



## MEMORANDUM

TO: California Ocean Protection Council

FROM: Rachel Couch, Project Manager

DATE: May 15, 2008

RE: [Resolution to promote Low Impact Development in California \(amended\)](#)

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### REQUESTED ACTION:

Staff recommends the Ocean Protection Council (OPC) adopt the attached resolution to promote Low Impact Development (LID) to improve California's coastal water quality and to protect and conserve California's fragile ocean and coastal ecosystems.

### INTRODUCTION:

At the February 2008 meeting, staff presented information and facilitated a discussion with a panel of experts to explore ways in which the Ocean Protection Council ("OPC") could contribute to improving coastal water quality and protection of ocean ecosystems by promoting innovative stormwater management practices such as Low Impact Development. The Council directed staff to hold two public workshops and to work with professional practitioners and government agencies to develop policy recommendations and potential funding actions to promote LID and other innovative approaches to stormwater management. Staff has carried out these directives and has developed the attached resolution proposing a set of policies and actions that, if adopted by the OPC, could help promote the implementation of LID in California. This memo includes additional information about each proposed action included in the resolution.

### BACKGROUND:

Polluted stormwater runoff continues to be the largest contributor to ocean water quality problems in California. As more impervious surfaces – such as roads, parking lots, and buildings – are built in watersheds, more runoff is produced carrying oil, grease, metals, bacteria, trash, and other pollutants into our waterways. To address these issues, many state agencies have taken steps to improve water quality through regulatory and funding programs designed to limit pollutant loads, divert and treat urban runoff, improve sewer systems, improve management practices, and identify pollution sources. The state has also partnered with local communities to find ways to improve water quality through projects to control flooding and erosion and to promote watershed protection and restoration. Despite these efforts, however, water quality

remains a persistent problem requiring innovative solutions that maximize state investments and, to the greatest extent possible, treat the problem at its source.

Low Impact Development (LID) is a stormwater management strategy designed to improve water quality and stream integrity by promoting the reduction of impervious surfaces, mimicking natural drainage patterns, dispersing, infiltrating and treating runoff, and controlling runoff volumes, peaks, and durations. While LID is being applied in cities and states around the United States, LID has only recently begun to gain broad acceptance in California. The OPC is in a position to help accelerate the implementation of LID in California.

### **OPC STAFF ACTIONS TO DATE:**

The policy recommendations included in the attached resolution were informed by ongoing efforts of the OPC and its staff to seek effective long-term solutions to coastal water quality impairments caused by stormwater runoff. In spring 2007, the OPC commissioned a report on LID “State and Local Policies Encouraging or Requiring Low Impact Development,” which was presented to the Council at the February 2008 meeting. This report examines approaches developed by states to require or incentivize LID and smart growth, summarizes various laws that implement LID practices, and identifies policy recommendations. The report also explores policies and practices that could be adopted by the state or municipalities in California to encourage or require LID. It also provides recommendations for amendments to state and local statutes and regulations to better accommodate implementation of LID. Since 2007, staff has worked closely with the State Water Board, the California Coastal Commission and other stakeholders to evaluate and refine the report’s recommendations, identify new mechanisms for LID implementation, and develop strategies for future action.

Also, after the February 2008 meeting, staff held two public workshops (one each in northern and southern California) to receive public input on potential OPC policy recommendations and funding actions to promote LID and other innovative approaches to stormwater management. Unlike many issues the OPC addresses, LID enjoyed nearly universal support from a wide variety of stakeholders. Some suggested we need to apply LID to the existing urbanized landscape, not just to new development. Several also compellingly suggested LID is more than just another stormwater treatment strategy -- It is a transformative approach to development that can: (1) reverse the decline in water quality we have been experiencing largely due to polluted stormwater runoff; (2) reduce excessive erosion from our creeks; and (3) recharge many of our aquifers and thereby reduce the need for expensive, greenhouse-gas intensive water transfers throughout the state. Staff also coordinated with professional practitioners and other government agencies to explore policy and funding options to promote implementation of LID in California.

### **PROPOSED RESOLUTION:**

The proposed resolution describes the complex and persistent problems caused by polluted runoff and outlines the state’s mandate to protect water quality.

OPC is in a unique position “to promote the policy that new developments and redevelopments should be designed so that stormwater quality and the peaks and durations of runoff are substantially the same as before the development project was built.” Accordingly, this is the first

resolved clause in the resolution and conveys the broad goals of this resolution as a whole. The resolution also notes up front that “LID is the best way to help new and redevelopment projects avoid, minimize and mitigate increases in runoff and runoff pollutants and the resulting impacts on downstream uses, coastal resources and communities.” LID should be the preferred strategy in California that is employed whenever feasible. Most experts tell us that LID is feasible in all but rare circumstances. Where infiltration of rainwater into the ground is limited by clayey soils, unstable slopes or other conditions, bioretention and other LID features can detain and treat runoff and allow it to seep away slowly, greatly reducing downstream impacts. In densely developed areas, green roofs, cisterns, pervious pavements, and bioretention planter boxes can maintain or partially restore pre-development rates of runoff.

The resolution also contains a series of specific recommendations to promote innovative stormwater management practices through: 1) state leadership; 2) state regulatory actions; and 3) incentives, technical support, and research, as follows:

#### State Leadership

State agencies can promote LID by setting an example. Where the state’s interest in water resource protection and land development intersect, state agencies can adopt policies, standards, rules, and guidelines that strongly encourage LID. OPC member agencies can play an important role in facilitating implementation of LID because they oversee numerous departments and boards that have jurisdiction in this realm: Cal/EPA works with the State and Regional Water Boards and the Resources Agency oversees departments charged with protecting the state’s coastal resources, critical plant and animal habitat areas, and the state’s water supply. These two agencies can develop LID requirements, similar to those already being imposed on private developments in some areas of the state, which could be applied to the projects performed by the departments that they work with or supervise. In addition, coordination between these two agencies will provide clear guidance for private and public sector entities trying to implement LID and balance water quality needs with land use.

The resolution also recommends actions that can be taken by other state agencies to promote implementation of LID. The following examples correspond with those outlined in the attached resolution:

- 1b. Caltrans – Roads and parking lots comprise more than half of impervious surfaces in California. Caltrans builds and maintains state highways, bridges and culverts which impact coastal water quality and habitat resources. Caltrans has become an acknowledged technical leader in stormwater pollution prevention and implements stormwater treatment or compensatory mitigation for new or widened roadways. The resolution urges Caltrans to continue to incorporate LID where feasible in projects it funds or oversees, to emphasize use of LID when coordinating with local agencies (including local assistance programs), and to revise as necessary design standards which unnecessarily inhibit LID implementation.
- 1c. The Office of Planning and Research (OPR) – OPR develops and adopts guidelines for the preparation of city and county general plans and prepares state CEQA Guidelines (part of the California Code of Regulations) for implementation of CEQA. The resolution encourages OPR work with agencies to include LID considerations, consistent with NPDES standards, in future amendments to these guidance documents. Local agency planners and preparers of CEQA documents pay close attention to OPR’s

guidelines, and these changes will help ensure LID is incorporated in the early stages of development project planning, which reduces costs and increases effectiveness of LID design.

- 1d. The Building Standards Commission (BSC) – BSC is in the process of revising its voluntary Green Building Standards. Although the draft Green Building Standards have incorporated references to LID techniques, the draft standards have not been coordinated with overlapping stormwater NPDES permit requirements. The resolution encourages the BSC to reference NPDES permit requirements in the Green Building Standards. This is an important way of making builders and municipal building officials aware of LID technology and requirements.
- 1e. The Department of Water Resources (DWR) – DWR is encouraged to develop project funding guidelines, such as those being developed in coordination with the State Water Board pursuant to AB 739, which strongly emphasize innovative stormwater approaches, incorporating LID principles and comprehensive watershed protection goals. This will encourage the use of LID in multi-benefit projects to effectively address problems resulting from conventional water supply and flood control projects.

#### State Regulatory Actions

The resolution also proposes state regulatory actions to promote or require LID, including the following:

- 2a. The State and Regional Water Quality Control Board's permits and requirements for new and redevelopment could be strengthened. Increasingly, stormwater treatment and flow-control (hydrograph modification management) requirements are being included in municipal stormwater permits issued by the Regional Water Boards. However, OPC staff learned from the outreach it conducted that some permit criteria are biased toward non-LID designs. The resolution encourages the State and Regional Water Boards to ensure LID can be used to meet stormwater treatment and flow-control requirements in future NPDES permits. In some cases, government agencies' design criteria and specifications for drainage systems have created barriers to LID implementation. For example, many local drainage ordinances require that stormwater be collected and conveyed from the site to the municipal storm drain, rather than being dispersed, infiltrated, or detained on-site.
- 2b. Consistency and coordination among regional stormwater permitting agencies is needed and could be accomplished by development of comprehensive policy directives from the State Water Board defining or describing the value of LID and other innovative approaches to address polluted runoff.
- 2c. Once LID policies and programs are implemented, program performance evaluation and monitoring should occur to determine how effectively LID is being implemented and how effectively it is protecting beneficial uses of downstream water bodies.

### Incentives, Technical Support, and Research

Through the resolution, the OPC also commits to continue to assist with coordination of efforts to identify and remove barriers to LID implementation. To this end, OPC staff will solicit strategic funding opportunities in the concept areas identified in the resolution. In selecting projects, OPC staff will consider the availability of funds, projects that can leverage funds from other sources, OPC funding priorities and other grant program criteria. OPC staff will also encourage and support efforts to promote LID by other state and local agencies.

### **CONSISTENCY WITH CALIFORNIA OCEAN PROTECTION ACT:**

The proposed action is consistent with the Ocean Protection Act (Division 26.5 of the Public Resources Code (“PRC”). Section 35615(a)(1) specifically directs the Council to coordinate activities of state agencies to improve the effectiveness of state efforts to protect ocean resources, establish policies to coordinate the collection of scientific data related to the ocean, and recommend to the legislature changes in law or identify changes in federal law. It is also consistent with Section 35615(a)(5), which directs the OPC to transmit the results of research and investigations to state agencies to provide information for policy decisions. Section 35650 further allows the OPC to fund projects that eliminate or reduce the threats to coastal and ocean ecosystems, habitats, and species, improve coastal water quality, and improve management, conservation, and protection of coastal waters and ocean ecosystems (PRC § 35650(b)(2)(A)(D)&(F).

### **CONSISTENCY WITH OPC'S STRATEGIC PLAN GOAL(S) & OBJECTIVE(S):**

The action is consistent with the OPC’s Five-Year Strategic Plan, which calls for significant improvements to ocean and coastal water quality (Goal C Objective 2a) through support for the development of new technologies to reducing non-point source pollution. The Strategic Plan calls for encouraging innovative approaches to improve storm water management and for promoting source control through improved public information and low impact development.