Salinas Valley
• BUILDER'S EXCHANGE •

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p: 831.758.1624 f: 831.758.6203

June 20, 2008

Jeffery S. Young, Chair and Board Members
Central Coast Regional Water Quality Control Board
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401
Fax 805/543-0397

RE: City of Salinas –Revisions to Storm Water Management Program

Dear Chairman Young and Board Members:

The Salinas Valley Builders Exchange is a non-profit organization that represents over 500 construction related companies in Monterey County. These companies with numerous employees primarily work and/or reside in the City of Salinas. After reading the City of Salinas Storm Water Management Standards document dated May 2008, we are most especially concerned with the area of new development and significant redevelopment.

We respectfully request an exemption for redevelopment projects from the standards imposed on new development.

The applicability of identical standards for new development projects and "significant redevelopment" projects is illogical. The cost of complying with storm water design, construction, and maintenance on small projects (minimum 5,000 square feet) inhibits the very redevelopment the City encourages with its Smart Growth policies. This low threshold also seems to be at odds with EPA priorities of favoring redevelopment and infill projects over new development. Over eighty-percent of the City's projects that would be impacted by the draft standards are small redevelopment projects.

These onerous standards place an undue burden on small redevelopment projects. Requirements such as the pre and post development calculations and computer modeling of storm water runoff serve no true purpose and provide little to no tangible data. While these practices can and will greatly raise the costs of these projects, making redevelopment too cost prohibitive and unrealistic. Simpler techniques should be utilized, such as prescriptive requirements for runoff and a simpler formula for calculations such as the now commonly applied Rational Formula.

Redevelopment and infill projects have little to no overall storm water impacts and therefore should not be required to meet the new development standards. At a minimum, any redevelopment project with less net impervious surface should be exempt from the requirements.

Item No. 18 Supp Attachment No. 1
July 11, 2008 Meeting
City of Salinas Stormwater
Development Standards

With a lack of an economic evaluation of cost versus benefit, and a clear economic disparity for small businesses and projects, the Salinas Valley Builders Exchange respectfully requests that redevelopment projects be exempt from the same storm water standards imposed on larger projects and new development. Thank you for your time and consideration.

Kind Regards,

Christie Cromeenes

Christie Cromeenes
Executive Director

cc: Roger W. Briggs, Executive Officer, RWQCB
Matt Thompson, RWQCB
Mayor Dennis Donohue, City of Salinas
Carl Niizawa, Deputy City Engineer, City of Salinas

June 20, 2008

Rodger W. Briggs, Executive Officer, RWQCB
Central Coast Regional Water Quality Control
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401
Fax 805/543-0397 - E-mail: rbriggs@waterboards.ca.gov

RE: City of Salinas –Revisions to Storm Water Management Program

Dear Mr. Briggs:

I represent Central Coast Residential Contractors (CCRB), a medium sized construction company that has been doing business in the City of Salinas for over 5 years. The following comments/recommendations concern the City of Salinas Storm water Management Plan dated May 2008, and a review of the Storm water Development Standards by Neil Weinstein of the Low Impact Development Center dated June 10, 2008.

Request to exempt redevelopment projects from the standards imposed on new development

The applicability of identical standards for new development projects and "significant redevelopment" projects is illogical. The cost of complying with storm water design, construction, and maintenance on small projects (minimum 5,000 square feet) inhibits the very redevelopment the City encourages with its Smart Growth policies. This low threshold also seems to be at odds with EPA priorities of favoring redevelopment and infill projects. Over eighty-percent of the City's projects that would be impacted by the draft standards are small redevelopment projects (under 30,000). The promulgation of these standards will make it more expensive for property owners to "do the right thing", as well as place an unfair burden on the small redevelopment projects.

Examples of burdensome requirements that serve no purpose are the pre and post development calculations, and computer modeling of storm water runoff. Rather than using expensive computer models, simpler techniques should be utilized, such as prescriptive requirements for runoff into green parkway strips. Also, the simpler and more beneficial method for calculating storm water runoff is the Rational Formula, which is commonly applied throughout the State.

The standards intended for new development will have a major impact on redevelopment projects. At a minimum, ANY redevelopment project with less NET impervious surface should be exempt from the requirements. Redevelopment and infill projects have little or no impacts, and therefore piling on additional and expensive standards is prejudicial and unwarranted. The building industry and redevelopment projects in the City of Salinas are being singled out with these excessive standards when no other jurisdiction on the Central Coast is currently required to meet these types of standards.

With a lack of an economic evaluation of cost versus benefit, and a clear economic disparity for small businesses and projects, the Salinas Valley Builders Exchange respectfully requests that redevelopment projects be exempt from the same storm water standards imposed larger projects and new development.

Sincerely,

Gabriel Torres
Vice President of Operations

cc: Matt Thompson, RWQCB
Carl Niizawa, Deputy City Engineer, City of Salinas

Central Coast Residential Builders, Inc.
P.O. Box 2825 • Salinas, CA 93902 • (831) 757-6251, ext. 117
e-mail: ccrb@chispahousing.org • www.chispahou

Item No. 18 Supp Attachment No. 2
July 11, 2008 Meeting
City of Salinas Stormwater
Development Standards

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

Escobar & Escobar Concrete Construction

June 20, 2008

Rodger W. Briggs, Executive Officer, RWQCB
Central Coast Regional Water Quality Control
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401
Fax (805) 543-0397
E-mail: rbriggs@waterboards.ca.gov

RE: City of Salinas – Revisions to Storm Water Management Program

Dear Mr. Briggs:

We are concrete contractors doing business in California. We have the following comments and suggestions about the City of Salinas Storm water Management Plan and a review of the Storm water Development Standards by Neil Weinstein dated June 10, 2008:

REQUEST TO EXEMPT REDEVELOPMENT PROJECTS FROM THE STANDARDS IMPOSED ON NEW DEVELOPMENT

The applicability of identical standards for new development projects and "significant redevelopment" projects is illogical. The cost of complying with storm water design, construction, and maintenance on small projects (minimum 5,000 square feet) inhibits the very redevelopment the City encourages with its Smart Growth policies. This low threshold also seems to be at odds with EPA priorities of favoring redevelopment and infill projects. Over eighty-percent of the City's projects that would be impacted by the draft standards are small redevelopment projects (under 30,000). The promulgation of these standards will make it more expensive for property owners to "do the right thing", as well as place an unfair burden on the small redevelopment projects.

Examples of burdensome requirements that serve no purpose are the pre and post development calculations, and computer modeling of storm water runoff. Rather than using expensive computer models, simpler techniques should be utilized, such as prescriptive requirements for runoff into green parkway strips. Also, the simpler and more beneficial method for calculating storm water runoff is the Rational Formula, which is commonly applied throughout the State.

The standards intended for new development will have a major impact on redevelopment projects. At a minimum, ANY redevelopment project with less NET impervious surface should be exempt from the requirements.

Redevelopment and infill projects have little or no impacts, and therefore piling on additional expensive standards is prejudicial and unwarranted. The building industry and redevelopment projects in the City of Salinas are being singled out with these excessive standards when no other jurisdiction on the Central Coast is currently required to meet these types of standards.

Item No. 18 Supp Attachment No. 3
July 11, 2008 Meeting
City of Salinas Stormwater
Development Standards

With a lack of an economic evaluation of cost versus benefit, and a clear economic disparity for small business and projects, the Salinas Valley Builders Exchange requests that redevelopment projects be exempt from the same storm water standards imposed on larger projects and new development.

Sincerely,

C Escobar

Catherine J. Escobar

CC: Matt Thompson, RWQCB
Carl Niizawa, Deputy City Engineer, City of Salinas

CHISPA

We Build Neighborhoods

VIA E-MAIL AND U.S. MAIL

June 20, 2008

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

RE: **Comment on Draft City of Salinas Stormwater Management Plan**

Dear Mr. Briggs:

We are writing to express our concerns regarding the above plan which is now being considered by your board.

We are a non-profit public benefit 501(c)(3), Community-based Housing Development Organization (CHDO). Our mission is "To enhance the quality of life and create socially and economically healthy living environments on the central coast of California by developing, owning and managing rental housing, by providing home ownership opportunities for very low, low and moderate income people and revitalizing neighborhoods". Many of our projects within the City of Salinas are in-fill or redevelopment projects.

The application of several regulations contained in this draft plan will be so cost prohibitive, it will essentially prohibit us from providing affordable housing and clean up blighted areas. Additionally, with the current market condition, these regulations will bring a halt to economic development.

Below are some examples of sections in the draft plan which will have a negative impact and unfair burden on small in-fill and redevelopment projects.

Page 4-13, Section 4.6 (D) (Development Design Standards)

This section provides in part "In the City's LID development approach, it is recognized that the use of site biofiltration is a preferred means for treatment of stormwater runoff". Our engineers have found that biofiltration is not necessarily the best or appropriate approach.

Community Housing Improvement Systems and Planning,
295 Main Street, Suite 100 • Salinas, CA 93901 • (831) 757-6251 • Fax
www.chispahousing.org

We are currently in the entitlement phase of a 10 lot subdivision (Wesley Oaks) in the redevelopment area of Salinas. The Wesley Oaks Subdivision will replace a dilapidated duplex and a vacant lot located in an area of social blight. If approved, this project will promote and support a vibrant, safe and healthy community. However, our engineers have found that the requirement of a biofiltration system will be costly (over $80,000 more than anticipated). Additionally, this type of system is very constrictive and will require perpetual maintenance. This maintenance not only involves cleaning of the structure, but also requires the replacement of the filtration media.

Specific stormwater BMP's entail specialized and detailed stormwater engineering and calculations. Accordingly, the specific system should be left to the discretion of the applicant's engineer.

Therefore, we recommend that the above sentence and encouragement/requirement be removed from the plan.

Page 4-20, Section 4.6 (L) (Development Review Process)

The City's NPDES Municipal Permit requires new development and significant redevelopment to meet specific standards (which include expensive stormwater BMP's). The definition of "significant redevelopment" includes additions or expansions of 5,000 square-feet or more of impervious surfaces. Moreover, any impervious area exposed to rainfall with 25 or more parking spaces, or with 5,000 square feet or more of area will trigger stormwater BMP's.

The requirement of stormwater BMP's on small infill projects that add 5,000 square feet or more of impervious surface or merely building on a 5,000 square foot lot will be so cost prohibitive, that non-profits and small businesses will no longer be able to provide affordable housing in these areas.

For example, we just completed a conversion of a 173 unit dilapidated motel into a 124 unit affordable senior rental apartment complex called Sherwood Village. Due to the fact that this lot was 5,000 square feet or more of area (notwithstanding the fact that most of the impervious surface was existing), we had to construct a stormwater BMP that cost over $300,000. Essentially, we were improving a situation, but got penalized due to the regulation as drafted.

Redevelopment projects such as Sherwood Village actually benefit the watershed and should not be subjected to overly burdensome restrictions mentioned above. In fact, in-fill and redevelopment projects are encouraged by the Environmental Protection Agency, as it is seen as a means for growth without negative impacts on water quality in the watershed. Most of the standards contained in the draft plan are intended for new developments which have larger stormwater impacts.

While we appreciate having just received a resolution of appreciation from your Board, we think the threshold of 5,000 square feet is too low.

Therefore, we recommend that the definition of "significant redevelopment" and section 4.6 (L) be re-written to exclude infill and redevelopment projects. Additionally, the 5,000 square foot threshold should be changed to one acre or 43,560 square feet consistent with state law relative to storm water pollution prevention plans.

We hope that you review this plan from a cost/benefit analysis in order to resolve these inequities as applied. Accordingly, we urge you to take our recommendations into consideration.

Respectfully submitted,

Paul V. Tran
Project Manager

CC: Matt Thompson, RWQCB
Carl Niizawa, Deputy City Engineer, City of Salinas
Matt Bogoshian, Deputy Secretary, Calif. Environmental Protection Agency
Alfred Diaz-Infante
Dana Cleary

KOBRINSKYGROUP

June 20, 2008

Lisa McCann, Environmental Programs Manager
Matt Thompson, Water Resource Control Engineer
California Regional Water Quality Control Board
Central Coast Region
895 Aerovista Place, Suite 101
San Luis Obispo, California 93401-7906

Re: Comments on Draft City of Salinas Storm Water Development Standards

Dear Ms. McCann and Mr. Thompson:

Upon review of the Draft Storm Water Development Standards, please consider the following comments.

I have represented the downtown business community with 6 years service on the Board of Directors of the Oldtown Salinas Association, 3 years as president. I have supported the efforts of SUBA, the Business Association representing the Alisal. I am a member of the Redevelopment Agency's Design Review Board. I am a longtime member of the Community Planning and Building Department Task Force. Through these activities and many other community involvements, I believe I have a clear understanding of how grave an effect some of the Development Standards as presented will have on the public interest in promoting urban infill redevelopment.

The area of greatest concern regards redevelopment and urban infill development. The standards, as developed, do not take into consideration the unique and compelling circumstances of urban infill redevelopment, as opposed to new development projects. Preliminarily, the proposed requirements make it virtually impossible to consider redeveloping an existing urban property. The 5000+ square feet of "disturbed surface" requirement is so small as to render almost every urban infill project as subject to the new standards, without any consideration to the spatial limitations of an urban location. This is particularly unfair and unreasonable considering the CRWQCB staff is recommending unnecessarily extreme standards in excess of the federal requirements. It would make far more sense to exempt urban infill redevelopment from these impractical and impossible standards.

That such an approach is being applied to a community with serious economic disadvantage raises the question of Economic Justice. In Salinas, creating an atmosphere which encourages industry diversification and better paying employment is key to our future community health. The City of Salinas has worked diligently and in good faith with CRWQCB staff on the new Development Standards. However, it is clear that the excessive nature of the proposed standards will have an unfair and destructive effect on existing and any proposed infill projects,

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(831) 757-4089 phone (831) 757-0826

and will further have a chilling effect on attracting new businesses and employment opportunities to Salinas.

Environmental goals and Economic goals must balance. The CRWQCB cannot separate itself from this responsibility. Notwithstanding the good faith efforts of Stakeholder Committee members, CRWQCB staff has intentionally refused to engage in any analysis of the economic impact of the proposed standards, and apparently feels no obligation to do so. The economic justice issues must be addressed prior to adoption of any standards.

The excessive NPDES requirements as proposed will perpetuate urban blight by prohibiting infill renewal.

In the interests of Economic Justice for all citizens of the Salinas community, the NPDES Development Standards should be waived for all urban infill development projects, regardless of size.

Respectfully submitted,

Catherine Kobrinsky Evans

Catherine Kobrinsky Evans

295 Main Street, Suite 500, Salinas, CA 93901
(831) 757-4089 phone (831) 757-0826 fax

BUILDERS EXCHANGE OF THE CENTRAL COAST, INC.

100 - 12th Street, Bldg 2861
Marina, CA 93933
831.883.3933
(Fax) 831.582.2356

June 19, 2008

Rodger W. Briggs
Executive Officer, RWQCB
Central Coast Regional Water Quality Control
895 Aerovista Place, Suite # 101
San Luis Obispo, CA 93401

Re: Revisions to Storm Water Management Program for City of Salinas

Dear Mr. Briggs,

The Builders Exchange of the Central Coast Inc. represents over 400 construction firms and businesses throughout the tri county areas of Monterey, Santa Cruz and San Luis Obispo.

We request you exempt redevelopment projects from the standards imposed on new development. Redevelopment and infill projects have little or no impacts, and therefore piling on additional and expensive standards is prejudicial and unwarranted. It is our understanding that no other jurisdictions on the Central Coast is currently requiring such. We feel the City of Salinas and the construction and building industry is being singled out with these excessive standards.

W respectfully request that redevelopment projects be exempt from the same storm water standards imposed on larger projects and new development.

Sincerely,

Gwendolyn Wells
Executive Director

Salinas Valley
CHAMBER OF COMMERCE

We are committed to. . .
Creating a strong local economy
Promoting the community
Providing networking opportunities
Representing the interests of business with government
Political action

June 17, 2008

Carl Niizawa- City of Salinas Deputy Engineer
Matt Thompson – Water Resource Control Engineer, California Regional Water Quality Control Board Central Coast Region

RE: Comment, Draft Storm Water Standards

The Salinas Valley Business Development Task Force was created in 2003 by the Salinas Valley Chamber of Commerce and is recognized by the City of Salinas. Our goal is to identify constraints within the City's development process that negatively impact economic development. The Task force is comprised of key business leaders and owners, contractors and architects, The Oldtown Salinas Association, the Salinas Valley Builder's Exchange, City staff responsible for various aspects of development, and staffed by the Salinas Valley Chamber of Commerce.

In reviewing the Draft Storm Water Standards dated May 16, 2008, the Task Force group is greatly concerned with the recommended standards for Low Impact Development. As written, the draft Standards for redevelopment will have a disproportionately onerous impact on small business owners. To encourage smart growth and remain feasible we ask that all redevelopment not be applicable to these standards. We also ask that a staff review of costs bourne by development for the NPDES program be part of any new requirement issued by the Regional Water Quality Control Board.

We are equally concerned that standards adopted in other regions of California may be applied to Salinas without consideration of the unique soil conditions, which are predominantly clay and nearly impervious. We need standards that are specific to our geology and that are technically and economically realistic and achievable.

It is the continued interest of the Business Development Task Force to work in a cooperative manner with the Regional Water Board and local government to maintain water quality and promote redevelopment and smart growth. If you have any questions regarding our comment, please feel free to contact me at 831-422-6860.

Sincerely,

Lori Atkinson
Chairperson- Salinas Valley Business Development Task Force

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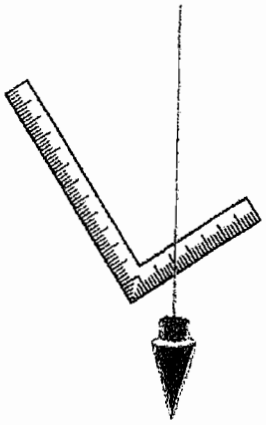

AUSONIO
INCORPORATED

Design & Construction

June 23, 2008

Lisa McCann, Environmental Programs Manager
Matt Thompson, Water Resource Control Engineer
California Regional Water Quality Control Board
Central Coast Region
895 Aerovista Place, Suite 101
San Luis Obispo, California 93401-7906

Re: Comment on Draft City of Salinas Storm Water Development Standards

Dear Ms. McCann and Mr. Thompson:

In review of the City of Salinas NPDES permit requirements, members of the City's Stormwater Stakeholders group and other community members have found a disparity in the applicability language for these standards and request clarification. It is important to have clarification of this issue so that the Stormwater Development Standards currently being developed are consistent with the City's permit requirement. It is seen that the current interpretation has resulted in the application of these standards to small redevelopment in a manner disproportionate to its relative impact.

Salinas NPDES Permit Applicability
Section 4 of the City of Salinas NPDES Permit identifies categories for application of the new development standards. These categories can be generally summarized in three groups: one, large new development (e.g., commercial developments of 100,000 sq ft or more), new project types of special water quality concerns (e.g., Gasoline Stations of 5,000 sq ft or more of impervious surfaces) and "significant redevelopment". The definition of "significant redevelopment" appears to be that of redevelopment with a net addition of 5,000 square feet; however, RWQCB staff and City of Salinas staff have taken a conservative interpretation of this term's definition to be any replacement of 5,000 sq ft or more of impervious surface. Regardless of which interpretation is used, this categorization of redevelopment treats small redevelopment on par with new development projects of significant larger size and special applications with potential water quality impacts.

Federal & State Policies for Development in the Watershed
Both state and federal guidelines regarding stormwater policies indicate a need to review development impacts on a watershed basis. In contrast to stormwater quality impacts seen in typically urban sprawl, Smart Growth policies advocated by the EPA minimize conversion of native vegetative areas in the watershed by focusing developmental growth in both in-fill

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E-MA

redevelopment and focused dense development. Redevelopment is especially encouraged by the EPA as it is seen as a means for growth without resultant impacts on water quality in the watershed. Redevelopment can actually be seen as improving water quality in the watershed if accompanied by simple water quality treatment measures such as disconnection of impervious surfaces. In terms of water quality concerns, there seems to be little logic for inclusion of small redevelopment projects with large new development and special projects of concern.

New Development Standards and Additional Requirements

Requirements in the City of Salinas Stormwater Development Standards are burdensome to small redevelopment projects. These projects, of which the majority are small businesses and non-profits, are forced by these standards to comply with the same extensive specialized and detailed stormwater engineering, calculations, and design control plans as the large new developments for which these standards were intended to affect. Additional requirements for computer modeling of stormwater runoff and volumetric control are currently being contemplated as additional requirements by RWQCB staff that would compound the burden on small business.

One new requirement is seen as perplexing. A letter from RWQCB staff dated February 15th from RWQCB staff, indicated that all redevelopment projects that replace 5,000 sq ft or more of impervious surface must show that post construction runoff match within one percent the pre-construction hydrograph. As pre-development is defined as prior to man-made disturbances, accurate prediction of the pre-development hydrograph prior to its original development would seem an impossible task for a redevelopment project.

Recommendation

The City of Salinas Development Standards currently require for all projects where the Development Standards are not applicable, to still minimize impervious surfaces and directly connected impervious surfaces, and treat stormwater by incorporating integrated management practices to collect, detain and infiltrate runnoff. As such, all redevelopment projects – even those not covered in these Development Standards - will result in beneficial water quality impacts on the watershed. As such, in order to rectify the inequity seen with the application of the stormwater requirements on small redevelopments, it is recommended that the Regional Water Quality Control Board consider and provide clarification to the definition of the term "significant redevelopment" in the City of Salinas permit.

Sincerely,

Mog Cabatu
Vice President

COMMON GROUND
MONTEREY COUNTY

June 20, 2008

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

Dear Mr. Briggs,

I am writing concerning the City of Salinas Draft Storm Water Development Standards. Common Ground Monterey County is a 501(c)(3) non-profit organization with the mission of "responsible stewardship of Monterey County resources in ensuring housing opportunities and a thriving economy while balancing human needs and the environment."

I have attended several of the "stakeholders" meetings during which the draft plan was developed, and am concerned that parts of the draft version of the Storm Water Development Standards do not appropriately balance human needs with the environment, and in fact are injurious to the residents of the City of Salinas.

The City of Salinas has a tremendous need for affordable housing. In fact, we have been named by the Wall Street Journal as the number one least affordable place to live in the United States of America.[1] In addition, the recent Demografia study named Salinas as the second least affordable place to live in the entire world.[2] For example, Census Tract 7, in the heart of Salinas, has a higher housing density than Manhattan Island. The toll on families and children is tragic.[3]

The Storm Water Development Standards, as currently proposed, would exacerbate the problem by making it much more difficult to build infill housing in the City of Salinas. For example, the threshold for triggering the regulations is a mere 5,000 square feet in area, which would include nearly all infill development in the City.

Along with many other groups, we have advocated for infill development in order to keep development pressure of the surrounding agricultural lands, which are some of the most fertile in the world. Discouraging infill by imposing overly-strict standards will inevitably result in greater

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[1] Simon, R. (2005, January 5). "The nations' least affordable housing markets." The Wall Street Journal, p. D2

[2] Cox, W. & Pavletich, H. (2008). 4th *Annual Demografia International Housing Affordability Survey: 2008.*

[3] Jordan, M. (2006 August 26). "In tony Monterey County, slums and a land war." The Wall Street Journal, p. A1

Item No. 18 Supp Attachment No. 9
July 11, 2008 Meeting
City of Salinas Stormwater
Development Standards

pressure to develop farm land.

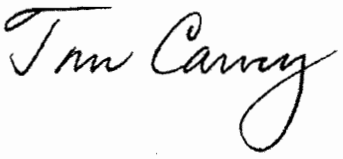
It should be noted that Salinas is unique in its geology. Numerous core drillings and well logs verify that the soils underlying the City of Salinas contain numerous clay layers. It is therefore not remarkable that Salinas was a swamp prior to agricultural development and installation of a reclamation ditch. The clay layers resist percolation, so that elaborate measures are necessary to achieve drainage. The expense of such measures as drilling, or underground percolation basins, are very expensive, and will ensure that infill development will either not take place, or will be prohibitively expensive.

Another requirement in the proposed draft Storm Water Development Standards has to do with "pre and post development" studies of storm water runoff. During one of the stakeholders' meetings, I asked what was meant by "pre-development" and was told that it meant prior to any human development. As previously mentioned, Salinas was once a swamp, with very little percolation; do the standards intend that this should once again be the case?

The requirement for pre and post development studies for every individual project, while financially beneficial to consultants and engineers, will have the effect of making housing in Salinas even more expensive than is now the case. The cost will be paid not by developers, but by the populace of Salinas, who are already living in over-crowded conditions.

We would appreciate your consideration of a more balanced Storm Water Runoff Management Plan, one that better balances human needs with the environment.

Sincerely,



Tom B. Carvey, Executive Director

Cc: Matt Thompson, CRWQCB
Lisa McCann, CRWQCB
Roger Briggs, CRWQCB
Carl Niizawa, City of Salinas

Monterey County Farm Bureau

Mailing address: P. O. Box 1449 Salinas, California 93902
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June 23, 2008

Lisa McCann, Environmental Programs Manager
Matt Thompson, Water Resource Control Engineer
California Regional Water Quality Control Board
Central Coast Region
895 Aerovista Place, Suite 101
San Luis Obispo, California 93401-7906

Re: Comments on Draft Storm Water Development Standards for the City of Salinas

Dear Lisa and Matt,

I first want to apologize for sending you my comments one day after the deadline. I am a member of the City of Salinas stakeholder group which was appointed by the City Council to provide input and advice to City Council members and City staff responsible for preparing the Draft Development Standards. Our group does not always agree on issues we discuss. However, at our last meeting on June 2nd, 2008 there was one issue that did receive general agreement. That is, the probability that infill and re-development projects, so important to helping upgrade the City, will be priced out of existence if held to the formal Development Standards now being drafted.

This letter was circulated among the stakeholder group but was only able to garner support from a few members who took the time to read, understand, ask questions and assist with language revisions. I want to thank Ken Tunstall and Ben Tiscareno for their time and efforts. Some others in our group also felt strongly about this issue but were unable to provide a clear articulation of their concern. Therefore, the following, though I have attempted to dutifully translate the discussion from our June 2nd meeting, is solely and only a comment from me as one member of the stakeholder group.

Important points to consider:

- Infill and re-development projects are necessary to improve our City and combat the over-crowdedness that now exists in some portions.
- "Significant redevelopment" in the Storm water permit (Order NO. R3-2004-0135) is creation or addition of at least 5,000 square feet of impervious surface on an already developed site. I am concerned that this very small area as trigger for full Development Standards will be a deterrent to most of the potential infill or redevelopment locations in the City.
- Low impact development methods (disconnecting impervious areas, grass swales, etc.) are already required of all projects in the draft Development Standards which will result in positive cumulative impact on water quality. However, this benefit could be lost if the full range of engineering requirements are imposed on in-fill or redevelopment projects.
- The additional engineering required by the full Development Standard requirements are likely to be cost prohibitive for small business expansions undertaken by people who are striving to improve the health and welfare of our community.

- ❖ Redevelopment projects can already be more difficult to design than new projects on undeveloped land due to constraints presented by existing infrastructure. Requiring additional engineering that will not have environmental benefits, the builder may choose not to undertake the project (which would have had low impact development elements integrated per the City's requirements) and rather invest the time and money into a new site on un-developed land instead.
- ❖ Regulatory entities including the US Environmental Protection Agency (USEPA) encourage in-fill and redevelopment projects as a means of providing housing and necessary businesses that are less likely to impact local water quality.

Proposal:
Do not require additional engineering and studies for in-fill and redevelopment projects since they begin with impervious (hardscape) surfaces and end with impervious surfaces. The Draft Development Standards already contain requirements for these types of projects to incorporate methods that will protect downstream water quality. The Regional Board should clarify the interpretation of "significant redevelopment" for use by City staff and community members seeking to conduct projects. "Significant redevelopment" should apply only to additional impervious surfaces of 5,000 square feet or more and not to replacements on already developed sites.

These comments are not intended to delay the process toward completion of the Development Standards. However, many community members that I have spoken with believe it is better to take the time to create a set of Development Standards that protect both our environmental and human resources than to approve Standards that will have un-intended consequences.

Thank you for accepting my comments.

Sincerely,

Traci Roberts

Traci Roberts, Environmental Resources Coordinator

Cc:
Dennis Donahue, Mayor, City of Salinas
Rob Russell, Deputy City Manager
Carl Niizawa, Deputy City Engineer

From: "Ken Tunstall" <kenneth@tunstallengineering.com>
To: Mthompson@waterboards.ca.gov
Date: 6/24/2008 2:34:38 PM
Subject: RE: City Stakeholder group: protect infill and redevelopment projects in City SWDS

June 24, 2008

Ms. Lisa McCann, Environmental Programs Manager and Mr. Matt Thompson, Water Resource Control Engineer,

Re: Comments on Draft Storm Water Development Standards for the City of Salinas

Dear Ms. McCann and Mr. Thompson,

As a member of the Stakeholder Group appointed by the City Council to provide input and advice to City Council members and City staff responsible for preparing the Draft Storm Water Development Standards, I have the following comments concerning the proposed City of Salinas standards. I emphasize that these are solely my comments and while other members of the Stakeholder Group may agree with me, I do not purport to represent their views on this matter.

My primary concern is the likelihood that small infill and re-development projects in the City of Salinas will be drastically impacted if held to the same Development Standards and requirements as new and larger projects. Therefore I recommend that one of the two following items be incorporated in any final decision on this matter. Of the two, I favor the second item.

1. The definition of "significant redevelopment" in the City of Salinas NPDES Permit is deemed to exist if "the creation of or an addition of at least 5,000 square feet of impervious surfaces of an already developed site", occurs.

While RWQCB staff and City of Salinas staff have taken a conservative interpretation of this term's definition to include replacement of 5,000 sq ft or more of impervious surface, I believe this to be ultra conservative and that the real intent of the definition is, or should be, that an addition of 5,000 square feet of impervious surface to that which is existing would trigger the imposition of LID requirements. Replacement of existing hardscape such as new pavement to replace failing pavement, or reroofing of an existing building exceeding 5,000 square feet in either case should not trigger LID requirements.

2. Suggested changes to the definitiion of "Significant Redevelopment".

Significant redevelopment should be defined as redevelopment of any parcel in excess of 1 acre, at which point the entire project would be subject to full LID requirements. This would allow removal of any mention of 5,000 square feet entirely, or would allow the imposition of somewhat lesser requirements than full development standards.

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Thank you for the opportunity to express my concerns.

Repectfully,

Ken

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June 23, 2008

Chair Young and Regional Water Board Members
Roger Briggs, Executive Officer
Lisa McCann, Environmental Programs Manager
Matt Thompson, Water Resource Control Engineer
California Regional Water Quality Control Board
Central Coast Region
895 Aerovista Place, Suite 101
San Luis Obispo, California 93401-7906

Via e-mail: rbriggs@waterboards.ca.gov; lmcann@waterboards.ca.gov; mthompson@waterboards.ca.gov

Re: City of Salinas Design Standards

Dear Chair Young, Board Members, Mr. Briggs, Ms. McCann, and Mr. Thompson;

Thank you for the opportunity to comment on the Salinas Design Standards (Standards). We have reviewed the Standards, all appendices, and The Low Impact Development Center (LID Center) comments to the Standards. In addition, the Monterey Coastkeeper has been an active stakeholder on the Salinas NPDES Committee formed by the Salinas City Council in July of 2007. We are very familiar with the Standards and would like to offer the following comments.

The document is incomplete

We must begin by pointing out that the Standards are incomplete. As noted by the LID Center, the waiver program (Section 1.4.6) contains the statement, "The City is currently in the process of developing a Waiver Program for approval by the Regional Board." It is impossible to comment on the conditions of this important *waiver* program as details are not given.

Further, Appendix E (Examples of Sizing Flow-Based and Volume-Based BMPs) is entirely missing with the note, "To be developed."

Omissions

The Standards also appear to have strategic omissions. According to the State Board, "The goal of LID is to mimic a site's predevelopment hydrology by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to the source of rainfall." To accomplish this goal, the pre-development condition must be studied in order to provide a baseline. The critical requirement, methodology, and discussion of the NPDES Permit Attachment 4 stipulation (Attachment 4, page 6, number 5): "Require developers to prepare

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and submit studies analyzing pre- and post- project pollutant loads (including sediment) and flows..." is missing.[1] Specifically, no pre- development site-specific hydrology study is required by the Standards. The General Performance Criteria on page 1.5.1 simply states, "All site designs shall establish storm water management practices to: *Minimize* [emphasis added] the rate, volume and pollutants of storm water runoff..." No goal is stated. The Standards require developers to submit a Storm Water Control Plan (SWCP) and Section 1.6.2 Minimum SWCP Elements states: "3. Calculations. Hydrologic design calculations for the *development conditions* [emphasis added] for the project design specified in these requirements shall include..." This section points to Appendix D, "Guidance for Preparing a Stormwater Control Plan."[2] The SWCP guidance appears to entirely omit pre-development conditions and states, "For each BMP used provide... [maps, tables, and calculations]" The appendix refers back to "Step 2 of the planning process" but no page number is given and we cannot find a planning process Step 2.

It is also critical to note that the final SWCP is not required until the grading and construction permit application is submitted (page 1-10). A "conceptual SWCP" is required during the design phase, but there is no discussion of what this "conceptual SWCP" should include or consider. By the time the grading and construction permit application is submitted, the developer has invested heavily in the project and will be most reluctant to make site design changes or reduce the footprint of the project. *As required in the NPDES permit, a study defining pre-project pollutant loads and hydrology must be required.* Without this study, it is impossible to require or design effective LID. *Further, the Standards must clearly state the goal—early and often -- of maintaining pre-project hydrology.*

Due to the previously mentioned omission, the requirement to match the pre-development hydrograph within 1-percent is also omitted. This requirement is stated in the RWQCB letter (February 15, 2008) to all Phase 2 MS4 municipalities. It is our understanding that a Phase 1 permit cannot require less than Phase 2 permits. It is also our understanding this was communicated, months ago, to the City. The City has included the standard for "effective impervious surface" but has ignored the requirement to match the pre-development hydrograph. *The Standards should require that new and redevevelopment projects that create and/or replace 5,000 square feet or more of impervious surface, the post-construction runoff hydrographs shall match within one percent the pre-construction runoff hydrographs, for a range of events with return periods from 1-year to 10-years* (text taken directly from February 15, 2008 Phase 2 letter).

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[1] The statement "analyzing pre- and post- project pollutant loads (including sediment) and flows..." can be read two ways: Does "flows" refer to pollutants or does "flows" refer to volume and velocity (hydrology) of storm water? We read it as referring to the volume and velocity of storm water as it is obvious that this information would be needed even to measure pollutant loads. And, the hydrology and hydrograph would be needed to comply with the intent of the State Board. This matter is further clarified by the Regional Board's December 23, 2005 letter to Salinas on MEP that states, "The overriding concern in the Salinas Permit and EPA guidelines is reducing urban impacts to receiving waters by maintaining pre-development hydrology, which in turn minimizes urban pollutants reaching waterways." Pre-project hydrology is obviously required and requirement 5 on page 6 in Attachment 4 is the place where it is called out.

[2] We were directed to this section by the City's consultant Kennedy-Jenks when we asked about the pre-development hydrology. At the same meeting we were told by City staff member Carl Niizawa that no pre-development study was required.

Likewise, the February 15 letter requires, "For projects whose disturbed project area exceeds two acres, preserve the pre-construction drainage density (miles of stream length per square miles of watershed) for all drainage areas serving a first-order stream or larger, and ensure that post-project time of concentration is equal or greater than pre-project time of concentration." *The requirement for drainage density and time of concentration should be included in the Standards.*

Pre-development conditions

A great deal is already known about the existing conditions in and around Salinas to help guide developers and the City. The Kennedy-Jenks July 2007 draft development standards included the following very informative maps:

- Soil drainage classifications
- Runoff and infiltration
- Saturated hydraulic conductivity
- Depth to restrictive clay layer
- Available soil water holding capacity
- Soil clay content

These maps indicate that there are areas, especially within the future growth area, with relatively pervious soils and a deep (greater than 10 foot) restrictive layer. *These maps should be included as an appendix to the Standards.*

Infiltration, groundwater depth, and soil infiltration capacity

As noted by the State Board, "The goal of LID is to mimic a site's predevelopment hydrology by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to the source of rainfall." The Standards "Considerations for Designing Infiltration Systems" at 4.3.2.4 is in direct contradiction of these goal and states, "The minimum separation required in these standards for direct storm water infiltration devices is 10 feet from the bottom of the device to the seasonal high groundwater level. Indirect stormwater infiltration methods, such as bioretention basins that filter urban runoff through amended surface soils and vegetation, are allowed to have less separation (5 feet)..." Standards Table 4.3 cites CASQA as having similar design standards, but in fact, CASQA handbook page SD-20, 2 of 10, states that depth to seasonal high groundwater can be as little as 4 feet. Table 4.3 also cites Contra Costa as having similar standards, but in fact Contra Costa (Contra Costa Clean Water Program Table C-2) appears to have no depth to groundwater restriction for indirect infiltration. Even within the Salinas' Standards there appears to be contradictory statements. On Standards page 1-9, restriction 1.5.6 states, "There must be a designed separation of 3 feet between the bottom of a proposed stormwater infiltration practice and the seasonally high groundwater level."

The goal is to put water back into the soil for infiltration and treatment: *The Standards should require infiltration in any location where pollution of groundwater is not a concern.*

Restriction 2, 1.5.6 states, "Unless it can be demonstrated that existing site soils have infiltration rates that are .5 inches/hour or greater, underdrain systems or equivalent will be required to adequately drain flow and volume based BMPs." *The Standards should require exactly the opposite burden of proof: Unless soils can be proven to be impermeable or there is the potential for groundwater pollution, infiltration BMPs should be the preferred.*

Infiltration potential and depth to restrictive layer

Inclusion of the map series mentioned above would show that the Salinas Future Growth Area, according to Kennedy-Jenks Development Standards Plan, July 2007 (pages 4-4 through 4-16), has:

- Soil Drainage Classification: Well drained soils
- Runoff and infiltration potential: Moderate runoff and infiltration potential
- Saturated Hydraulic Conductivity: High K values with good storm water infiltration potential
- Available Soil Water Holding Capacity: Moderate AWC values typical of soils consisting of mixes of sands, silt, and clay.
- Soil Clay Content: 15-25% clay with moderate textures such as loams, sandy loams, and clay loams.
- Depth to Restrictive Clay Layer: Shallow clay layers may occur at depths shallow enough to present a barrier to storm water infiltration.

The depth to the restrictive clay layer is the single factor limiting infiltration. Drill logs show that in and adjacent to the Future Growth area the restrictive layer ranges from a shallow 2 feet to a "greater than 20 foot" depth. There are areas where infiltration is certainly possible and preferable by any metric (3 feet or 10 feet to seasonal high ground water). Salinas does not want these informative maps included in the Standards and instead prefers the Standards to default to a requirement for underdrains as noted above. A 'global' requirement for underdrains and lined treatment BMPs (as consistently illustrated throughout the Standards) will certainly drive up the cost, increase developer resistance, and circumvent the good intent of LID.

Given that infiltration is the goal and potential for infiltration exists, effort should be made to determine exactly where infiltration is practical. The Standards at 1.5.2, Site Design Planning, 4. Soils, states that "for all development sites greater than 20 acres in total size, soil percolation tests and soil borings to determine the depth of the clay layer shall be required." Twenty acres is far too great an area. *The Standards should require any new development greater than two acres, or in an area where the depth to restrictive layer is unknown, to conduct percolation tests and to determine the depth to any restrictive layer.*[3]

[3] The requirement for both perc tests and soil borings was discussed by the Salinas NPDES Stakeholders Committee. Numbers were thrown out as 'straw men' until better numbers could be found by reviewing other Design Standards Plans. Other plans are far more fine-grained than 20 acres (see Contra Costa).

Readability

The plan is far too complex and disorganized. The plan continually requires referencing to other sections and documents. As noted above, the plan is sometimes contradictory and sometimes refers to sections that do not seem to exist. As noted by The LID Center, there are major inconsistencies throughout the Standards and there are redundant sections.

The Regional Board staff and stakeholders (beginning in November 2007) have consistently pointed Salinas toward more clearly written LID standards such as Contra Costa's. Salinas has the clear advantage that other municipalities' plans are in the public domain. Salinas's staff has stated that Contra Costa has similar soils, similar clay layers, and they have toured Contra Costa LID sites to see and understand their performance.

The Contra Costa Standards are especially strong on the approval and permitting process. This clarity works in favor of the developers AND the entire community. With clarity come efficiency and fewer delays.

The Salinas Standards should be rewritten and formatted similar to Contra Costas's - a proven success story. In the interim, until Salinas develops adequate LID standards of their own, Contra Costa standards should be imposed upon Salinas. In addition, any requirements found in the RWQCB's February 15 letter to Phase 2 MS4s not contained in the Contra Costa Standards should also be required.

The Low Impact Development Center Review and "Important to Address" changes

The Low Impact Development Center review focused on answering the specific questions posed by RWQCB staff. Due to the nature of this review, it lacked some of the detail we have tried to fill-in here. We concur with all the "important to address" required changes and hope they will be used, at some point, to improve the Salinas Standards. We will not reiterate those required changes; very simply, we concur.

We would prefer that the submitted Standards were a much better document. But regrettably, we find the LID Center's required changes are so broadly stated and sweeping - by necessity - that if they were incorporated into the Salinas Standards we have little or no idea what the final document would look like. The LID Center's comments, plus ours would lead us to an entirely new document.

In conclusion

The Salinas NPDES permit was approved on February 11, 2005. Salinas was required to submit Design Standards one year after that date. Today, Salinas is nearly two and a half years late. The Regional Board has spent many tens of thousands of dollars to encourage and help Salinas comply. Instead, Salinas has been recalcitrant and has in fact publicly used both the Regional Board and Kennedy-Jenks as excuses. Many of the delays in receiving the July 2007 Kennedy-Jenks report were created by Salinas. Many people have spent hundreds of hours trying to help. And here we are three and a half years after the approval of the permit with no Design Standards.

As stated above: *The Salinas Design Standards must clearly articulate the goal of new development matching the pre-development hydrologic and pollutant discharge condition.*

The Standards must clearly require a study of pre-project hydrologic conditions. Infiltration of storm water must be stated as the required preferred option for dealing with storm water. Percolation and soil bore testing must be fine-grained enough to identify infiltration opportunities. The Salinas Standards should be rewritten and formatted similar to Contra Costa - a proven success story. In the interim, until Salinas develops adequate LID standards of their own, Contra Costa standards should be imposed upon Salinas. In addition, any requirements found in the RWQCB's February 15 letter to Phase 2 MS4s not contained in the Contra Costa Standards (Effective Impervious Area not greater than 5%, hydrograph matching within 1%, drainage density and time of concentration matching pre-project) should also be required.

Thank you for the opportunity to comment.

Sincerely,

Steve Shimek
Monterey Coastkeeper
Monterey Coastkeeper is a program of The Otter Project

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June 23, 2008

Via electronic mail and U.S. mail

Executive Officer and Members of the Board
Central Coast Regional Water Quality Control Board
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401

Re: Comments on City of Salinas Stormwater Development Standards

Dear Mr. Briggs and Members of the Board:

We write on behalf of the Natural Resources Defense Council and Monterey Coastkeeper in response to the latest document released by the City of Salinas, "The City of Salinas Stormwater Development Standards for New Development and Significant Redevelopment" ("Stormwater Development Standards"). Based on Salinas's NPDES permit and accompanying documents, the Stormwater Development Standards must include the specific, enforceable requirements for low-impact development ("LID") implementation that were lacking in the City's previous submissions to the Regional Board. (*See* City of Salinas Stormwater Management Plan, at 4-24 (April 8, 2008 draft) ("SWMP"); City of Salinas Stormwater Permit, NPDES Permit No. CA0049981, Attachment 4, at 7 (Feb. 11, 2005) ("Permit").) Our last several comment letters described this problem in great detail, and the lack of specific, enforceable LID requirements in Salinas's prior submissions rendered the City's stormwater program entirely inadequate under federal law. An administrative appeal of the Regional Board's unlawful approval of Salinas's SWMP is now pending before the State Water Resources Control Board.

The Stormwater Development Standards, as currently written, represent an improvement from the other documents submitted by Salinas. Nonetheless, they are not yet adequate to ensure that Salinas's stormwater program reduces pollutants to the maximum extent practicable ("MEP"), as required by the Clean Water Act. The Stormwater Development Standards need significant tightening and clarification, particularly those provisions which appear to set forth the most basic standards that the City designed presumably to assure compliance with its Permit: the "General Performance Criteria for Stormwater Management." (§ 1.5.1.) These criteria establish the numeric standards that site designs must achieve to reduce pollutant loading, impervious area coverage, and adverse hydromodification impacts. As such, these criteria are the bedrock of any program to implement LID at new development and redevelopment sites, and they must include robust requirements to meet the MEP standard.

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To provide the necessary water quality benefits, the General Performance Criteria and the overall document must be revised in the following ways, as elaborated below:

- The numeric sizing criteria should be required for all site designs, not only for Integrated Management Practices (IMPs) and structural treatment controls;
- To prevent adverse hydromodification impacts, both peak flow rates *and* volumes should be controlled and appropriate design storm criteria must be established;
- The factors for determining the impracticability of meeting the 5% Effective Impervious Area ("EIA") limitation should be clearly described so that the City Engineer can apply the waiver option impartially and ensure that projects receiving waivers still meet the MEP standard, and so that deviations from the 5% limitation are transparent and subject to review by the Regional Board and interested stakeholders; and
- The criteria should specify that, in addition to infiltration, stormwater may also be captured and reused onsite to reduce pollution and stormwater discharge rates and volumes.

I. Numeric Sizing Criteria Should Be Applied to All Site Designs.

Section 1.5.1 currently requires that site designs "[m]inimize the rate, volume and pollutant loading of stormwater runoff using the LID Site Design Planning techniques presented [in the Stormwater Development Standards manual]." (§ 1.5.1(1).) However, this provision applies the numeric sizing criteria in Section 4.4 only to Integrated Management Practices ("IMPs") and to structural treatment controls. This means that site designs other than IMPs and structural treatment controls would not have to be hydraulically sized, and the list of IMPs is not all-inclusive of LID techniques (capture and reuse systems, for instance, are not described, as discussed below). Failing to apply numeric sizing criteria to *all* site designs defeats the purpose of this provision because it would allow developers to construct stormwater treatment features without calibrating them to the necessary treatment capacity. There is no basis in fact, or in the record, that supports this limitation on the numeric sizing criteria's applicability.

Section 1.5.1(1) should be rewritten to apply the numeric sizing criteria to all techniques used to mitigate stormwater runoff. We suggest the following language:

> *All site designs (whether landscape-based or structural) shall be sized according to the Numeric Sizing Criteria presented in Section 4.4.*

This revision will ensure that developers who choose LID treatment methods other than the IMPs listed in the Stormwater Development Standards will size these features properly. Without proper sizing for all site designs, Salinas's program will not reduce pollution to the maximum extent practicable.

The lack of numeric sizing criteria also plagues the description of how impervious surfaces can be rendered "ineffective" for purposes of meeting the 5% EIA limitation. Footnote 1 on page 1-6 of the Stormwater Development Standards notes that "[i]mpervious surfaces that drain first to pervious areas (e.g., landscaping or porous pavements) are not considered Effective Impervious Areas." This description is inadequate because it does not specify that the pervious areas receiving impervious runoff must be properly sized to accommodate design storm water volumes/flows. Furthermore, impervious surfaces that drain to a stormwater capture and reuse system (for instance, a cistern combined with a greywater recycling system) should not be considered Effective Impervious Areas because they do not drain to the storm sewer.[1] However, with the current language, such surfaces would be considered Effective Impervious Areas since capture and reuse systems do not constitute "pervious areas."

The footnote should instead read as follows:

Impervious surfaces that drain first to pervious areas (e.g., landscaping or porous pavements) or to stormwater capture and reuse systems are not considered Effective Impervious Areas. Pervious areas or stormwater capture and reuse systems must be hydraulically sized according to the numeric sizing criteria in Section 4.4. Impervious surfaces may be considered "disconnected" and therefore "ineffective" only if all runoff (up to the water quality design storm) from such surfaces is infiltrated or harvested for reuse.

Without these changes, the 5% EIA limitation will not necessarily result in the intended water quality benefits. The provision and footnote, as currently written, are scientifically and legally unsound because their failure to address sizing criteria and all potential LID measures undermines the technical value of the EIA concept, prevents the EIA limitation from meeting the MEP standard, and ill-advisedly restricts the universe of LID techniques that can be used to satisfy the EIA limitation.

II. The City's Hydromodification Control Criterion Needs to Address Peak Flow Volumes and Hydrograph Matching.

Section 1.5.1(5) establishes a vague hydromodification control standard that cross-references Section 5. It is unclear, however, what basic performance criterion would apply to development projects. There are two principal gaps in the current provision. First, it fails to

[1] The failure to consider capture and reuse (through cisterns, rain barrels, and greywater recycling systems) as a LID technique is a major oversight in the Stormwater Development Standards. In locations where infiltration in infeasible, capture and reuse systems may be the most effective means of reducing stormwater pollution and adverse hydromodification impacts, while also reaping other benefits such as water and cost savings. Even where infiltration is feasible, capture and reuse is a desirable technique for its non-water quality-related benefits. See Section IV, below, for our recommendations on this issue.

require control of peak flow *volumes*, as well as peak flow rates. In order to avoid adverse hydromodification impacts, it is essential that projects limit both peak flow rates *and* volumes. Other sections of the Stormwater Development Standards even acknowledge this fact:

> Conventional development and storm drainage system designs typically increase the rate, volume and pollutant loading of urban runoff, which can result in environmental impacts to local surface water resources. (P. 2-2.)

Second, Section 1.5.1(5) fails to establish baseline conditions and an appropriate range for design storm performance criteria. Merely requiring that developments "control" stormwater runoff is insufficient to protect receiving waters from the adverse impacts of hydromodification, which is necessary to meet the Clean Water Act's MEP standard. Instead of the current language, this provision should require that post-development stormwater runoff not exceed pre-development runoff from the channel-forming event (*e.g.*, 10% of the pre-development two-year peak flow) up to at least the 10-year pre-development peak flow.

Given the preceding concerns, we recommend the following hydromodification control standard as a replacement for Section 1.5.1(5):

> *Prevent adverse hydromodification impacts by controlling stormwater discharge such that post-development peak flow rates and volumes do not exceed pre-development peak flow rates and volumes from 10% of the pre-development two-year peak flow up to the 50-year pre-development peak flow.*

Without this revision, the Stormwater Development Standards will not contain a legally adequate hydromodification control performance criterion.

III. The Stormwater Development Standards Should Include Specific Guidance for the City Engineer to Use When Determining the Impracticability of Meeting the 5% EIA Limitation, and Waivers or Other Exceptions Should be Subject to Public Review.

The General Performance Criteria, as drafted, include no description of what factors could render compliance with the 5% EIA limitation "impracticable." Rather, the City Engineer has unbridled discretion to define impracticability: "Plans for Effective Impervious Area in excess of 5% of the total project area will only be approved if the applicant demonstrates, to the satisfaction of the City Engineer, that achievement of such is impracticable." (§ 1.5.1(2).) This broad grant of authority is impermissibly vague and must be restricted so that the EIA limitation is waived only in cases of true impracticability.

It appears that Salinas is developing the criteria for a waiver program (according to Section 1.4.6), but this program does not yet exist, and it is unclear whether this program will encompass waivers of the EIA limitation. If it will encompass such waivers, Section 1.4.6 should be cross-referenced in Section 1.5.1(2) so that it is clear what impracticability criteria will

apply to EIA waivers. The Regional Board must also ensure that the waiver program, regardless of its relationship to the EIA limitation, explicitly defines impracticability/infeasibility in a manner that ensures attainment of the MEP standard for projects receiving waivers. If Salinas's Regional Board-approved documents fail to do this, then the actual control measures that will be imposed by the City to meet the MEP standard are not now known, which means that they are not subject to public review or approval by the Regional Board. These provisions must be subject to review, as must the actual implementation of the City's waiver program.

IV. The Stormwater Development Standards Should Place More Emphasis on Encouraging Capture and Reuse Technologies As a Means of Complying with the LID Requirements.

As currently written, the Stormwater Development Standards scarcely mention capture and reuse technologies. The only references to such technologies are buried in a discussion of "LID Designs for Roofs" (p. 3-3), and these references amount to nothing more than admonitions to be aware of the potential for vector breeding in rain barrels and cisterns. In many locations, however, capture and reuse systems (*i.e.*, rain barrels or cisterns, possibly in combination with greywater recycling systems) can provide the best option for preventing stormwater runoff and for meeting treatment and hydromodification goals, especially at severely constrained sites or where non-infiltrative soils render infiltration difficult or infeasible.

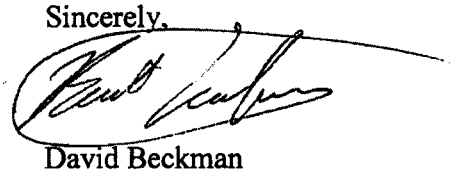
Capture and reuse systems represent a critical LID Integrated Management Practice, and the City should include in Section 3 a detailed description of—and a set of specifications for—these technologies. The Stormwater Development Standards document should also reference capture and reuse options wherever appropriate, including, for instance, in Section 1.5.1(4) where capture and reuse should be mentioned as a favorable alternative when infiltration is not possible.

V. Conclusion.

While the City of Salinas's Stormwater Development Standards could impose some numeric, enforceable requirements on development projects—which were entirely lacking in previous submissions to the Regional Board—the document currently before the Board still needs critical changes to meet the Clean Water Act's MEP standard. As detailed above, the most important changes involve tightening and clarifying the General Performance Criteria because these criteria are the overarching, enforceable standards for stormwater management.

If these criteria are not sufficiently stringent and unambiguous, the document will fail to require the federally mandated level of pollution reduction and receiving water protection. We urge the Regional Board to take decisive action on these issues now as Salinas is already years late in implementing its NPDES permit and LID standards.

Sincerely,



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July 27, 2007

Rob Russell
City Engineer
City of Salinas
200 Lincoln Ave.
Salinas, CA 93901-2639

RE: CITY OF SALINAS STORMWATER PERMIT, ATTACHMENT 4 CLARIFICATION

Mr. Russell;

At the July 2007 Low Impact Development (LID) Workshop, we discussed the question of what projects are required to implement the LID standards. The Stormwater Permit, Attachment 4, section III.c.i., addresses this:

> *Priority Development Project Categories*: Development Standards requirements shall apply to all new development and significant redevelopment projects within the Permittee's jurisdictional authority and falling under the priority project categories listed below. The term "significant redevelopment" is defined as the creation or addition of at least 5,000 square feet of impervious surfaces on an already developed site. Significant redevelopment includes, but is not limited to expansion of a building footprint, or replacement of a structure; replacement of impervious surface that is not part of a routine maintenance activity; and land-disturbing activities related to structural or impervious surfaces. Where significant redevelopment results in an increase of less than 50 percent of the impervious surfaces of a previously existing development, and the existing development was not subject to Development Standards, the BMP design standards discussed below apply only to the addition, and not to the entire development. Priority Development Project Categories are listed below.

We realize that the wording from the permit could be interpreted in several ways, therefore we would like to clarify. The primary driver is described in the permit's sentence, *"The term "significant redevelopment" is defined as the creation or addition of at least 5,000 square feet of impervious surfaces on an already developed site."* The Permit's overall objective is water quality protection. Water quality is threatened by increased impervious surface, which restricts plants and soil from filtering pollutants, and increases stormwater runoff rates and volumes. Therefore, the Permit applies a 5,000 square foot "trigger" that indicates when LID must be applied. The next sentences in the section ("Significant redevelopment includes...") is intended to define and give examples of redevelopment. Reworded, if a developer decides to replace

one impervious surface with another and will increase the impervious cover on that site by 5000 sq. ft., then the LID standards would apply.

Additionally, we would like to clarify a verbal statement made by a Kennedy/Jenks Consultants staff during the July 2007 LID Workshop. The consultant incorrectly asserted that LID standards only applied to the newly created portion in a redevelopment scenario. However, the Permit does require LID be applied to the entire project if the redevelopment impervious-area meets or exceeds 50 percent of the original impervious area.

We hope that the information in this letter helps clarify the requirements of the Salinas Permit. If you have questions, please contact Donette Dunaway at (805) 549-3698 or ddunaway@waterboards.ca.gov.

Sincerely,

for Lisa H McCann

Roger W. Briggs
Executive Officer

Cc: Vanessa Vallarta, City Attorney
Carl Niizawa, Deputy City Engineer

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complexes, shopping malls, hotels, office buildings, public warehouses, and other light industrial facilities.

3. Automotive repair shops. This category is defined as a facility that is described by one of the following Standard Industrial Classification (SIC) codes: 5013, 5014, 5541, 7532-7534, 7536-7539, where the total impervious area for development is 5,000 feet or more.

4. Restaurants. This category is defined as a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812) and has 5,000 or more feet of impervious area.

5. Hillside developments 5,000 square feet or more of impervious area. This category is defined as any development that creates 5,000 square feet of impervious surface in area with known erosive soil located in an area with natural slopes having a twenty-five percent or greater grade.

6. Parking lots exposed to rainfall that are 5,000 square feet or more, or with 25 or more parking spaces. This category is defined as uncovered impervious area for the temporary parking or storage of motor vehicles used personally, for business, or for commerce.

7. Street, roads, highways, and freeways. The category includes any paved surface five acres or greater used by automobiles, trucks, motorcycles, and other vehicles.

8. Retail Gasoline Outlets. "Retail Gasoline Outlet" is defined as any facility engaged in selling gasoline with 5,000 square feet or more of impervious surface.

All significant redevelopment projects are also required to comply with the design, construction and maintenance process requirements of these Stormwater Development Standards. "Significant Redevelopment" is defined as the creation or addition of at least 5,000 square feet of impervious surfaces on an already developed site. Where significant redevelopment results in an increase of less than 50% of the impervious surfaces of a previously existing development, and the existing development was not subject to the Stormwater Development Standards, the Development standards only apply to the addition, not to the entire development.

For projects for which these Stormwater Development Standards are not applicable, the applicant will follow the usual City process for permitting and shall be required to:

- *Minimize impervious surfaces, directly connected impervious surfaces and treat stormwater by incorporating IMPs that collect, detain, and infiltrate runoff.*

- *Design efficient landscaping to reduce runoff irrigation, promote surface infiltration, and minimize the use of fertilizers and pesticides that can contribute to water pollution.*

1.4.2 Permit Required

No land owner or land operator shall receive any building, grading or other land development permits required for land disturbance activities without first meeting the requirements of these

Redevelopment Examples

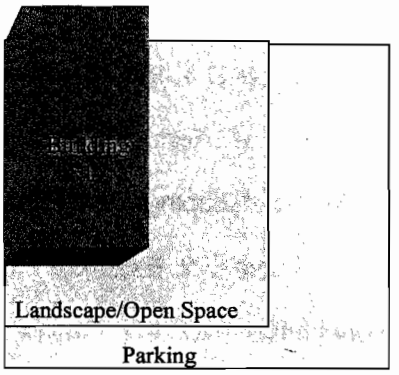
Pursuant to Order No. R3-2004-0135, Attachment 4, Section C.1 (p. 7 of Attachment 4), redevelopment projects have specific impervious square footage and percent of total site thresholds that govern whether Development Standards apply to a portion or all of the site. Examples of various redevelopment project scenarios and the portions of the project that would be subject to Development Standards for storm water BMPs depending on the proportion of the project site that is being redeveloped are also shown and described on the figure below.

Redevelopments that could increase the impervious surface could include remodel, tenant improvement, or new building to replace an existing building.

EXAMPLE:REDEVELOPMENT PROJECTS
(Not To Scale)

ORIGINAL SITE DESCRIPTION

Building 1 = 15,000 ft^2
Parking = 9,500 ft^2
Landscaping = 7,500 ft^2
Open Space = 20,000 ft^2
Total Site = 52,000 ft^2
Total Impervious Surface = 24,500 ft^2

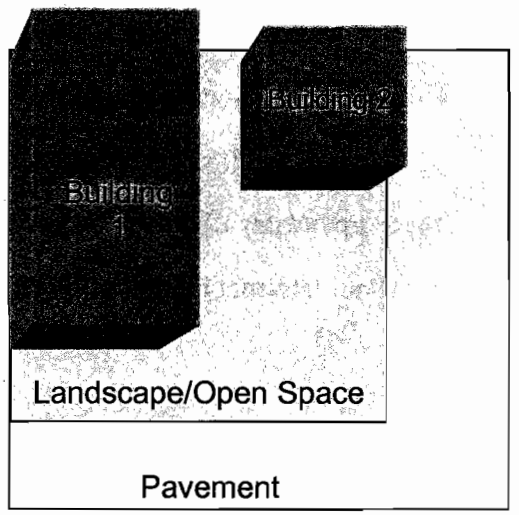


EXAMPLE A

Redevelopment of Site with:
New Building 2 = 2,000 ft^2 and
Increase of Parking by 2,000 ft^2
Total of new impervious surface added is 4,000 ft^2
Total Site Impervious Surface = 28,500 ft^2

Added impervious surface after Redevelopment is <5,000 ft^2, therefore;

Site is NOT subject to City Develop Standards Plan requirements. However, site developer is encouraged to minimize impervious areas and to drain storm water to vegetated areas as much as possible.

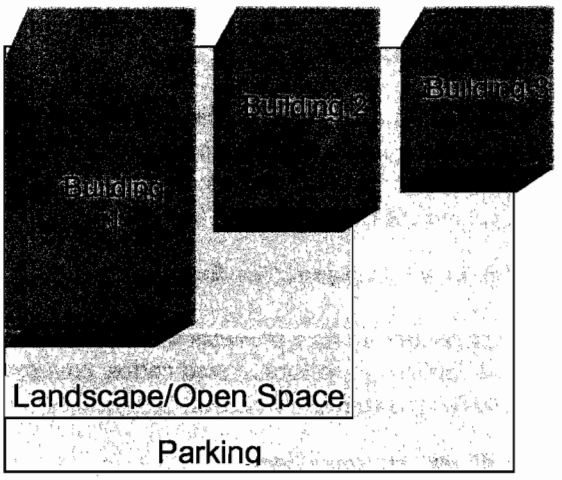


EXAMPLE B

Redevelopment of Site with:
Existing Building = 15,000 ft^2
New Building 2 = 10,000 ft^2 and
New Building 3 = 7,000 ft^2 and
increase of Parking to 11,500 ft^2 and
Total Site Impervious Surface= 43,500 ft^2

Total Redevelopment is > 5,000 ft^2 and therefore,

Entire 43,500 ft^2 of original site is subject to Development Standards storm water BMPs



EXAMPLE C

Redevelopment of Site with:

Original Building = 15,000 ft^2

New Building 2 = 6,000 ft^2 and

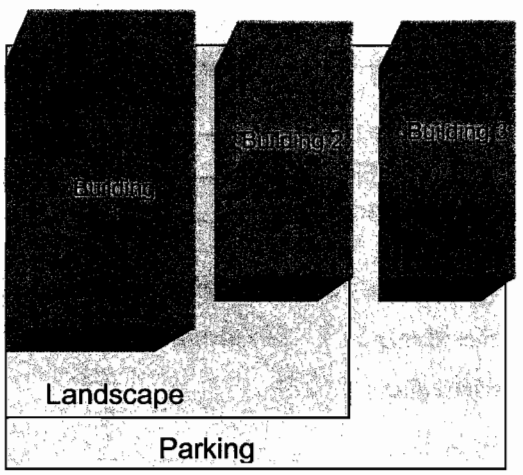
New Building 3 = 6,000 ft^2 and

Parking to 9,500 ft^2 and

Total Site Impervious Surface= 38,500 ft^2

Total Redevelopment adds 12,000 ft^2 impervious area, but is <50% of the existing impervious area, therefore,

Only the 12,000 ft^2 of new impervious area added to the site is subject to Development Standards for storm water BMPs.



IMPERVIOUS SURFACE DATA FORM

What Projects Apply?

All applicants for projects adding, or replacing 5000 sq. ft. or more of impervious surface on the project site or adding impervious surface per NPDES Priority Development criteria for new development projects must fill out this worksheet and submit it to the Engineering Services Section at the City of Salinas Permit Center prior to the issuance of a building permit.

What is an Impervious Surface?

An impervious surface prevents the infiltration or passage of water into the soil. Impervious surfaces include building rooftops, paved patios, covered patios, driveways, parking lots, paved walkways, sidewalks and streets.

For More Information

For more information regarding selection of Best Management Practices for stormwater pollution prevention or stormwater treatment contact: Dale Rosskamp, P.E., Senior Civil Engineer, City of Salinas Permit Center, 831-758-7295

Project Name: _____ **APN #**__ __ __ - __ __ - __ __ __

Applicant Name: _____

Project Location: _____
(address)

1. **Project Type (Check all that apply):**

   ☐ Residential ☐ Commercial ☐ Industrial ☐ Public

2. **Project size:**

   a. Site size _____ sq. ft.

   b. Existing impervious surface area (includes land covered by buildings, sheds, patios/covers, parking lots, streets, sidewalks, paved walkways and driveways)_____ sq. ft.

   c. Impervious surface area created, added, or replaced_____ sq. ft.

   d. Total impervious surface area (new + existing)_____ sq. ft.

   e. Percent increase/replacement of impervious surface area _____ % c/b(100%)

   f. Estimated area of land disturbance during construction _____ sq. ft. (including clearing, grading, or excavating).

If impervious surface area added or replaced is > 5,000 sq. ft, then low impact development measures and practices as described in the City of Salinas Development Standards apply.

Linda S. Adams
Agency Secretary

California Regional Water Quality Control Board

Central Coast Region

Arnold Schwarzenegger
Governor

Internet Address: http://www.waterboards.ca.gov/centralcoast
895 Aerovista Place, Suite 101, San Luis Obispo, California 93401-7906
Phone (805) 549-3147 • FAX (805) 543-0397

February 15, 2008

«AddressBlock»
«AgencyMailingAddress»
«AgencyCity», CA «AgencyZip»

«GreetingLine»:

Notification to Traditional, Small MS4s on Process for Enrolling under the State's General NPDES Permit for Storm Water Discharges

Introduction

As Executive Officer of the Regional Water Quality Control Board, Central Coast Region (Water Board), I am writing to notify you of the Water Board's revised process for enrolling traditional, small Municipal Separate Storm Sewer Systems (MS4s) under the State's General Permit No. CAS000004 (General Permit). Water Board staff have identified you as an entity that owns or operates an MS4, so you must enroll in the General Permit and develop and implement a Storm Water Management Program (SWMP). This letter describes the SWMP approval process and our expectations regarding the content of your SWMP to comply with the General Permit, and provides you with the schedule Water Board staff intend to follow for review of your SWMP and enrollment of your MS4 under the General Permit. Staff will communicate further with you as your enrollment cycles begin, to establish specific schedules for the five phases leading to enrollment.

Water Board staff will evaluate your SWMP for compliance with the General Permit requirements, including the Maximum Extent Practicable standard, and as appropriate will approve the SWMP and enroll you in the General Permit. If requested, Water Board staff will schedule a public hearing before the Central Coast Water Board for consideration of an individual SWMP.

The Water Board's revised enrollment process is a fundamental shift from the way we have reviewed and approved SWMPs to date. The revised enrollment process eliminates the multiple SWMP review/edit iterations and negotiations that characterized our previous approach. For SWMPs that do not meet the schedule and content described here for General Permit compliance, staff will draft specific resolutions or individual permits for Water Board consideration that will protect water quality, beneficial uses, and the biological and physical integrity of watersheds.

Enrollment Process and Schedule

Water Board staff grouped the 24 remaining un-enrolled traditional MS4s into eight enrollment cycles (Table 1). Each cycle spans a period of 33 to 38 weeks and concludes, on the projected date, with Water Board approval of individual SWMPs and enrollment of the MS4s under the General Permit.

Each enrollment cycle includes five time-limited phases requiring specific actions by both Water Board staff and the MS4 (Table 2). The precise timing and duration of each phase is subject to

change; Water Board staff will develop specific schedules at the commencement of each enrollment cycle.

Table 1: Enrollment Cycles for Attachment 1 and 2 MS4s

Cycle	MS4 Group	Group Members	Projected Start Date for Enrollment Cycle	Projected Executive Officer SWMP Approval	Projected Board SWMP Approval [1]
1	Santa Maria/Lompoc	Santa Maria Lompoc	Jan. 22, 2008	July 28, 2008	Sept. 5, 2008 San Luis Obispo
2	Coastal Santa Barbara County	Goleta Carpinteria Santa Barbara UC Santa Barbara	Jan. 29, 2008	September 2, 2008	Oct. 17, 2008 Santa Barbara
3	Santa Cruz Mountains and Coast	Santa Cruz County Capitola Soquel Aptos Ben Lomond Boulder Creek Live Oak Felton Coralitos Watsonville City of Santa Cruz Scotts Valley UC Santa Cruz	Mid February 2008	October 20, 2008	Dec. 5, 2008 San Luis Obispo
4	Coastal San Luis Obispo County	Arroyo Grande Grover Beach Pismo Beach Oceano Morro Bay Baywood – Los Osos	Mid April 2008	January 2009	2009 – 1st Quarter San Luis Obispo
5	Upper Salinas	King City Templeton Atascadero	Early June 2008	February 2009	2009 – 1st Quarter Salinas
6	City of San Luis Obispo	City of San Luis Obispo	Early September 2008	April 2009	2009 – 2nd Quarter San Luis Obispo
7	Upper Pajaro	Gilroy San Martin Santa Clara	Early November 2008	August 2009	2009 – 3rd Quarter Watsonville
8	Santa Ynez	Buellton Solvang Vandenberg AFB	Mid November 2008	August 2009	2009 – 3rd Quarter San Luis Obispo

1. Board approval only required if a hearing is requested by stakeholder

Table 2: Phases of MS4 Enrollment Cycle

	Duration (weeks)
Phase I: Water Board Staff Assessment of Water Quality Challenges	
Water Board staff: Assess available water quality information Accept input from stakeholders on water quality conditions Prepare and transmit to MS4 staff a statement of current knowledge of water quality challenges that must be addressed by SWMP	3 – 4
Phase II: Water Board Staff SWMP Review	
Water Board staff: Review SWMP and "red-lines" text Send red-lined SWMP and letter explaining requirements to MS4	3 – 4
Phase III: MS4 SWMP Redraft	
MS4 staff re-draft SWMP and post for Public Review	6
Phase IV: Water Board Staff Final Review and Posting of SWMP	
Water Board staff review SWMP	2 – 4
Water Board staff post SWMP and table of required revisions for Public Review	8
Water Board staff respond to public comment and EO approves SWMP	3 – 4
Phase V: Water Board Action (If hearing requested)	
Water Board staff prepare Staff Report with recommendation and resolution for SWMP approval	2
Water Board Staff: Post Staff Report with Board Agenda for Public Review Respond to additional public comment Prepares Presentation for Hearing Conduct internal review up to Board Meeting	6
Total	**33 to 38**

Communication

Clear and open communication between Water Board staff, MS4 staff, and stakeholders is vital to the success of this enrollment process. Also, the Phase II General Permit requires public participation as a component of developing and implementing successful stormwater management programs for MS4s. To comply with the General Permit, you must verify that you have achieved broad and timely distribution of announcements of scoping meetings, draft stormwater program documents, and local agency actions on stormwater program activities when you submit your SWMP for Water Board staff review.

Water Board staff are committed to ensuring that the enrollment process proceeds with open communication. Staff will employ a list-serve (email notification) for notifying all interested parties of important milestones in each enrollment cycle. Water Board staff will also maintain an MS4 enrollment tracking webpage where staff will post relevant documents and indicate the status of each MS4 in the enrollment process. Additionally, an individual Water Board staff person will be assigned to each enrollment cycle. We request that you also identify an individual to serve as point of contact representing your MS4 with whom we will communicate during the enrollment process. You must identify your point of contact when Water Board staff contact you to initiate your enrollment cycle.

Central Coast Water Board Expected SWMP Content

The federal Clean Water Act (CWA) provides that National Pollutant Discharge Elimination System (NPDES) permits for MS4s must require municipalities to reduce pollutants in their stormwater discharges to the Maximum Extent Practicable (MEP) (CWA §402(p)(3)(B)). The California Water Boards have established the meaning and application of this standard through several adopted stormwater permits (the MEP standard is the same for Phase I and Phase II municipalities)[1]. The Water Board implements the General Permit to be consistent with its Water Quality Control Plan (Basin Plan) to ensure protection of water quality, beneficial uses, and the biological and physical integrity of watersheds according to the issues in the Regions.

Your SWMP must include an array of Best Management Practices (BMPs), including the six Minimum Control Measures listed in the General Permit, to achieve the following conditions:

I. Maximize infiltration of clean stormwater, and minimize runoff volume and rate
II. Protect riparian areas, wetlands, and their buffer zones
III. Minimize pollutant loading; and
IV. Provide long-term watershed protection

I. Maximize Infiltration of clean stormwater, and minimize runoff volume and rate.
Water Board staff expect your SWMP to present a schedule for development and adoption of control standards for hydromodification. For SWMP adoption, staff will recommend to the Water Board the following interim requirements, which would apply until such time that you develop acceptable control standards for hydromodification:

- For new and re-development projects, Effective Impervious Area[2] shall be maintained at less than five percent (5%) of total project area.
- For new and redevelopment projects that create and/or replace 5,000 square feet or more of impervious surface, the post-construction runoff hydrographs shall match within one percent (1%) the pre-construction[3] runoff hydrographs, for a range of events with return periods from 1-year to 10-years.
- For projects whose disturbed project area exceeds two acres, preserve the pre-construction drainage density (miles of stream length per square mile of watershed) for all drainage areas serving a first order stream[4] or larger, and ensure that post-project time of concentration is equal or greater than pre-project time of concentration.

These interim requirements must be implemented for all applicable projects subject to your discretionary approvals within six (6) months of your enrollment in the Phase II permit. Your schedule for development and adoption of your own control standards for hydromodification must include:

- Numeric criteria for controlling stormwater runoff volume and rates from new and redevelopment.

[1] Several stormwater permits adopted by different Regional Boards have been legally challenged. All have been upheld by the State Water Resources Control Board and the courts. The Water Boards have broad authority to regulate stormwater and land use activities that result in discharges to waters of the State. Urbanization is one the most important land use activities affecting water quality, beneficial uses, and the physical and biological integrity of watersheds in the Central Coast Region.

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

[3] Pre-construction condition is defined as undeveloped soil type and vegetation.

[4] A first order stream is defined as a stream with no tributaries.

- Numeric criteria for stream stability required to protect downstream beneficial uses and prevent physical changes to downstream stream channels that would adversely affect the physical structure, biologic condition, and water quality of streams.
- Specific applicability criteria, land disturbance acreage thresholds, and exemptions.
- Performance criteria for control BMPs and an inspection program to ensure proper long term functioning over.
- Education requirements for appropriate municipal staff on hydromodification and Low Impact Development.

You must include an effective strategy to control hydromodification, or Water Board staff will recommend to the Water Board requirements in the resolution approving your SWMP and enrolling you in the Phase II permit.

II. Protect riparian areas, wetlands, and their buffer zones:
Your SWMP must include BMPs and/or other control measures to establish and maintain a minimum 30-foot buffer zone for riparian areas and wetlands[5]. The buffer zone is a protective area that is undisturbed to the maximum extent practicable. Your SWMP must include consideration and prioritization of local conditions, such as habitat degradation, water quality, and land management practices, and apply more substantial buffer zones where necessary to protect riparian areas and wetlands.

You must include an effective strategy to adopt and implement protection of riparian areas, wetlands, and their buffer zones, or Water Board staff will recommend to the Water Board requirements in the resolution approving your SWMP and enrolling you in the Phase II permit.

III. Minimize pollutant loading
Your SWMP must include BMPs and/or other control measures to minimize pollutant loading, including volume- and/or flow-based treatment criteria. Your SWMP must include consideration and prioritization of local conditions, such as existing pollutant loading, water quality, 303(d) listed impaired waters, pollutants of concern, habitat degradation, and land management practices, and apply more stringent control measures where necessary to minimize pollutant loading.

You must include an effective strategy to reduce pollutant loading, or Water Board staff will recommend to the Water Board requirements in the resolution approving your SWMP and enrolling you in the Phase II permit.

IV. Provide long-term watershed protection
You must include in your SWMP a strategy to develop watershed based hydromodification management plans. These plans should incorporate Low Impact Development strategies with the goal of Post Construction Storm Water Management to achieve an Effective Impervious Area of no more than three to ten percent (3 – 10%) of watershed area within your jurisdiction, depending on local conditions.

The requirements listed above are often characterized as hydromodification controls, or Low Impact Development. These terms are related and their meanings overlap. These requirements are necessary to ensure protection of water quality, beneficial uses, and the biological and physical integrity of watersheds and aquatic habitat. You can reference information on hydromodification controls and Low Impact Development principles on the Central Coast Water Board's website:

[5] The Central Coast Water Quality Control Plan (Basin Plan) requires protection of riparian and wetland habitat and their buffer zones (Basin Plan, Section V.G. 4).

http://www.waterboards.ca.gov/centralcoast/stormwater/low%20impact%20devel/lid_index.htm.

Evaluation of Program Effectiveness and Progress toward Water Quality Goals

Because MEP is a dynamic performance standard which evolves over time as stormwater management knowledge increases, MS4 managers must continually assess and modify their programs to incorporate improvements in control measures and BMPs to achieve MEP. Therefore, your SWMP should contain a detailed plan for evaluating its effectiveness and progress toward complying with the General Permit. Your SWMP must also explain how you will communicate evaluation results with stakeholders. Your evaluation plan should include quantifiable measures for evaluating the effectiveness of the program and be based on the following objectives:

- Assess compliance with requirements of the General Permit , including:
  - Inspection Programs
  - Construction Site Controls
  - Elimination of unlawful discharges
  - New development and redevelopment requirements
- Verify that BMPs are being implemented (e.g., all new applicable developments meet hydromodification control requirements described above and as further described in your SWMP);
- Assess the chemical, physical, and biological impacts on beneficial uses caused by pollutants of concern in stormwater discharges;
- Characterize watersheds and stormwater discharges;
- Identify sources of pollutants; and
- Evaluate long-term trends in receiving water quality.

Conclusion

Please become familiar with the schedule for the enrollment cycle for your MS4, and the steps in the enrollment process. When Water Board staff contact you to initiate your enrollment cycle, please provide us with contact information for the individual that will be representing your MS4.

Please begin updating or preparing your SWMP to include the following as explained in this letter:

- Hydromodification controls for new and redevelopment;
- Protection of riparian and wetland habitat and their buffer zones;
- Minimization of pollutant loading;
- Provision of long-term watershed protection; and
- Evaluation of program effectiveness.

Your SWMP must be specific and must include: well-defined BMPs and other actions that you will implement, schedules, measurable goals, and measures to determine the effectiveness of your program. If your SWMP is not comprehensive or lacks specificity, I will not approve it, and Water Board staff will draft a resolution or an individual permit for consideration by the Water Board at a hearing.

I am clarifying the Water Board's revised enrollment process and SWMP content and requirements to speed up approval of SWMPs for MS4s in the Central Coast Region that will protect water quality, beneficial uses, and the biological and physical integrity of watersheds. I am also committing staff time to regulate MS4s and provide technical and financial assistance to municipalities for stormwater management programs.

The Proposition 84 Storm Water Grant Program funds may be used to provide matching grants to local public agencies for the reduction and prevention of stormwater pollution of rivers, lakes, and streams. A total of approximately $82 million will be available for matching grants. A scoping meeting to answer questions and to solicit input will be held at our office in San Luis Obispo on Monday, March 3, 2008, from 1:00 – 4:00 PM. For more information on the Proposition 84 Storm Water Grant Program and workshops, visit the State Water Board's website at: http://www.waterboards.ca.gov/funding/prop84.html.

I anticipate you will have questions about this letter and the expected content of your SWMP. Please contact us. Our lead staff for this enrollment process is **Dominic Roques**, **droques@waterboards.ca.gov** or at **(805) 542-4780.**

Sincerely,

Roger W. Briggs
Executive Officer

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Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices

This fact sheet provides additional information about EPA's report *Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices*, EPA publication number 841-F-07-006, December 2007.

BACKGROUND

Stormwater has been identified as a major source of pollution for all waterbody types in the United States, and the impacts of stormwater pollution are not static; they usually increase with land development and urbanization. The addition of impervious surfaces, soil compaction, and tree and vegetation removal result in alterations to the movement of water through the environment. As interception, evapotranspiration, and infiltration are reduced and precipitation is converted to overland flow, these modifications affect not only the characteristics of the developed site but also the watershed in which the development is located.

Parking lot runoff is allowed to infiltrate through a vegetated bioretention area

Low Impact Development (LID) is a stormwater management strategy that seeks to mitigate the impacts of increased runoff and stormwater pollution. LID comprises a set of site design approaches and small-scale stormwater management practices that promote the use of natural systems for infiltration, evapotranspiration, and reuse of rainwater. These practices can effectively remove nutrients, pathogens, and metals from stormwater, and they reduce the volume and intensity of stormwater flows.

COST ANALYSIS

This report is an effort to compare the projected or known costs of LID practices with those of conventional development approaches. Traditional approaches to stormwater management typically involve hard infrastructure, such as curbs, gutters, and piping. LID-based designs, in contrast, are designed to use natural drainage features or engineered swales and vegetated contours for runoff conveyance and treatment. In terms of costs, LID techniques can reduce the amount of materials needed for paving roads and driveways and for installing curbs and gutters. Other LID techniques can eliminate or reduce the need for curbs and gutters, thereby reducing infrastructure costs. Also, by infiltrating or evaporating runoff, LID techniques can reduce the size and cost of flood-control structures. Note that in some circumstances LID techniques might result in higher costs because of more expensive plant material, site preparation, soil amendments, underdrains and connections to municipal stormwater systems, as well as increased project management costs. Other considerations include land required to implement a management practice and differences in maintenance requirements. Finally, in some circumstances LID practices can offset the costs associated with regulatory requirements for stormwater control.

Item No. 18 Supp Attach No. 17
July 11, 2008 Meeting
City of Salinas Stormwater
Development Standards

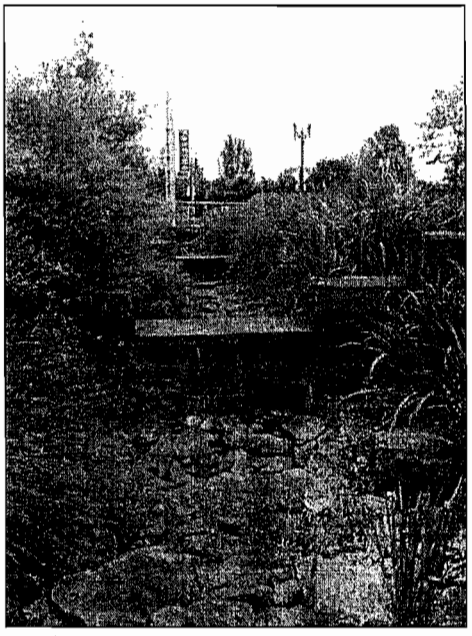
FINDINGS

Seventeen case studies were evaluated for this report. In general, the case studies demonstrated that LID practices can reduce project costs and improve environmental performance. Although not all the benefits of the projects highlighted in the case studies were monetized, with a few exceptions, LID practices were shown to be both fiscally and environmentally beneficial to communities. In a few case studies, initial project costs were higher than those for conventional designs; in most cases, however, significant savings were realized due to reduced costs for site grading and preparation, stormwater infrastructure, site paving, and landscaping. Total capital cost savings ranged from 15 to 80 percent when LID methods were used, with a few exceptions in which LID project costs were higher than conventional stormwater management costs. (Table 1)

Table 1. Cost Comparisons Between Conventional and LID Approaches

Project[a]	Conventional Development Cost	LID Cost	Cost Difference[b]	Percent Difference[b]
2nd Avenue SEA Street	$868,803	$651,548	$217,255	25%
Auburn Hills	$2,360,385	$1,598,989	$761,396	32%
Bellingham City Hall	$27,600	$5,600	$22,000	80%
Bellingham Bloedel Donovan Park	$52,800	$12,800	$40,000	76%
Gap Creek	$4,620,600	$3,942,100	$678,500	15%
Garden Valley	$324,400	$260,700	$63,700	20%
Kensington Estates	$765,700	$1,502,900	–$737,200	-96%
Laurel Springs	$1,654,021	$1,149,552	$504,469	30%
Mill Creek[c]	$12,510	$9,099	$3,411	27%
Prairie Glen	$1,004,848	$599,536	$405,312	40%
Somerset	$2,456,843	$1,671,461	$785,382	32%
Tellabs Corporate Campus	$3,162,160	$2,700,650	$461,510	15%

[a] Some of the case study results do not lend themselves to display in the format of this table (Central Park Commercial Redesigns, Crown Street, Poplar Street Apartments, Prairie Crossing, Portland Downspout Disconnection, and Toronto Green Roofs). [b] Negative values denote increased cost for the LID design over conventional development costs. [c] Mill Creek costs are reported on a per-lot basis.



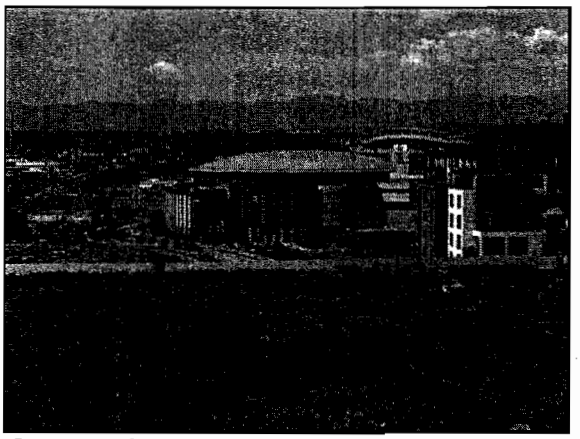
A rain garden manages runoff from impervious surfaces such as roofs and paved areas.

In all cases, LID provided other benefits that were not monetized and factored into the project bottom line. These benefits include improved aesthetics, expanded recreational opportunities, increased property values due to the desirability of the lots and their proximity to open space, increased total number of units developed, increased marketing potential, and faster sales. The case studies also provided other environmental benefits such as reduced runoff volumes and pollutant loadings to downstream waters, and reduced incidences of combined sewer overflows.

CONCLUSIONS

This report summarizes 17 case studies of developments that include LID practices and concludes that applying LID techniques can reduce project costs and improve environmental performance. In most cases, LID practices were shown to be both fiscally and environmentally beneficial communities. In a few cases, LID project costs were higher than those for conventional stormwater management projects. However, in the

vast majority of cases, significant savings were realized due to reduced costs for site grading and preparation, stormwater infrastructure, site paving, and landscaping. Total capital cost savings ranged from 15 to 80 percent when LID methods were used, with a few exceptions in which LID project costs were higher than conventional stormwater management costs.



Green roofs capture rainfall, promote evapotransporation, and offer energy savings. This is a photo of a green roof on the EPA Region 8 building in Denver, CO.

EPA has identified several additional areas that will require further study. First, in all cases, there were benefits that this study did not monetize and did not factor into the project's bottom line. These benefits include improved aesthetics, expanded recreational opportunities, increased property values due to the desirability of the lots and their proximity to open space, increased total number of units developed, increased marketing potential, and faster sales. Second, more research is also needed to quantify the environmental benefits that can be achieved through the use of LID techniques and the costs that can be avoided. Examples of environmental benefits include reduced runoff volumes and pollutant loadings to downstream waters, and reduced incidences of combined sewer overflows. Finally, more research is needed to monetize the cost reductions that can be achieved through improved environmental performance, reductions in long-term operation and maintenance costs, and/or reductions in the life cycle costs of replacing or rehabilitating infrastructure.

AVAILABILITY

The full report is available for download at www.epa.gov/nps/lid.