

# Orange County MS4 Permit LID Requirements

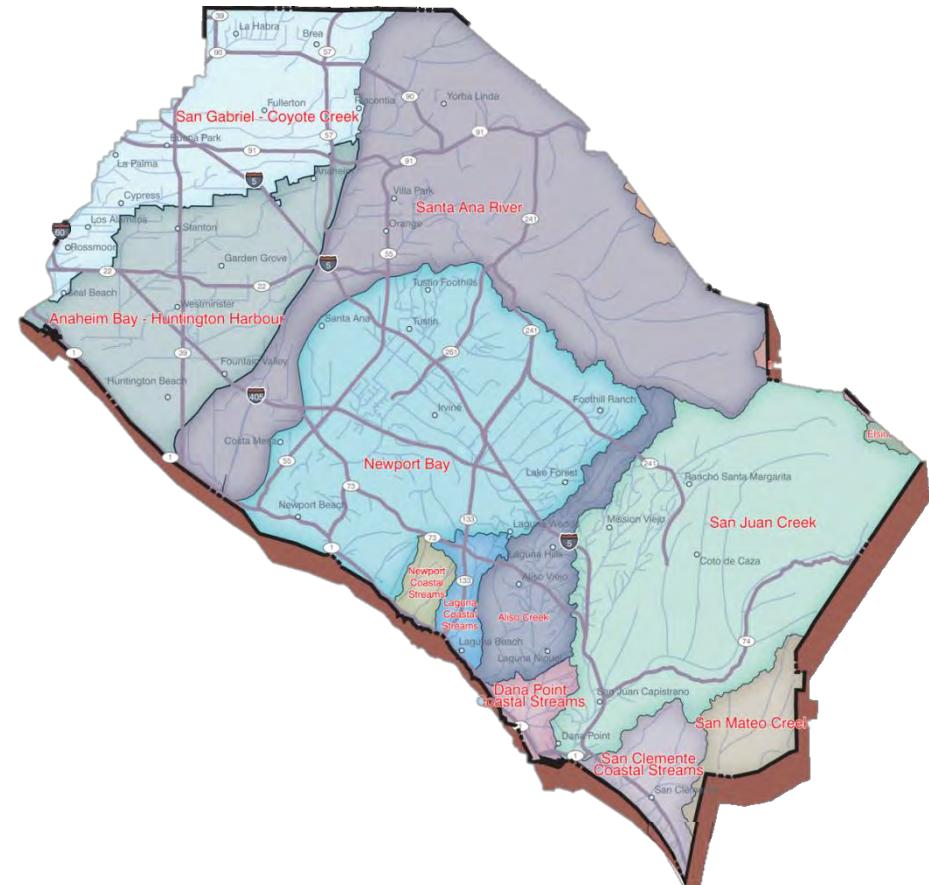


Christy Suppes  
OC Environmental Resources

# Orange County Stormwater Program

A cooperative of the County of Orange, the Orange County Flood Control District and all 34 Orange County cities.

- ➔ Maintain compliance
  - Santa Ana Region
  - San Diego Region
- ➔ Protect waterbodies
- ➔ Manage runoff quality



# Evolution of the MS4 Permit



1972 - Clean Water Act (NPDES, point sources)



1972

OC Public Works

# Projects Subject to Land Development Requirements

The following project sizes generally trigger requirements for preparation of a Water Quality Management Plan:

- **New Development**

Creates 10,000 square feet or more of new impervious surface on a previously undeveloped site

- **Significant Redevelopment**

Adds or replaces 5,000 sf or more impervious surface on an already-developed site

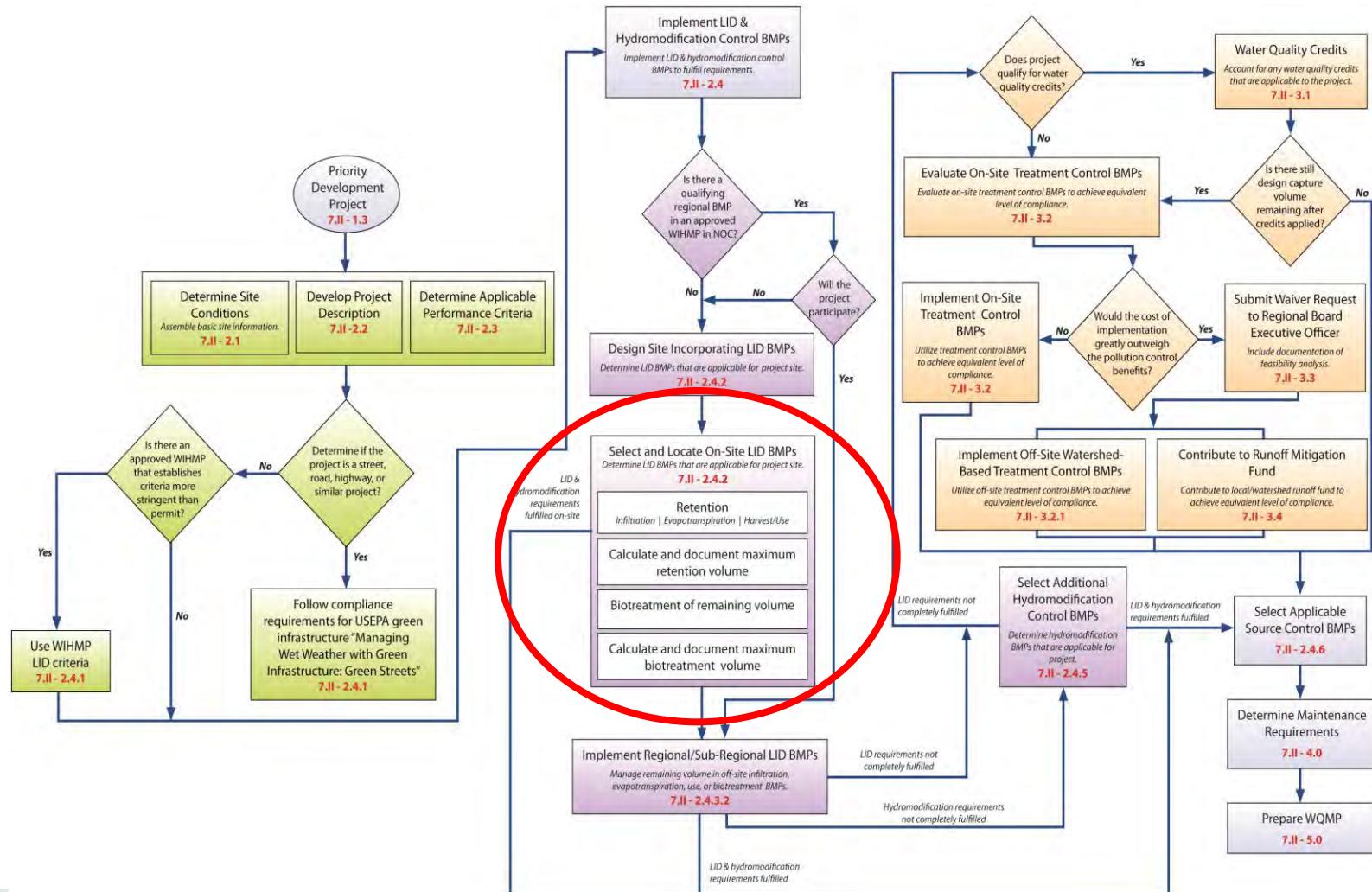


# Permit Requirements for Land Development

Permit Order No.	R8-2009-0030 (Santa Ana Region)	R9-2009-0002 (San Diego Region)
Low Impact Development	<ul style="list-style-type: none"><li>• Infiltration, harvest &amp; reuse, or evapotranspiration of runoff from 24-hour 85<sup>th</sup> percentile storm event<ul style="list-style-type: none"><li>• Biotreat</li></ul></li><li>• If not feasible: traditional BMPs onsite PLUS offsite retention or in-lieu</li></ul>	<ul style="list-style-type: none"><li>• Infiltration, harvest &amp; reuse, or evapotranspiration of runoff from 24-hour 85<sup>th</sup> percentile storm event<ul style="list-style-type: none"><li>• Biofilter</li></ul></li><li>• If not feasible: traditional BMPs onsite PLUS LID waiver program</li></ul>
Hydromodification Management	<ul style="list-style-type: none"><li>• Pre- and post- development runoff volume and Tc for 2-year storms matches +/- 5%</li><li>• 2 year storm runoff is infiltrated<ul style="list-style-type: none"><li>• If adverse HCOC, additional management controls required</li></ul></li></ul>	<ul style="list-style-type: none"><li>• <b>Match</b> pre- (naturally occurring) and post-development <u>flow-duration curves</u> for a range of 10% of 2-year to 10-year flow.</li><li>• Sediment supply: site design <b>must avoid</b> significant sources of bed sediment</li></ul>



# Model WQMP Process (2011 onwards)



# LID Hierarchy

The stormwater permits establish a hierarchy of LID features required to capture a specified volume of rainfall (85<sup>th</sup> percentile storm). A rigorous analysis is required to demonstrate infeasibility.

1. On-site Retention
  1. Infiltration
  2. Evapotranspiration
  3. Harvest and Reuse
2. On-site Bio-treatment
3. Off-site LID (Regional/Sub-Regional BMPs) (SAR)
6. In-lieu fee (SAR)
7. LID Waiver (SDR)



# Resources

- [www.ocwatersheds.com](http://www.ocwatersheds.com)
  - Model WQMP & Technical Guidance Documents
  - Hydromodification Management Plan and South Orange County Hydrology Model (SOCHM)
  - Training (MS PowerPoint)
  - FAQs
- *Water Quality Requirements for Land Development* brochure
- City & County Staff
- Help Desk (via email)



# Questions

Christy Suppes  
(714) 955-0673

[christy.suppes@ocpw.ocgov.com](mailto:christy.suppes@ocpw.ocgov.com)

