable (MEP).

2. Existing City Programs

The City of Scotts Valley submitted a Stormwater Management Plan that we feel is effective, technically feasible, can be implemented within existing limited resources, and enjoys broad community support, as expressed during recent public hearings.

As a Phase II Small Municipal Stormwater Program Operator (MS4), the City does not enjoy many of the financial or other advantages available to the larger Phase I jurisdictions. Despite these limitations, the City of Scotts Valley has implemented stormwater management environmental protection practices that serve to improve the beneficial uses of the water in this city.

The City strives to be a leader in implementing programs that protect the environment and, in spite of our limited resources, we have moved forward with various measures, plans, and ordinances that serve to improve the beneficial uses of water within the City of Scotts Valley. The City of Scotts Valley’s SWMP includes a section titled “Existing Stormwater Management Practices.” This section details the City’s long standing efforts in conditioning projects and developers to provide substantial protection to stormwater quality. The SWMP also details the municipal maintenance efforts currently ongoing, the City’s recycling programs, source control inspections, and many of

the Municipal Code sections and General Plan requirements that are currently in place and enforced. Unlike some of the “required revisions” proposed by Regional Board staff, these measures have been in place for many years, and, as such, have a proven track record.

3. Legal Standards and Guidance

Regional Board requirements fail to consider local conditions, lack technical basis, and exceed the Maximum Extent Practicable (MEP) Standard

“Required Revisions” of Major Concern

The City has chosen to amend its SWMP to include most of your staff’s “required revisions” contained in the Regional Board’s letter dated November 14, 2008. The City is most concerned with the Regional Board’s “required revisions” numbered 19-21, 23-25, 29 & 30. Additional details are described below.

Items 19, 20, 21, would require the City to revise its SWMP to include a schedule for developing interim hydromodification control criteria within one year of enrollment and further require that the criteria shall be effective as the following:

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

Items 23, 24 require development of long-term criteria and control measures as part of a hydromodification management plan that will be based on a technical assessment of the impact of development on the City’s watersheds. The required elements of the assessment and steps the City must take are further detailed in the Regional Board’s November 14, 2008 letter addressed to the City.

Item 25 deals with long-term watershed protection. It requires the City to state how and when it will:

- Develop quantifiable measures that indicate how the City’s watershed protection efforts achieve desired watershed conditions

- Evaluate watershed protection planning efforts including plans, ordinances, guidance manuals, development project review procedures and BMPs
- Adapt or change existing efforts if warranted.

Items 29-30 require the City to commit to develop, submit and implement a wasteload allocation attainment plan (WAAP).

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

Federal Guidance-MEP stresses flexibility to fit local conditions

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

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

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

Contrary to this guidance from the EPA, the Regional Board has chosen to apply the same standards on a region-wide basis ignoring the fact that Santa Cruz County has conditions different than San Benito, Monterey, and San Luis Obispo or Ventura MS4

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

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

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

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

⁵ Id.

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

jurisdictions. Even jurisdictions within Santa Cruz County have different conditions. One size does not and cannot fit all.

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

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

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

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

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

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

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

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

1. Effectiveness: will the BMP address a pollutant of concern?
2. Regulatory compliance: Is the BMP in compliance with stormwater regulations as well as other environmental regulations?
3. Public acceptance: Does the BMP have public support?

⁷ (State Water Board order WQ 2000-11, p.20).

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

4. Costs: Will the cost of implementing the BMPs have a reasonable relationship to pollution control benefits to be achieved?
5. Technical feasibility: Is the BMP technically feasible considering, soils, geography, water resources, etc.?

Each of the factors identified by the State Water Board Chief Counsel is analyzed in the sections that follow.

Relevant State General Permit Provisions also emphasize flexibility, costs, effectiveness and local acceptance

In addition to EPA guidance and State Board precedent, the State General Permit describes MEP as "...an ever evolving, flexible, and advancing concept, which considers technical and economic feasibility."⁹ It goes on to state that:

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

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

"In choosing BMPs, the major focus is on technical feasibility, but **costs, effectiveness, and public acceptance are also relevant**...MEP requires permittees to choose effective BMPs, and to reject applicable BMPs only where other effective BMPs will serve the same purpose, the BMPs are not technically feasible, or the cost is prohibitive."¹¹

4. Application of Maximum Extent Practicable Criteria

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

A. Effectiveness

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

Regional Board staff has included numerous "required revisions" that result in costly new monitoring and reporting requirements that may not improve water quality. Numerous other jurisdictions have already questioned the effectiveness of the Regional

⁹ State General Permit

¹⁰ State General Permit pg 4.

¹¹ General Permit Fact Sheet at pg 9.- emphasis added.

Board's plan to develop local hydromodification criteria. The City believes the requirement to include a wasteload allocation plan in the SWMP is also flawed.

Hydromodification

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

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

As a result of the Lompoc hearing, the Regional Board has revised its position to permit local jurisdictions to develop local hydromodification criteria that are "as effective as" the criteria proposed by regional staff. However, a significant flaw remains in that there has been no discussion or explanation of what it means to be "as effective as" the interim "numeric" criteria proposed by Regional Board staff. By establishing numerical criteria, the Regional Board staff has effectively curtailed the City's options.

The EPA notes:

"Although the increase in application of these practices is growing rapidly, data regarding both the **effectiveness** of these practices and their costs **remain limited.**"¹³

As outlined in further detail below in Segment E, consultants retained by the City and Santa Cruz County (EOA, Inc.) have concluded that further documentation from the Regional Board is required to demonstrate that the alternative hydromodification criteria being developed by the City will be "as effective as" the Regional Board's interim criteria. The effectiveness of interim criteria is unknown at this time.

Wasteload Allocation Attainment Plans and Effectiveness Assessments

The City has taken the initiative to work with community groups to conduct studies, develop plans and begin implementation of efforts that have subsequently served as the basis for local TMDLs. The City intends to achieve the TMDL wasteload allocations to the maximum extent practicable, while at the same time addressing priority

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

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

pollutants in the other waters that are not subject to a TMDL. It should be kept in mind that stormwater management is just one component of most TMDLs.

The City concurs with the overall objectives represented by Wasteload Allocation Attainment Plans (WAAPs). Many elements of the WAAP have been addressed in the preparation of the City's SWMP. However, we disagree with the requirement that WAAPs be incorporated in the SWMP. TMDLs are watershed-scale programs that involve multiple land uses, not just those associated with an MS4. TMDL program effectiveness (such as WAAPs) should be accomplished through a comprehensive program that includes all contributing land uses. A program based on the Regional Board's TMDL triennial review process is more appropriate.

B. Regulatory compliance

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

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

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

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

The “required revisions” for hydromodification also violate the intent of the federal regulations, which defer compliance with minimum control measures until EPA can review and evaluate the effectiveness of the small MS4 regulations after December 2010.¹⁶ The “required revisions”, at most, reflect EPA guidance and are not required by the regulatory scheme for Phase II jurisdictions.

There are a number of policy and legal issues raised by the County's comments. All stormwater permits challenged to date have been Phase I permits for large MS4s. The legal challenges to date have not specifically addressed the issues and concerns presented here. In California, the controlling law includes not just the federal Clean

¹⁴ (See 40 C.F.R. Section 122.34(b)(5)(iii).

¹⁵ 40 C.F.R. Sections 122.34(e)(2) and 122.37.

¹⁶ 40 C.F.R. Sections 122.34(e)(2) and 122.37.

Water Act, but if the standards proposed exceed federal standards then the Porter-Cologne Water Quality Control Act (Porter-Cologne Act) must also be considered.

The Porter-Cologne Act's goal is

“...to attain the highest water quality which is reasonable, considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, and **social, economic, tangible and intangible.**”¹⁷

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

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

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

In 1998 the City of Burbank challenged the Los Angeles Regional Board's issuance of a wastewater permit contending the board had not considered the factors contained in Water Code section 13241. In 2005 the Supreme Court¹⁸ held that whether the regional board should have complied with Water Code Sections 13263 and 13241 by taking into account “economic considerations,” such as the costs the permit holder would incur to comply with the numeric pollutant restrictions set out in the permits, depended on whether those restrictions met or exceeded the requirements of the federal Clean Water Act, 33 U.S.C. § 1251 et seq. The court noted that California law could not authorize California's regional boards to allow the discharge of pollutants into the navigable waters of the United States in concentrations that would exceed the mandates of federal law, but also noted that the federal Clean Water Act did not prohibit a state, when imposing effluent limitations that were more stringent than required by federal law, from taking into account the economic effects of doing so.¹⁹

¹⁷ Water Code Section 13000.

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

¹⁹ *ibid*

If the “required revisions” were “federally required” as Regional Board staff contend, then every jurisdiction in the United States would be required to implement hydromodification criteria as proposed in the “required revisions.” Since the requirements are more stringent than required by federal law, state law requires the Regional Board to consider economics and other public interest factors prior to adoption of the required revisions.²⁰ This position also finds support in Water Code sections 13000 and 13241, which require consideration of economic and social factors (both tangible and intangible) in making decisions.

The Financial condition of the City is Significantly Constrained

The requirements by the Regional Board will have a significant impact on the City’s General Fund budget which currently has a structural deficit. The City has had a hiring freeze since 2004. The Public Works Department has two of six positions frozen. Current staffing is insufficient to perform the additional duties that would be required. At least one additional position would need to be hired at a time when the City is trying to reduce expenditures. With an \$8.27 million General Fund budget for fiscal year 2008-09, the structural deficit is approximately \$900,000. As just mentioned, the City is not in a position to add significant programs to its budget.

The requirements being imposed by the Regional Board on the small MS4s are more restrictive than requirements currently considered in permits for large MS4s. As a matter of policy it is inappropriate to impose more restrictive requirements on these small MS4s, which have fewer available resources. The fact sheet for the General Permit notes, “it is anticipated that this general permit term will serve as a “ramping up” period and that programs implemented by phase II communities will not necessarily conform to programs implemented by phase I communities”.²¹

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

No additional requirements beyond the minimum control measures be imposed on regulated small MS4s, **without the agreement of the operator of the affected small MS4**, except where an approved TMDL or equivalent analysis provides adequate information to develop more specific control measures to protect water quality”.²²

Therefore until such time as the State undertakes and completes its process to develop a new General Permit for small MS4s and EPA evaluates the Phase II program

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

²¹ General Permit fact sheet, pg. 9.

²² 40 C.F.R. section 122.34(e)(2). emphasis added

after December 2010, the Regional Board is premature to require new criteria related to hydromodification and LIDS on financially strapped Phase II jurisdictions.

C. Public Acceptance

The City has experience working collaboratively with environmental and other community groups to develop public acceptance of new water quality programs

Attached to this letter is a joint letter from several local Santa Cruz environmental organizations and water agencies that attest to the fact that Scotts Valley and other municipalities in Santa Cruz County have in the past worked cooperatively with local groups to improve water quality. These cooperative efforts have included participation in the Integrated Watershed Restoration program, the Blue Circle, the Integrated Regional Water Management program, and Eco Cruz, the environmental online guide for Santa Cruz County. The letter from the local groups states:

“We are concerned that to some degree the current SWMP approach as advocated by the RWQCB will divert limited resources away from the important water quality, ecosystem and climate change issues we are trying to address. The municipalities are active and critical partners in these efforts. *We strongly recommend that the RWQCB work with us to collaboratively achieve the “healthy watersheds” we all seek.*”²³

The letter concludes:

We have confidence that through the proposed municipal stormwater management programs the municipalities will continue to work with the RWQCB and our agencies to evaluate program effectiveness and modify or expand those programs as needed in the future to ensure that water quality protection and hydromodification are adequately addressed. *The municipalities have a good track record and long experience successfully implementing practical resource protection efforts in Santa Cruz County. (Emphasis added.)*²⁴

There is no evidence to support the notion that the residents and taxpayers of the City of Scotts Valley are willing to financially support the establishment of new unfunded mandates being contemplated by the Regional Board.

While the City of Santa Cruz just recently succeeded in enacting a ballot measure to increase funding for Stormwater programs, a similar level of financial support does not

²³ See letter dated Jan 10, 2009, Support for Santa Cruz Municipalities stormwater programs signed by representatives of Resource Conservation District of Santa Cruz County, Ecology Action, Coastal Watershed Council, Save Our Shores Pajaro Valley Water Management Agency, and Soquel Creek Water District--pg 1-emphasis added.

²⁴ Ibid, page 3

exist in the City. In the two most recent election cycles, City residents rejected a bond supporting additional fire services and a school bond to replace a 60 year old middle school.

A special tax is imposed for specific purposes and must be approved by a two-thirds vote.²⁵ In this environment, it is unlikely that funding for a specific purpose such as the mandated storm water programs would find the requisite level of voter support in the City. While the City has continued to improve and strengthen its stormwater programs, it has done so within its limited resources. As evidenced by the attached letter from local environmental groups, the best results are achieved when the planning process incorporates extensive public participation and seeks to obtain a broad consensus for the proposed plans. The path and timelines the Regional Board staff has chosen, coupled with their lack of flexibility, has not permitted sufficient time to develop the necessary local consensus.

D. Costs

Provisions in the “Required Revisions” are not cost effective and significantly increase the financial burden on the City and private development efforts

From a practical standpoint, the development and adoption of local standards for hydromodification will require the expenditure of significant public and private resources. The City understands that at the Regional Board’s October 17th hearing on the City of Lompoc SWMP, the City and County of Santa Barbara testified that they expended in excess of \$250,000 to develop local hydromodification criteria. Development of the HMP for Santa Clara County cost \$800,000 (which included additional studies) and took three years to complete. The City does not have the funding available to finance all of the “required revisions” and the ensuing liability associated with failure to implement these “required revisions.”

Unless the Regional Board is willing to consider changes to their rigid interim hydromodification criteria, landowners, developers and the City itself will all be adversely affected. Santa Cruz County examined several recent development applications to evaluate what additional information/improvements could be required based on our current understanding of the interim hydromodification criteria. They concluded that imposition of the Board’s interim criteria would result in: additional engineering analysis and reviews, reduction in developable areas, conflicts with Smart Growth principles that may lead to “hypersprawl”²⁶, and costly on-site flow control measures that may or may not protect the City’s creeks and watersheds.

Interim Hydromodification Criteria, Hydromodification Plans, Long Term Watershed Protection, Effectiveness Assessments and Wasteload Allocation Attainment Plans are Unfunded State Mandates.

²⁵ See *Howard Jarvis v. City of Salinas*, 98 Cal App 4th 1351,1358-1359.

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

The City also considers the imposition of these requirements to be an unfunded state mandate. Because the “required revisions” in question exceed requirements as mandated by federal law, the provisions are an unfunded state mandate²⁷. Furthermore, even if a program is required in response to a federal mandate, a subvention of state funds may be in order. For example, Government Code section 17556(c) provides that if a requirement was mandated by federal law or regulation, but the [state] “statute or executive order mandates costs that exceed the mandate in that federal law or regulation” a subvention of funds is authorized. Even if the costs were mandated to implement a federal program, if the “state freely chose to impose the costs upon the local agency as a means of implementing” that federal program, “the costs are the result of a reimbursable state mandate regardless whether the costs were imposed upon the state by the federal government.”²⁶

As noted above, the effectiveness and benefit to be received from the Regional Board staff’s “required revisions” have not been demonstrated. Thus, the “required revisions” are onerous and costly and may not provide any environmental benefit by actually improving water quality, or at least at a level that is commensurate with the cost.

Based on our previous experience with TMDL development and limited review of the CASQA Municipal Stormwater Program Effectiveness Assessment Guidance, it is estimated that the addition of these tasks could cost the City as much as \$100,00 over the five year term of the permit.

As noted by local environmental groups:

While we concur with the overall objectives represented by Wasteload Allocation Attainment Plans (WAAPs), we agree with the municipalities that the requirement for separate WAAPs for each TMDL and each stormwater program detracts from a comprehensive watershed approach and would be an unnecessary and redundant effort. Many of the elements of the WAAPs have been addressed through the preparation of the stormwater plans, the TMDL’s, and/or the supporting studies that lead to the TMDL’s. Ongoing assessment of program effectiveness will be accomplished through the stormwater program effectiveness monitoring and the Regional Board’s triennial review of TMDL implementation.”²⁷

Even references cited by Regional Board staff state that:

“Despite the fact that LID technologies have been promoted and studied since the early 1990’s for many Stormwater managers and developers, LID is still a new and emerging technology. As with most new technologies, installation and other **costs of LID are highest during the early phases** of development and adoption. Over time, as practioners learn

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

²⁸ *ibid* pg 2

²⁹ *ibid* pg. 2

more about the technology, as the number of suppliers of inputs expands, and as regulations adapt to new technology, costs will **likely** decline”³⁰

The EPA further notes that:

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

Finally, the EPA goes on to caution:

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

As a matter of public policy it makes little sense in these times of dwindling resources to require small MS4s with limited funds to develop criteria that should be developed as part of the upcoming Phase II small MS4 General Permit Update process.

E. Technical Feasibility

The Criteria established by the regional Board staff may not be technically feasible to achieve

The Regional Board has already heard testimony from other jurisdictions questioning the technical feasibility of achieving the criteria required by the Regional Board. In its response to the City of Lompoc’s proposed SWMP the Regional Board staff stated:

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

As evidenced by the comments made here, this statement is not totally accurate since the Table of Required Revisions disregards the prior approval by the Regional Board staff of the City’s proposal to develop its hydromodification criteria and continues to include the Feb, 2008 criteria. Further, we understand that the City of Santa Maria recently questioned both the timelines and the substance of the “required revisions” proposed by the Regional Board staff.

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

Speaking on behalf of the County of Ventura, GeoSyntec expressed its concerns with the technical feasibility of a blanket hydromodification criterion. GeoSyntec stated that while the requirement was presumably based on existing literature, the use of this information was premature because it has not been developed and tested locally²⁸. GeoSyntec also concluded that this blanket requirement is not needed in all cases and that such a requirement:

“...ignores the need to promote urban infill, redevelopment and dense districts in new development projects as identified in the smart growth principles”²⁹

Later in its memo GeoSyntec states:

“Interim criteria requirements for post construction runoff hydrographs may be impractical as applied to redevelopment projects, and in particular, redevelopment projects for industrial areas. Requiring the site to match predevelopment runoff hydrographs will hinder redevelopment projects that are industrial in nature, and by virtue of the industry require significant impervious areas (e.g. trucking and shipping facilities)”³⁰.

As previously noted, even the literature cited by the Regional Board in its comments to other jurisdiction’s SWMPs caution against the blanket use of LIDs and by implication the new hydromodification criteria. In its comments to the City of Lompoc SWMP, Regional Board staff cites the ECONorthwest’s report of the review of literature³¹ and EPA Documents cited above³². Both these documents advise against reading too much into past studies to justify the use of LIDS.

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

“It is not feasible to demonstrate that the alternative hydromodification criteria being developed by the County will be as effective as the Regional Board’s interim criteria without further documentation from the Regional Board. The technical basis for, and the effectiveness of, the interim criteria are unknown at this time. The Regional Board put forth detailed interim hydromodification criteria in letters dated February 2008 and July 2008. These criteria are now listed as required

²⁸ See memorandum to Mark Grey, CICWQ, from Lisa Austin, Donna Bodine and Erick Strecker, GeoSyntec Consultants dated March 7, 2007, at pg 9

²⁹ Ibid, at pages 9 and 10

³⁰ ibid

³¹ See City of Lompoc Board hearing materials, page 4 of supplemental sheet 3, item 9 dated October 17, 2008

³² EPA 841-F-07-006 dated December 2007

changes for the SWMP (comment 39). However, neither of the letters, attached references, or other correspondence from the Regional Board provides the scientific basis of the interim criteria.³³

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

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

This requirement appears to have come from the draft Ventura County stormwater permit, the language of which is quite controversial and has not yet been adopted³⁴. Dr. Richard Horner, a researcher from the Pacific Northwest and consultant to NRDC, proposed the EIA limit, however, two of the references provided in the July 2008 RWQCB letter as support for the EIA limit are actually in disagreement with a 5% EIA. Reference 16 is a memorandum prepared by GeoSyntec Consultants, a leader in the LID and hydromodification management field, that evaluated Dr. Horner's assumptions in a memorandum prepared for the Building Industry Association of Southern California (BIASC) (reference 16 to

³³ EOA, Inc. Email of 12/18/08, Lori Pettegrew, References reviewed included materials from the July 2008 Regional Board Letter (item numbers below refer to the numbering in that letter)

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

Other References reviewed include:

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

³⁴ "Draft Tentative Order, *Ventura County Municipal Separate Storm Sewer System Permit*." Los Angeles Regional Water Quality Control Board. (29 April 2008): 9 June 2008.

the July 2008 RWQCB letter)³⁵. The memorandum concluded that an EIA limit of 5% is not a feasible or appropriate criterion. In its report entitled “Coastal Sprawl” (reference 5 to the July letter), the Pew Oceans Commission also did not support an EIA limit at the project site level³⁶. They contend that an impervious limit can lead to “hypersprawl” and they recommend a “New Urbanist/Smart Growth” approach that considers the effects of land use changes at the regional, neighborhood, and site scale.

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

This requirement appears to be a hybrid of the hydrograph matching criteria proposed in the report by Coleman et al for the Southern California Coastal Water Resources Program (SCCWRP) (reference 9 to the July letter) and the matching tolerance proposed in the draft Ventura permit³⁷. The SCCWRP report studied the effects of peak flows and levels of watershed imperviousness on Southern California streams (which are very different from Central Coast Region streams), but did not provide any technical basis for the effectiveness of matching the 1- to 10-year hydrographs (a management recommendation that seemed to be added at the end of the report). In fact, hydrograph matching is considered less protective of streams than flow duration matching, as demonstrated in the Santa Clara Valley Urban Runoff Program hydromodification studies, and matching the 1-year storm and greater ignores the effects of smaller, more frequent storms that may cumulatively have significant erosive effects on stream channels.

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

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

This requirement seems to be taken from the draft Construction General Permit, and no reference for its technical basis has been provided in this permit. In

³⁵ GeoSyntec Consultants. Memorandum to Mark Grey, Building Industry Association of Southern California: *Review of Investigation of the Feasibility and Benefits of Low Impact Site Design Practices for Ventura County*. 28 May 2008.

³⁶ Beach, Dana. “Coastal Sprawl: The Effects of Urban Design on Aquatic Ecosystems in the United States”. The Pew Oceans Commission. (8 April 2002). 11 June 2008.

³⁷ Coleman, Derrick, et al. “Effect of Increases in Peak Flows and Imperviousness on the Morphology of Southern California Streams.” *Southern California Coastal Water Research Project. Technical Report 450 (2005). and Draft Tentative Order, Ventura County Municipal Separate Storm Sewer System Permit.* Los Angeles Regional Water Quality Control Board. (29 April 2008): 9 June 2008.

its comments on the draft Permit, the California Stormwater Quality Association (CASQA, June 11, 2008) stated that:

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

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

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

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

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

A review of hydromodification management requirements throughout the state indicates that most stormwater programs have a general requirement that post-project runoff peaks, volumes, and/or durations shall not exceed those for the pre-project condition. Project size thresholds vary, but most programs also have exemptions for discharges to streams or channels where potential for erosion is small (e.g. hardened or engineered channels, tidal areas, enclosed pipes, etc.). What’s important to note about these existing hydromodification management

programs is that the majority of them have developed criteria based on extensive technical studies, and have been peer reviewed by noted geomorphologists and independent technical experts. These criteria have been demonstrated to be effective at reducing hydromodification and protecting beneficial uses.”

The City of Scotts Valley’s approach to development of alternative interim hydromodification management criteria will build upon this existing base of technical knowledge, combined with knowledge of local watershed and stream conditions, to create a management plan and criteria that are technically sound and appropriate for the City.

5. Request for a hearing

City staff has worked cooperatively with Regional Board staff in the past to resolve differences of opinion on the City’s SWMP. Unfortunately, at this time agreement has not yet been reached. Thus, in order to preserve its legal rights, the City of Scotts Valley requests a hearing before the Regional Board prior to the Regional Board making its final determination as to the exact nature and form of “required revisions” it will impose.

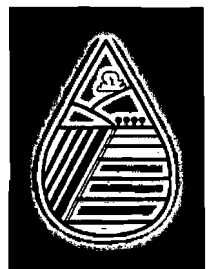
Conclusion

The City of Scotts Valley seeks to implement programs that are technically feasible, effective, enjoy broad public support and actually improve water quality, rather than fighting over “required revisions” to its SWMP. The City does not disagree with the ultimate objectives sought by the Regional Board. The City believes that its proposed SWMP achieves those goals by establishing programs that will improve water quality within existing resources. The City of Scotts Valley will continue our proactive approach to enhance our programs and, as money becomes available, we will expand those programs towards improving stormwater quality and its beneficial uses.

Yours very truly,



Ken D. Anderson
Public Works Director/City Engineer



Pajaro Valley
Water Management Agency



January 10, 2009

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

Dear Mr. Briggs:

RE: Support for Santa Cruz Municipalities Stormwater Programs

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

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

Hydromodification

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

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

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

Low Impact Development

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

Recommendation: *Consider a watershed based cap and trade model that will maximize watershed scale benefits for water quality, water quantity and hydrologic function.*

TMDLs

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

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

Recommendation: *Build on ongoing efforts to comprehensively and realistically address TMDLs and priority pollutants originating from all sources in all watersheds.*

Climate Change

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

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

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

Increased air and water temperatures will likely affect a number of endangered species (aquatic and terrestrial). The long-term survival of these genetically unique populations may well require special consideration in terms of land use and water management policies and practices. The possible extirpation of local steelhead populations is an example of one such organism, where innovative watershed-scale approaches to stormwater management may need to be developed.

Recommendation: *Avoid prescriptive requirements for use of historical rainfall data in hydromodification and LID sizing calculations, and allow for flexibility in such calculations to account for the predicted effects of climate change.*

Conclusion

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

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

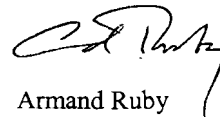
Sincerely,



Karen Christensen
Executive Director of
RCD Santa Cruz County



Virginia Johnson
Executive Director of
Ecology Action



Armand Ruby
Executive Director of
Coastal Watershed Council

pending
Laura Kasa
Executive Director
Save Our Shores



Mary Bannister
Interim General Manager
Pajaro Valley Water
Management Agency

pending
Laura Brown
General Manager
Soquel Creek Water District

Cc: Bill Kocher, City of Santa Cruz
Bridget Hoover, AQWA
John Ricker, Santa Cruz County
Kate Goodnight, Coastal Conservancy
Rachel Fatoohi, Santa Cruz County
Robert Ketley, City of Watsonville
Sarah Corbin or Richard Ferdinand, Surfriider
Steve Jesberg, City of Capitola
Steve Shimek, Monterey Coastkeeper
Suzanne Healy, City of Santa Cruz

Storm Water Management Plan



CITY OF SCOTTS VALLEY

JANUARY 2009

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ACRONYMS AND ABBREVIATIONS

ASC	Agency Staff Committee
BASMAA	Bay Area Storm Water Management Agencies Association
BMP	Best Management Practices
CAC	Citizens Advisory Committee
CASQA	California State Storm Water Quality Association
CDC	County Design Criteria
CEQA	California Environmental Quality Act
EPA	United States Environmental Protection Agency
FIB	Fecal Indicator Bacteria
GIS	Geographic Information System
MEP	Maximum Extent Practicable
MS4s	Municipal Separate Storm Sewer System
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination system
NRCS	National Resources Conversation Service
RCD	Resource Conservation District
RWQCB	Central Coast Regional Water Quality Control Board
SWRCB	California State Water Resource Control Board
SUSMP	Standard Urban Storm Water Management Program
SWMP	Storm Water Management Plan

INTRODUCTION

BACKGROUND

In 1972, the federal Water Pollution Control Act (also referred to as the Clean Water Act "CWA") was amended to provide that the discharge of pollutants to waters of the United States from any point source is unlawful unless the discharge is in compliance with a NPDES permit. The 1987 amendments to CWA added section 402(p), which established a framework for regulating storm water discharges under the NPDES Program. Subsequently, in 1990, the U.S. Environmental Protection Agency (U.S. EPA) promulgated regulations for permitting storm water discharges from industrial sites (including construction sites that disturb five acres or more) and from municipal separate storm sewer systems (MS4s) serving a population of 100,000 people or more. These regulations, known as the Phase I regulations, require operators of medium and large MS4s to obtain storm water permits. On December 8, 1999, U.S. EPA promulgated regulations, known as Phase II, requiring permits for storm water discharges from Small MS4s and from construction sites disturbing between one and five acres of land. This General Permit regulates storm water discharges from Small MS4s.

An "MS4" is a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains): (i) designed or used for collecting or conveying storm water; (ii) which is not a combined sewer; and (iii) which is not part of a Publicly Owned Treatment Works (POTW).

A "Small MS4" is an MS4 that is not permitted under the municipal Phase I regulations, and a public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes.

SWRCB elected to adopt a statewide general permit for Small MS4s in order to efficiently regulate numerous storm water discharges under a single permit.

The General Permit effectively prohibits the discharge of materials other than storm water that are not "authorized non-storm water discharges" or authorized by a separate NPDES permit.

Effluent Limitations

Permittees must implement Best Management Practices (BMPs) that reduce pollutants in storm water runoff to the technology-based standard of Maximum Extent Practicable (MEP) to protect water quality. The inclusion of BMPs in lieu of numeric effluent limitations is appropriate in storm water permits.

Preparation of SWMP

The General Permit requires regulated Small MS4s to:

1. Develop and implement a SWMP that describes BMPs, measurable goals, and timetables for implementation in the following six program areas (Minimum Control Measures):

Public Education

The Permittee must educate the public in its permitted jurisdiction about the importance of the storm water program and the public's role in the program.

Public Participation

The Permittee must comply with all State and local notice requirements when implementing a public involvement/participation program.

Illicit Discharge Detection and Elimination

The Permittee must adopt and enforce ordinances or take equivalent measures that prohibit illicit discharges. The Permittee must also implement a program to detect illicit discharges.

Construction Site Storm Water Runoff Control

The Permittee must develop a program to control the discharge of pollutants from construction sites greater than or equal to one acre in size within its permitted jurisdiction. The program must include inspections of construction sites and enforcement actions against violators.

Post Construction Storm Water Management

The Permittee must require long-term post-construction BMPs that protect water quality and control runoff flow to be incorporated into development and significant redevelopment projects. Post-construction programs are most efficient when they stress (i) low impact design; (ii) source controls; and (iii) treatment controls.

Pollution Prevention/Good Housekeeping for Municipal Operations

The Permittee must examine its own activities and develop a program to prevent the discharge of pollutants from these activities. At a minimum, the program must educate staff on pollution prevention, and minimize pollutant sources.

2. Reduce its discharge of pollutants to the MEP.
3. Annually report on the progress of SWMP implementation.

The Phase II Storm Water Regulations require each municipality to adopt and enforce ordinances and policies to clarify its authority to control what is discharged to the municipally owned storm drain system. In addition, each agency needs to develop adequate legal authority to implement and enforce provisions of the SWMP, including right of entry and inspection, and methods to reduce discharge of pollutants to the storm drain.

During the term of the SWMP, the City will review existing ordinances and general plans and develop legal authority for implementing the SWMP. As all ordinances will be considered at public meetings which by city ordinance and state law must comply with public notification requirements, the public will be fully informed. In particular, legal authority for the following will be established:

- Effectively prohibiting non-storm water discharges to storm drains and implementing appropriate enforcement procedures and actions

- Requiring that persons engaged in activities that are potential sources of pollutants implement BMPs to reduce pollutant discharges to the MEP
- Requiring erosion and sediment controls, as well as sanctions or other effective mechanisms, to ensure compliance from construction site activities that result in a land disturbance of greater than or equal to one acre
- Addressing post-construction runoff from new development and redevelopment projects that disturb greater than or equal to one acre; including projects less than one acre that are part of a larger common plan of development or sale.

Hydromodification Plan (HMP) and Long Term Watershed Management

The City of Scotts Valley, in conjunction with Santa Cruz County and the municipalities within the County, has established a strategy to develop hydromodification standards for new and redevelopment projects. The primary goal of the HMP is to determine an economically viable and effective set of Scotts Valley specific hydromodification control standards that will provide protection of water resources (e.g. water quality, beneficial uses, biological and physical integrity of watersheds and aquatic habitats) to the maximum extent practical.

The City's Master Plan is a comprehensive document addressing future growth, including infrastructure and redevelopment in the context of long-term watershed protection. The Master Plan will be reviewed to verify that long-term watershed management efforts are being addressed. Based on results of this review, the Master Plan will be revised as appropriate.

Low Impact Development (LID)

The City supports the incorporation of LID strategies into all new development and redevelopment projects as appropriate. This provides for the development and adoption of LID design guidelines within the permit period. Once adopted, the LID design guidelines will serve as a reference guide to designers and engineers in the early phases of project development.

Total Maximum Daily Load (TMDL)

Carbonero Creek, as a tributary to San Lorenzo River, was identified as impaired by sediment on the 1998 Clean Water Act list of impaired water bodies. This SWMP as a document, and many of the practices put in place as part of this plan, will address many of the issues and is intended to reduce the sources of pollution contributing to the impairment. The City of Scotts Valley is committed to implementation of measures that target the City's contribution to sediment loading in Carbonero Creek and fecal indicator bacteria in Carbonero Creek and Camp Evers Creek.

Funding Mechanism and Structure

Meeting these new regulatory requirements will require new or additional public expenditures. The Phase II regulations require that each agency allocate funds for the capital, operation and maintenance, and enforcement expenditures necessary to implement and enforce the SWMP within its jurisdiction. In 1998, EPA developed cost estimates for each element of a typical Phase II program. They estimated total Phase II program costs would average \$9.16 per

household or about \$3.00 per capita. The annual cost for the City of Scotts Valley with a population of 11,000 would be about \$33,000. Obviously, there will be a range of costs from locality to locality, due to local preferences, budget and labor constraints, etc. The City of Scotts Valley recently completed an evaluation of actual costs of providing staff for work on various projects. The study indicated that the cost of a fully supported composite planning staffer or engineering division staffer is \$110/hr. There are obviously various ways to utilize staff time, but two simple budget scenarios are as follows: 6 weeks annually of a full-time staff person @ \$110/hour at a cost of \$26,400 leaves \$6,600 remaining for hard costs, such as media or print material and postage costs. Increasing the full-time staff person's time commitment to 7 weeks full time increases that cost to \$30,800, leaving only \$2,200 for hard costs. During the first year of the SWMP, the City will investigate funding mechanisms to support the storm water program. Possible funding options/mechanisms that the City may choose to utilize for developing and implementing the SWMP include the following:

- Current revenues (general fund appropriation)
- New "dedicated" funding sources (fees and taxes)
- Outside funding sources (The City, along with the other Santa Cruz County jurisdictions will be actively pursuing grant funds)

EXISTING STORM WATER MANAGEMENT PRACTICES

Conditions of Approval

The City of Scotts Valley commissioned a study in 1988 to evaluate and make recommendations for addressing the City's storm drain and storm channel systems. From that study, a Storm Drain Master Plan was developed which included recommendations for improvements in problem areas including correcting eroding channels and outfalls. Areas of erosion in channels were repaired through the City's Capital Improvement Program and Conditions of Approval were placed on developers for channel improvement and outfall improvements where a nexus could be established. A substantive recommendation proposed in the study was also adopted by the City as well as a tool to not allow an increase in peak flows in channels affecting both flood elevations and erosive scouring due to high velocities and flood elevations. Projects are now conditioned on a case-by-case basis to provide storm water detention systems. Projects are required to determine the pre-development rate of run-off contributing to the storm drain system and provide on-site detention so that post-development rate is not exceeded for a 10-year storm.

As water supply and recharge issues arose, the City began specifying that underground storm detention systems be designed to provide infiltration to the maximum extent feasible. Generally, detention systems were required to have non-grouted bottom half of pipe joints in an effort to allow percolation. In 1995, the City first required a more explicit effort by builders to provide infiltration of storm water. A larger subdivision was required to remove portions of the bottom of detention system pipe and bed the pipe with five feet of drain rock. A non quantified visual inspection of the outfall showed a limited amount of overflow drainage during inspections in early rainfall events.

In 2006, Conditions of Approval were again changed for a mixed use commercial project where the developer was required to filter, retain, and percolate a significant portion of their storm water. The project was never built. The developer indicated that one of the several reasons

the project was abandoned was the expense of this percolation system.

The City continues to condition projects to detain a 10-year storm event to pre-development rates and include percolation considerations to the maximum extent feasible including percolation pits and roof leaders directed into landscaped areas.

Municipal Maintenance Efforts

The City's maintenance division provides several efforts that lead directly to improved storm water quality run-off. The City currently contracts for street sweeping efforts. Those efforts have increased in frequency in the last several years with a concerted increase as the wet weather season approaches. Prior to the first significant rains of the year, the maintenance crew walks the full length of Carbonero Creek and its significant tributaries for flood control purposes. In 1997, an additional task was begun in conjunction with that effort to remove trash from the channels being inspected. The first year, a significant dump site was found and a special project completed to remove several truckloads of debris. The following two years, a considerable effort was continued during those inspections gathering significant amounts of trash. Since that time, the effort has been able to be reduced to simply having the maintenance crew each carry a garbage bag and gathering trash during their efforts. Because of the regular effort, no significant amount of trash has been encountered.

The street maintenance division performs a storm drain inlet inspection prior to every storm. During that inspection, any debris in the inlet grates is removed and any debris nearby likely to cause a flooding problem is also removed. During a storm event itself, a two person crew is assigned to perform continuous rounds within the City to ensure storm drain inlet operation and to remove any debris found. All this debris is transported to the landfill.

Maintenance crews periodically perform storm drain stenciling within the limits of the City of Scotts Valley. This program has been sporadic and concentrated only on the main streets in Scotts Valley. The SWMP will be expanding those efforts.

The City maintenance division quarterly inspects the corporation yard for safety and includes storm water runoff quality issues. Recent modifications to policy have expanded to include all municipal facilities including public buildings and parks.

Recycling Programs

The City has been very proactive in establishing recycling programs within the City of Scotts Valley. These programs have gone a great distance towards trash and debris reduction in the streets and ultimately storm drainage system. Currently, the solid waste contract includes curbside single stream general recycling, curbside used oil recycling, and curbside yard waste recycling. Additionally, the City provides a free yard waste drop-off center, provides annual free drop-off of tires and appliances event, and provides an annual free drop-off e-waste event.

Source Control Inspections

The City's current source control inspector regularly inspects restaurants, automobile and industrial businesses within the City of Scotts Valley. Those inspections currently include storm water education and inspection of any BMPs that are currently in place. All problems are noted

and discussed by the inspector with the business for correction. Recent enforcement includes prohibiting an RV sales business from discharging wash water from RV washing into the storm drain and prohibition of a crane business discharging wash water from their vehicle washing in to the storm drain.

Integrated Pest Management Policy (IPM)

The City adopted a pest management policy requiring strict compliance for application as well as limits on the amount and location of application. These limitations minimize or eliminate the likelihood of pesticides and herbicides contributing substantially to stormwater degradation.

Education

The City participates in the O'Neill Sea Odyssey Program, an education effort of school age children on the Monterey Bay which includes storm water quality.

Municipal Codes

- 13.08 Individual disposal systems banned if within 200 feet of public sewer.
- 13.07.075 Prohibits discharge of anything except storm water into any storm drain or natural channel.
- 15.06.130 Design standards for erosion and sediment control.
- 15.06.110 Stream and riparian setback requirements
- 6.16.070 Pet waste prohibited.
- 17.20.050 Prohibits building within 25 feet of top of bank of perennial or intermittent stream.

General Plan Open Space & Conservation

- OSP-323 Retain and protect riparian areas.
- OSP-351 Protect streams and aquifers from pollution and erosive forces.
- OSP-366 Pursue acquiring riparian corridors.
- OSP-415 Preserve creeks as nearly as possible in their natural state.

Reporting

At the end of each fiscal year, the SWMP Coordinator will develop the Annual Report. The staff position for developing the report and the contract for the program will be the Public Works Director/City Engineer, who can be reached at 831.438.5854, One Civic Center Drive, Scotts Valley, CA 95066. The Annual Report will summarize the progress of implementing the SWMP and will be submitted to the RWQCB for staff review and comments.

CHAPTER 1

PUBLIC EDUCATION AND OUTREACH

An informed and knowledgeable community is crucial to the success of a storm water management program since it helps to ensure the following:

- Greater support for the program as the public gains a greater understanding of the reasons why it is necessary and important. Public support is particularly beneficial when operators of small MS4s attempt to institute new funding initiatives for the program or seek volunteers to help implement the program; and
- Greater compliance with the program as the public becomes aware of the personal responsibilities expected of them and others in the community, including the individual actions they can take to protect or improve the quality of area waters.

The City will implement a program to educate the public about the causes of storm water pollution and the steps that can be taken to reduce storm water pollution.

The City currently conducts educational outreach to residents as part of the household hazardous waste program and the curbside yard waste program.

The City will partner with other local municipalities, such as the County of Santa Cruz and cities of Watsonville, Capitola and the City of Santa Cruz to develop educational materials and host civic events. Coordination between municipalities will be useful in developing a standardized storm water campaign to strengthen the message and reach as many people as possible.

The City's goals are to:

- Provide a consistent message for the length of time necessary to change community behavior;
- Change specific behaviors which adversely affect water quality; and
- Increase the community awareness and understanding of the individual actions that can be taken to protect and improve the quality of surrounding water bodies.
- Regularly assess new public education methods. Techniques of community based social marketing will be considered.

The following BMPs will be implemented by the City within the permit term. Where appropriate, the selected BMPs will specifically address the City's current water quality challenges (i.e., pollutants of concern). The City will utilize existing federal, State, and City-developed storm water public education and outreach materials whenever possible. When necessary, new materials will be created.

BROCHURES (BMP #1-1)

Implementation Details

The City will create and distribute three brochures targeting specific activities known to contribute storm water pollutants to the MS4. These brochures include:

- “Home Owners Guide”;
- “Restaurant/Automotive Guide”; and
- “Construction Site Storm Water Runoff Control Guide.”

These brochures will be targeted to provide information about non-storm water discharge elimination, stormwater pollution prevention, hydromodification reduction, and LID principles for four focal areas: (1) residences (the “Home Owner’s Guide” will focus on reduction of pollutants such as fertilizers, animal wastes, pollutants of concern, including FIB, green waste, vehicle wash water, etc); (2) restaurants (the “Restaurant Guide” will focus on reduction of pollutants such as gray water, litter, grease, and cleaning agents); (3) automotive businesses (the “Automotive Guide” will focus on reduction of pollutants such as vehicle fluids, waste oil, and batteries); and (4) construction sites (the “Construction Site Storm Water Runoff Control Guide” will focus on reduction of pollutants such as sediment, litter, paints, solvents, cement/concrete wash-outs, and equipment fluids). Revisions will be made as necessary when new storm water technology or opportunities for storm water pollution prevention are developed and the information should be disseminated to the community.

Measurable Goals

1. Develop, design, and print the three brochures targeting residents, restaurants/automotive facilities, and construction.
2. Distribute the “Home Owners Guide” brochures to 100% of the City’s residents.
3. Distribute the “Restaurant Guide” and “Automotive Guide” brochures to 100% of inspected facilities via applicable business inspections.
4. Distribute “Construction Site Storm Water Runoff Control Guide” brochures to 100% of contractors requesting construction permits from the City.
5. Revise brochures as necessary and document the number of brochures distributed.

CHILDREN’S EDUCATIONAL PROGRAM (BMP #1-2)

Implementation Details

Providing storm water education through the public schools conveys the message not only to students, but to their parents as well. The children learn about environmental issues early, and therefore become interested and perhaps involved at earlier ages. School children often tell their parents what they learn in school, therefore, teaching children about storm water is an effective way to pass environmental awareness to their parents and throughout the entire community. The City will promote the availability of classroom education on storm water.

The local education community has expressed their concern that many outside groups request classroom time to present information to students. This reduces the amount of time teachers are able to focus on curriculum necessary to meet their mandates. However, some teachers have taken advantage of the City’s offers in the past of field trips to the Wastewater Treatment Plant and recycling plant. Those events will be expanded to include storm water education.

The two schools in Scotts Valley will be informed at the beginning of each year of the availability of the field trips. Additionally, they will be informed of the availability of staff for presenting in classroom education, at their request, on storm water quality.

Measurable Goals

1. Include a storm water quality component in all field trips conducted at the WWTP.
2. Inform School District of availability of field trips and in-classroom presentations.
3. Request and document teacher and student comments regarding the classroom presentations and incorporate improvements to each presentation as necessary for following years.
4. Request and document teacher and student comments regarding the field trips and incorporate improvements to each field trip as necessary for following years.

LOCAL EVENTS (BMP #1-3)

Implementation Details

The City features and participates in a number of local community events, which are attended by local residents. The City plans to incorporate a storm water pollution prevention component into these local events held annually and develop a storm water display for use at these events. Possible opportunities for education include vacuum truck demonstrations. ~~and~~ Included will be information on the City's current efforts to protect riparian corridors and educate the public on opportunities and activities for riparian restoration and protection.

Measurable Goals

1. Create a list of local events that will provide greatest opportunities to promote storm water education and outreach.
2. Attend a minimum of two local events to promote storm water awareness.
- ~~2~~ 3. Develop a storm water display board for use at local events which includes a comment box for the public to submit questions or comments regarding water quality and/or pollution.
- ~~3~~ 4. Document and respond to all community questions and comments within one week of a local event.
- ~~4~~ 5. Document the number of attendees to each local event and actively refine the events attended and support based on the greatest opportunities to educate the public.

STORM WATER INFORMATION ON THE CITY'S WEBSITE (BMP #1-4)

Implementation Details

Information and proposed regulations regarding storm water pollution will be placed on the City's website.

Measurable Goals

Educational information on storm water pollution prevention and information related to review and adoption of ordinances will be provided on the City's Web Page.

PROGRAM EFFECTIVENESS

Effectiveness assessment is a process that stormwater program managers use to evaluate whether their programs are resulting in desired outcomes and if these outcomes are being achieved efficiently and cost-effectively. During the first ~~two~~ years of the stormwater program, the City will ~~achieve~~ develop an effectiveness assessment program using Outcome Level One - Documented Activities, as defined in the *Municipal Stormwater Program Effectiveness Assessment Guidance CASQA, May 2007*. Additional effectiveness outcomes will be evaluated for this MCM beginning in year ~~three~~ four. Chapter 7 further describes effectiveness assessment for the storm water program.

**TABLE 1-1
 BMPS, MEASURABLE GOALS AND IMPLEMENTATION SCHEDULE
 Public Outreach/Education for Homeowner
 City of Scotts Valley**

No.	BMPS	Description	Measurable Goals	Implementation Year				
				1	2	3	4	5
1 - 2	Children's Educational Program	The two schools in Scotts Valley will be informed at the beginning of each year of the availability of field trips to the WWTP.	1. Include a storm water quality component in all field trips conducted at the WWTP. 2. Inform School District of availability of field trips and in-classroom presentations. 3. Request and document teacher and student comments regarding the classroom presentations and incorporate improvements to each presentation as necessary for following years. 4. Request and document teacher and student comments regarding the field trips and incorporate improvements to each field trip as necessary for following years.	X	X	X	X	X

**TABLE 1-1
 BMPS, MEASURABLE GOALS AND IMPLEMENTATION SCHEDULE
 Public Outreach/Education for Homeowner
 City of Scotts Valley**

No.	BMPS	Description	Measurable Goals	Implementation Year					
				1	2	3	4	5	
1 - 3	Local Events	The City plans to incorporate a storm water pollution prevention component into local events held annually and develop a storm water display for use at these events.	<p>1. Create a list of local events that will provide greatest opportunities to promote storm water education and outreach.</p> <p>2. <u>Attend a minimum of two local events to promote stormwater awareness.</u></p> <p>3. Develop a storm water display board for use at local events which includes a comment box for the public to submit questions or comments regarding water quality and/or pollution.</p> <p>4. Document and respond to all community questions and comments within one week of a local event.</p> <p>5. Document the number of attendees to each local event and actively refine the events attended and support based on the greatest opportunities to educate the public.</p>	X					
					X	X	X	X	
					X				
						X	X	X	X
						X	X	X	X
1 - 4	Storm Water Information on the City's Website	Information and proposed regulations regarding storm water pollution will be placed on the City's website.	Educational information on storm water pollution prevention and information related to review and adoption of ordinances will be provided on the City's website.	X					

CHAPTER 2

PUBLIC PARTICIPATION/INVOLVEMENT

The public can provide valuable input and assistance to a municipal storm water management program and, therefore, the public will be given opportunities to play an active role in the implementation of the program. An active and involved community is crucial to the success of a storm water management program because it allows for:

- Broader public support since citizens who participate in the development and decision making process are partially responsible for the program and, therefore, may be less likely to raise legal challenges to the program and more likely to take an active role in its implementation.
- Shorter implementation schedules due to fewer obstacles in the form of public and legal challenges and increased sources in the form of citizen volunteers.
- A broader base of expertise and economic benefits since the community can be a valuable and free intellectual resource.
- A conduit to other programs as citizens involved in the storm water program development process provide important cross connections and relationships with other community and government programs.

The goal of the Public Involvement and Participation (PIP) control measure is to raise public awareness about urban runoff pollution through public involvement and participation in the City's Storm Water Management Program. Additionally, the City hopes to involve the public in the development and implementation process to secure "buy in" and to generate public support for the City's water quality protection efforts. It is the City's intent that the BMPs support the overall program in generating public participation, fostering support for the purpose and goals of the program, and ultimately reducing the discharge of pollutants to the MEP. The General Permit requires the City to, at a minimum, comply with State and local public notice requirements when implementing a public involvement/participation program.

STORM DRAIN LABELING (BMP #2-1)

Implementation Details

Storm drain stenciling involves labeling storm drain inlets with painted messages warning citizens not to dump pollutants into the drain. The signs raise awareness about the connection between storm drains and receiving waters. City public works staff or volunteer groups can perform the stenciling. Using a volunteer group will increase public awareness of storm water pollutants and their path to water bodies. During the first year of the storm water program, the current storm drain stenciling program will be reviewed and updated as needed. The City will, at a minimum, stencil 25% of the storm drains each year starting in year two. Also, opportunities for using volunteers to stencil storm drains will be investigated.

Measurable Goals

1. Apply storm drain markers or stencils to all City-owned storm drain inlets.

2. Maintain and replace storm drain markers or stencils as needed and document the number of storm drain markers applied throughout the City.
3. Implement Design Standards and Drawings to be utilized by all developers to install storm drain markers in new developments .

STORM WATER HOTLINE (BMP #2-2)

Implementation Details

A storm water hotline will be created during the indicated year of the Storm Water Program. The purpose of the hotline is to provide a means for the public's questions and concerns about water quality to be addressed.

The hotline messages will be checked daily during regular business hours and all calls responded to within 24 hours. The hotline will be advertised on the City's website and in newspapers, and will be included on all storm water educational brochures. The City will develop Storm Water Hotline tracking forms to assure all storm water concerns are adequately resolved. Resolutions will be documented on this form.

Measurable Goals

1. Create a storm water hot line.
2. Receive, document and resolve all calls received on the storm water hot line.
3. Track the number of calls received as well as the City's response to each call.

INTERAGENCY COORDINATION (BMP #2-3)

Implementation Details

Representatives from Scotts Valley will participate in the Stormwater Information Network (SIN) exchange group. This group composed of five jurisdictions in Santa Cruz County will meet on a semi-annual basis to share stormwater program information that may be relevant on a region-wide basis, including partnering to educate the public. Topics may include BMP effectiveness and partnership opportunities.

Measurable Goals

1. The City will participate in semi-annual meetings.
2. Records will be kept identifying the meetings attended.

PUBLIC MEETINGS (BMP #2-4)

Implementation Details

The City will conduct public meetings on adoption of the SWMP and any amendments, as well as the Storm Water Ordinance, Grading Ordinance and any required General Plan, Zoning

Ordinance or other ordinance changes. The SWMP has been presented to the City Council in a noticed public meetings where public comments were solicited. Public Hearings to elicit comments and workshops with the Planning Commission and City Council are planned for review of the future storm water ordinance, grading ordinance and any related regulatory or policy changes. Applicable state and local public notice requirements will be complied with, including notification in the local newspaper. (These meetings and any necessary regulatory or policy changes will be held and completed within the first two years of the permit term, contingent upon City of Scotts Valley City Council direction).

These meetings will provide stakeholders with updates on the program and ways groups can get involved. The City will collect names and contact information from attendees to build a mailing and emailing distribution list of interested parties.

Measurable Goals

Hold at Least One Public Hearing Per Ordinance. Public meetings on adoption of the SWMP and any amendments will be held, as well as the proposed Storm water Ordinance, Grading Ordinance and any required policy or regulatory amendments. Minutes of public meetings will be kept.

PROGRAM EFFECTIVENESS

Effectiveness assessment is a process that stormwater program managers use to evaluate whether their programs are resulting in desired outcomes and if these outcomes are being achieved efficiently and cost-effectively. During the first ~~two~~ years of the stormwater program, the City will ~~achieve~~ develop an effectiveness assessment program using Outcome Level One - Documented Activities, as defined in the *Municipal Stormwater Program Effectiveness Assessment Guidance CASQA, May 2007*. Additional effectiveness outcomes will be evaluated for this MCM beginning in year ~~three~~ four. Chapter 7 further describes effectiveness assessment for the storm water program.

**TABLE 2-1
 BMPS, MEASURABLE GOALS AND IMPLEMENTATION SCHEDULE
 Public Involvement/Participation
 City of Scotts Valley**

No.	BMPS	Description	Measurable Goals	Implementation Year				
				1	2	3	4	5
2 - 1	Storm Drain Labeling	The current storm drain stenciling program will be reviewed and updated as needed. The City will, at a minimum, stencil 25% of the storm drains each year starting in year two.	1. Apply storm drain markers or stencils to 25% City-owned storm drain in lets. 2. Maintain and replace storm drain markers or stencils as needed and document the number of storm drain markers applied throughout the City. 3. Implement Design Standards and Drawings to be utilized by all developers to install storm drain markers in new developments.		X	X	X	X
					X	X	X	X
						X		
2 - 2	Storm Water Hotline	A storm water hotline will be created during the indicated year of the Storm Water Program.	1. Create a storm water hot line. 2. Receive, document and resolve all calls received on the storm water hot line. 3. Track the number of calls received, as well as the City's response to each call.			X	X	X
						X	X	X

**TABLE 2-1
 BMPS, MEASURABLE GOALS AND IMPLEMENTATION SCHEDULE
 Public Involvement/Participation
 City of Scotts Valley**

No.	BMPS	Description	Measurable Goals	Implementation Year				
				1	2	3	4	5
2 - 3	Interagency Coordination	Representatives from Scotts Valley will participate in the stormwater Information Network (SIN) exchange group. This group composed of five jurisdictions in Santa Cruz County will meet on a semi-annual basis to share stormwater program information that may be relevant on a regional-wide basis.	1. The City will participate in semi-annual meetings. 2. Records will be kept identifying the meetings attended.	X	X	X	X	X
2 - 4	Public Meetings	The City will conduct public meetings upon adoption of the SWMP and any amendments, as well as the Storm Water Ordinance, Grading Ordinance and any required General Plan, Zoning Ordinance or other ordinance changes.	Hold at least one public hearing per Ordinance. Public meetings on adoption of the SWMP and any amendments will be held, as well as the proposed Storm Water Ordinance, Grading Ordinance and any required policy or regulatory amendments. Minutes of public meetings will be kept.	N / A	N / A	N / A	N / A	N / A

CHAPTER 3

ILLCIT DISCHARGE DETECTION AND ELIMINATION

What Is An “Illicit Discharge?”

Federal regulations define an illicit discharge as “...any discharge...that is not composed entirely of storm water....” Illicit discharges are considered “illicit” because MS4s are not designed to accept, process, or discharge such non-storm water wastes.

A study conducted in 1987 in Sacramento, California, found that almost one-half of the water discharged from a local MS4 was not directly attributable to precipitation runoff. A significant portion of these dry weather flows were from illicit and/or inappropriate discharges and connections to the MS4.

Illicit discharges enter the system through either direct connections (e.g., wastewater piping either mistakenly or deliberately connected to the storm drains) or indirect connections (e.g., infiltration into the MS4 from cracked sanitary systems, spills collected by drain outlets, or paint or used oil dumped directly into a drain). The result is untreated discharges that contribute high levels of pollutants, including heavy metals, toxics, oil and grease, solvents, nutrients, viruses, and bacteria to receiving water bodies. Pollutant levels from these illicit discharges have been shown to be high enough to significantly degrade receiving water quality and threaten aquatic, wildlife, and human health.

General Permit Section D, *Storm Water Management Program Requirements, part 2.c(6)*, *Illicit Discharge Detection and Elimination*, requires the SWMP to address listed categories of authorized non-storm water discharges or flows **only** where they are identified as significant contributors of pollutants to the small MS4.

A non-storm water discharge can be either illicit (illegal) or exempted from regulation

Illicit Discharges

Illicit discharges are discharges into the City’s storm drain system which either do not include storm water or are not comprised solely of storm water and which are not exempt or covered by a separate NPDES Permit.

Exempt Non-Storm Water Discharges

The following non-storm water discharges are exempt, except in instances where a specific discharge has been identified as a source of pollution or a nuisance.

1. Water line flushing
2. Landscape irrigation
3. Diverted stream flows
4. Rising ground water

5. Uncontaminated ground water infiltration
6. Uncontaminated pumped groundwater
7. Foundation drains
8. Fire sprinkler flushing
9. Irrigation water
10. Springs
11. Water from crawl space pumps
12. Footing drains
13. Lawn watering
14. Individual residential car washing
15. De-chlorinated swimming pool discharges

During the routine MS4 inspections, inspectors will identify any generally exempt discharges that appear to be significant contributors of pollutants. Written records will be kept identifying the location, date and type of any generally exempt non-storm water discharges that appear to be resulting in pollution. Actions taken to address these issues will be documents.

The Storm Water Ordinance is proposed to have a section identifying provisions for enforcement against individuals responsible for a generally exempt non-storm water source that is determined to be a significant source of pollution or a nuisance. Appropriate resolution of each enforcement case will be determined on a case-by-case basis, consistent with the provisions of the City's adopted Storm Water Ordinance.

NON STORM WATER DISCHARGE (BMP #3-1)

Implementation Details

The City has undergone a preliminary evaluation of non-storm water discharges or flows authorized by the General Permit (i.e. authorized non-storm water discharges) to determine whether any exists and are significant contributors of pollutants.

The City of Scotts Valley is primarily a residential community with a considerable amount of office, warehouse, and research and development in the commercial sector. The notable lack of manufacturing, food processing, agriculture, and other high generators of pollution laden storm water runoff, makes the task of storm water pollution prevention somewhat easier.

Currently, the City is confident the following authorized non-storm water discharges are not significant contributors of pollutants: water line flushing, diverted stream flows, pumped groundwater, water from crawl space pumps, footing drains, foundation drains, potable water discharges, flows from riparian habitats and wetlands, and municipal street washing and

sidewalk washing.

The water table is historically low in Scotts Valley making rising groundwater, ground water infiltration, and springs of minor concern

These conclusions are based on the fact that numerous BMPs, ordinances, and storm water controls are currently utilized to prevent a significant contribution of pollutants from these activities.

The City does not provide fire service or potable water service to its residents. These services are provided by other districts. The City will work with these districts to train their staff on proper procedures when flushing water lines to consider chlorine, water temperature, and sediments.

The remaining authorized non-storm water discharges identified in the General Permit will require further review and evaluation by the City during the implementation period of this SWMP. As such, the City proposes to develop a series of internal technical memorandums related to the following groups of authorized non-storm water discharges with the purpose of ~~defining whether or not they are a significant contributor:~~ ensuring they are not now, nor do they become, significant pollutants to the City's MS4.

- Irrigation water, landscape irrigation, lawn water;
- Individual residential car washing;
- ~~Springs and rising groundwater, uncontaminated groundwater infiltration to the MS4;~~

Measurable Goals

1. Acquire or develop an informational fact sheet related to nuisance flows through proper management of irrigation water, landscape irrigation and lawn water.
2. Acquire or develop an informational fact sheet regarding the proper management of residential car washing.
3. Make all fact sheets available to City crews to distribute to the public wherever those activities are seen.

During the routine MS4 inspections, inspectors will identify any generally exempt discharges that appear to be significant contributors of pollutants. Written records will be kept identifying the location, date and type of any generally exempt non-storm water discharges that appear to be resulting in pollution. Actions taken to address these issues will be documented.

The Storm Water Ordinance is proposed to have a section identifying provisions for enforcement against individuals responsible for a generally exempt non-storm water source that is determined to be a significant source of pollution or a nuisance. Appropriate resolution of each enforcement case will be determined on a case-by-case basis, consistent with the provisions of the City's adopted Storm Water Ordinance.

The following BMPs will be implemented by the City within the term of the permit.

DEVELOP A STORM WATER ORDINANCE THAT ADDRESSES ILLICIT DISCHARGE (BMP #3-1 2)

Implementation Details

A Storm Water Ordinance will be developed and will include a section defining and prohibiting illicit discharges into the storm sewer system through City streets or directly into a storm sewer.

During the indicated year of the program, existing ordinances will be reviewed and language modified or added to clarify the City's authority to control discharges to the storm drain system. Enforcement authority will also be clarified or put into place.

Measurable Goals

Adoption of a Storm Water Ordinance that addresses illicit discharge. The City will adopt a storm water ordinance that will include enforcement provisions for illicit discharges.

MAINTAIN A MASTER STORM DRAIN MAP (BMP #3-2 3)

Implementation Details

During the indicated year, staff will locate and inspect all outfalls and collect existing information and identify areas of incomplete information. Based on this information, the system will be prioritized for mapping. Each year, 25% of the complete system will be mapped.

As a part of the process of identifying potential illicit connections and discharges, storm drains within the City limits will be mapped. Inlets will be shown, as well as outfalls. Specific areas of concern will be identified, as appropriate. The map will be updated annually, as new storm drain installations occur.

Measurable Goals

1. Locate and inspect outfalls. Collect existing information and identify areas of incomplete information.
2. Map 25% of storm drain system annually.
3. Update the City's Master Storm Drain Map annually.

ILLICIT DISCHARGE/CONNECTION INVESTIGATION AND ABATEMENT (BMP #3-3 4)

Implementation Details

The City intends to implement an MS4 Maintenance Program with the goal of regular inspection, cleaning, and repair of the City's MS4. Through the MS4 Maintenance Program, the City will identify, investigate, and ~~abate~~ eliminate all detected illicit discharges and connections. To assure efficient use of future City resources, the Engineering Department will assess illicit discharge potentials based on known challenges; historical and current

discharge concerns; results of the routine Business and Industry Inspection Program; and analysis of the MS4 Drainage Map. Based on this information, the City will develop a series of illicit discharge/connection investigation and abatement goals and implementation strategies for use during the permit cycle.

Annually, City staff will conduct drainage facility walks of open drainage facilities starting in the sub-watersheds deemed to have the greatest risk. Field screening will be performed during these facility walks looking for evidence of illicit discharges and tracking and eliminating sources if evidence is found. ~~Results of this exercise will assist City staff to identify abatement, and/or enforcement of illicit discharges and connections. Enforcement efforts will be coordinated with the City's Code Compliance Division to be detailed in the IDDE Ordinance.~~

The source of the discharge will be investigated by back-tracking the flow upstream through the storm drain system using the storm drain system map. This upstream investigation typically involves lifting manhole covers, inspecting drain inlets, and inspecting drainages for indications of wastewater flows. If the source of the discharge can be identified, then the inspector will meet with the property representative, require termination of the discharge, explain the relevant storm water discharge regulations, and conduct enforcement activities, as necessary, to achieve the required corrective action. If the source of the discharge can not be readily discerned, then the illicit discharge tracking may require utilizing smoke testing, dye testing, or video survey to elucidate the potential sources of the discharge. If necessary, water samples of the discharge will be collected and analyzed for selected indicator parameters (e.g. ammonia, surfactants, conductivity, boron, chlorine, color, fluorescence, E. coli, pH, hardness, enterococcus, potassium, turbidity) to provide evidence as the source of the discharge.

Inspection findings will be documented on incident report forms. If illicit discharges or connections are found during MS4 maintenance activities, the Engineering Division notifies the Code Compliance staff, upon which an incident report form is completed and utilized for further investigation. This process will be refined over time.

Measurable Goals

1. Conduct an assessment of illicit discharge potentials for prioritization and allocation of City resources.
2. Conduct drainage facility walks along 20% of open drainage facilities annually starting with areas deemed to have the greatest risk of failure or illicit connections.
3. Develop a series of illicit discharge/connection investigation and abatement goals and implementation strategies for use during the permit cycle.
4. Track the number of illicit discharges and connections detected and their associated corrective actions.
5. When a Notice of Non-Compliance or Notice of Violation has been issued by the City, conduct follow-up inspections within one week to evaluate discharge abatement efforts; other follow-up inspections will be performed if determined to be necessary by a

designated inspector.

RESPOND TO REPORTED SPILLS, SEWER OVERFLOWS AND ILLEGAL DISCHARGES (BMP # 3-5)

Implementation Details

The City of Scotts Valley Public Works Department has developed an emergency response system to quickly correct problems with the storm water or sewer collections system. City staff is on-call 24 hours a day, and also responds to an automated alarm system that monitors most of the wastewater treatment plant systems.

The City responds to all reports of sewer overflows and illegal discharges to the storm drain system as soon as possible. For sewer overflows, the spill is contained upon arrival. The subject property owner or manager is required to discontinue use of water until the cause of the blockage is determined and remedied. If necessary, the water contributing to the overflow is temporarily shut off. The downstream is evaluated to determine if any, or how much, entered the receiving water. All opportunities to intercept the waste before it discharges to receiving water are evaluated.

Field inspections and investigations are conducted as a result of the following:

- Reports received from the general public
- Staff observations of suspicious activities
- Line blockages, leaks, or breaks
- Physical indications that a spill or illegal discharge has occurred.

Scotts Valley Fire District and/or Santa Cruz County Environmental Health Services (SCCEHS) are the primary responders on spills of hazardous materials. The Santa Cruz Hazardous Materials Incident Team (SCHMIT) can be called in the event of an unknown material spill to assist in the identification of the substance. Hazardous waste disposal companies are notified as needed to assist in the recovery of the spilled material.

Measurable Goals

1. City staff shall respond to 100% of sewer overflows reported to customer service.
2. Report the number and volume of spills and sewer overflows and if they reached a receiving water or not.

PROGRAM EFFECTIVENESS

Effectiveness assessment is a process that stormwater program managers use to evaluate whether their programs are resulting in desired outcomes and if these outcomes are being achieved efficiently and cost-effectively. During the first ~~two~~ years of the stormwater program, the City will ~~achieve~~ develop an effectiveness assessment program using Outcome Level One - Documented Activities, as defined in the *Municipal Stormwater Program Effectiveness Assessment Guidance CASQA, May 2007*. Additional effectiveness outcomes will be evaluated for this MCM beginning in year ~~three~~ four. Chapter 7 further describes effectiveness assessment for the storm water program.

**TABLE 3-1
 BMPS, MEASURABLE GOALS AND IMPLEMENTATION SCHEDULE
 Illicit Discharge Detection and Elimination
 City of Scotts Valley**

No.	BMPS	Description	Measurable Goals	Implementation Year				
				1	2	3	4	5
3-1	Fact Sheets	<u>Prepare and distribute fact sheets on the subjects of irrigation water, landscape irrigation, lawn water and residential car washing</u>	<u>1. Acquire or develop an informational fact sheet related to nuisance flows through proper management of irrigation water, landscape irrigation and lawn water.</u> <u>2. Acquire or develop an informational fact sheet regarding the proper management of residential car washing.</u> <u>3. Make all fact sheets available to City crews to distribute to the public wherever those activities are seen.</u>			X		
3 - 4 2	Develop a Storm Water Ordinance that Addresses Illicit Discharge	A Storm Water Ordinance will be developed and will include a section defining and prohibiting illicit discharges in to the storm sewer system.	Adoption of a Storm Water Ordinance that addresses illicit discharge. The City will adopt a Storm Water Ordinance that addresses illicit discharge. The City will adopt a Storm Water Ordinance that will include enforcement provisions for illicit discharges.	X				

**TABLE 3-1
 BMPS, MEASURABLE GOALS AND IMPLEMENTATION SCHEDULE
 Illicit Discharge Detection and Elimination
 City of Scotts Valley**

No.	BMPS	Description	Measurable Goals	Implementation Year					
				1	2	3	4	5	
3 - <u>2-3</u>	Maintain a Master Storm Drain Map	Staff will locate and inspect all outfalls and collect existing information and identify areas of incomplete information. The system will be prioritized for mapping. Each of the first four years, 25% of the complete system will be mapped.	1. Locate and inspect outfalls. Collect existing information and identify areas of incomplete information. 2. Map 25% of storm drain system annually. 3. Update the City's Master Storm Drain Map annually.	X					
					X	X	X	X	
					X	X	X	X	

**TABLE 3-1
 BMPS, MEASURABLE GOALS AND IMPLEMENTATION SCHEDULE
 Illicit Discharge Detection and Elimination
 City of Scotts Valley**

No.	BMPS	Description	Measurable Goals	Implementation Year					
				1	2	3	4	5	
3 - 3 4	Illicit Discharge/Connection Investigation and Abatement	The City intends to implement an MS4 Maintenance Program with the goal of regular inspection, cleaning, and repair of the City's MS4. Through the MS4 Maintenance Program, the City will identify, investigate trace and abate illicit discharges and connections.	<p>1. Conduct an assessment of illicit discharge potentials for prioritization and allocation of City resources.</p> <p>2. Conduct drainage facility walks along <u>20%</u> open drainage facilities <u>annually</u> starting with areas deemed to have the greatest risk of failure or illicit connections.</p> <p>3. Develop a series of illicit discharge/connection investigation and abatement goals and implementation strategies for use during the permit cycle.</p> <p>4. Track the number of illicit discharges and connections detected and their associated corrective actions.</p> <p>5. When a Notice of Non-Compliance or Notice of Violation has been issued by the City, conduct follow-up inspections within one week to evaluate discharge abatement efforts; other follow-up inspections will be performed if determined to be necessary by a designated</p>	X					
				X	X	X	X	X	
							X		
				X	X	X	X	X	
				N / A	N / A	N / A	N / A	N / A	

**TABLE 3-1
 BMPS, MEASURABLE GOALS AND IMPLEMENTATION SCHEDULE
 Illicit Discharge Detection and Elimination
 City of Scotts Valley**

No.	BMPS	Description	Measurable Goals	Implementation Year				
				1	2	3	4	5
3-5	<u>Spill Response</u>	<u>Respond and clean up sewer spills and overflows in a timely manner and prevent entry into the stormwater system whenever possible.</u>	<u>1. City staff shall respond to 100% of sewer overflows reported to customer service.</u> <u>2. Report the number and volume of spills and sewer overflows and if they reached a receiving water or not.</u>	X	X	X	X	X
				X	X	X	X	X

P:\char private\storm water management plan\Table 3-1

CHAPTER 4

CONSTRUCTION SITE RUNOFF CONTROL

Polluted storm water runoff from construction sites often flows to MS4s and ultimately is discharged into local rivers and streams. Sediment is usually the main pollutant of concern. Sediment runoff rates from construction sites are typically 10 to 20 times greater than those of agricultural lands, and 1,000 to 2,000 times greater than those of forest lands. During a short period of time, construction sites can contribute more sediment to streams than can be deposited naturally during several decades. The resulting siltation, and the contribution of other pollutants from construction sites, can cause physical, chemical, and biological harm to our nation's waters.

GRADING ORDINANCE (BMP #4-1)

Implementation Detail

During the indicated year of the Program, policies and procedures to control runoff from construction sites with a land disturbance of greater than or equal to one acre will be established. Existing ordinances will be evaluated and modified to clarify authority to address minimizing soil movement and capturing sediments from construction sites and impose penalties for violations. Residents and developers, subject to ordinance applying for projects, will be required to utilize BMPs to meet the objectives. The development community will be informed of the requirements through distribution of requirements at the planning and building counters.

The City's storm water ordinance will include enforcement provisions to address illegal discharge of sedimentation, erosion control and on-site pollutants in storm water, as well as illegal non-storm water discharge from construction sites. The City's grading ordinance currently includes requirements for erosion and sediment control on construction sites. Enforcement measures for construction violations of the storm water ordinance and grading ordinance will include issuance of official warnings, issuance of Stop Work Orders, Notices of Violation and fines for violations of the ordinances.

Measurable Goals

Develop a Storm Water Ordinance and Grading Ordinance that address construction storm water within the indicated year of the permit term.

CONSTRUCTION SITE INSPECTIONS (BMP #4-2)

Implementation Details

During the indicated year of the Program, the City will examine existing site review and inspection procedures and revise them, as appropriate, to address storm water issues. The review will include evaluating current sediment and erosion control programs, revising existing agency permit requirements and developing additional controls into planning documentation and policies, such as the CEQA initial studies checklist and General Plan.

The City will review SWPPP's prior to issuance of permits to ensure that erosion and sediment control have been addressed and evaluate BMP implementation and effectiveness during site inspections.

Also the City will review SWPPP's prior to issuance of permits to ensure that construction waste management has been addressed.

To ensure construction site operators control erosion and sediment, the engineering site inspector will inspect each construction site, of one acre or greater in size, for storm water BMP adequacy at least once between June and September and once a month between October and May. Engineering staff will develop a construction site inspection check list. The site inspections will ensure that Storm Water BMPs are properly implemented on each project site. The inspector shall ensure the site manager is aware of any issues and note any violations of either the grading ordinance or the storm water quality ordinance and is instructed to correct problems within a designated time period. When a violation is outstanding, additional permits or sign-offs on the project ~~should~~ will not occur until the storm water violation is corrected. The number of inspections conducted per permit and per year will be recorded.

Measurable Goals

1. Examine existing site review and inspection procedures and revise as appropriate.
- 4 2. Require submittal and review for adequacy of construction SWPPPs prior to issuance of grading permits. For sites larger than 1 acre, provide copies of the City's operational BMPs and require submittal of a completed copy of the SWPPP for the job before issuance of a grading permit. Track the number of grading permits issued during each permit year. Identify the size of the project, i.e. 1 acre to 5 acres and 5 acres and above.
3. Develop and utilize a construction site inspection check list.
- 2: 4. Inspect each construction site of one acre or greater for storm water waste control adequacy a minimum of once between June and September and once a month between October and May.

PUBLIC COMMENT (BMP #4-3)

Implementation Details

The public can play a crucial role in identifying instances of non-compliance at construction sites. During the indicated year of the permit cycle a Public Inquiry Program will be established and implemented. The program will include a process for receiving and considering public inquiries, concerns, and information submitted regarding local construction activities.

Public complaints and comments can be made in person at City Hall, to the engineering inspector when he is on-site, or by phone or email. The City will follow-up on complaints to determine if a problem situation exists and correct it if it does.

Measurable Goals

Provide an opportunity for public comments and complaints regarding construction through the City's Storm Water hotline and Storm Water Website. Record and investigate complaints from the public regarding hydrological and water quality impacts from construction sites. Strive to resolve complaint issues within 24 hours of receipt of the complaint and work. Violation components of the Storm Water Ordinance discussed earlier would also apply to discharges from construction sites.

PROGRAM EFFECTIVENESS

Effectiveness assessment is a process that stormwater program managers use to evaluate whether their programs are resulting in desired outcomes and if these outcomes are being achieved efficiently and cost-effectively. During the first ~~two~~ years of the stormwater program, the City will ~~achieve~~ develop an effectiveness assessment program using Outcome Level One - Documented Activities, as defined in the *Municipal Stormwater Program Effectiveness Assessment Guidance CASQA, May 2007*. Additional effectiveness outcomes will be evaluated for this MCM beginning in year ~~three~~ four. Chapter 7 further describes effectiveness assessment for the storm water program.

**TABLE 4-1
 BMPS, MEASURABLE GOALS AND IMPLEMENTATION SCHEDULE
 Construction Site Storm Water Runoff Control
 City of Scotts Valley**

No.	BMPS	Description	Measurable Goals	Implementation Year				
				1	2	3	4	5
4 - 1	Grading Ordinance	Existing grading ordinance will be evaluated and modified to clarify authority to address minimizing soil movement and capturing sediments from construction sites and impose penalties for violations.	Modify the existing Grading Ordinance that addresses construction storm water requirements within the indicated year of the permit term.		X			

**TABLE 4-1
 BMPS, MEASURABLE GOALS AND IMPLEMENTATION SCHEDULE
 Construction Site Storm Water Runoff Control
 City of Scotts Valley**

No.	BMPS	Description	Measurable Goals	Implementation Year					
				1	2	3	4	5	
4 - 2	Site Construction Inspections	The City will examine existing site review and inspection procedures and revise them as appropriate to address storm water issues.	<p><u>1. Examine exiting site review and inspection procedures and revise as appropriate.</u></p> <p>4. <u>2. Require submittal and review for adequacy of construction SWPPPs prior to issuance of grading permits. For sites larger than one acre, provide copies of the City's operational BMPs and require submittal of a completed copy of the SWPPP for the job before issuance of a grading permit. Track the number of grading permits issued during each permit year. Identify the size of the project; i.e., one acre to five acres and five acres and above.</u></p> <p><u>3. Develop and utilize a construction site inspection check list.</u></p> <p>2. <u>4. Inspect each construction site of one acre or greater for storm water waste control adequacy a minimum of once between June and September and once a month between October and May.</u></p>		X				
					X	X	X	X	X
				X	X	X	X	X	X

**TABLE 4-1
 BMPS, MEASURABLE GOALS AND IMPLEMENTATION SCHEDULE
 Construction Site Storm Water Runoff Control
 City of Scotts Valley**

No.	BMPS	Description	Measurable Goals	Implementation Year				
				1	2	3	4	5
4 - 3	Public Comment	As part of the Storm Water Program, a Public Inquiry Program will be established and implemented.	Provide an opportunity for public comments and complaints regarding construction through the City's Storm Water hotline and Storm Water website. Record and investigate complaints from the public regarding hydrological and water quality impacts from construction sites. Strive to resolve complaint issues within 24 hours of receipt of the complaint and work. Violation components of the Storm Water Ordinance discussed earlier would also apply to discharges from construction sites.			X	X	X

CHAPTER 5

POST-CONSTRUCTION RUNOFF CONTROL

Post-construction storm water management in areas undergoing new development or redevelopment is necessary because runoff from these areas has been shown to significantly affect receiving water bodies. Many studies indicate that prior planning and design for the minimization of pollutants in post-construction storm water discharges is the most cost effective approach to storm water quality management.

There are generally two forms of substantial impacts of post-construction runoff. The first is caused by an increase in the type and quantity of pollutants in storm water runoff. As runoff flows over areas altered by development, it picks up harmful sediment and chemicals such as oil and grease, pesticides, heavy metals, and nutrients (e.g., nitrogen and phosphorus). These pollutants often become suspended in runoff and are carried to receiving waters, such as lakes, ponds, and streams. Once deposited, these pollutants can enter the food chain through small aquatic life, eventually entering the tissues of fish and humans.

The second kind of post-construction runoff impact occurs by increasing the quantity of water delivered to the water body during storms. Increased impervious surfaces interrupt the natural cycle of gradual percolation of water through vegetation and soil. Instead, water is collected from surfaces such as asphalt and concrete and routed to drainage systems where large volumes of runoff quickly flow to the nearest receiving water. The effects of this process include streambank scouring and downstream flooding, which often lead to a loss of aquatic life and damage to property.

Structural and non-structural BMPs are an excellent way to minimize contaminants. Both will be required at new development and redevelopment projects. Examples of structural and non-structural BMPs are as follows:

Non-Structural BMPs

- **Planning and Procedures.** Runoff problems can be addressed efficiently with sound planning procedures. Master Plans, Comprehensive Plans, and zoning ordinances can promote improved water quality by guiding the growth of a community away from sensitive areas and by restricting certain types of growth (industrial, for example) to areas that can support it without compromising water quality.
- **Site-Based Local Controls.** These controls can include buffer strip and riparian zone preservation, minimization of disturbance and imperviousness, and maximization of open space.

Structural BMPs

- **Storage Practices.** Storage or detention BMPs control storm water by gathering runoff in wet ponds, dry basins, or multi chamber catch basins and slowly releasing it to receiving waters or drainage systems. These practices both control storm water volume and settle out particulates for pollutant removal.

- **Infiltration Practices.** Infiltration BMPs are designated to facilitate the percolation of runoff through the soil to ground water and, thereby, result in reduced storm water quantity and reduced mobilization of pollutants. Examples include infiltration basins/ trenches, dry wells, and porous pavement.
- **Vegetative Practices.** Vegetative BMPs are landscaping features that, with optimal design and good soil conditions, enhance pollutant removal, maintain/improve natural site hydrology, promote healthier habitats, and increase aesthetic appeal. Examples include grassy swales, filter strips, artificial wetland, and rain gardens.

In the indicated year of the program, the City will review and modify existing ordinances and establish policies to address post-construction runoff from new and re-development that disturbs more than one acre. The ordinance will include an enforcement mechanism to ensure compliance. Specific policies and/or language will be included to reduce impervious surfaces in future development.

DEVELOP ORDINANCE (BMP #5-1)

Implementation Details

The requirements for new development and redevelopment will be incorporated into the City's Storm Water Ordinance and modified and updated design standards applied to 100% of new development and redevelopment projects. Conditions to ensure storm water quality will be applied to new development and redevelopment proposals as they are being processed through the Planning Division immediately upon adoption of the ordinance. These conditions will be enforced at the time the applicant applies for development permits. Grading plans will be reviewed by Public Works and Community Development staff to ensure conditions are met and to verify appropriate drainage information, Low Impact Development (LID) measures and storm water BMPs to reduce sediment and other pollutants in storm water BMPs to reduce sediment and other pollutants in storm water are identified on the plans. Project improvement plans will be evaluated to determine their consistency with conditions of approval intended to address post-construction storm water run-off. Inspections conducted on each site by City staff or their representatives will determine if the conditions of approval have been met.

Conditions requiring LID measures and/or alternative BMPs that will minimize run-off and reduce the rate of surface flows and pollutant loads from the development site will be applied to new development. Appropriate LID measures include, but are not limited to, detention basins, bioswales, check dams to slow velocity, directing roof and hardscape run-off to landscaped areas. These measures shall be designated to control and redirect run-off, while increasing percolation. Detention basins will be used and storm water filters will be considered to remove oil and grease, as well as trash and sediments from parking area or private street run-off, before the water enters a basin or similar catchment feature.

The City currently has and will continue to enforce post-construction requirements that benefit storm water quality and increase percolation. Each new project is required to include a specified amount of landscaping, measured as a minimum percentage of the property's size. This assists in reducing erosion and siltation. Storm water filters will be evaluated to filter storm water that drains from new commercial, industrial and multi-family developments. When storm water filters or basins are required or incorporated into private developments, private property owners will be required to be responsible for their maintenance. The City also provides a

Planned Development (PD) zoning designation that can be applied to properties allowing clustered development and development transfers. This encourages the retention of natural features such as drainages, buffering development from drainages and riparian vegetation.

Measurable Goals

~~Adopt a~~ Amend the City Storm Water Ordinance with post-construction hydromodification/LID requirements.

PROJECT REVIEW PROCESS (BMP #5-2)

Implementation Details

The current project review process includes review by engineering and planning staff for land use applications for development and redevelopment projects. This review also ensures that post construction water quality control measures are implemented in the course of construction. The efficacy of this process will be reviewed and modified, as necessary, to include incorporation and review of implementation of effective treatment BMP's and allow for implementation of less effective treatment BMP's when more effective BMP's are infeasible.

Measurable Goal

Review and modify project review process.

POST CONSTRUCTION BMP INSPECTION (BMP #5-2 3)

Implementation Details

Public Works Engineering Division provides regular inspections of projects during construction to ensure compliance with permit conditions and mitigation measures. The project's Conditions of Approval related to construction activity may vary, however, all include water quality protection. As such, all projects are required to incorporate storm water control measures intended to protect water quality. These control measures typically apply to construction activities (temporary); however, implementation of long-term post-construction storm water control measures (e.g., structural features, bioswales, drainage design, and re-vegetation) will also be necessary to reduce the discharge of pollutants to the MS4 and protect downstream water quality.

Certain long-term control measures will require a maintenance program approved by the Engineering Division and Community Development Department. These maintenance programs shall be documented on the approved plan set and Conditions of Approval and/or Covenants, Conditions and Restrictions (CC&R's) where applicable. These documents shall require the owner of the land, a homeowner's association (residential subdivision), or business owner (commercial or industrial) to administer its implementation. During construction of post-construction storm water controls, construction site inspections will be utilized to assure proper siting and adherence to construction specifications. These inspections will be conducted by the Building Division. Additionally, the City will institute post-construction storm water control inspections to ensure proper long term operation and maintenance of post-construction storm water facilities in accordance with pre-defined project Conditions of Approval and CC&R's. These inspections will be performed by the City Engineering Department. Post-construction

storm water control inspections will be documented and deviations from the project's Conditions of Approval and CC&R's noted. The City will develop a system for tracking and resolving such operations and maintenance deficiencies.

Measurable Goals

1. Develop and document a methodology for conducting post-construction storm water control inspections and enforcement, ensure tracking and dispute resolution is addressed.
2. Inspect all project's post-construction storm water controls triennially for adherence to project Conditions of Approval and/or CC&R's with the primary goal of ensuring adequate operations and maintenance.
3. Establish biennial training for building and erosion and sediment control inspectors.

TOTAL MAXIMUM DAILY LOAD (TMDL)

The Federal Clean Water Act requires the development of TMDL's and implementation plans to bring impaired water bodies back into compliance with water quality objectives. A Sediment TMDL and a Pathogen TMDL have been developed for Carbonero Creek and/or Camp Evers Creek in the City of Scotts Valley.

These TMDL's identify the stormwater systems as sources of sediment and fecal indicator bacteria (FIB). However, it must be kept in mind that there are also other sources, including natural sources and uncontrollable sources, particularly for FIB. While the goal of the TMDL's and associated Implementation Plans is to reduce pollutant loading from each source to levels that will allow water quality objectives to be met, research by Santa Cruz County and others suggest that the goals for FIB cannot be met in urban areas. Nevertheless, the BMP's in the stormwater management plan have been developed to reduce controllable sources of FIB that are conveyed by the storm drain system to the maximum extent practicable.

The BMP's contained in this SWMP have been developed specifically to implement recommendations and address the sources identified in the TMDL implementation plans and supporting documents. The background material used in the development of the TMDL's included source identification and prioritization; BMP identification and prioritization, monitoring program development and coordination with stakeholders, as needed to attain the recommended wasteloads. A goal of the SWMP is not to target BMP's to specific TMDL's or geographic areas, but to implement the BMP's throughout the management area to reduce controllable sources of sediment and FIB associated with the storm drain system to the maximum extent practicable.

The effectiveness of these BMP's toward meeting water quality objectives will be assessed on a triennial basis, in conjunction with the Regional Water Board's mandated triennial review of TMDL implementation for all sources. This review may result in further refinement of BMP's for greater effectiveness or refinement of water quality objectives to recognize the effect of uncontrollable sources of pollutants.

The primary pollutants of concern specific to the City of Scotts Valley are fecal indicator bacteria, sediment and nutrients. These pollutants of concern will be addressed throughout the

City.

CARBONERO CREEK SEDIMENT TMDL (BMP #5-3-4)

Implementation Details

TMDL for sediments in Carbonero Creek became effective on December 18, 2003. During TMDL development, Central Coast Water Board staff developed seven trackable implementation actions to be undertaken by the City of Scotts Valley. In January 2007, the water board requested the City to submit the first triennial report for those actions. The water board staff concluded that the City made, "significant progress towards implementing the actions and continued their commitment to sediment control". Water Board staff indicated that "triennial reviews will serve as a tool to communicate progress towards 'tangible results', demonstrating whether or not the water board and implementing parties are achieving water and habitat quality improvements." As water board staff indicated, "the trackable implementation actions table illustrates implementation actions that will address the problem of sediment control in the San Lorenzo River watershed". The TMDL identifies the need to evaluate numeric target date but as stated by water board staff, "It is important to note that evaluation of numeric targets can only be performed if funding is secured to conduct the monitoring".

Measurable Goals

Assess on a triennial basis, the effectiveness of these BMP's toward meeting water quality objectives. This review may result in further refinement of BMP's or refinement of water quality objectives to recognize the effect of uncontrollable sources of pollutants.

CARBONERO CREEK / CAMP EVERS CREEK PATHOGENS TMDL (BMP #5-4 5)

Implementation Details

The RWQCB adopted the TMDL for pathogens in Carbonero Creek and Camp Evers Creek on March 21, 2008. The TMDL includes a source analysis indicating the opinion that the relative order of controllable sources, in descending order, are storm drain discharges, pet waste, homeless encampments, septic systems, domesticated animals, City sanitary sewer collection system leaks, including private laterals.

The BMP's contained in this SWMP have been developed specifically to implement recommendations and address the sources identified. A goal of the SWMP is not to target BMP's to specific TMDL's, but to implement the BMP's throughout the management area to reduce controllable sources of FIB associated with the storm drain system to the maximum extent practicable.

Measurable Goals

1. Submit pathogen specific best management practices.
2. Submit a fecal indicator bacteria monitoring and reporting plan.

HYDROMODIFICATION CRITERIA

In response to the February 15, 2008, letter from the Central Coast Regional Water Quality Control Board (Water Board) regarding hydromodification control requirements, the County of Santa Cruz, City of Santa Cruz, City of Watsonville and City of Scotts Valley established a strategy to develop alternative hydromodification criteria. The goal of the criteria is to determine an economically viable and practicable hydromodification management strategy that will provide protection of water resources to the maximum extent practicable.

The strategy was submitted to the Water Board in May 2008 and included in the following elements:

- Evaluating existing Hydromodification Criteria
- Evaluating Protection of Beneficial Uses
- Meeting with Water Board Staff
- Developing Alternative Hydromodification Criteria for Santa Cruz Agencies
- Plan Milestones

The agencies will determine hydromodification MBP's and measurable goals based on the alternative Hydromodification criteria developed.

HYDROMODIFICATION MANAGEMENT PLAN (BMP #5-5 6)

The City of Scotts Valley, in conjunction with Santa Cruz County and the municipalities within the County, has established a strategy to develop hydromodification standards for new and redevelopment projects. The primary goal of the HMP is to determine an economically viable and effective set of Scotts Valley specific hydromodification control standards that will provide protection of water resources (e.g., water quality, beneficial uses, biological and physical integrity of watersheds and aquatic habitats) to the maximum extent practical.

Implementation Details

The City is working in coordination with regional agencies to develop hydromodification criteria that will be specific to the watersheds of Santa Cruz County. A considerable effort will be put forth in developing criteria that are protective of the watersheds and address increases in peak flow and runoff volume where such increased flow and/or volume is likely to cause increased erosion of creek beds and banks, silt pollutant generation, or other impacts to beneficial use.

Measurable Goals

1. Develop and implement hydromodification criteria.
2. Develop BMP's and measurable goals.
3. ~~Determine methods used to assess effectiveness.~~

- 4 3. Assess criteria for effectiveness and revise BMP's to protect watershed health.
- 5 4. Determine if further watershed data is needed and refine the existing hydromodification criteria.

PROGRAM EFFECTIVENESS

Effectiveness assessment is a process that stormwater program managers use to evaluate whether their programs are resulting in desired outcomes and if these outcomes are being achieved efficiently and cost-effectively. During the first ~~two~~ years of the stormwater program, the City will ~~achieve~~ develop an effectiveness assessment program using Outcome Level One - Documented Activities, as defined in the *Municipal Stormwater Program Effectiveness Assessment Guidance CASQA, May 2007*. Additional effectiveness outcomes will be evaluated for this MCM beginning in year ~~three~~ four. Chapter 7 further describes effectiveness assessment for the storm water program.

**TABLE 5-1
 BMPS, MEASURABLE GOALS AND IMPLEMENTATION SCHEDULE
 Post Construction Storm Water Management
 City of Scotts Valley**

No.	BMPS	Description	Measurable Goals	Implementation Year				
				1	2	3	4	5
5 -1	<u>Develop Amend Ordinance</u>	The requirements for new development and redevelopment will be incorporated into the City's Storm Water Ordinance.	<u>Adopt a Amend the City Storm Water Ordinance</u> with post-construction hydromod/LID requirements.				X	
5-2	<u>Project Review Process</u>	<u>Review new and redevelopment projects to ensure post construction water quality measures are implemented in the course of construction.</u>	<u>Review and modify the project review process.</u>	X				
5-2 <u>3</u>	Post Construction BMP inspection.	Provide regular inspections of projects during construction to ensure compliance with permit conditions and mitigation measures.	1. Develop and document a methodology for conducting post-construction storm water control inspections and enforcement, ensure tracking and dispute resolution is addressed. 2. Inspect all <u>project's</u> post-construction storm water controls <u>triennially</u> for adherence to project conditions of approval and/or CC&R's with the primary goal of ensuring adequate operations and maintenance. 3. Establish <u>biennial annual</u> training for building and erosion and sediment control inspectors.			X		
				X	X	X	X	X

**TABLE 5-1
 BMPS, MEASURABLE GOALS AND IMPLEMENTATION SCHEDULE
 Post Construction Storm Water Management
 City of Scotts Valley**

No.	BMPS	Description	Measurable Goals	Implementation Year				
				1	2	3	4	5
5-3 <u>4</u>	Carbonero Creek Sediment TMDL	Continue to make significant progress towards implementing the seven trackable implementation actions.	Assess on a triennial basis, the effectiveness of these BMP's toward meeting water quality objectives. This review may result in further refinement of BMP's or refinement of water quality objectives to recognize the effect of uncontrollable sources of pollutants.			X		
5-4 <u>5</u>	Carbonero Creek / Camp Evers Creek Pathogens TMDL	Comply with implementation requirements of Resolution No. R3-2008-0001 TMDL for pathogens in Camp Evers Creek and Carbonero Creek for storm drain discharges to MS4s.	<ol style="list-style-type: none"> 1. Submit pathogen specific best management practices. 2. Submit a fecal indicator bacteria monitoring and reporting plan. 		X			
5-5 <u>6</u>	Hydromodification Criteria	Determine an economically viable and practicable hydromodification management strategy that will provide protection of water resources to the maximum extent practicable.	<ol style="list-style-type: none"> 1. Develop hydromodification criteria. 2. Develop <u>and implement</u> BMP's and measurable goals. 3. Determine methods used to assess effectiveness. 4. Assess criteria for effectiveness and revise BMP's to protect watershed health. 5. Determine if further watershed data is needed and refine the existing hydromodification criteria. 		X	X	X	X

CHAPTER 6

POLLUTION PREVENTION/GOOD HOUSEKEEPING

The Pollution Prevention/Good Housekeeping for municipal operations minimum control measure is a key element of the small MS4 storm water management program. This measure requires the small MS4 operator to examine and subsequently alter their own actions to help ensure a reduction in the amount and type of pollution that: (1) collects on streets, parking lots, open spaces, and storage and vehicle maintenance areas and is discharged into local waterways; and (2) poor maintenance of storm sewer systems.

This measure is meant primarily to improve or protect receiving water quality by altering municipal or facility operations.

During the indicated year of the program, several aspects of maintenance operations will be evaluated and specific new procedures established. Inlet maintenance will be added to current street cleaning efforts.

The City of Scotts Valley is committed to reducing storm water pollution from municipal operation sources. The City's Wastewater Treatment Plant operates under separate a Industrial NPDES storm water permit. Therefore, this SWMP does not directly address their requirements for storm water control identified in their individual permits. However, where crews associated with the Wastewater Treatment Plant are working off the Treatment Plant site, they are expected to comply with these BMPs. These BMPs are also to be applied to activities that take place on City properties not under separate permit and will be inspected annually.

Storm water BMPs applicable to City operations were identified and circulated to the various departments for review and comment. Sample Citywide BMPs can be found in Appendix A.

CITY STORM DRAIN MAINTENANCE (BMP #6-1)

Implementation Details

25% of the City's storm drain inlets will be annually cleaned out prior to the fall rains.

Measurable Goals

25% of the City's storm drain inlets shall be cleaned once a year in the fall and inspected each spring to determine if they need to be cleaned at that time as well. Records shall be kept of the dates and times that these activities occur each year.

STREET SWEEPING OPERATIONS (BMP #6-2)

Implementation Details

The City's goal is sweeping all City streets every two months with the exception of the first flush time frame. The entire City is swept in late Fall as the season of early rains approaches. When the weather forecasts the season's first storm where flow is expected in gutters and the drain system an additional City-wide street sweeping operation is performed. Sweepers are called out to assist in clean-up after vehicular accidents and when appropriate, to clean-up hazardous

materials spills. Contractors and businesses are required to specially sweep areas where soil or sediment has been deposited. Residuals from the sweepers are disposed of at the Landfill. City-owned parking lots are swept at least twice a year, once before the rainy season.

Measurable Goals

All public streets shall be swept every two months with specific first flush consideration. City-owned parking lots shall be swept at least twice a year, including once before the rainy season. Records shall be kept of the dates and times that these activities occur each year.

CITYWIDE BMPs (BMP #6-3)

Implementation Details

The City has developed sample Best Management Practices to prevent storm water pollution in City operations. Sample BMPs can be found in Appendix A of this document. The City's BMPs are subject to change as City operations change and as BMPs are tested for effectiveness. The Citywide BMPs will be addressed in the City's Storm Water Ordinance.

The BMP's will be reviewed and updated to ensure all municipal operations have appropriate BMP's.

Measurable Goals

1. The City's Citywide BMPs shall be followed by each Department and Division, as they are applicable to the Department's or Division's responsibilities. All City Departments and Divisions are to obtain storm water educational information.
2. Review and update the citywide list of BMP's to include operations such as parks and vehicle cleaning.

MUNICIPAL INSPECTIONS (BMP #6-4)

Implementation Details

Currently, the City Maintenance Division quarterly inspects the City corporation yard as well as public buildings and parks. These inspections will continue in conformance with current policy.

Measure Goal

Quarterly inspect municipal facilities for storm water quality issues and make corrections when noted.

TRAINING (BMP #6-4 5)

Implementation Details

Conduct annual Storm Water BMP Training of City Staff. City staff shall be trained in the provisions of the Citywide BMPs, as they are applicable to each staff member's job requirements. Outside training will be provided for some Departments/Divisions when it is

provided locally and funds are available to send employees. Outside training opportunities will be offered primarily to representatives of those Divisions that are most involved in administering segments of the SWMP (Engineering and Planning) as well as representatives of those Divisions responsible for maintaining separate industrial storm water permits.

In-house training will be provided at least once a year to all employees of the Engineering, Planning, Building, Streets, and Wastewater divisions. Training will include Storm Water, LID and Hydromodification concepts; SWMP responsibilities; illicit discharge detection and elimination and specific BMPs related to the Departments'/Divisions' activities. Copies of the Citywide BMPs will be made available, as well as any BMP specific handouts that apply to the activities of the Department/Division being trained.

In addition, some storm water training will be integrated into existing training opportunities, such as Safety Training and Tailgate meetings. Records of training sessions and staff attendance shall be maintained for the permit term.

Measurable Goals

City staff shall be annually trained in concepts related to storm water pollution prevention, LID and Hydromodification and in the provisions of the Citywide BMPs, as they are applicable to each staff member's job requirements. Records shall be kept to document all storm water training attended by City staff.

PROGRAM EFFECTIVENESS

Effectiveness assessment is a process that stormwater program managers use to evaluate whether their programs are resulting in desired outcomes and if these outcomes are being achieved efficiently and cost-effectively. During the first ~~two~~ years of the stormwater program, the City will ~~achieve~~ develop an effectiveness assessment program using Outcome Level One - Documented Activities, as defined in the *Municipal Stormwater Program Effectiveness Assessment Guidance CASQA, May 2007*. Additional effectiveness outcomes will be evaluated for this MCM beginning in year ~~three~~ four. Chapter 7 further describes effectiveness assessment for the storm water program.

**TABLE 6-1
 BMPS, MEASURABLE GOALS AND IMPLEMENTATION SCHEDULE
 Pollution Prevention/Good Housekeeping for Municipal Operations
 City of Scotts Valley**

No.	BMPS	Description	Measurable Goals	Implementation Year				
				1	2	3	4	5
6 - 1	City Storm Drain Maintenance	25% of the City's storm drain inlets will be annually cleaned out prior to the fall rains.	25% of the City's storm drain inlets shall be cleaned once a year in the fall and inspected each spring to determine if they need to be cleaned at that time as well. Records shall be kept of the dates and times that these activities occur each year.		X	X	X	X
6 - 2	Street Sweeping Operations	The City's goal is sweeping all City streets every two months with the exception of the first flush time frame. When the weather forecasts the season's first storm where flow is expected in gutters and the drain system, an additional City-wide street sweeping operation is performed.	All public streets shall be swept every two months with specific first flush consideration. City-owned parking lots shall be swept at least twice a year, including once before the rainy season. Records shall be kept of the dates and times that these activities occur each year.	X	X	X	X	X
6 - 3	Citywide BMPS	The City has developed sample Best Management Practices to prevent storm water pollution in City operations.	1. The City's Citywide BMPs shall be followed by each Department and Division, as they are applicable to the Department's or Division's responsibilities. All City Departments and Divisions are to obtain storm water educational information. 2. <u>Review and update the citywide list of BMP's to include operations such as park maintenance and vehicle cleaning.</u>	X	X	X	X	X
6-4	<u>Municipal Inspection</u>	<u>Continue quarterly inspections of municipal facilities</u>	<u>Quarterly inspect municipal facilities for stormwater quality issues and make correction when noted.</u>	X	X	X	X	X

**TABLE 6-1
 BMPS, MEASURABLE GOALS AND IMPLEMENTATION SCHEDULE
 Pollution Prevention/Good Housekeeping for Municipal Operations
 City of Scotts Valley**

No.	BMPS	Description	Measurable Goals	Implementation Year				
				1	2	3	4	5
6-4-5	Training	City staff shall be trained in the provisions of the Citywide BMPs as they are applicable to each staff member's job requirements.	City staff shall be trained <u>annually</u> in concepts related to storm water pollution prevention, LID and Hydromodification and in the provisions of the Citywide BMPs as they are applicable to each staff member's job requirements. Records shall be kept to document all storm water training attended by City staff.	X	X	X	X	X

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CHAPTER 7

PROGRAM EFFECTIVENESS ASSESSMENT

PROGRAM EFFECTIVENESS ASSESSMENT (BMP #7-1)

Implementation Details

Effectiveness assessment is a process used to evaluate whether a stormwater program is meeting the performance standards and if the performance standards are being achieved efficiently and cost-effectively. The Phase II NPDES General Permit contains requirements for annual review of the SWMP's effectiveness, BMP's effectiveness and improvement opportunities to achieve MEP.

While it is known that effectiveness assessment is a fundamental and necessary component for developing and implementing a successful stormwater program, methods for conducting such assessments are less known. For over 10 years, Phase I Stormwater communities have been faced with increasing pressures to demonstrate effectiveness of programs without specific guidance in conducting these assessments. Therefore, these programs have historically relied on regular evaluation of program elements and control measures to ensure progress is being made towards achieving broader program goals.

In May 2007, the California Stormwater Quality Association (CASQA) developed the *Municipal Stormwater Program Effectiveness Assessment Guidance* to assist stormwater program managers in designing and conducting program effectiveness assessment using a range of assessment methods. As described in the CASQA Guidance document, BMP's, program elements or the overall stormwater program can be categorized as having one or more of six levels of outcomes. Outcomes being defined as the result of implementing a stormwater BMP, program element or overall program implementation.

The City will develop an effectiveness assessment program using the CASQA Guidance Document *Level One Outcomes* (documenting activities) during the first ~~two~~ years of program implementation. This will allow City staff to become familiar with the basics of the stormwater program and allow program staff to become fluent in the various BMP's and measurable goals of the stormwater Program.

In year four, the City will develop an effectiveness assessment strategy based on the principles outlined in the CASQA Guidance Document. The strategy will be submitted as an update to the SWMP with the year four annual report. The strategy will describe actions that will be taken to assess the effectiveness of the SWMP in meeting regulatory requirements and improving water quality and beneficial use conditions. The strategy will specifically address the following:

- Identifying a process to be used to conduct effectiveness assessments and improve BMP implementation.
- Identifying quantifiable BMP and program effectiveness measurements.
- Assessing BMP implementation in terms of regulatory compliance, changing awareness, changing behavior, pollutant load reductions and runoff and receiving water quality.

The assessment strategy will seek to identify links between BMP/program implementation and

improvement in water quality and beneficial use conditions.

Measurable Goals

1. Develop an assessment strategy using CASQA Level One Outcomes.
2. Assess level one outcomes to all applicable BMP's.
2. 3. Develop an assessment strategy based on the principles outlined in the CASQA Guidance Document.
4. Begin implementation of assessment strategy.

**TABLE 7-1
 BMPS, MEASURABLE GOALS AND IMPLEMENTATION SCHEDULE
 Program Effectiveness Assessment
 City of Scotts Valley**

No.	BMPS	Description	Measurable Goals	Implementation Year					
				1	2	3	4	5	
7 - 1	Program Effectiveness Assessment	The City will develop an <u>and use</u> effectiveness assessment <u>strategies</u> based on the principles outlined in the CASQA Guidance Document.	1. Develop an assessment strategy using CASQA Level One Outcomes. 2. <u>Assess Level One Outcomes to all applicable BMP's.</u> 2-3. Develop an assessment strategy based on the principles outlined in the CASQA Guidance Document. 4. <u>Begin implementation of assessment strategy.</u>	X					
					X	X	X		
							X		
									X

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APPENDIX A

CITY OF SCOTTS VALLEY MUNICIPAL OPERATIONS

BEST MANAGEMENT PRACTICES

In Designing and Planning City Projects, All City Departments Shall Strive to do the Following:

1. Preserve drainages in a natural state.
2. Where practical, use alternate paving material that allows percolation, such as gravel or turf-block.
3. Provide vegetation or other cover, such as gravel, in dirt areas, to prevent erosion and sedimentation.
4. Use low maintenance landscaping.
5. Remove existing mature vegetation only when absolutely necessary.
6. Prevent unnecessary disturbance by establishing clear limits to work zones, delineating limits of work and sensitive or critical areas. Critical areas, vegetation, trees, creek beds and buffer zones, which are to be protected, shall be delineated in the field with fencing and/or survey tape.
7. Avoid construction on steep slopes when practical.
8. Minimize cut and fill as much as possible.
9. Align temporary and permanent roads and driveways along slope contours where possible.
10. Phase large scale grading operations to minimize the amount of time disturbed areas are exposed.
11. Avoid excavation and grading during wet weather when practical.

All City Operations Shall Comply With Each of the Following Requirements:

-Outdoor storage and hazardous materials storage:

1. Keep lids on all containers and store under cover.
2. Use secondary containment for hazardous materials and protect from rain. Store hazardous materials in an area where sills will not reach storm drains.
3. Label all hazardous materials according to hazardous waste regulations.
4. Do not combine wastes when storing them. This increases safety, recycling and disposal

options and reduces disposal costs.

5. Never mix waste oil with fuel, antifreeze or chlorinated solvents.
6. Use secondary containment on all bulk fluids stored in amounts in excess of 55 gallons and wastes to prevent accidental discharge. Secondary containment includes, but is not limited to, berming around storage areas and use of absorbents.
7. Keep storage areas clean and dry. Conduct regular inspections of storage areas to detect leaks and spills.
8. Store new or used batteries securely to avoid breakage and acid spills during earthquakes. When stored outdoors, batteries shall be covered with plastic tarp to protect them from rain.
9. Recycle old batteries.
10. Wood products treated with chromated copper arsenate, ammoniacal copper zinc arsenate, creosote, or pentachlorophenol should be covered with tarps.
11. Cover stockpiled soil, construction materials and waste with plastic sheeting or temporary roofs where practical.
12. When procuring new refuse containers, purchase containers with lids.

Construction, Grading and Erosion Control

1. Minimize clearing and grading activity. Clear and grade only during dry weather when possible.
2. Construct stabilized access roads and entrances.
3. Use appropriate methods to ensure that soil is not tracked into City streets, such as gravel entrances, street sweeping and tire washes, as necessary.
4. Identify all storm drains, drainage swales and creeks located near construction areas, make sure all subcontractors are aware of storm drain locations and the need to prevent pollutants from entering them.
5. Use berms or drainage ditches to capture and divert natural run-off away from the construction site.
6. Protect storm drain inlets from sediment-laden run-off. Storm drain inlet protection devices include, but are not limited to, sandbag barriers, filter fabric fences, block and gravel filters and excavated drop inlet sediment traps.
7. Use as little water as possible for dust control during grading operations.
8. If soil stockpiles are to be stored in high wind areas, consider use of a chemical dust suppressant.
9. Use installed straw bale barriers, silt fencing, sand bag barriers, brush or rock filters,

temporary sediment basins, sediment traps or temporary vegetation on slopes to reduce run-off velocity and trap sediments. Do not use asphalt rubble or other demolition debris for this purpose.

10. Earth dikes, drainage swales and ditches, slope drains and subsurface drains, velocity dissipation devices, flared culvert end sections, check dams, slope roughening, terracing and rounding, shall be used to ensure proper drainage and soil retention once a project is completed or when a phase of a project is completed.
11. When cleaning sediments from streets, driveways and paved areas on construction sites, use a standard dry sweeper with a water system to control dust whenever possible. Dispose of solids at the landfill, and run the remaining swept material through a clarifier with approved sediment/oil separators. Dispose of the clean water into the storm drain and dispose of the residual oils as hazardous waste.
12. Install cover materials such as vegetative debris, mulch, crushed stone, geo-textile, fabric erosion control blankets, soil stabilizers, and temporary seeding and planting to reduce erosion during and after clearing and grading operations.
13. When de-watering a site, remove sediment from the discharge, using filtration methods or if the site is large enough, use a discharge pond to allow the clear water to percolate into the groundwater table leaving sediments on the surface. If the material is drilling mud, or testing indicates that it is contaminated, dispose of it as required by law.
14. Clean up leaks and spoils on the construction site immediately.
15. When placing or removing concrete, ensure that wet concrete, cement and its components or concrete dust do not enter storm flows.
16. Refuel and perform emergency repairs on vehicles and heavy equipment in a designated protected location. Protect the soil from leaks and spills. If refueling or repair must be done away from the fuel station or garage, try to do so away from storm inlets, storm channels and the river.
17. Ensure that spill kits are readily available to construction sites and vehicles.
18. Wash vehicles at an appropriate off-site facility. If equipment must be washed on-site, do not use soaps, solvents, de-greasers, or steam cleaning equipment and prevent wash water from entering the storm drain.
19. Cover construction materials, stockpiled soil and waste with plastic sheeting or temporary roofs, prior to expected rain. Sweep and remove materials from surfaces that drain to storm drains, the river and channels prior to expected rain.
20. Place refuse containers and recycling receptacles around construction sites to reduce litter.
21. Recycle or reuse leftover materials whenever possible.
22. Dispose of all wastes properly. Material that cannot be recycled or reused must be taken to the landfill, hazardous waste collection facility or shipped as hazardous waste.

23. Train employees and supervisors to implement these requirements.
24. When transporting material to and from the construction area, cover or reduce the height of loads so that earthen material and debris do not blow out of the truck.
25. Avoid flushing streets with water. If flushing street or wet cleaning is required, sweep and remove debris beforehand, plug storm inlets, collect wash water and dispose of as required by law. Alternately, allow wash-water to drain to the storm drain and collect it downstream at a manhole or storm drain clean out and dispose as required by law.
26. If drilling is to occur near a watercourse, ensure that all appropriate permits are obtained.

Paint Work

1. Never clean brushes or rinse paint containers into a street gutter, storm drain or creek or where they will end up in a gutter, storm drain or creek.
2. When finished painting, use up water-based paint in brushes and then rinse them into the sanitary sewer (indoor plumbing).
3. When stripping building exteriors with high pressure water, cover or berm storm drain inlets. If possible, collect building cleaning water and discharge to the sanitary sewer, if disposal is approved by Wastewater. If the substances test too high in critical elements to be disposed of in the sanitary sewer, dispose of wash water as a hazardous material.
4. If power washing or stripping surfaces painted with lead paint, block storm drains, contain and vacuum water and test water for lead. If lead above threshold levels is found, proper disposal methods shall be followed.
5. Once finished with oil-based painting, paint out brushes to the extent possible and filter and reuse thinners and solvents. Dispose of unusable thinners and residue as hazardous waste.
6. Return unused water-based (latex) paint, properly contained, back to the supplier, or turn it in to the Household Hazardous Waste Collection Facility (HHWCF) where it will be processed and reused.
7. Dry latex paint and paint cans with dried paint may be disposed of in the garbage.
8. Take unwanted oil-based paint, paint thinners and sludges to the HHWCF or ship as hazardous waste.
9. Clean equipment including sprayers and sprayer paint supply lines at the end of each day, collecting and disposing of wash water and excess paint properly.

Cement and Concrete Work

1. Saw cut concrete in dry weather whenever possible. Protect nearby storm drain inlets and water bodies with sandbags around inlets and work areas where debris could be introduced into a water body.

2. After removal, recycle concrete material and sweep area thoroughly.
3. Use as little water as possible during saw cutting operations. Block or berm around storm inlets, drainage channels and watercourses with sandbags or absorbent materials to contain slurry. If slurry enters the storm system, remove immediately.
4. When saw cutting to make repairs to utility lines or for other repairs, collect and deposit debris and earth away from any water and ensure that pollutants do not contact water from saw cutting or necessary repair work.
5. Remove Saw cut slurry with a shovel or vacuum or by sweeping when dry as soon as possible.
6. Avoid mixing excess fresh concrete or cement mortar on-site.
7. Store dry and wet concrete materials under cover protected from rain and run-off.
8. Wash out concrete transit mixers only in wash out areas where water will flow into settling ponds of dirt, aggregate base or sand located away from a watercourse. If possible, recycle wash water by pumping back into mixers for reuse. Do not dispose of washout into storm system.
9. Whenever possible, reuse or recycle small amounts of excess concrete, grout and mortar. Allow excess to set in concrete forms and reuse or dispose of excess at the landfill.

Municipal Pool and Water Features

1. Discontinue use of chlorine, allowing chlorine to dissipate through aeration, dechlorination or neutralization of previously chlorinated water, prior to discharge. Test for presence of chlorine prior to discharge and ensure dechlorination before discharge.