WHITE PAPER

Navigating The Complexities of Stormwater Regulation in California

By Frank Lopez, PE, QSD, CFM

In this whitepaper, Harris & Associates provides not one, but four best-practice approaches for addressing California's latest stormwater requirements for smaller municipalities.

Big-city regulations trickle down to smaller communities

New California State Water Resources Control Board regulations require that municipal separate storm sewer systems or MS4s must be low-impact—even for smaller "Phase II" communities of 10,000 to 100,000 people. As an example, stormwater must be directed over vegetation or green space for treatment. This not only replenishes the groundwater, it also reduces the potential pollutants that could wash downstream.

The new "upstream focus" regulation is a significant departure from past operations, in which developers were allowed to treat stormwater at the downstream end, often by simply inserting drainage filters to treat water or direct it into mechanical systems.

Under the updated mandates, more green space must be incorporated to treat water at the lot level. Municipalities must ensure that developers satisfy the requirements of the low-impact development (LID) approach. Those affected will face challenges, since the regulation employs broad language forcing municipalities to interpret the requirements whenever location-specific issues arise, which is quite often.

Teamwork required

One of the most significant changes to both the new Phase I and Phase II permits in California is a newly adopted watershed approach. In contrast to the previous per-agency methodology, this regimen calls for cities and counties to collaborate as they establish comparable precedents and consistent interpretations of the permitting requirements for developers.

To help navigate the ever-changing and always-challenging stormwater permitting landscape, Harris & Associates offers four potential best-practice solutions that municipal agencies can follow for successful compliance:

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1. **Increase involvement in the process for permitting requirements.** Identify representatives in relevant municipal departments to participate in advisory committees and regional water board meetings. This will offer insights as to why certain regulations are in place and how the process works. It will also help to forge important relationships with staff working at the water board.

2. **Open the lines of communication.** Establish procedures to ensure that departments such as planning, public works, engineering and maintenance coordinate their efforts throughout development. The benefits of this approach are manifold. Construction delays, legal issues and environmental concerns will all be reduced. City compliance will be maintained. And sustainable development will be verified. This can't happen on its own—funding mechanisms such as Community Services Districts are a prerequisite to ensuring a sustainable development.

3. **Tap a third party for expertise.** Since they are already current with the protean permitting requirements for stormwater, engineering consultants can be effective resources. In addition to ensuring that developers adhere to optimum LID approaches, they can also act as interlocutors, serving as a trusted communication conduit between agencies and developers as each strives to meet the regulations in both letter and spirit.

4. **Raise public awareness.** Compared to drinking water as an example, it may be harder for community residents to grasp the big-picture impact of stormwater development. That's why efforts such as Contra Costa County's Stormwater Funding Initiative call for the management of stormwater akin to that for wastewater or potable water—complete with updated infrastructure needs. To help share this vision and make it a reality, city officials must reach out to their constituents so that they, too, will rally behind the funding needed for proper stormwater management.

Incorporating any or all of these best practices into managing development efforts will significantly help cities, counties and developers navigate new stormwater regulations and realize LID goals.

MS4 Defined

What is an MS4? A municipal separate storm sewer system (MS4) is a conveyance or system of conveyances that is:

- Owned by a state, city, town, village or other public entity that discharges to waters of the U.S.
- Designed or used to collect or convey stormwater (including storm drains, pipes, ditches, etc.)
- Not a combined sewer
- Not part of a publicly owned treatment works (sewage treatment plant)

Source: Environmental Protection Agency

About the Author

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With expertise in stormwater management, drainage design, LID and green infrastructure design, Frank enhances communities across California.

Frank is Vice President of Engineering at Harris, overseeing budgets, schedules, and quality control for municipal and land development projects statewide. Frank currently serves as past-president of the APWA Monterey Bay Chapter. He has also been an active member of the San Luis Obispo County Technical Advisory Committee on LID and Hydromodification and the Central Coast Regional Water Quality Control Board Joint Effort Review Team.