

DATE ISSUED: June 2, 2000

REPORT NO. 00-123

ATTENTION: Natural Resources & Culture Committee
Agenda of June 7, 2000

SUBJECT: Standard Urban Storm Water Mitigation Plan (SUSMP) and Storm Water
Numeric Sizing Criteria for Development

SUMMARY

THIS IS AN INFORMATION ITEM ONLY. NO ACTION IS REQUIRED ON THE PART OF
THE COMMITTEE OR THE CITY COUNCIL.

BACKGROUND

Municipalities in San Diego County collect and discharge storm water and urban runoff containing pollutants through their storm water conveyance systems. These municipalities, including the City of San Diego, implement programs to reduce pollutants in storm water and urban runoff under requirements contained in Regional Board Order No. 90-42 (commonly known as the Municipal Storm Water Permit for San Diego Co-permittees). These programs resulted from 1987 Amendments to the federal Clean Water Act. The US Environmental Protection Agency (EPA), which administers the Clean Water Act, has delegated authority to the State of California. The State exercises its delegated authority through its agency, the State Water Resources Control Board, which uses a system of regional entities (the Regional Water Quality Control Boards) to enforce the Clean Water Act. The San Diego Regional Board is following a pattern of regulation that began with the Los Angeles Regional Board and is considering the adoption of more explicit requirements to address storm water runoff in the form of a Standard Urban Storm Water Mitigation Plan or SUSMP (*pronounced sue-sump*). These requirements will be incorporated into the reissued Municipal Storm Water Permit that is expected to be before the San Diego Regional Board for approval in the fall of this year.

DISCUSSION

Urbanization generally results in an increase in pollutant sources and impervious surfaces. The increase in pollutant sources leads to an increase in pollutant loads found in storm water, while the increase in impervious surfaces prevents natural processes from reducing the pollutant loads. The impervious surfaces associated with urbanization prevent storm water from infiltrating into the soil. The resulting storm water flows are greater in volume and the pollutant loads are greater because the natural filtration no longer exists (e.g. vegetation is removed and soil is paved over). This causes the quality of receiving waters, our creeks, bays and the ocean, to be

adversely impacted and the beneficial uses impaired.

For these reasons, the San Diego Regional Board intends to require the City of San Diego and the other co-permittees to develop Standard Urban Runoff Mitigation Plans (SUSMPs) for new development and significant redevelopment. These plans would include regulatory measures that will reduce the negative impacts to receiving waters resulting from development runoff. Such measures would include implementing Best Management Practices (BMPs) and modifying planning and land use philosophies to control peak storm water runoff rates, conserve natural areas, prevent pollution, control pollutant sources, protect slopes and channels, and design proper storage areas. Best Management Practices (BMPs) are structural devices or landscape designed to remove pollutants and reduce runoff flow. In general, suspended solids, nutrients, pathogens, and metals are the pollutants of most concern in storm water in the San Diego region. Specific BMP examples include grass swales, wet ponds, and filters. Long term maintenance of these water quality features or post-construction BMPs would also be required. The categories of new development and significant redevelopment would include:

- Single-Family Hillside Residences
- 100,000 Square-Foot Commercial Developments
- Automotive Repair Shops
- Retail Gasoline Outlets
- Restaurants
- Home Subdivisions with greater than 10 Housing Units
- Locations Adjacent to or Discharging to an Environmentally Sensitive Area
- Exposed Park Lots greater than 5,000 Square-Feet or with greater than 25 Parking Spaces

Similar provisions have been in place for years in other areas of the United States (e.g. Puget Sound, WA; Alexandria, VA; Montgomery County, MD; Denver, CO; Orlando, FL; and Austin, TX.) to guide development. It is also noteworthy to mention that legal challenges failed to stop their implementation in Maryland and Washington.

Contained within the SUSMP would be specific design parameters or numeric sizing criteria. These parameters are tools for designing effective water quality features to reduce the impacts resulting from runoff. As proposed, numeric sizing criteria would require that a project be designed to capture and treat or infiltrate a volume of storm water runoff prior to discharge to a storm water conveyance system. The interim minimum number proposed by the Regional Board staff for San Diego is 0.6 inches of rainfall over a 24-hour period. (For Los Angeles, the number is 0.75 inches). In addition, the Regional Board staff proposed an alternative approach for flow-based measures to be designed to capture and treat or infiltrate storm water runoff at a rate of 0.2 inch of rainfall per hour. The proposed criteria may be modified if additional technical information justifies adjustment.

Many details associated with the implementation have not been developed yet. Therefore, determining the economic impacts at this time is difficult. The meanings of “pollutants of concern” and “maximum extent practicable” or MEP are key to determining the extent of treatment required irrespective of the defined flow volume or flow rate. These key elements must be defined before the associated costs can be assessed. The definition of MEP has generally been applied to mean implementation of economically achievable management practices but this broad definition results in liability concerns.

There are projects throughout San Diego County where water quality features or BMPs were incorporated into development projects with no additional costs. One such example is the tennis center near Robb Field not far from the San Diego River. On this project, biofilters or grass swales purify runoff and are integrated into the required landscaping.

It is possible that the costs to some development projects would be significant. In some cases, location, terrain, and soil type would limit the feasible control options. Changing “the way we’ve always done it” presents other challenges. Development planning and site layout approached with water quality in mind would likely look different from what we’re used to seeing in Southern California. The City would look to the watershed approaches and better site design developed in other areas of the nation as a guide as well as new technologies to establish standards. The methods being tested by Caltrans in their BMP Pilot Studies Project have cost them as much as several hundred thousand dollars per acre to implement. The Caltrans project is an example of what it would cost down the road to add water quality controls after an area is developed. Designing controls into a project early in the planning stages would be the most cost effective strategy.

CONCLUSION

New Standard Urban Storm Water Mitigation Plans (SUSMPs) will have a broad impact on San Diego County. It is anticipated that the cost of these required measures would offset the cost of other watershed protection measures in the future. Through the municipal storm water permit, the City of San Diego is responsible for virtually all the discharge of pollutants into and out of its storm drain system from all land uses. Polluted runoff impacts the aquatic environment, human health, and the economy. Better site design with water quality in mind has considerable potential to reduce the environmental impacts of new development and redevelopment sites. Implementing water quality features within development would help the City meet water quality objectives in the future.

Respectfully submitted, D. Cruz Gonzalez Transportation Director		Approved: Frank Belock, Jr.
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