

# Palos Verdes Peninsula EWMP Watershed Management Group



Participating Agencies:

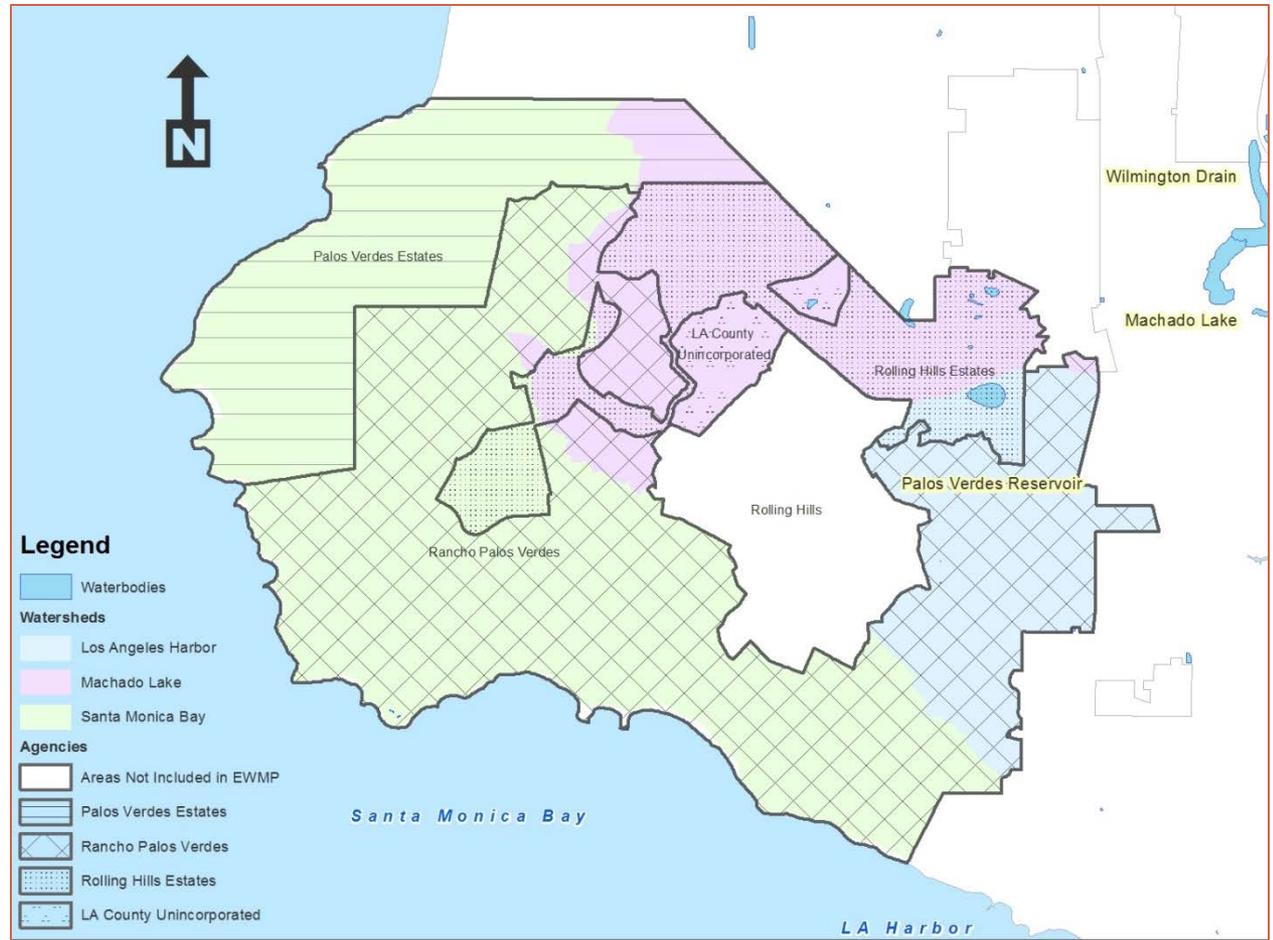
**Rancho Palos Verdes**

**Palos Verdes Estates**

**Rolling Hills Estates**

**County of Los Angeles**

**Los Angeles County Flood Control District**



## Peninsula EWMP Agencies

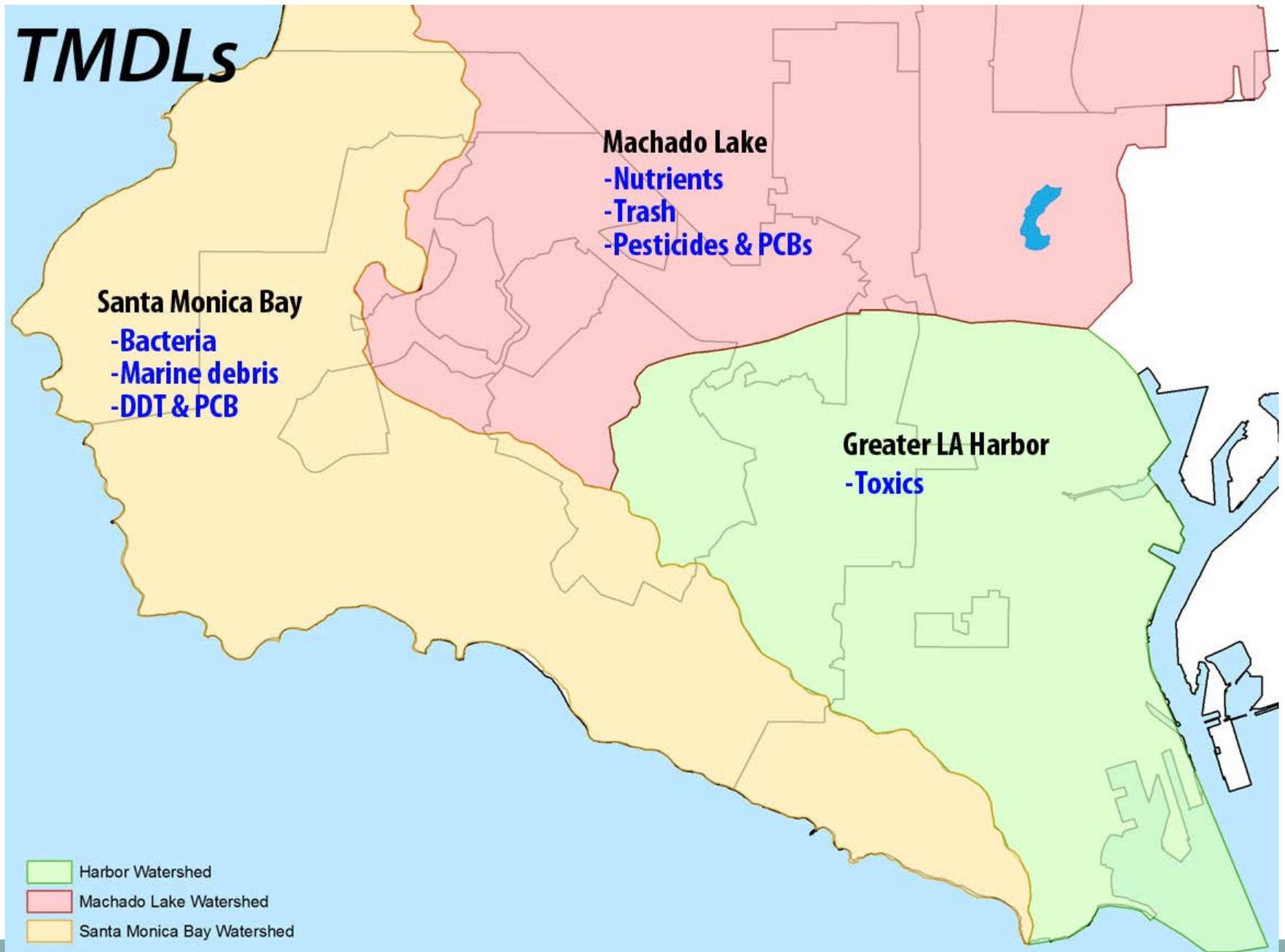
# TMDLs

**Machado Lake**  
-Nutrients  
-Trash  
-Pesticides & PCBs

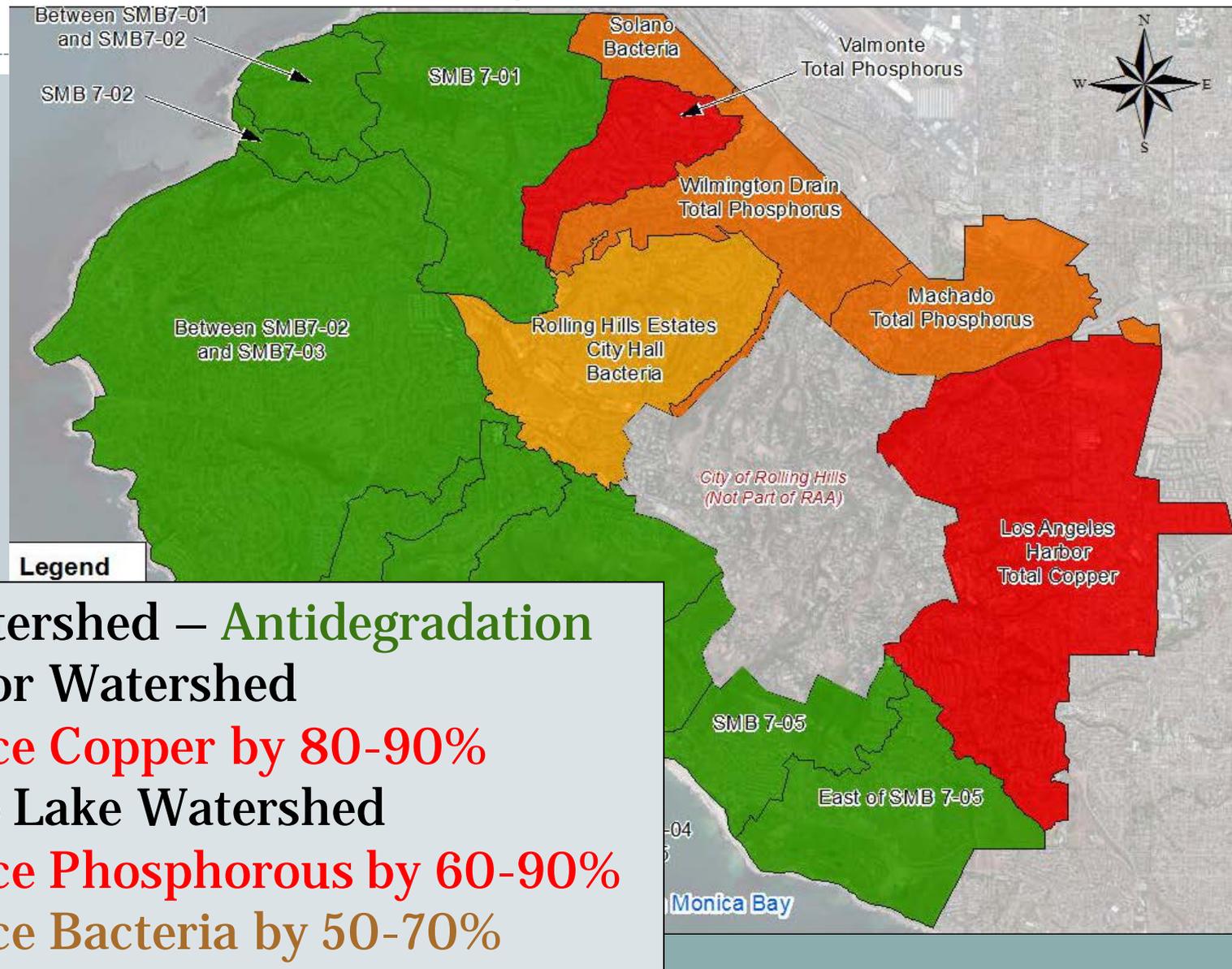
**Santa Monica Bay**  
-Bacteria  
-Marine debris  
-DDT & PCB

**Greater LA Harbor**  
-Toxics

-  Harbor Watershed
-  Machado Lake Watershed
-  Santa Monica Bay Watershed



# Water Quality Priorities



# Technical Challenges

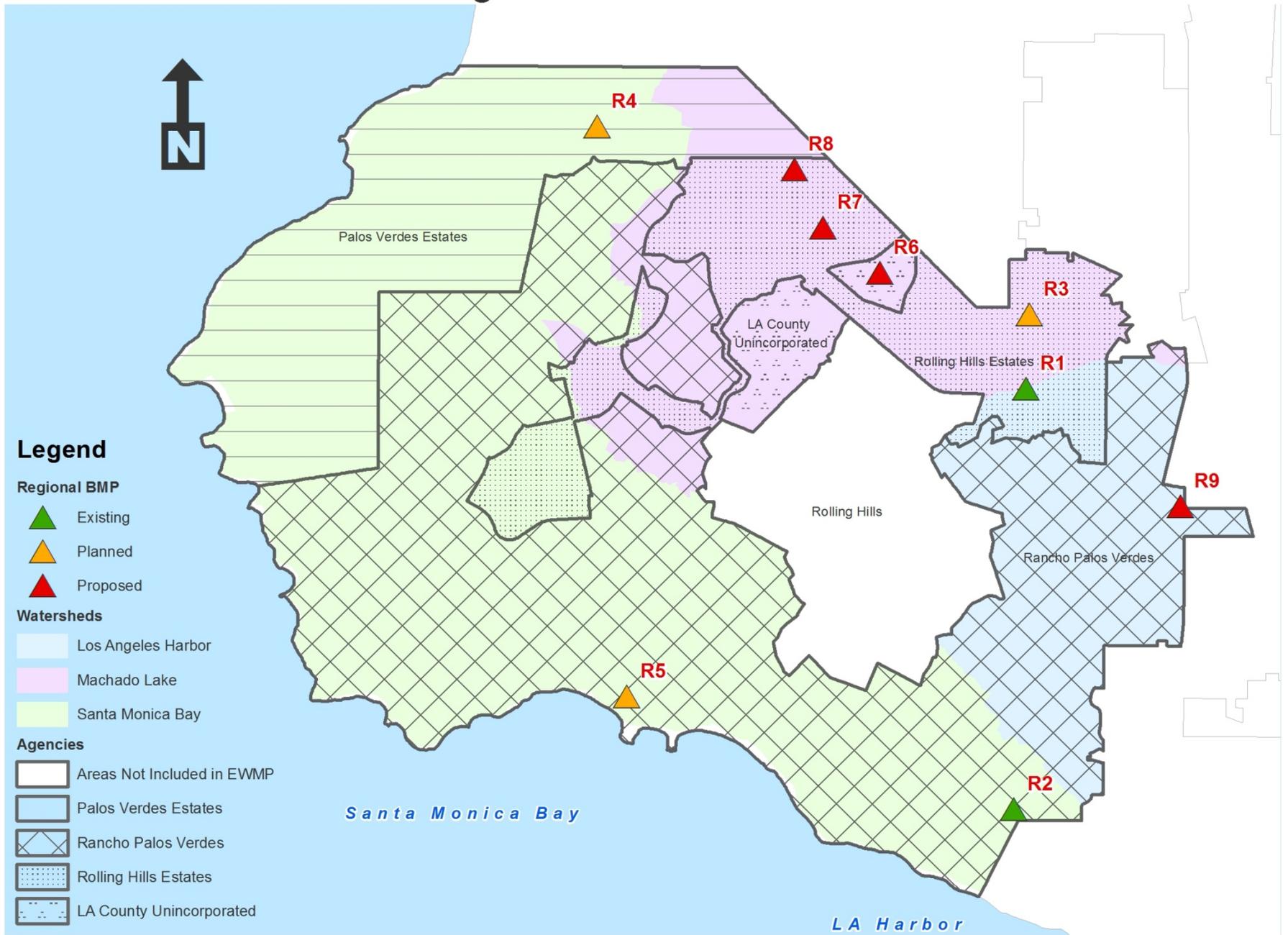


- **Machado Lake Nutrient TMDL Final Compliance Deadline 2018**
- **Machado Lake Pesticides and PCBs TMDL Final Compliance Deadline 2019**
- **Significant occurrence of geotechnical hazards**
  - **Infiltration infeasibility**
- **Machado Lake Watershed held to very low WQBELs, particularly for phosphorus**
  - **Traditional biofiltration BMPs would not satisfy necessary reductions**

# Distributed Structural BMPs



# Regional BMP Locations



## Legend

### Regional BMP

- Existing
- Planned
- Proposed

### Watersheds

- Los Angeles Harbor
- Machado Lake
- Santa Monica Bay

### Agencies

- Areas Not Included in EWMP
- Palos Verdes Estates
- Rancho Palos Verdes
- Rolling Hills Estates
- LA County Unincorporated

# Regional BMPs - Casaba Estates (Butcher Ranch)



- Completed – Early Action
- Located in Rolling Hills Estates
- Pre-existing ravine re-graded to remove standing water conditions
- Rehabilitated into a **bioretention system**
- Drainage area: ~28.62 acres

# Regional BMPs - San Ramon Canyon



- Completed September 2014 – Early Action
- Located in the City of Rancho Palos Verdes
- Erosion Reduction
- Landslide Stabilization
- Ecosystem Restoration

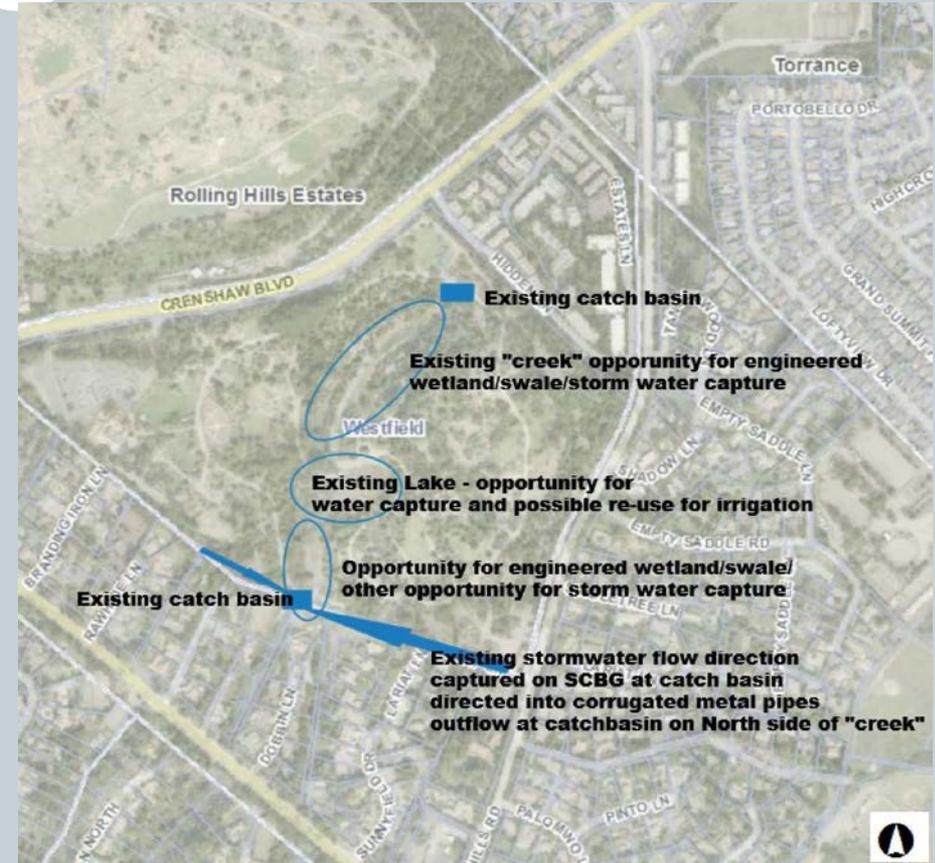




# Regional BMPs - South Coast Botanic Garden



- As a part of the SCBG Conceptual Vision Plan, additional enhancements are being considered:
  - Existing creek to an **engineered wetland, swale, or stormwater capture facility**
  - Existing lake for **stormwater capture and possible reuse for irrigation**
  - Existing open space for an **engineered wetland, swale, or stormwater capture facility**
  - Existing catch basin to **divert upstream flows to Regional BMP**



# Additional Regional BMPs



- **Machado Lake Watershed BMPs**

*Infiltration Infeasible & Biofiltration Opportunities Limited*

- Treatment Facility or a Subsurface Flow (SSF) Wetland

- ✓ *Palos Verdes Landfill Regional BMP*

- ✓ *Valmonte Regional BMP*

} Modeled with RAA

- Walteria Flood Control Basin BMP

- Low Flow Diversion BMP

- Fern Creek Stream Restoration

- Machado Lake Restoration

- Lake Nutrient TMDL Reopener

- **Los Angeles Harbor Watershed BMPs**

- *Eastview Park Infiltration Project*

} Modeled with RAA

- **Santa Monica Bay Watershed BMPs**

- *Malaga Cove Water Reuse*

- *Abalone Cove Water Reuse*

# Stakeholder Outreach

- Two workshops were held to engage stakeholders in the Peninsula EWMP development process and solicit input. These stakeholders include:
  - Key City Staff
  - City Council Members and Water Quality and Flood Protection Oversight Committee
  - Governmental Organizations Staff
  - Non-Governmental Environmental Organizations Staff
  - Non-Governmental Organizations Staff
  - Palos Verdes Peninsula Residents
- Three separate meetings were held with specific stakeholders who expressed interest in providing more detailed input into the Peninsula EWMP:
  - South Coast Botanic Garden (SCBG)
  - Palos Verdes Peninsula Land Conservancy (PVPLC)
  - Palos Verdes Golf Club



# City Council Meetings



- **Elected Officials are familiar with the EMWP plan and submittal of that plan**
- **All agencies have obtained their Council or Board's approval on LID Ordinances**
- **All agencies have obtained their Council or Board's approval on Green Streets Policies**

# How much will it cost?



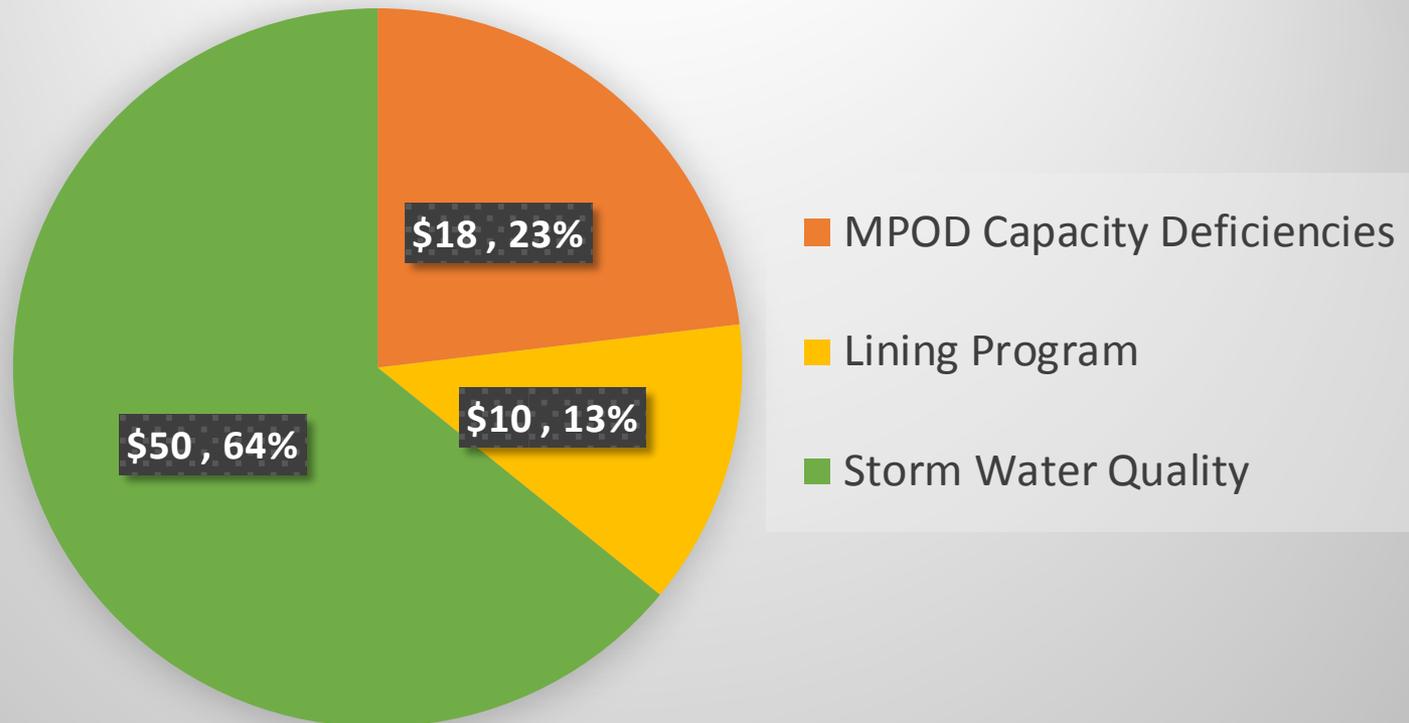
- We don't know... exactly
- Orders of magnitude higher than what is being spent now
- Estimated Cost for the 3 Modeled Peninsula WMG Projects:
  - Capital: \$90 - 130 M (front loaded)
  - Annual O&M: \$1 - \$1.5 M
- Combined FY15-16 Budgets of Cities is \$47.1M

# Cost Planning



*The tide is turning...SWQ infrastructure needs will soon overshadow flood control needs*

**Potential Infrastructure Storm Water Funding Needs in RPV  
Next 15 to 20 Years, in Millions**



# SWQ Financial Strategy Needed



- To be established by each CC / County BOS
- General Fund – currently used for SWQ
- State Bonds & Grants – competitive & revenue is uncertain
- Dedicated Fee Efforts – Prop 218, etc.
- Pursuing partnerships and looking for ways to collaborate
- Our leadership is wrestling to develop strategies to meet demands of a NEW infrastructure category that enters as the LARGEST need



**THANK YOU**