Development of Hydromodification Control Requirements for New and Redevelopment:

The Central Coast Joint Effort

February, 2012
Today’s Workshop

Meeting Purpose:

Discuss Joint Effort progress in the development of stormwater control requirements for new and redevelopment projects

Agenda:

• Project background

• Process for developing Numeric Criteria (Watershed Management Zones, Strategies, etc.)

• Applicability Thresholds and Alternative Compliance
Joint Effort Background

Post-construction stormwater requirements protect and improve downstream receiving waters.
Joint Effort Background

The Water Board proposed the Joint Effort as a regional approach to develop stormwater control requirements.

The Joint Effort was initiated in 2009 and has participation from all the Region’s MS4 municipalities.

The requirements are planned to go into effect January 2013.
Joint Effort Background

Project Assumptions:

• Landscapes across the Central Coast are not the same and a “one-size-fits-all” approach is not appropriate

• Conventional stormwater management approaches are not adequate to protect/improve receiving waters

• Hydromodification control should focus on the protection/improvement of watershed processes

• Post-construction requirements for hydromodification control must be technically feasible and reasonable (i.e., cost-effective)

• Water quality requirements must be integrated to create the final new/redevelopment requirements
Watershed Management Zones, Strategies, and Identification of Numeric Criteria
1. TYPES OF PHYSICAL LANDSCAPE FEATURES (GEOLOGY, SLOPE)
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Watershed Management Zones, Strategies, and Identification of Numeric Criteria

1. TYPES OF PHYSICAL LANDSCAPE FEATURES (GEOLOGY, SLOPE)

- MOUNTAINS
- HILLS
- COASTAL PLAIN
Watershed Management Zones, Strategies, and Identification of Numeric Criteria

2. TYPES OF RECEIVING WATERS
(WHERE DOES RUNOFF GO?)
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(WHERE DOES RUNOFF GO?)

RECEIVING WATER = STREAM
Watershed Management Zones, Strategies, and Identification of Numeric Criteria

RECEIVING WATER = OCEAN

RECEIVING WATER = STREAM
Map of Physical Landscape Zones of the Central Coast
Map of Receiving Water Types for urban areas of the Central Coast
Map of Watershed Management Zones for urban areas of the Central Coast (Physical Landscape Zone + Receiving Water Type)
What do we mean by “stormwater management strategies”? 

- Flow control (reduces overland flow, increases infiltration) 
- Water-quality improvement/protection 
- Preservation of natural features, including the influx of sediment and organic material
KEY POINTS:

• Watershed processes need protection *where* they occur; thus, most mitigation will typically occur on-site.

• “Runoff” is not the only process of concern for maintaining healthy watersheds; thus, “flow control” is not the only management strategy that will typically be needed.

• Conversely, not every site needs every process protected; not every receiving water needs the same type or degree of protection.
Stormwater management strategies should be tailored to meet the requirements of individual Watershed Management Zones.

For example:

• Areas that drain to small streams need to maintain the watershed processes that regulate flows, maintain water quality, and ensure continued delivery of sediment and organics.

• Areas that support groundwater aquifers need to maintain high rates of infiltration.

• Areas that drain directly to the marine nearshore need to maintain only those processes that support high water quality and delivery of beach sediment.
Watershed Management Zones, Strategies, and Identification of Numeric Criteria
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Management Strategies + Numeric Criteria = Performance-based Requirements
Evaluation of Existing Numeric Criteria to Determine Suitability in Addressing Central Coast Watershed Management Strategies

Post-project peak flows shall not exceed pre-project peak flows for recurrence intervals up to two years (Q2)

Retain the 95th Percentile Event

etc.
Watershed Management Zones, Strategies and Numeric Criteria: Summary

The WMZs identify:

- Key watershed processes to protect
- Necessary management strategies to achieve protection

The WMZs inform:

- The translation of management strategies into numeric performance targets
Discussion: Part 1

- Watershed Management Zones
- Management Strategies
- Numeric Criteria
Applicability Thresholds
Components of Applicability Thresholds

- Parameter used to trigger requirements
  (e.g., new/replaced impervious surface)

- Exemptions

- Type of requirement at each threshold
  (e.g., water quality and flow control)
A programmatic approach undertaken by a municipality to provide an alternative to the uniform application of Joint Effort numeric criteria to all projects in their jurisdiction.
Opportunities
• Flexibility to align with broader development objectives
• Ability to meet compliance

Challenges
• Legal framework (location, schedule)
• Equivalency with Joint Effort numeric criteria
• Long term ownership and responsibility
• Identification of suitable mitigation sites

Alternative Compliance is new territory and most likely a Pilot Project for a subset of projects.
Discussion: Part 2

- Applicability Thresholds
- Alternative Compliance
Post Construction Requirements for WMZ “A”

Amount of new/replaced impervious surface:

(small) $ft^2$ then $\text{(insert numeric requirement)}$

(large) $ft^2$ then $\text{(insert numeric requirement)}$
Please see schedule handout
Thank You