



California Regional Water Quality Control Board

Central Coast Region



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December 23, 2005

Ms. Caballero:

RE: CITY OF SALINAS STORM WATER PERMIT MAXIMUM EXTENT PRACTICABLE STANDARD AND LOW IMPACT DEVELOPMENT TECHNIQUES; R3-2004-0135; MONTEREY COUNTY

The City of Salinas (City) representatives have verbally asked what the baseline Design Standards and Ordinances must encompass to comply with the Waste Discharge Requirements for the City of Salinas Municipal Storm Water Discharges ("Salinas Permit", which includes Order No. R3-2004-0135 and all Attachments). Additionally, the City has informally inquired whether Low Impact Development technology is a requirement for new and re-development. To answer these questions, we have compiled excerpts from the Salinas Permit. The City must abide by all aspects of the Salinas Permit, however the following Permit sections will provide background for the discussion to follow.

The Salinas Permit states:

- a. "Discharges from MS4s in a manner causing, or threatening to cause, a condition of pollution, contamination, or nuisance... in waters of the State of California are prohibited." (Salinas Order, Discharge Prohibition A.1);
- b. "Discharges from MS4s containing pollutants that have not been reduced to the Maximum Extent Practicable (MEP) are prohibited." (Salinas Order, Discharge Prohibition A.2);
- c. "...The Code of Federal Regulations (40 CFR 122.26(d)(2)(iv)) requires storm water permittees to implement BMPs to reduce pollutants in storm water discharges to the maximum extent practicable. BMPs are described in the Permittee's SWMP." (Salinas Order, Effluent Discharge Limitations B.1);
- d. "Discharges from the MS4 of storm water, or non-storm water for which a Permittee is responsible, shall not cause or contribute to a condition of nuisance in Receiving Waters." (Salinas Order, Receiving Water Limitations C.2);
- e. "The SWMP shall be designed to achieve compliance with Receiving Water Limitation(s) to the MEP." (Salinas Order, Receiving Water Limitations C.3);



- f. "MEP is generally a result of *emphasizing pollution prevention and source control BMPs as the first lines of defense* in combination with structural and treatment methods where appropriate serving as additional lines of defense. The MEP approach is an ever evolving, flexible, and advancing concept, which considers *technical and economic feasibility*. For purposes of this Permit, the Regional Board will determine compliance with the MEP standard based on the terms of the Permit, including Attachment 4; and State Board decisions or guidance, *EPA regulations and guidance* and applicable case law defining MEP." (Salinas Order, Finding 16, italics added).

Traditional development and re-development techniques typically cause and threaten to cause pollution, contamination, and nuisance through increased storm water runoff volumes, rates, and temperatures. Excess storm water runoff also acts to carry urban pollutants to receiving waters quickly and efficiently (which is not desirable). Traditional methods of storm water conveyance and end-of-pipe basins are marginally effective at mitigating erosion, sedimentation, urban pollutant removal, and thermal impacts in receiving waters. The Salinas Permit Attachment 4 is very specific about particular site plan development principles that must be incorporated to meet MEP in order to address urban runoff impacts. In particular are the following excerpts from Attachment 4 of the Salinas Permit (italics added):

1. *Minimize the amount of impervious surfaces and directly connected impervious surfaces in areas of new development and redevelopment and use on-site infiltration of runoff* in areas with appropriate soils where the infiltration of storm water would not pose a potential threat to groundwater quality (Attachment 4, III.a.i.1);
2. Implement pollution prevention methods supplemented by pollutant source controls, and if source controls are not practicable, by treatment controls. Where practical, use strategies that control the sources of pollutants or constituents to *minimize the transport of storm water and pollutants offsite* and into MS4s (Attachment 4, III.a.i.2);
3. *Preserve and, where possible, create or restore areas that provide important water quality benefits, such as riparian corridors, wetlands and buffer zones* (Attachment 4, III.a.i.3);
4. *Limit disturbances of natural water bodies and natural drainage systems* caused by development within Permittee's jurisdictional authority, including roads, highways, and bridges (Attachment 4, III.a.i.4);
5. Require developers to prepare and submit studies analyzing pre- and post-project pollutant loads (including sediment) and flows resulting from projected future development. Require incorporation of structural and non-structural *BMPs to mitigate the projected increases in pollutant loads in runoff* (Attachment 4, III.a.i.5);
6. Implement source and/or treatment controls as necessary to *protect downstream receiving water quality from increased pollutant loads in runoff flows from new development and significant redevelopment* (Attachment 4, III.a.i.7); and
7. *Control the post-development peak storm water run-off discharge rates and velocities to prevent or reduce downstream erosion, and to protect stream habitat* (Attachment 4, III.a.i.8).

The US Environmental Protection Agency (EPA) published the "National Management Measures to Control Nonpoint Source Pollution from Urban Areas" (November 2005, EPA-841-B-05-004) which also

gives specific guidance on new and re-development principles. The first few pages of Chapter 4, "Site Development", and Chapter 5, "New Development Runoff Treatment" contain a list of the primary principles, and are copied and attached to this letter.¹ The overriding concern in the Salinas Permit and EPA guidelines is reducing urban impacts to receiving waters by maintaining predevelopment hydrology, which in turn minimizes urban pollutants reaching waterways. These goals are achieved by designing sites that disturb (starting from the site layout, and grading and compaction phases of construction) only the smallest area necessary, minimize soil compaction and imperviousness, preserve natural drainages, vegetation, and buffer zones, and utilize on-site, lot-sized storm water treatment techniques. These principles and techniques are collectively known as "Low Impact Development, (LID)". At the core, LID technology is a collection of methods, beginning with site design, which a developer may choose from in order to reach the ultimate goal of having post-development hydrology match pre-development hydrology. The added goal of minimizing pollutant transport and maximizing on-site pollutant treatment is an added benefit gained from utilizing LID techniques. LID techniques have been employed by various municipalities nationwide, and worldwide, and have been shown to be effective and feasible methods of preventing urban development impacts to receiving waters. In many cases, the cost of low-impact development is lower than traditional development, both in terms of construction costs and costs to maintain infrastructure and BMPs. Because LID techniques are effective, feasible and economically practicable, they meet the MEP definition. The Salinas Permit requires the City to meet MEP. MEP is defined by what is required in the Permit, EPA guidance, and current applied and available methods and technology. The methods collectively called "Low Impact Development" meet the MEP definition. The City must, therefore, incorporate LID methodology into new and redevelopment ordinances and design standards unless the City can demonstrate that conventional BMPs are equally effective, or that conventional BMPs would result in a substantial cost savings while still adequately protecting water quality. In order to justify using conventional BMPs based on cost, the City would have to show that the cost of low impact development would be prohibitive because the "cost would exceed any benefit to be derived." (State Water Resources Control Board Order No. WQ 2000-11.) The City must provide convincing arguments if the City fails to incorporate low impact development principles. Conventional site layouts, construction methods, storm water conveyance systems with "end of pipe" basins and treatment systems that do not address the changes in volume and rates of storm water runoff and urban pollutants (including thermal pollution) do not meet MEP standards where low impact development is more effective at reducing pollutants in storm water runoff at a practicable cost.

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,



Roger W. Briggs
Executive Officer

¹ A complete copy of the EPA document is available at
http://www.epa.gov/owow/nps/urbanmm/pdf/urban_guidance.pdf

Attachment: EPA document, "National Management Measures to Control Nonpoint Source Pollution from Urban Areas", excerpts from Chapters 4 and 5.

Cc: City Council Members:

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