

# Ballona Creek Watershed Management Group

City of Los Angeles

County of Los Angeles

Los Angeles Flood Control District

City of Beverly Hills

City of Culver City

City of Inglewood

City of West Hollywood

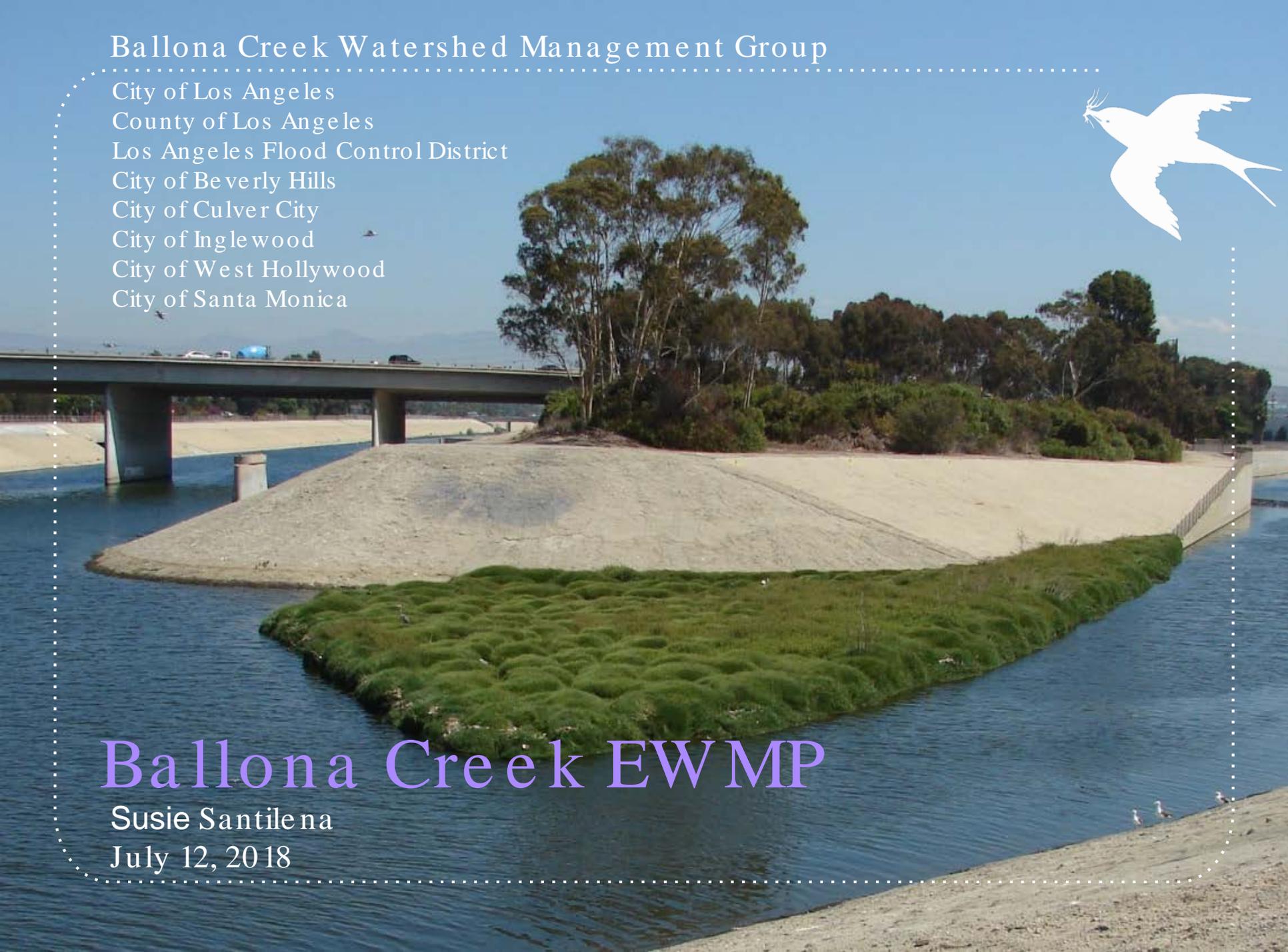
City of Santa Monica



## Ballona Creek EWMP

Susie Santilena

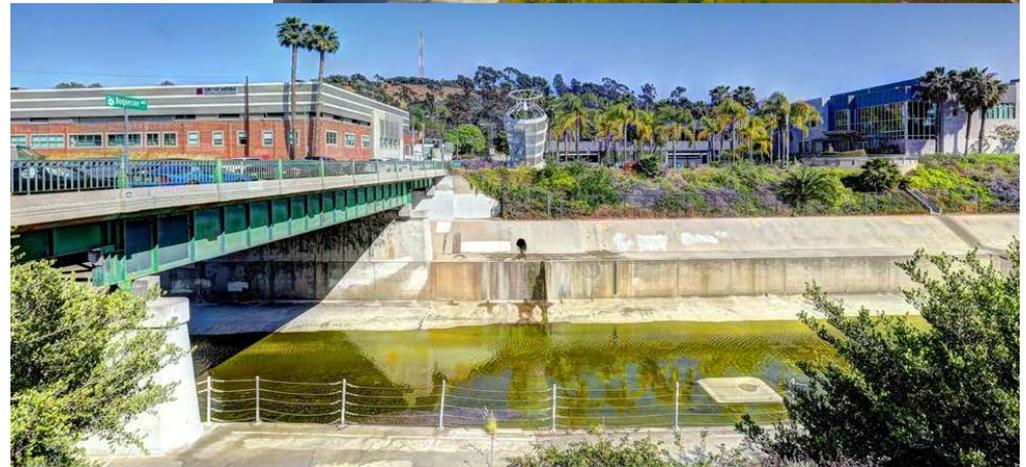
July 12, 2018



# Presentation Outline

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- **Watershed Background**
- **EWMP Implementation**
  - LID Progress
  - Green Streets
  - Project Highlights
  - Program Highlights



# Watershed Attributes

8 agencies

128 square miles

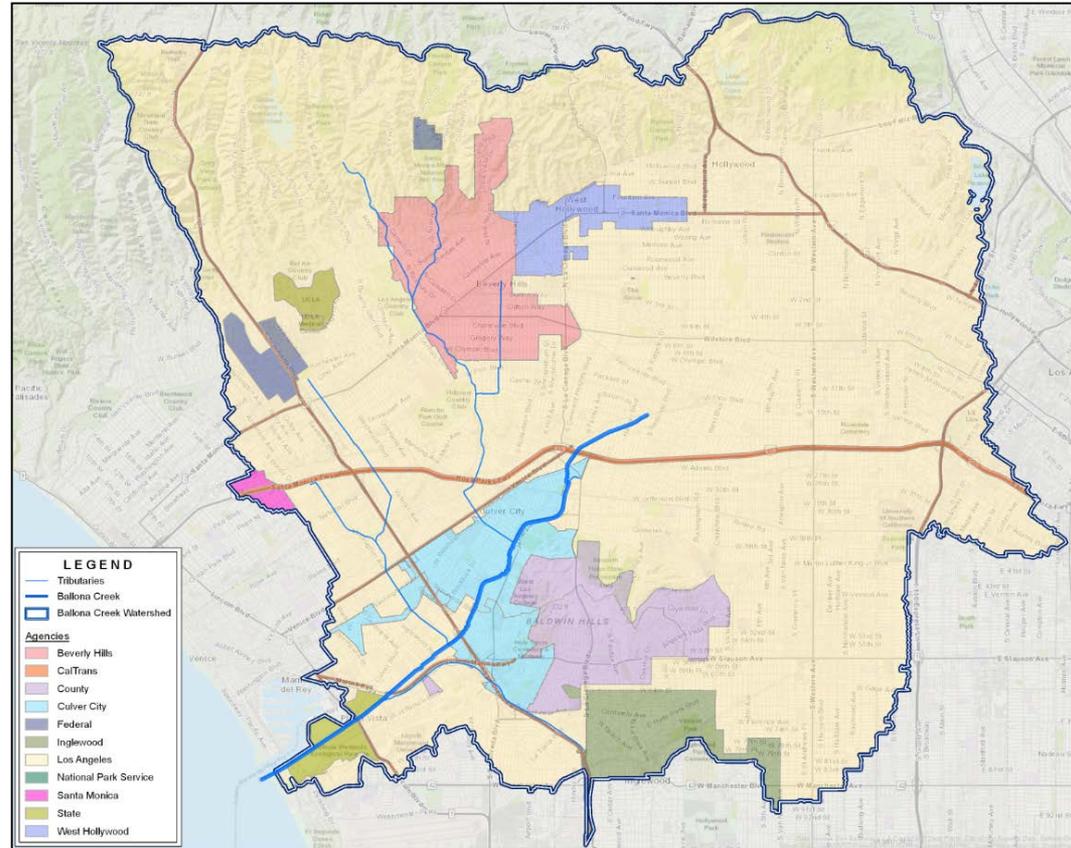
Highly urbanized:

60% Residential

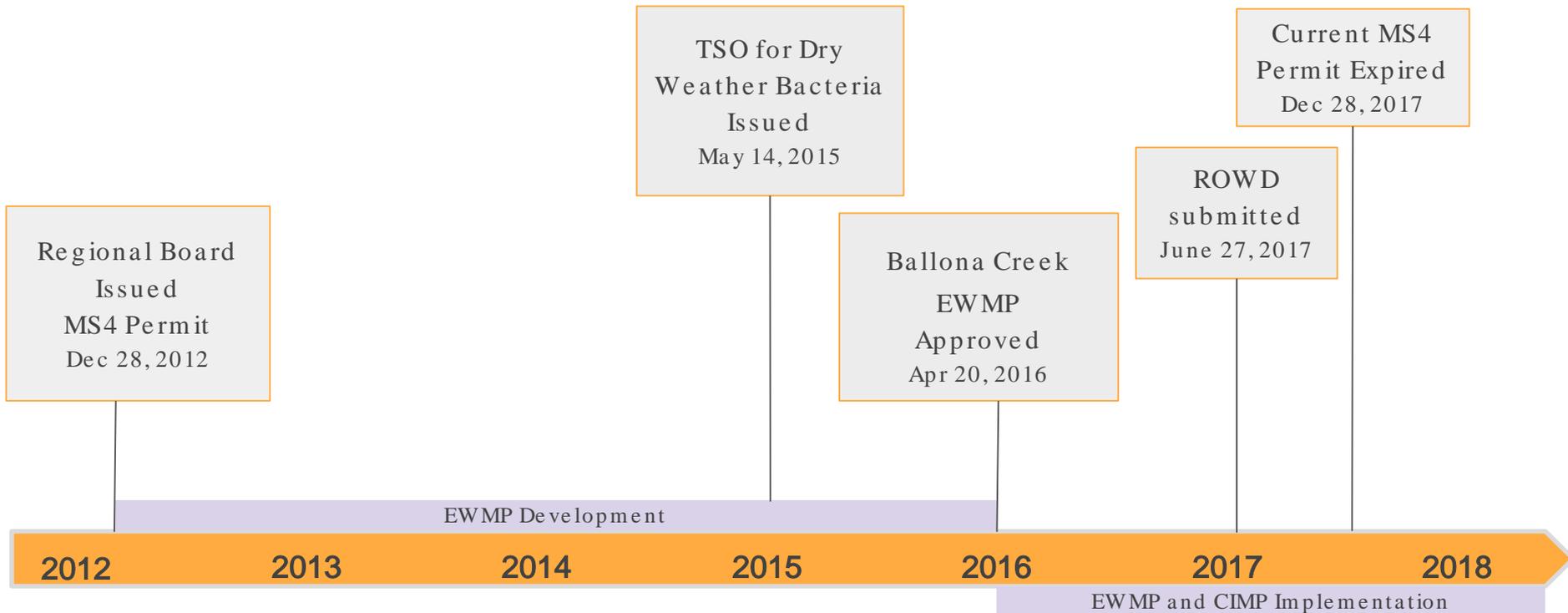
16% Commercial

540 acres of wetlands

7 applicable TMDLs



# Watershed History

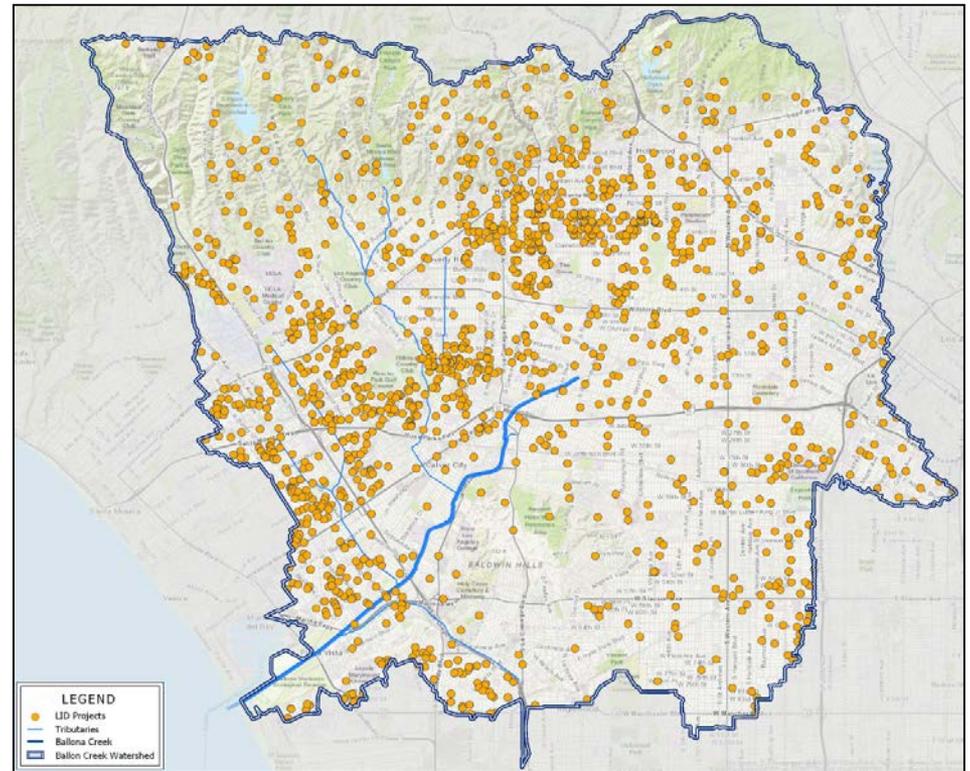


## Watershed Collaboration:

- Management group established in 2007
- Meets monthly
- Agencies collaborate on and cost -share watershed efforts

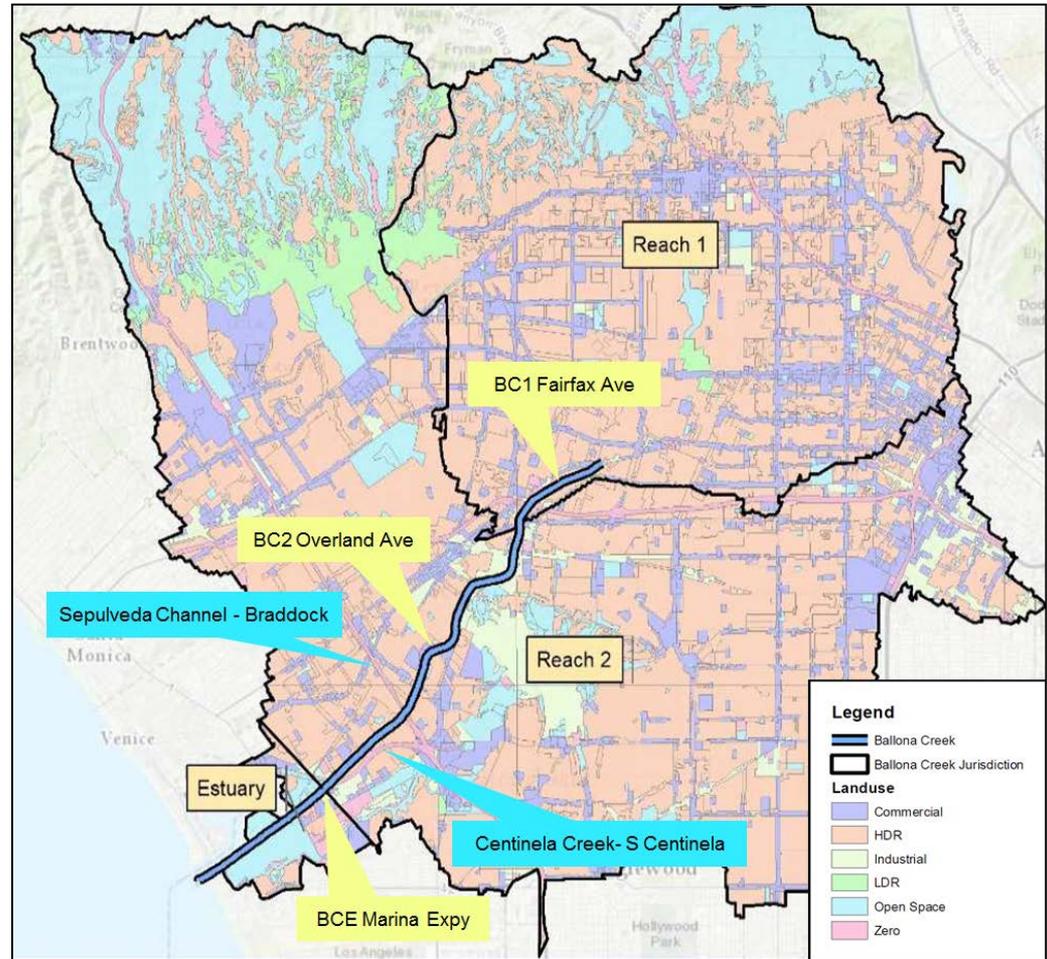
# Low Impact Development

- LID ordinances adopted by all agencies
- Over **1750** LIDs constructed 2012-2017
- Capacity: **15** ac-ft



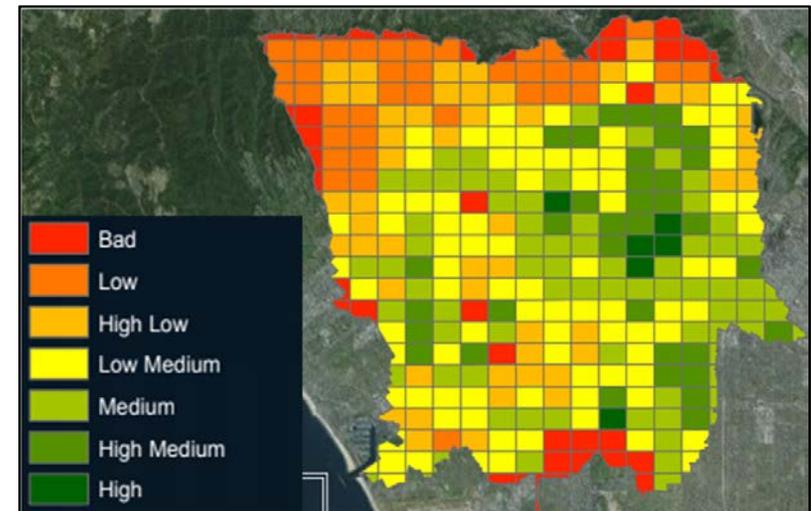
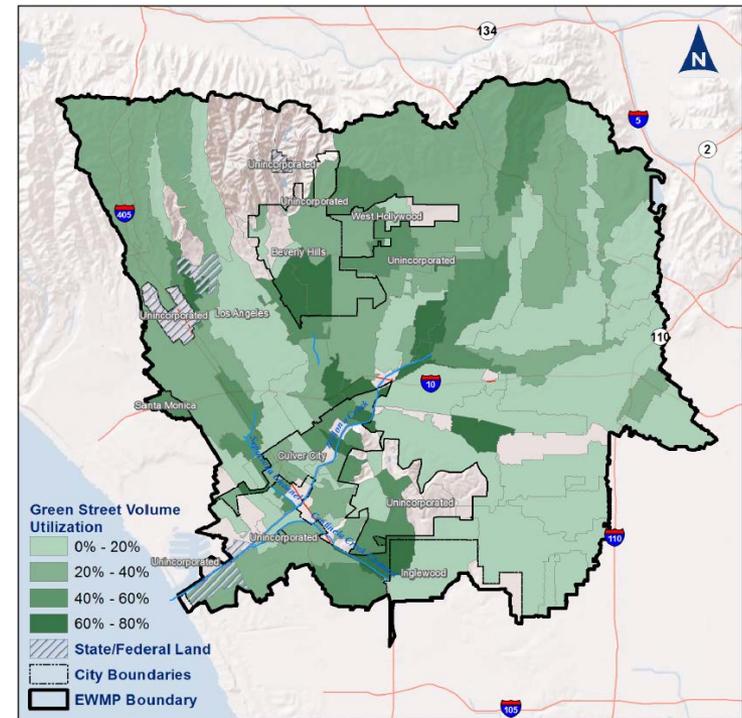
# Trash TMDL

- Over **16,000** catch basins retrofitted
- Institutional measures
- Implementing TMRP
  - **3** Receiving Water Monitoring Sites
  - **2** Tributary Monitoring Points
- Compliance status: **100%**



# Green Streets

- Green Street Policies adopted by all agencies
- City of Los Angeles: Green Street Prioritization
- County of Los Angeles: Green Street Task Force
- Beverly Hills: Stormwater Compliance Master Plan
- Culver City: Median Project
- Inglewood: Greening red curbs
- West Hollywood: Complete Streets
- Santa Monica: Permeable Alley Surfaces



# PROJECT

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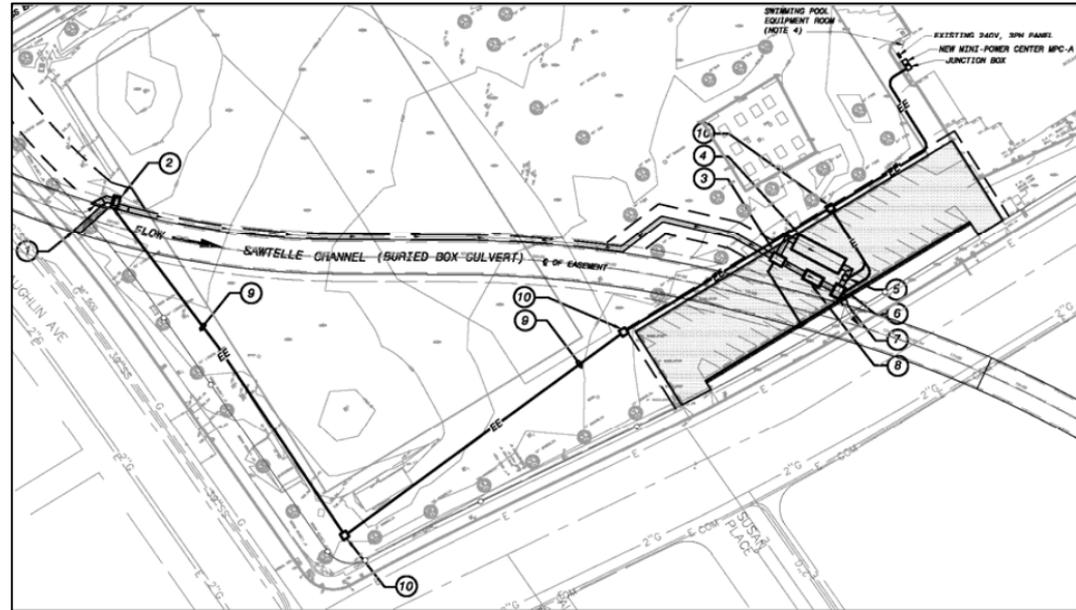
## Highlights

- Regional Projects
- Green Streets
- TSO Projects

# Westside Water Quality Improvement Project

## Santa Monica

- **Capacity:** Up to 33 cfs
- **Drainage Area:** 2,500 acres
- **Estimated Cost:** \$1.7 M
- **Components:**
  - Diversion for treatment and return
- **Status:** Completed
  - Evaluating Phase II feasibility
- **Completion Date:** 2006



# Ladera Park Regional Stormwater Capture Project

## County of Los Angeles

- **Capacity:** 5.1 acre-ft
- **Drainage Area:** 110 acres
- **Estimated Cost:** \$10 M
- **Components:**
  - Pretreatment system
  - Re-irrigation system
  - Recreation & aesthetic enhancements
  - Demonstration garden
  - Educational signage
- **Status:** Design
- **Completion Date:** Fall 2019



# La Cienega Park **Project** & Frank Fenton Field

## Beverly Hills

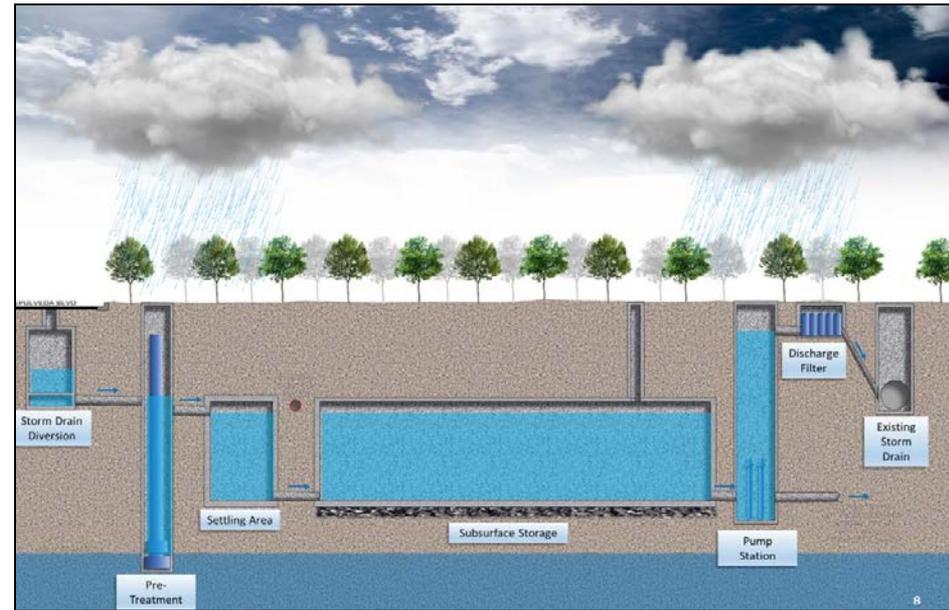
- **Capacity:** 24 acre-ft
- **Drainage Area:** 578 acres
- **Estimated Cost:** TBD
- **Components:**
  - Capture & treat/divert to sewer
- **Status:** Feasibility Study
- **Completion Date:** TBD



# Culver Boulevard Project

## Culver City

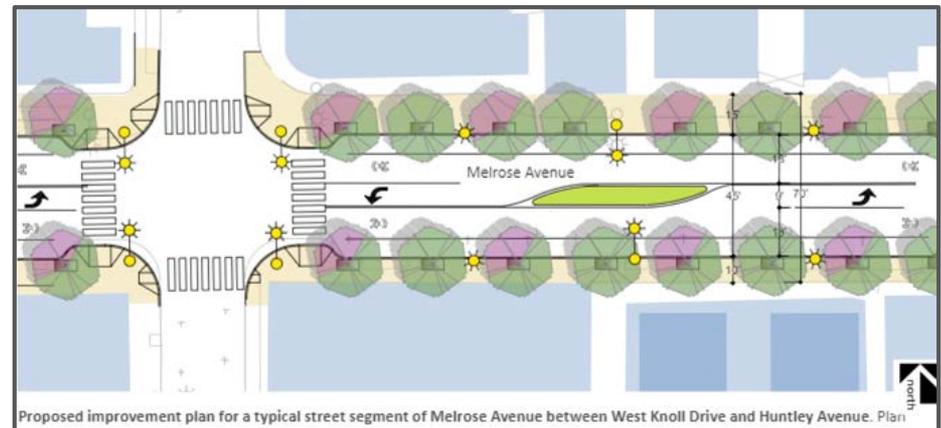
- **Capacity:** 20 acre-ft
- **Drainage Area:** 303 acres in Culver City
- **Estimated Cost:** \$12-16M
- **Components:**
  - Storage: 8 acre-ft
  - Treatment Volume: 11.66 acre-ft
  - Diversion to Harter Ave Drain
  - Diversion to Sepulveda Blvd Drain
- **Status:** Design
- **Completion Date:** Late 2020



# Melrose Ave Complete Street Project

## West Hollywood

- Capacity: TBD
- Drainage Area: TBD
- Estimated Cost: \$ 4 M
- Components:
  - Infiltration BMPs
  - Transit and bicycle routes
  - Street lighting and furniture
  - Pedestrian safety/access
- Status: Planning/Concept
- Completion Date: Fall 2019



# Burton Way Median Green Street Project

## Beverly Hills

- **Capacity:** 9 acre-ft
- **Drainage Area:** 248 acres
- **Estimated Cost:** \$9.8 M
- **Components:**
  - Storm drain diversion
  - Bioswales along 3 mile stretch of median
  - Treatment and reuse
  - Phase 1: 4 ac-ft/ yr (\$3.0 million)
  - Phase 2: 5 ac-ft/ yr (\$6.8 million)
- **Status:** Design
- **Completion Date:** Fall 2019



# Santa Monica Boulevard Green Streets Project

## Beverly Hills

- **Capacity:** 1 acre-ft
- **Drainage Area:** 13 acres
- **Estimated Cost:** \$500 k
- **Components:**
  - Infiltration
  - Treatment
  - Flood Control
  - 3200 ft of green street
- **Status:** Construction
- **Completion Date:** Fall 2018



## County of Los Angeles

- **Capacity:** 9.3 acre-ft
- **Drainage Area:** 228 acres
- **Estimated Cost:** \$3.7 M
- **Components:**
  - Pretreatment system
  - Recreation & aesthetic enhancements
  - Green alley with drought tolerant landscaping
  - 16 infiltration wells
  - Educational signage
- **Status:** Planning/Concept
- **Completion Date:** Fall 2021





# Westwood Neighborhood Greenway Project

## Los Angeles

- **Capacity:** 300 acre-ft/year
- **Drainage Area:** 2,400 acres
- **Estimated Cost:** \$5.4 M
- **Components:**
  - Storm drain diversion
  - 2 parallel vegetated swales (1,400 ft)
  - Native vegetation
  - Restoration of riparian habitat
  - Educational signage
- **Status:** Design
- **Completion Date:** Fall 2020



# University Park Neighborhood Rain Gardens Project

## Los Angeles

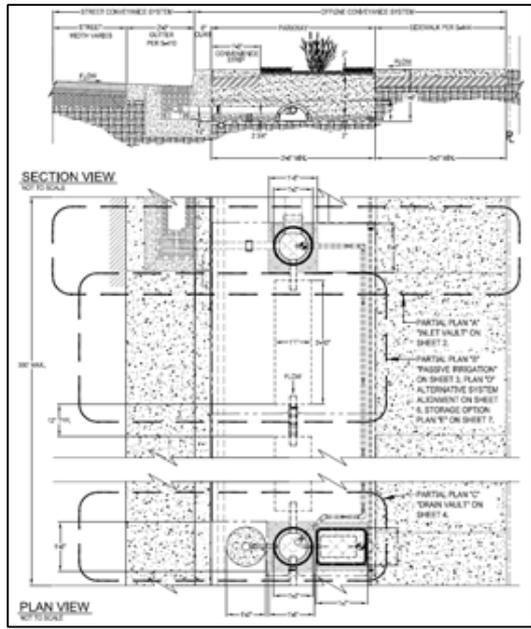
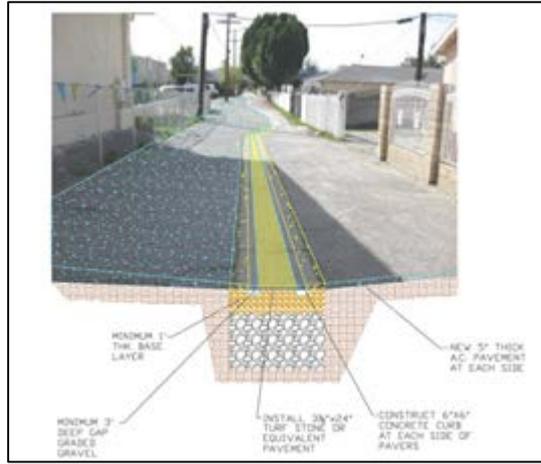
- **Capacity:** 0.23 acre-ft
- **Drainage Area:** 209 acres
- **Estimated Cost:** \$600 K
- **Components:**
  - 35 rain gardens
  - Replenishes groundwater through infiltration
  - Beautification in DAC
  - Community education on LID
- **Status:** Completed
- **Completion Date:** 2017



# Vermont Ave. Stormwater Capture & Green Street Project

## Los Angeles

- Capacity: TBD
- Drainage Area: 39 acres
- Estimated Cost: \$3.7 M
- Components:
  - Median biofilter
  - Green alley
  - Green street standard plans
  - Beautification in DAC
- Status: Design
- Completion Date:
  - Phase I- June 2019
  - Phase II- February 2021





# PROGRAM

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## Highlights

- CIMP Implementation
- Measure CW

# Watershed Monitoring

- 5 new monitoring sites as a result of the CIMP:
  - 3 Stormwater Outfalls
  - 2 Non-Stormwater Outfalls
- 1 Shoreline Station
- 2 NSWO screenings of 2 sig. outfalls

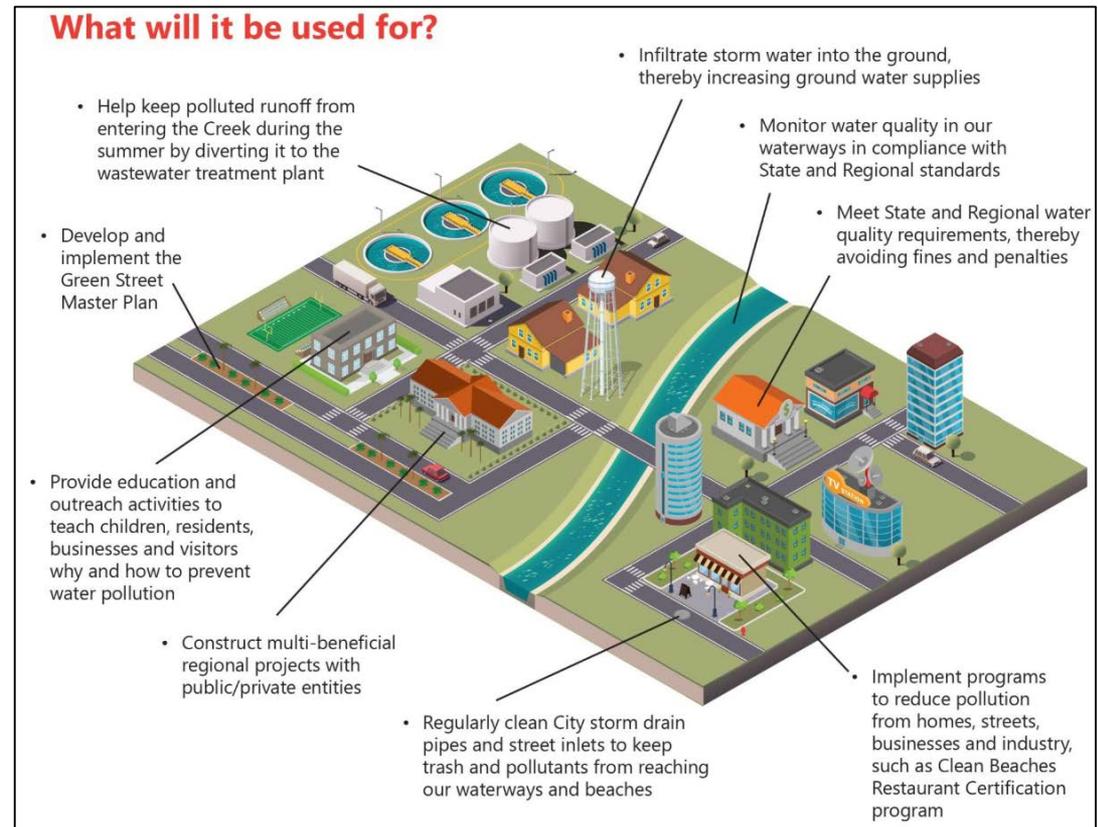


Station Type	# of monitoring Locations	Automated sampling stations (wet weather)
Main Stem RW	9 (1 ME site)	4
Tributary RW	4	3
Lagoon	1	N/A
SWO	3	3
<b>Total</b>	<b>17</b>	<b>10</b>

Monitoring Type	Frequency
Wet Weather Events	3x / year
Dry Weather Events	2x / year
Bacteria TMDL	Weekly
Metals TMDL	Monthly
Estuary Bed Sediment	Annually
Mussel Tissue	Annually
Fish Tissue	Annually
Plastic Pellets Monitoring	2x / year

# Measure CW Culver City

- The Clean Water, Clean Beach Parcel Tax passed in Culver City (November 2016)
- Set annual parcel tax for:
  - Single family residential \$99
  - Multi-family dwelling unit \$69
  - \$1,096 per acre for non-residential
- A dedicated funding for Culver City's Water Quality Programs
- Measure V: Santa Monica



# Thank You

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## Any questions?

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