

**STATE OF CALIFORNIA  
REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL COAST REGION**

**STAFF REPORT FOR REGULAR MEETING OF MAY 10-11, 2007**

Prepared on April 20, 2007

**ITEM NUMBER: 15**

**SUBJECT: Institutionalizing Low Impact Development and Standardizing Stormwater Requirements**

**INTRODUCTION**

The Central Coast Regional Water Quality Control Board (Water Board) staff has studied low impact development (LID) extensively over the past few years. Staff and other stakeholders have concluded that LID is an important tool in protecting water quality, particularly in rapidly urbanizing areas such as the Central Coast. The issue of standardizing storm water management plans throughout the Central Coast Region is closely related to the issue of how to ensure that LID is utilized for as much development and redevelopment as possible. The Water Board's attorney and the Board will discuss some options at the May Board meeting for consistently applying LID and similar principles to as many Central Coast Region projects as possible.

"Low impact development" generally refers to construction design features that reduce the volume of stormwater runoff and reduce pollutant loads in stormwater runoff. The Water Board is interested in requiring or promoting LID throughout the Central Coast Region in order to protect water quality. The tools to accomplish this include the municipal stormwater permitting program; the construction permitting program; non-NPDES waste discharge requirements or waivers; basin plan amendments, including total maximum daily loads (TMDLs); decision tools and templates; grant funding for LID projects; and education and outreach.

LID is site- and region-dependent, and is a new and evolving science. The Water Board's focus should be on adopting requirements and incentives that promote public and developer acceptance of LID and that require LID to be implemented in a consistent manner for similar sites throughout the Region, while considering the need to allow for flexibility in defining and refining LID techniques.

**MUNICIPAL STORMWATER PERMITS**

The primary means to implement LID to date has been through NPDES permits for municipal separate storm sewer systems (MS4s). MS4 permits must require dischargers to reduce stormwater pollutant loads to the maximum extent practicable (MEP).<sup>1</sup> Development increases the rate and volume of stormwater runoff, which in turn increases the pollutant loads in stormwater outfalls. LID designs increase on-site infiltration and inflow, thereby eliminating some of the pollutant loading. The Central Coast Region regulates one medium (Phase I) and 30 small (Phase II) traditional MS4s.

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<sup>1</sup> The permits can also impose additional requirements as necessary to meet water quality standards, even if the additional requirements go beyond MEP. (*Building Industry Association of San Diego County v. SWRCB* (2004) 124 Cal.App.4<sup>th</sup> 866.)

The Board has also required an additional 82 non-traditional MS4s (primarily school districts, colleges and universities) to obtain MS4 permit coverage.<sup>2</sup>

In 2000, the State Water Board upheld a requirement to include design standards for certain types of businesses in Phase I (medium and large) MS4 permits.<sup>3</sup> These standards and some best management practices (BMPs) are included in Attachment 4 of the Phase II General Permit. The General Permit Fact Sheet explains that the "design standards in Attachment 4 focus on mitigating the impacts caused by increased impervious surfaces through establishing minimum [best management practice] requirements that stress (i) *low impact design*; (ii) source controls; and (iii) treatment controls."<sup>4</sup> Attachment 4 only applies to municipalities (cities or counties) with a population of 50,000 people or more, or that experience high growth (at least 25% over ten years). However, the Water Board has the discretion to impose Attachment 4 or similar requirements on other areas if necessary to meet the MEP standard or protect water quality. The Water Board did this in approving the Monterey Regional SWMP.

Municipalities must adopt requirements mandating LID in appropriate cases in order to meet the MEP standard. To date, MS4 permittees in the Central Coast Region have adopted storm water management programs (SWMPs) on a case-by-case basis. Each permittee will develop specific requirements during the first five-year term of Phase II General Permit coverage. An alternative would be to adopt a region-wide general Phase II MS4 permit with more specific requirements than the State Water Board's General Permit includes.<sup>5</sup> This allows the Water Board to address some aspects of SWMP development on a region-wide basis while still affording site-specific and watershed-specific flexibility to permittees.

In lieu of a general permit covering the whole Central Coast Region, the Board could issue permits covering a smaller area, such as a single watershed. This is the approach taken by the Monterey Regional permit group and some of the Phase I permits in Southern California.

Finally, the Board could adopt one or more permits that include a SWMP drafted by Central Coast Water Board staff. In addition to the flexibility that site-specific conditions demand, the SWMP would have to provide flexibility in order to comply with Water Code Section 13360, which prevents the Board from specifying the "design, location, type of construction, or particular manner [of] compliance" with water quality requirements.

## CONSTRUCTION PERMITS

All construction projects greater than one acre in size must obtain a construction stormwater permit. Most regulated sites in California obtain coverage under the State Water Board's general construction permit. The current construction general permit requires BMPs to control erosion and sedimentation during construction, and to reduce pollutant runoff from the completed site. The MEP standard does not apply to construction permits; rather, permittees must meet the more stringent best conventional technology (BCT) and best available technology economically achievable (BAT) standards (for conventional and non-conventional/toxic pollutants, respectively).

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<sup>2</sup> This memorandum focuses on traditional MS4s (cities and counties), but any discussion of MS4 permitting requirements also applies to the non-traditional designated MS4s. A list of designated non-traditional MS4s is included as Attachment 1.

<sup>3</sup> These standards are often referred to as standard urban storm water mitigation plans, or SUSMPs.

<sup>4</sup> General Permit Fact Sheet, p. 10 (emphasis added).

<sup>5</sup> As an example of this approach, see the State Water Board's draft construction general stormwater permit at <http://www.waterboards.ca.gov/stormwtr/constpermits.html>.

The State Water Board is in the process of renewing the statewide general construction permit to include more specific requirements for construction and post-construction runoff. The draft permit requires the use of BMPs that ensure that the post-development runoff volume approximates the pre-project runoff volume for areas covered with impervious surfaces. LID is consistent with this requirement since LID provides on-site retention or treatment of stormwater and reduction in the amount of impervious surfaces. If the State Water Board includes these requirements in the final permit, the construction general permit will provide another important tool for requiring LID, and will provide some standardization due to the more specific requirements. If these provisions are not included in the final permit, the Central Coast Water Board could consider developing its own construction permit.

### **NON-NPDES PERMITTING**

Generally, the Water Board only regulates construction projects covering more than one acre and municipalities that meet the size or growth-rate criteria in the federal regulations. However, the Board can also regulate construction sites smaller than one acre in size and smaller MS4s if the discharges may adversely impact surface water or ground water quality. General or individual waste discharge requirements (WDRs) or conditional waivers can require management practices to reduce pollutant loads, even where the discharger is not subject to Clean Water Act regulation. WDRs can be used to require LID, or similar concepts, in agricultural areas, non-urban or urbanizing areas that are not regulated under the MS4 program, and small construction sites.

### **BASIN PLANNING**

The Basin Plan includes a plan of implementation to achieve water quality standards and to comply with the anti-degradation policy. The Basin Plan could require dischargers to install LID features in several ways. The requirement could take the form of a conditional prohibition of discharges resulting from hydromodification (i.e., post-construction discharges), so that the Basin Plan would only allow construction pursuant to an approved LID plan, or an approved exception. The Central Coast Water Board has adopted several grazing prohibitions using this approach.<sup>6</sup>

Another option is to amend the Basin Plan to include performance specifications or design standards that would then be implemented as minimum requirements in all NPDES permits or waste discharge requirements. These could be similar to the Attachment 4 requirements discussed above.

The implementation plan can establish minimum measures that the Water Board has determined are necessary to protect water quality. It also serves as an important policy statement regarding what is necessary to protect water quality. The primary advantage of a Basin Plan amendment is to set region-wide or water-shed wide standards that would apply to NPDES and non-NPDES permitting and establish the baseline for design standards that are appropriate to the Central Coast Region.

TMDLs are another basin planning tool. TMDLs only apply to water bodies that are already impaired, so their application is more limited than general Basin Plan amendments. However, TMDLs are useful for learning more about the sources of impairment in large areas, and have a reliable source of funding. This research could also be useable in higher-quality watersheds. The Water Board should consider this when prioritizing TMDL development and implementation.

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<sup>6</sup> The Lahontan Region's basin plan uses a similar approach by including development prohibitions to protect Lake Tahoe. The prohibitions incorporate Tahoe Regional Planning Agency (TRPA) land use restrictions and mitigation requirements. The Basin Plan established criteria for TRPA's mitigation and offset program, which allows landowners to transfer development rights and provides development credit for restoration and retrofit projects.

The basin planning tools discussed above would not necessarily standardize SWMP implementation (including LID) or permit requirements. A basin planning option that would increase standardization is to require the use of analytical models such as the evaluation tool available at [http://www.waterboards.ca.gov/centralcoast/stormwater/special\\_projects/eval\\_tool.pdf](http://www.waterboards.ca.gov/centralcoast/stormwater/special_projects/eval_tool.pdf) (Bitting 2006), provided the models have been adequately tested and are flexible enough to evolve with the continued study of LID.

## **OTHER TOOLS**

The Water Board can use decision tools, templates, design manuals and permittee checklists to implement LID and standardize LID decision-making. The use of such tools would have to be optional unless they are adopted as part of a permit, waste discharge requirements, conditional waiver, Basin Plan amendment or formal policy document. Otherwise, these tools would likely constitute illegal "underground regulations."

The Water Board can continue to provide incentives by supporting grant proposals and allocating SEP and settlement funds to projects that study, implement or promote LID. The Water Board can also sponsor or participate in educational workshops to increase public acceptance of LID and other pollution-reduction development strategies, similar to programs that regulated MS4s are implementing as part of their SWMPs.

One reported obstacle to LID is that existing ordinances may be inconsistent with, or even prohibit, LID implementation. An example is an ordinance prohibiting the use of pervious surfaces for suburban driveways. As part of the MS4 program, regulated entities must adopt stormwater ordinances, and must make changes to existing ordinances as necessary to allow implementation of the SWMP requirements. Municipalities not subject to MS4 permitting do not have to adopt or revise stormwater ordinances.<sup>7</sup> The Water Board could encourage unregulated municipalities to update their ordinances by providing sample ordinances from the Central Coast Region and elsewhere, and using permitting authority to require projects within those municipalities to implement LID. The latter would create additional support for the municipalities to adapt their existing planning controls to allow compliance with water quality requirements.

## **CONCLUSION**

The Water Board has a variety of tools to encourage LID. They are subject to different procedural requirements, and in some cases are subject to different standards of review. These issues will be discussed at the May Board meeting.

The tools discussed above are not mutually exclusive. Water Board staff is in the process of investigating the practical options, including what other regions (and maybe other agencies) are doing and their lessons learned. Staff will provide a further report later this year.

## **ATTACHMENTS**

1. List of Designated Non-Traditional MS4s

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<sup>7</sup> The Water Board has the authority to designate additional areas or municipalities as regulated small MS4s, which subjects the designated entities to NDPES permitting requirements. These designations are beyond the scope of this memorandum.