



Public Works Agency



# Urban Low Impact Development (LID) Retrofit Project at Meiners Oaks, CA

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*Presentation for*  
Ventura River Watershed Council

June 5, 2014



# Ventura River 303(d) List

Water Quality Impairments to be addressed by proposed project include:

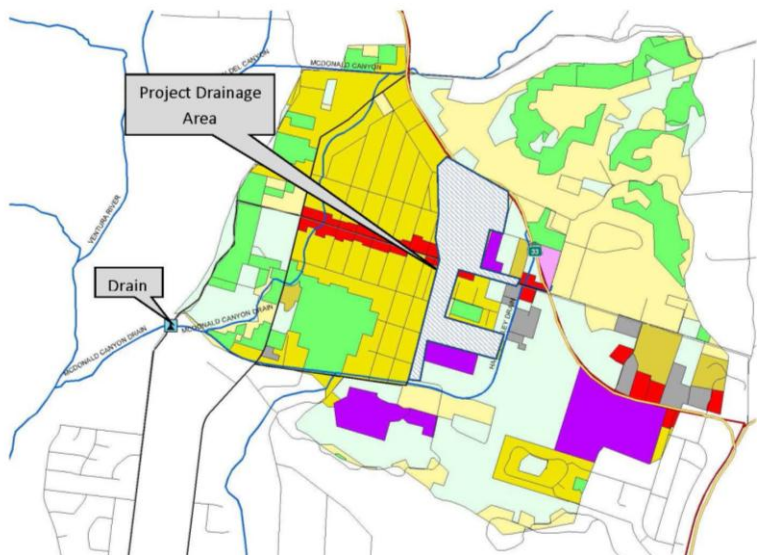
- Indicator Bacteria, Total Coliform
- Algae, Eutrophic Conditions (nitrogen & phosphorus)



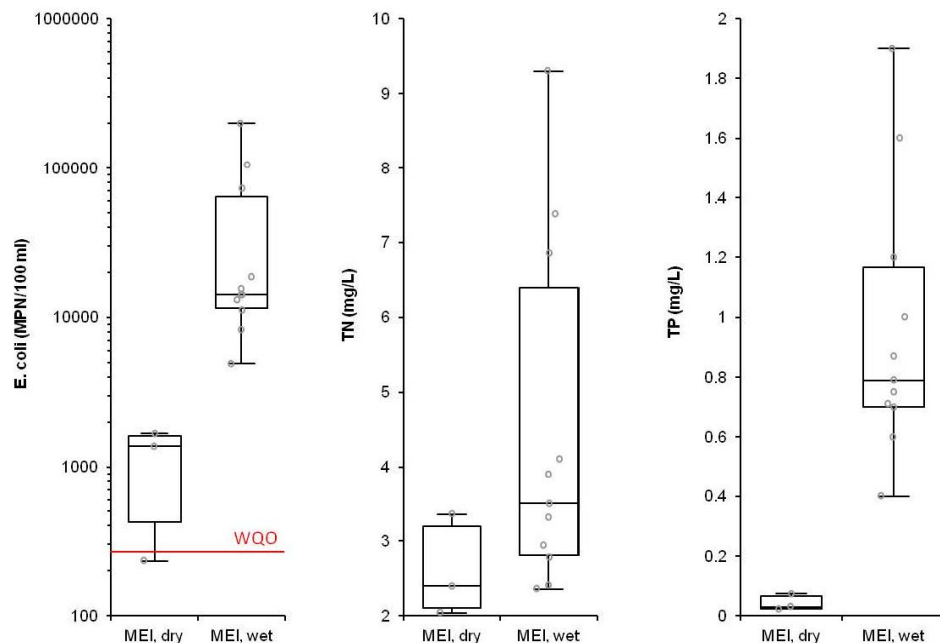


# Countywide Stormwater Quality Management Program

Public Works Agency



## Meiners Oaks outfall (Happy Valley Drain) monitoring





# Efforts to Improve Water Quality

## County & Cities

- Illicit Discharge and Dumping hotlines
- Business inspections
- Storm drain cleaning
- Full trash capture devices
- Construction BMPs
- Low Impact Development for new development and redevelopment projects
- Education and Outreach





# Prop 84 Program Background

- Proposition 84 Stormwater Grant Program: Run by California State Water Resources Control Board
- Program is intended to provide matching grants to local public agencies for reduction and prevention of stormwater contamination of rivers, lakes, and streams





# Prop 84 Grant Application Process

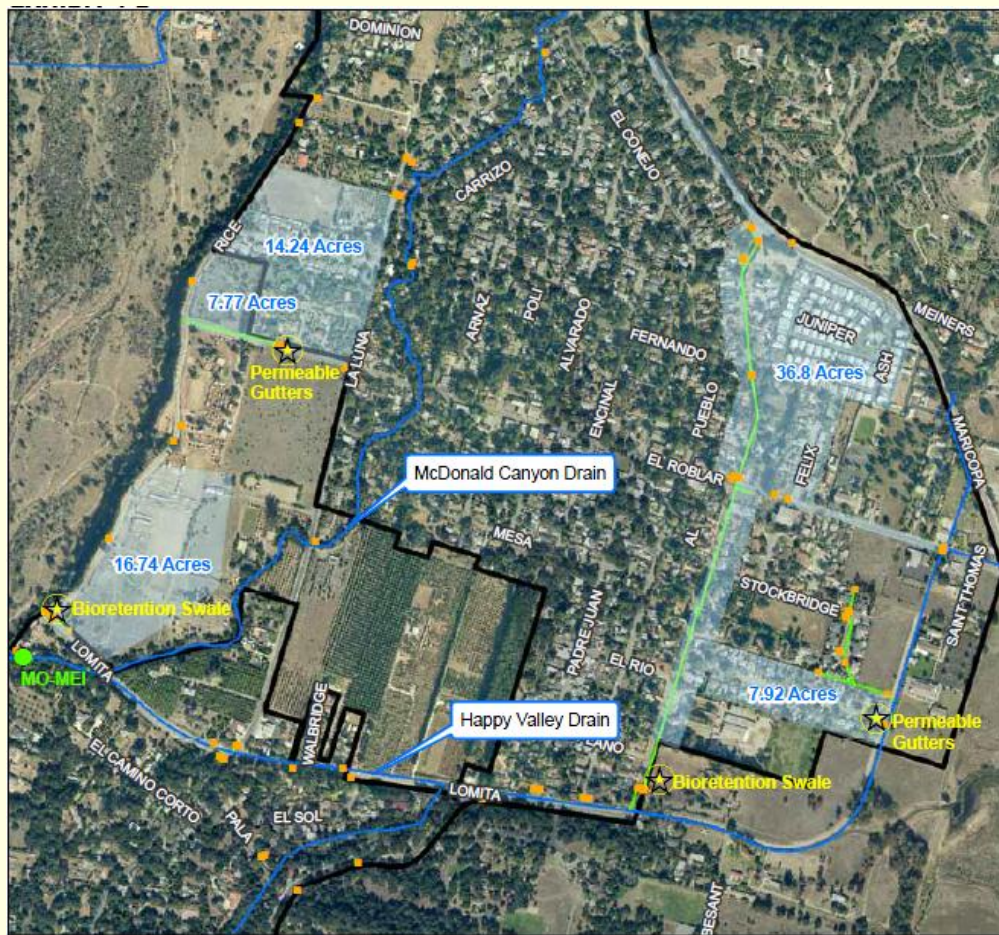
- The County submitted Concept Proposal in October 2013.
- Project was one of 41 projects throughout the State selected to submit Full Proposal in February 2014.
- Project was selected for funding in May 2014.

PIN	REG	APPLICANT NAME	PROJECT NAME	FUNDING AMOUNTS		
				Prop 84	Match	Total
The following projects have been invited to submit Full Proposal applications for the Proposition 84 Stormwater Grant Program Round 2 (12-20-2013)						
25874	6	City of South Lake Tahoe	Sierra Tract Erosion Control Project, Phase 3&4	\$ 2,811,164	\$ 540,000	\$ 3,351,164
25925	2	Bay Area Rapid Transit District	BART Lafayette Station Parking Lots Improvement Project	\$ 2,543,603	\$ 4,717,857	\$ 7,261,460
25926	4	Housing Authority of the County of Los Angeles	The HACOLA Nueva Maravilla Stormwater BMP Pilot Project	\$ 2,550,000	\$ 450,000	\$ 3,000,000
25937	3	City of Gonzales	GOT LID? City of Gonzales Old Town LID Project	\$ 450,100	\$ 56,900	\$ 507,000
25938	3	City of Santa Maria	City of Santa Maria Blosser Bioretention Project	\$ 1,954,150	\$ 341,000	\$ 2,295,150
25941	4	County of Ventura	Oak Park Green Streets Urban Retrofit	\$ 1,397,410	\$ 350,540	\$ 1,747,950
25942	4	County of Ventura	Urban LID Retrofit at Meiners Oaks	\$ 815,410	\$ 204,350	\$ 1,019,760
25952	4	City of Los Angeles, Department of Public Works	Avalon Green Alley North: LID Demonstration Project Phase II	\$ 1,153,445	\$ 307,000	\$ 1,460,445



# Site Selection

- Concept application proposed improvements at 4 sites
- Upstream of monitoring station and next to existing storm drains





# Infiltration Testing

- January 2014
- Insufficient infiltration rates
- Redesign was required for final application



Table 2. Field Percolation Testing Results

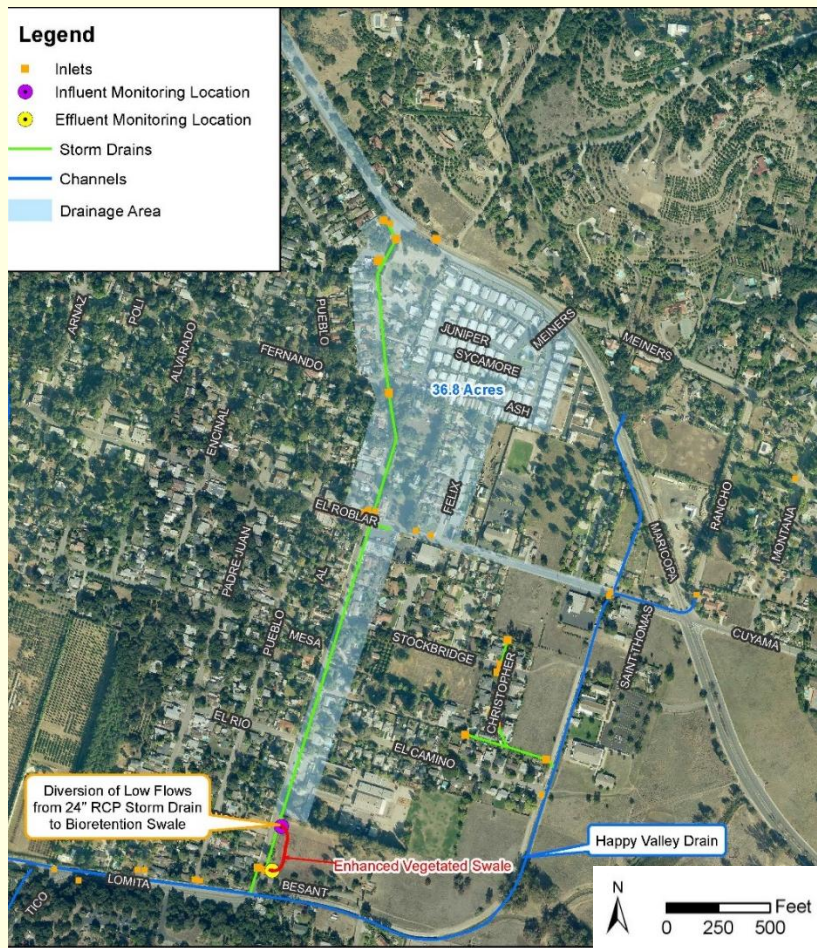
Site Name	Location	Test Interval (feet bgs)	Stabilized Field Test Percolation Rate (in/hr)	
			Corrected (for open, uncased hole)	Uncorrected (Field Data)
OVLC	Ojai Valley Land Conservancy parcel	DH-01B, 2-5	<1/4	<1/4
		DH-01A, 9-14	<1/4	<1/4
El Camino	Ventura County access road	DH-02B, 2-5	<1/4	<1/4
		DH-02A, 9-14	3/4	1
El Roblar	Ventura County ROW (dirt shoulder of road)	DH-03B, 2-5	<1/4	<1/4
		DH-03A, 10-14	1/2	3/4
Lomita	Ventura County ROW (dirt shoulder of road)	DH-04B, 3-5	<1/4	<1/4
		DH-04A, 6-9	<1/4	<1/4





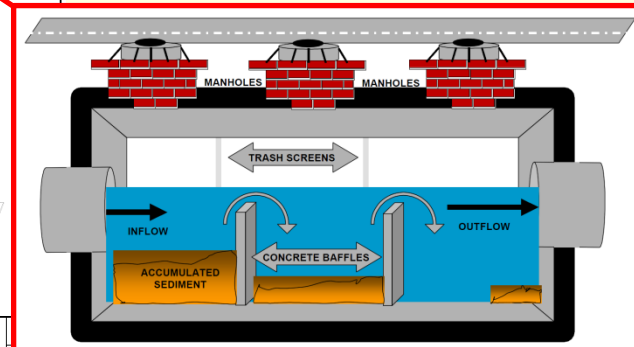
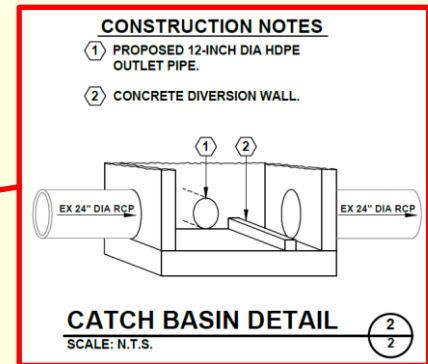
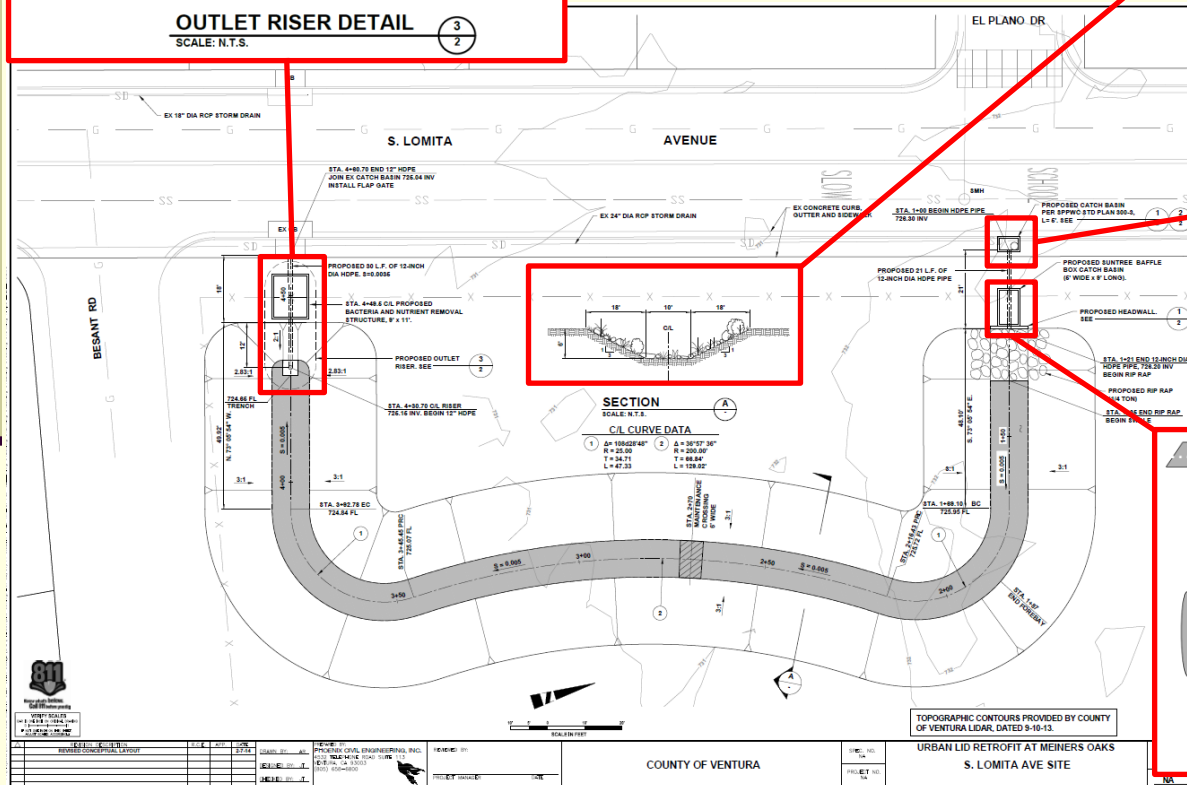
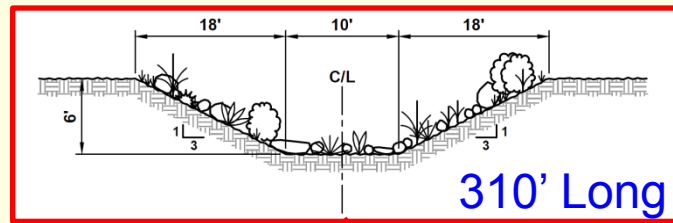
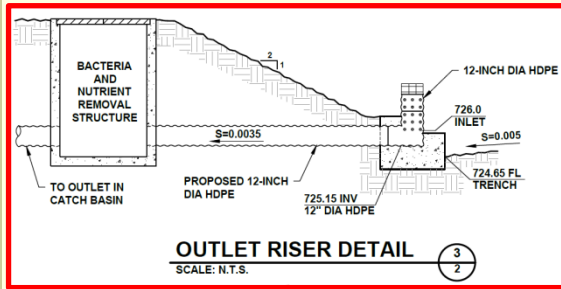
# Urban LID Retrofit Project at Meiners Oaks, CA - Location

- Ojai Valley Land Conservancy's Ojai Valley Meadows Preserve
- Treats runoff from about 40% (36.8 acres) of the Meiners Oaks urban area





# Enhanced Vegetated Swale



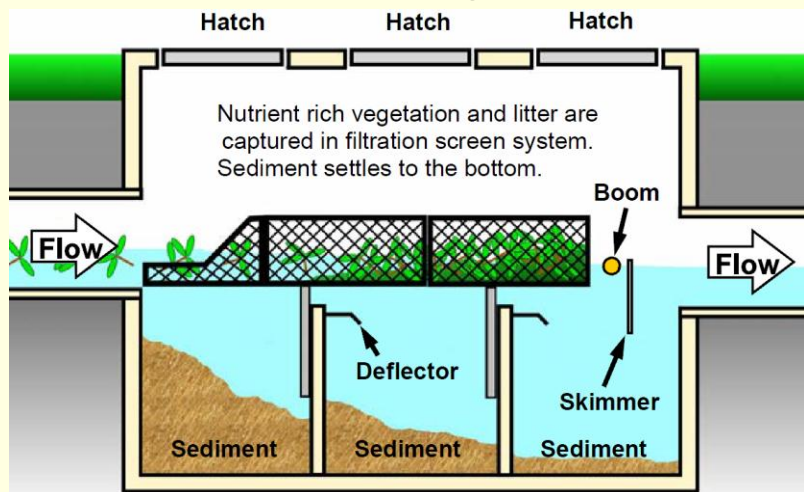


# Proprietary Treatment Devices

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## Suntree Baffle Box

### Sediment/Trash/Organic Removal



## Abtech Smart Sponge Vault

### Bacteria/Nutrient Removal

**Containment Cage**  
Containment cage made of 304 stainless steel is utilized to contain the Smart Sponge® media.

**Concrete Construction**  
The use of concrete allows this to be a flexible design for new or retrofitted applications.

**Smart Sponge® Compact Vault**  
Effective on Hydrocarbon Removal and Bacteria Reduction.

**Smart Sponge® Filtration Units SMPK**  
Utilizes the patented technology of Abtech's Smart Sponge or Smart Sponge Plus filtration media



# Other Project Elements

- Water Quality & Flow Monitoring
- Education and Outreach:
  - Educational Kiosk
  - OFG™ classroom and hands-on workshops
  - Presentation, press releases, etc.





# Project Schedule

Project Tasks	Due Date
Complete Design, Permitting	Spring 2015
Construction	Summer 2015
Flow and Water Quality Monitoring	Fall 2015, Winter 2015/16
Education & Outreach	2015/2016
OFG <sup>TM</sup> classroom and hands-on workshops	Fall 2015 – Spring 2016
Project Completion	Spring 2017



# Questions?

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