



Introduction to the Watershed Management Programs

Lower Los Angeles River - Steve Myrter, Chair

Los Cerritos Channel - Anthony Arevalo, Chair

Lower San Gabriel River - Adriana Figueroa, Chair

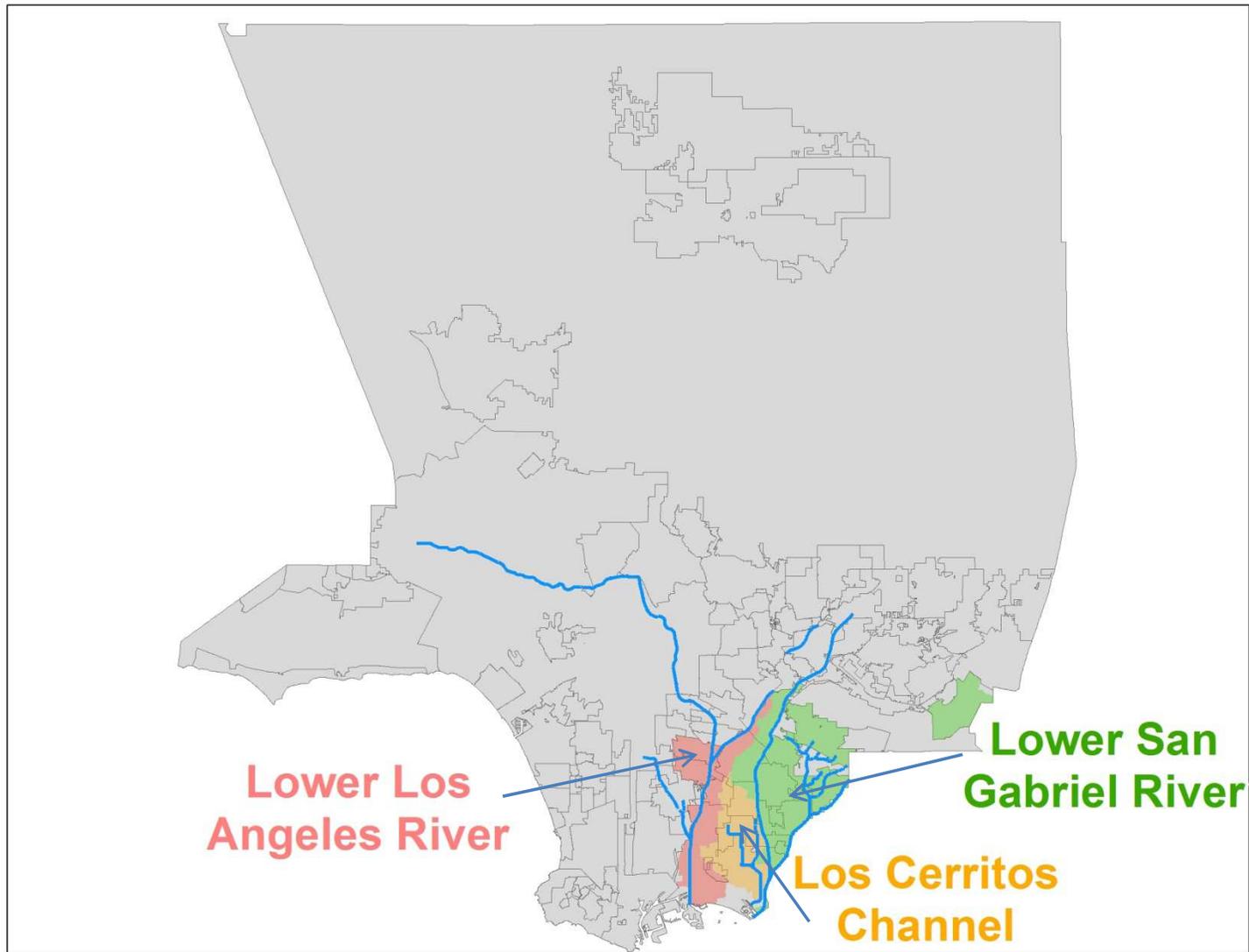
Presented to the California Regional Water Quality Control Board, Los Angeles Region
October 9, 2014



Multi-Watershed Cooperation

- **17 cities** and our partner, **Los Angeles County Flood Control District**
- **3 watersheds** sharing resources
- MOUs through the Gateway Water Management Joint Powers Authority

Multi-Watershed Cooperation



Date: 10/7/2014



Multi-Watershed Cooperation

Goals of working together included:

- **Consistency**, many cities overlap into two even three watersheds.
- **Ease of implementation**, similar methodologies for computer modeling and watershed control measures were used throughout the three watersheds.
- **Cost savings**, several hundred thousand dollars saved by working together



Multi-Watershed Cooperation

All 3 watersheds:

- Used the same WMP development team
- Agreed to use the same Watershed Database
- Developed a Green Street and LID Templates
- Entered into long term MOUs
- Have establish Watershed Management committees for both WMP development and WMP implementation



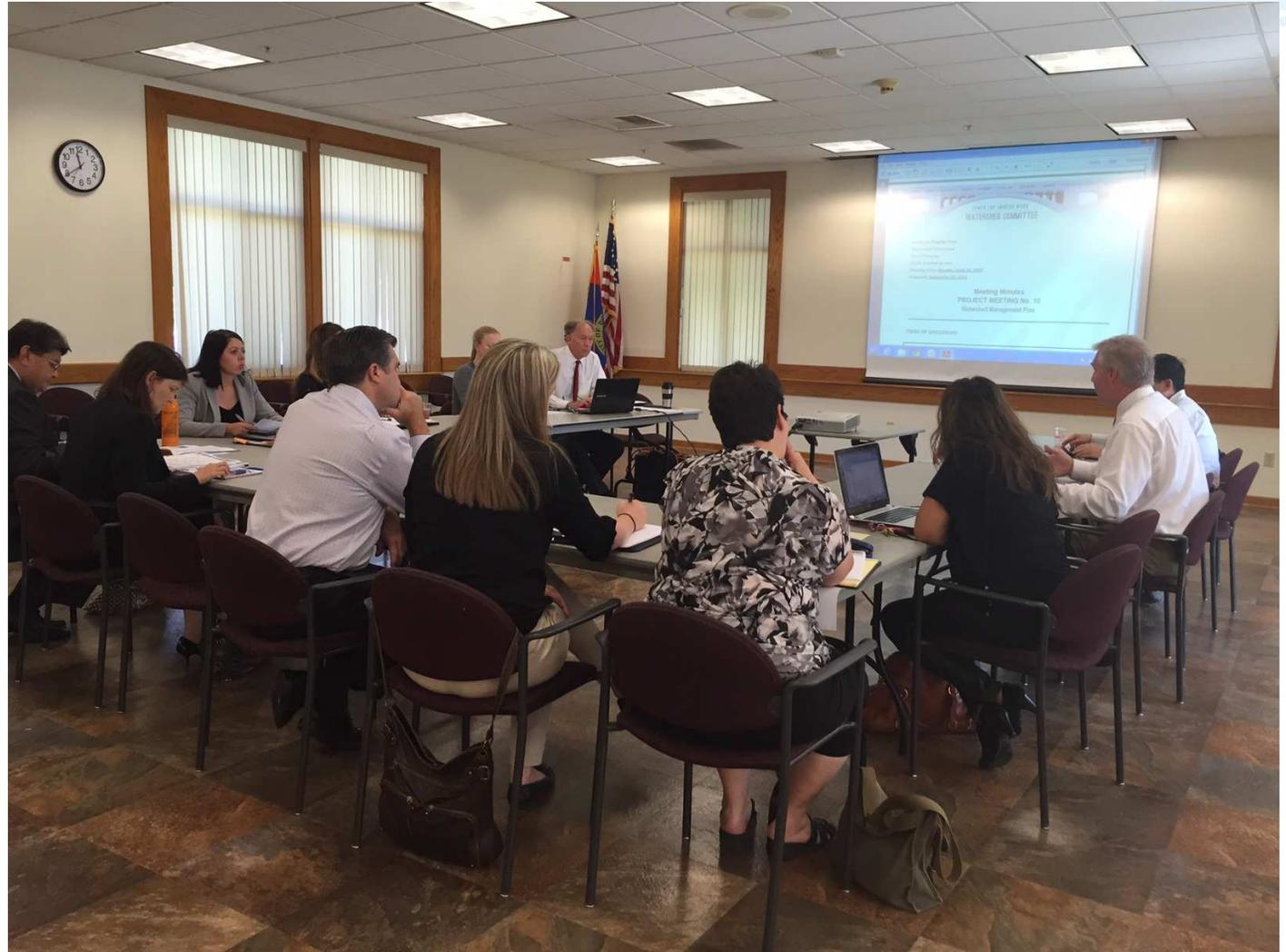
The Lower Los Angeles River Watershed

Speakers: Steve Myrter
John Hunter

LOWER LOS ANGELES RIVER WATERSHED COMMITTEE

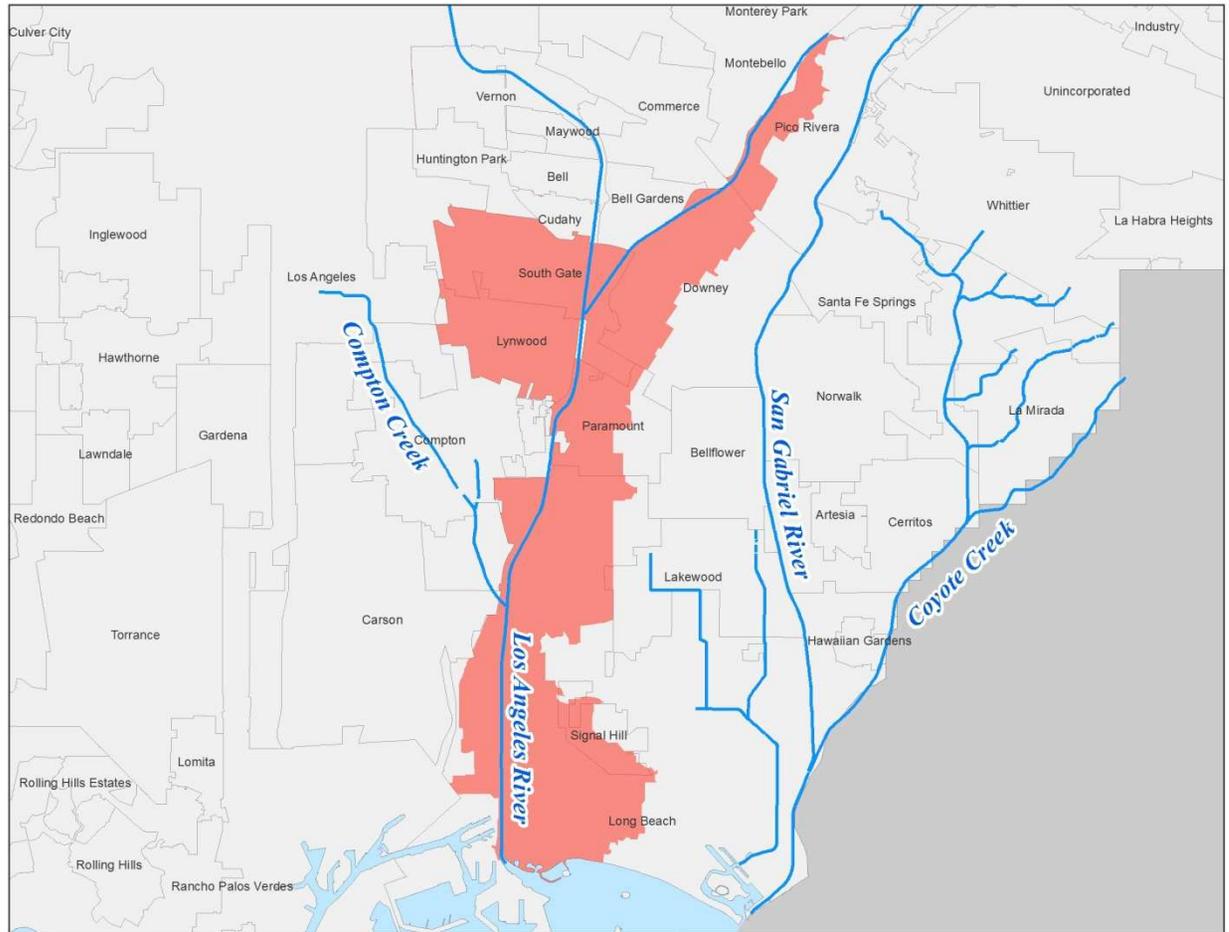
All
Watersheds
have
Watershed
Committees

Lower Los
Angeles River
has been
meeting
monthly
since **2009**



LOWER LOS ANGELES RIVER WATERSHED COMMITTEE

Downey
Lakewood
Long Beach
Lynwood
Paramount
Signal Hill
Pico Rivera
South Gate
and
**Los Angeles County Flood
Control District**



Date: 10/7/2014





Achievements to date Include:

Trash TMDL

- More than 90% of the catch basins have been retrofitted with trash full-capture inserts, trash nets, Automatic Retractable Screens and retention basins. This is over 7,300 systems.

As a whole, agencies are having to spend \$500,000 annually for maintenance of the catch basin inserts

LOWER LOS ANGELES RIVER
WATERSHED COMMITTEE

Dominguez Gap



LOWER LOS ANGELES RIVER WATERSHED COMMITTEE



LOWER LOS ANGELES RIVER
WATERSHED COMMITTEE

Hundreds of small and mid sized local LID projects





Water Quality Priorities

- The WMP established three categories of Water Quality Priorities.

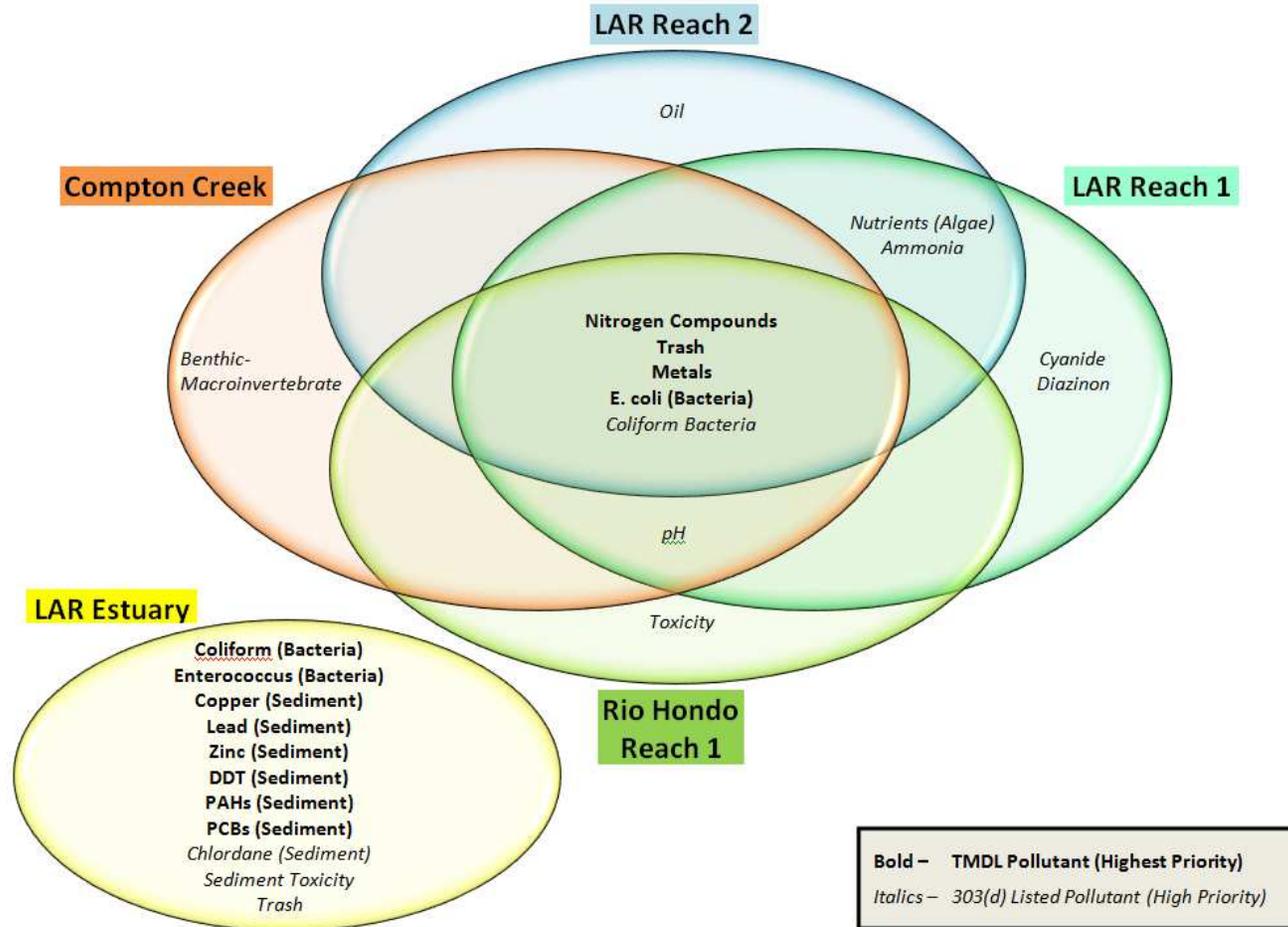
Category 1 – TMDLs

Category 2 – 303d listed

Category 3 – other pollutants exceeding
Basin Plan

LOWER LOS ANGELES RIVER
WATERSHED COMMITTEE

Water Quality Priorities



Category 1 and 2 pollutants and waterbody segments



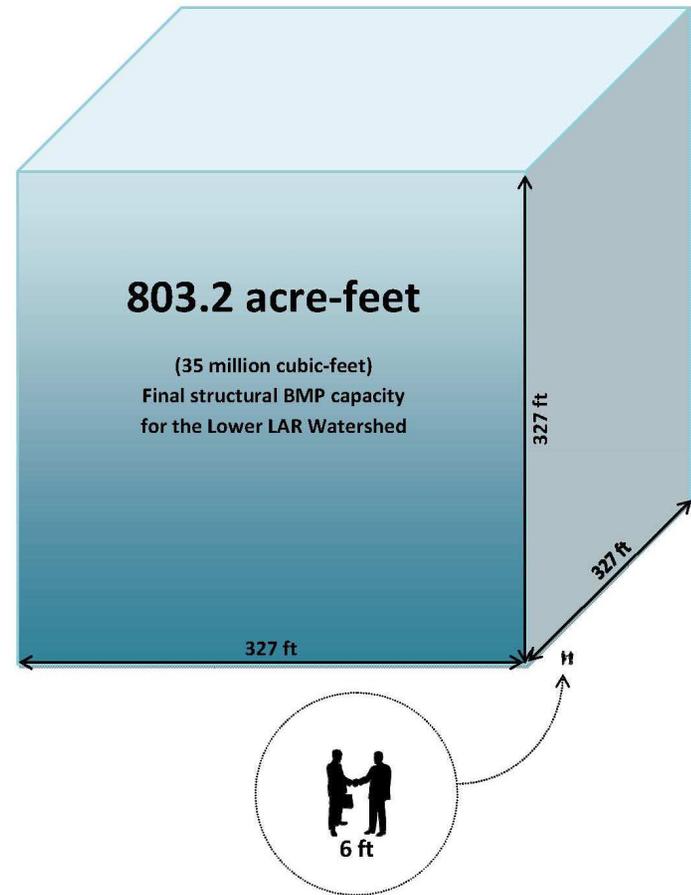
Reasonable Assurance Analysis

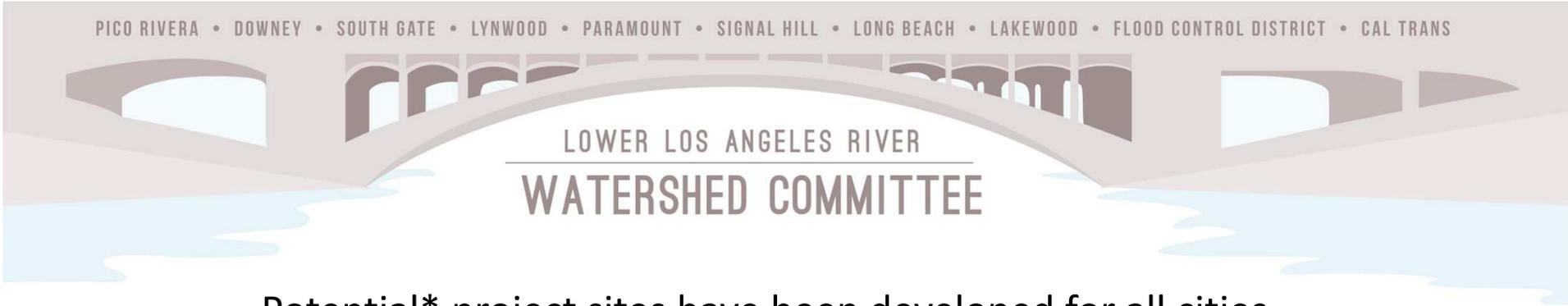
- All three Watersheds used Computer modeling using the US EPA approved and MS4 Permit authorized **Watershed Management Modeling System**.
- **Zinc** was identified as the primary pollutant of concern.
- Control measures to adequately reduce zinc, expected to reduce other pollutants as well.

LOWER LOS ANGELES RIVER
WATERSHED COMMITTEE

Reasonable Assurance Analysis

- Treatment systems must be sized to capture (or equivalently treat) **262 million gallons** of runoff.





Potential* project sites have been developed for all cities.
 This example is for the City of Downey.

31% Interim Compliance 2017 Milestone	
Potential BMP Site	Potential Design Capture Volume (ac-ft)
Furman Park	16.5
Right-of-Way BMPs	3.5
Total	20.0

50% Interim Compliance 2024 Milestone	
Potential BMP Site	Potential Design Capture Volume (ac-ft)
Apollo Park	13.2
Cumulative Total	33.2

*Sites are based on preliminary assessment



Reasonable Assurance Analysis

- Estimated watershed final Project Cost: Up to \$293 million for future projects
- Based on actual project estimates/completed projects

Existing or potential estimated structural BMP cost

Project Name	Total Estimated Cost	BMP Capacity (acre-feet)	Cost Per Acre Foot
Bethune Park	\$570,000	0.9	\$1,000,000
Enterprise Park	\$1,240,000	3.9	\$318,000
Reid Park	\$1,400,000	0.6	\$2,333,000
Belvedere Park	\$3,700,000	13.8	\$268,000
Discovery Park	\$4,500,000	8.0	\$562,500
Johnson Park	\$5,060,000	20.0	\$253,000
Charles White Park	\$5,300,000	21.0	\$252,380
Right-of Way BMPs	-----	0.25	\$250,000

- Projected cost estimate assumes
 - Two-thirds regional projects
 - Remaining one-third being Green Streets projects
 - Cost does not include the purchase of a new property



Control Measures

- Large treatment projects have a long planning and construction timeline. For the immediate future, new and existing watershed control measures will be implemented

Control Measures

The overall nonstructural strategy includes:

Table 5-1: Nonstructural TCM Compliance Schedule			
Nonstructural TCM	Chapter 3 ID	Effort	Start date
Prioritize facility inspections based on WQPs	TCM-ICF-1	J*	2015-2017
Copper reduction through implementation of SB 346	TCM-INI-1	W*	Ongoing
Lead reduction through implementation of SB 757	TCM-INI-2	W	Ongoing
Support zinc reduction in tires through safer consumer product regs	TCM-INI-3	W	Ongoing
Apply for grant funding for stormwater quality/capture projects	TCM-INI-4	W/J	Ongoing
Enhanced tracking through use of online GIS MS4 Permit database	TCM-MRP-1	J	2014-2015
Incentives for irrigation reduction practices	TCM-NSWD-1	J	Ongoing
Upgraded sweeping equipment	TCM-PAA-1	J	2015-2017
Sanitary Sewer Management Plan	TCM-PAA-2	J	Ongoing
Increased street sweeping frequency or routes	TCM-PAA-3	J	2015-2017
Refocused outreach to target audiences and WQPs	TCM-PIP-1	W/J	2015
Train staff to facilitate LID and Green Streets implementation	TCM-PLD-1	J	2014
Ordinance requires LID BMPs for projects below MS4 Permit thresholds	TCM-PLD-2	J	2014-2017
Encourage retrofitting of downspouts	TCM-RET-1	J	2015
Prepare guidance documents to aid implementation of MCMs	TCM-SWM-1	W/J	2014
Exposed soil ordinance	TCM-TSS-1	J	2014-2017
Erosion repair and slope stabilization on private property	TCM-TSS-2	J	2015-2017
Private parking lot sweeping ordinance	TCM-TSS-3	J	2015-2017
Sweeping of private roads and parking lots	TCM-TSS-4	J	2015-2017
Negotiations with regulated utilities for erosion control within ROW	TCM-TSS-5	W	Ongoing
Erosion repair and slope stabilization on public property	TCM-TSS-6	J	2015-2017

**For all
3 watersheds,
above and
beyond MCMs**

*W – Watershed Group effort,
J – Jurisdictional effort



LOWER LOS ANGELES RIVER
WATERSHED COMMITTEE

Key Components of Control Measures

Adopted LID

Downey
Lakewood
Long Beach
Lynwood
Paramount
Signal Hill
Pico Rivera
South Gate

Adopted Green Street

Downey
Lakewood
Lynwood
Paramount
Signal Hill
Pico Rivera
South Gate

Long Beach is under a different MS4 Permit and the Green Street Policy is under their “complete Streets” but will be updated under their new MS4 permit and can be provided at that time.



Control Measures

- The WMP makes a substantial effort to implement Control Measures that can be implemented in the short run.
- These are based on the “Minimum Control Measures” in the MS4 Permit and include:
 - Progressive Enforcement
 - New municipal BMPs, including Integrated Pest Management
 - Enhanced Construction program (more inspections, standards, training, etc.)
 - Enhanced non-stormwater measures (e.g., water purveyor discharge monitoring/reporting)



Control Measures

- Some customization is proposed in the WMP, for example:
 - Agencies may prioritize inspection sites and the inspection schedule.
 - WMP contains a detailed prioritization process
 - High priority sites inspected annually
 - Medium Priority once per 2.5 years (MS4 default schedule)
 - Low Priority, once per 5 years.
 - But only if the total number of inspections completed by the end of the MS4 Permit term **does not decrease**.



Public Participation

- Public input was sought during the development of the WMPs.



You are cordially invited to a presentation of the Draft Watershed Management Plan



Date: May 1st, 2014
Time: 6 pm
Location: City of Downey Council Chamber
(11111 Brookshire Ave. Downey, CA 90241)

The Lower Los Angeles River Watershed is preparing a Draft Watershed Management Program (WMP). The goal is to improve the quality of Storm-water and Urban runoff in the Los Angeles River between Pico Rivera and the Long Beach Harbor.

The WMP is only in Draft form and will be submitted to the Regional Board on June 28, 2014. This presentation will cover the general approach and concepts followed in developing the WMP. Your input and comments will be appreciated. Detailed technical comments will be welcome, but will not necessarily be incorporated until after the initial review by the Regional Board.

No RSVP is needed. For questions, please call Jason Wen, City of Downey at (562) 904-7202 or Steve Myrter, City of Signal Hill at (562) 989-7356.



Bellflower
Cerritos
Downey
Lakewood
Long Beach
Paramount
Signal Hill
Los Angeles County
Flood Control District

The Los Cerritos Channel Watershed

Speakers: Anthony Arevalo
Richard Watson

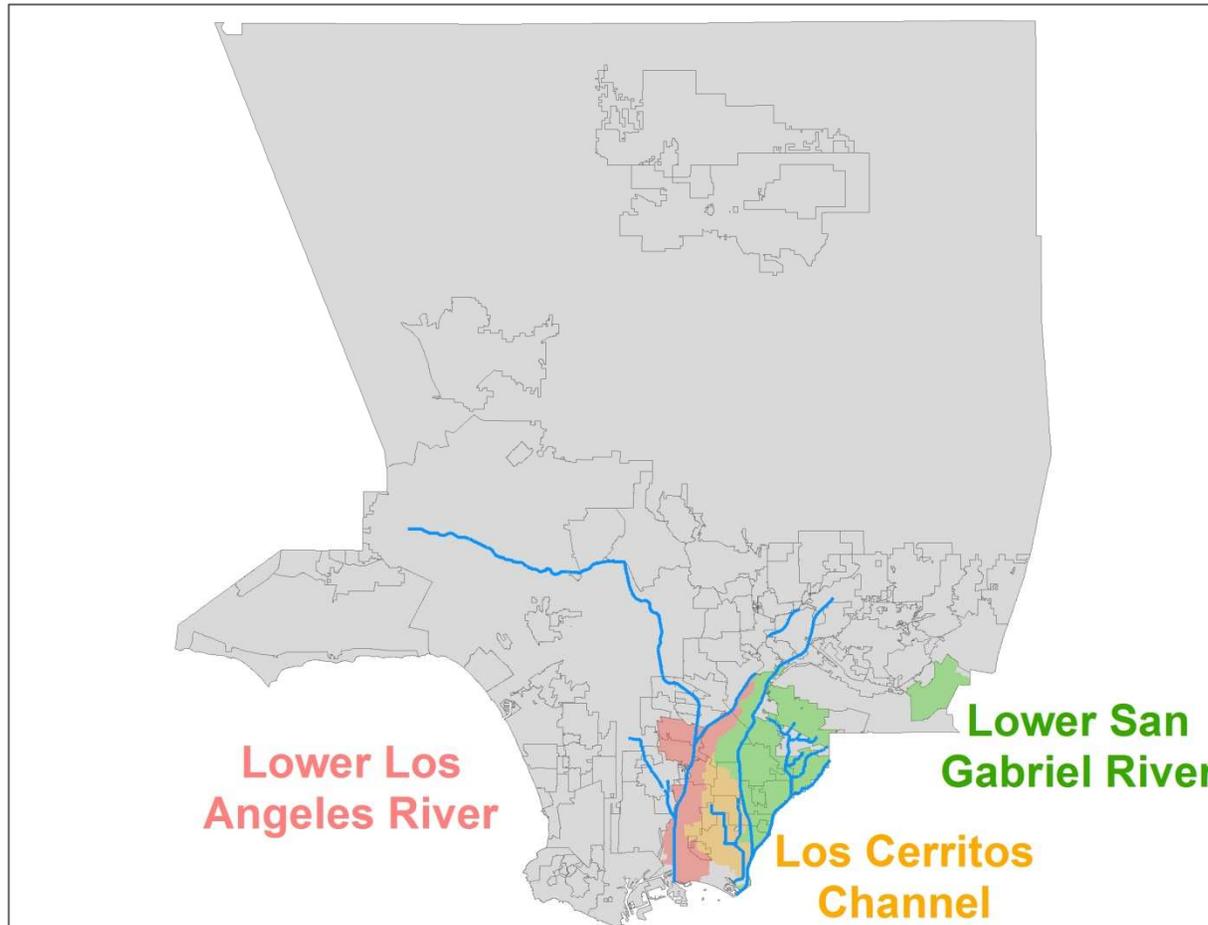


LOS CERRITOS CHANNEL
WATERSHED GROUP

Bellflower
Cerritos
Downey
Lakewood
Long Beach
Paramount
Signal Hill

Los Angeles County
Flood Control District

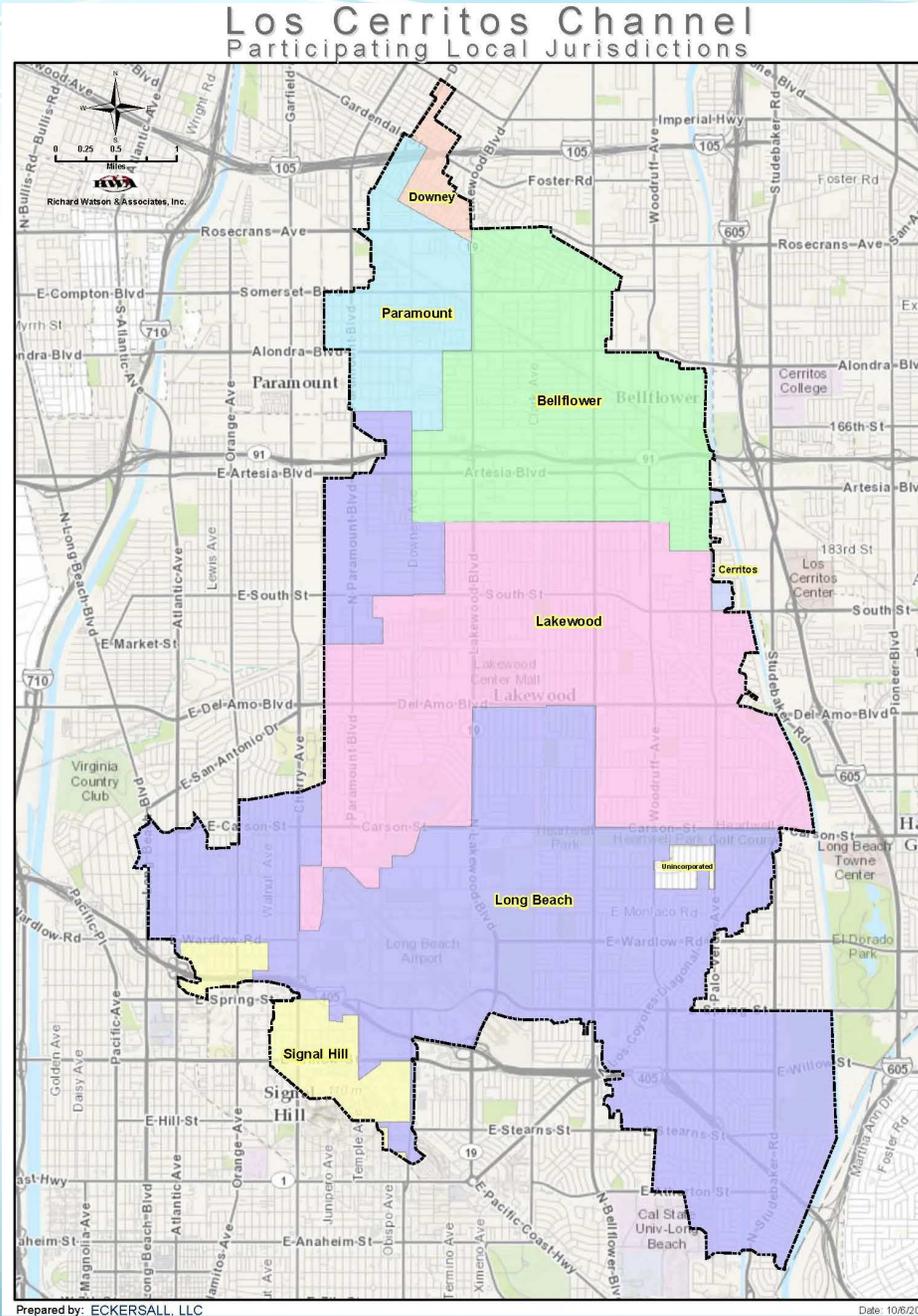
Watershed Location



Date: 10/7/2014



Los Cerritos Channel Participating Agencies



- Bellflower
- Cerritos
- Downey
- Lakewood
- Long Beach
- Paramount
- Signal Hill
- Los Angeles County
Flood Control District

Watershed Committee

Cities and agencies within the watershed have been working together since **2008**



Identification of Water Quality Priorities

- Priority pollutants determined based on 10 years of monitoring data at the base of the watershed.
- Highest priority pollutants include:
 - Metals and a few legacy organics
- High priority pollutants include
 - Bacteria, Trash and a few others
- Medium priority pollutants include
 - MBAS and enterococcus

Milestones

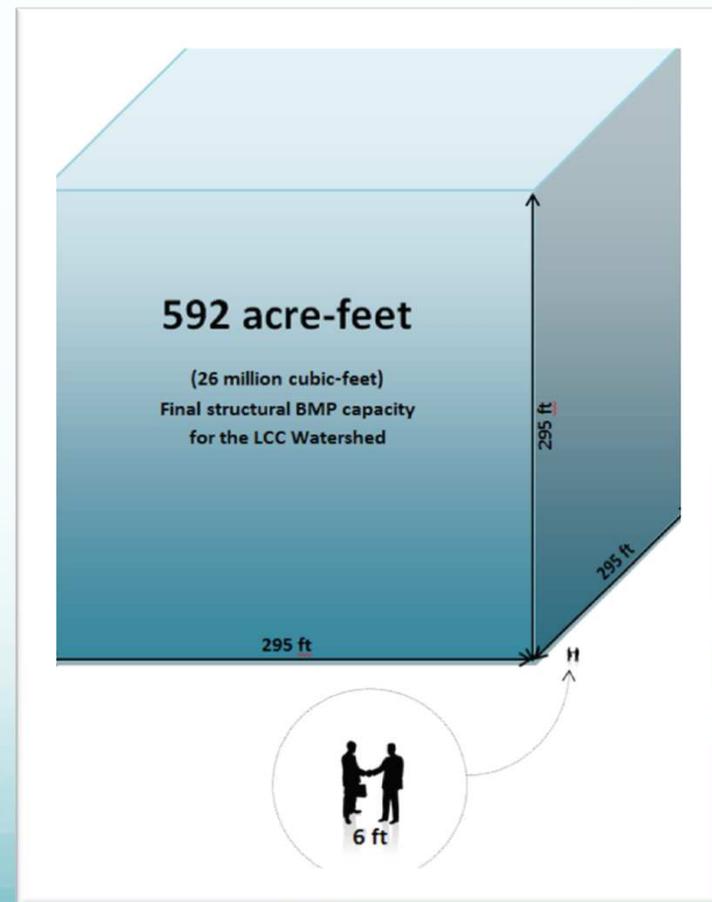
Milestone Targets Between
December 28, 2012 and December 28, 2022

Target*	Milestones	
Drainage area served by MS4 effectively meeting WLA for:	September 30, 2017	September 30, 2020
Dry Weather	30%	70%
Wet Weather	10%	35%

* Or equivalent reductions in total loads at the new primary watershed segmentation Monitoring Sites.

Reasonable Assurance Analysis

- Treatment systems must be sized to capture (or equivalently treat) **193 million gallons** of runoff.



Water Quality Improvement Strategy

- Multi-pronged strategy initially focused on source control, runoff reduction and total suspended solids (TSS) reduction.
- A particular emphasis on true source control for metals
 - SB 346 for copper
 - Future use of Safer Consumer Product Regulations for zinc
- Lead is already under control – no further reduction required by TMDL

Breaking news from the Auto Industry



Ford F-150 Truck – Most popular vehicle in North America will be sold only with Copper-Free brake pads starting January 2016

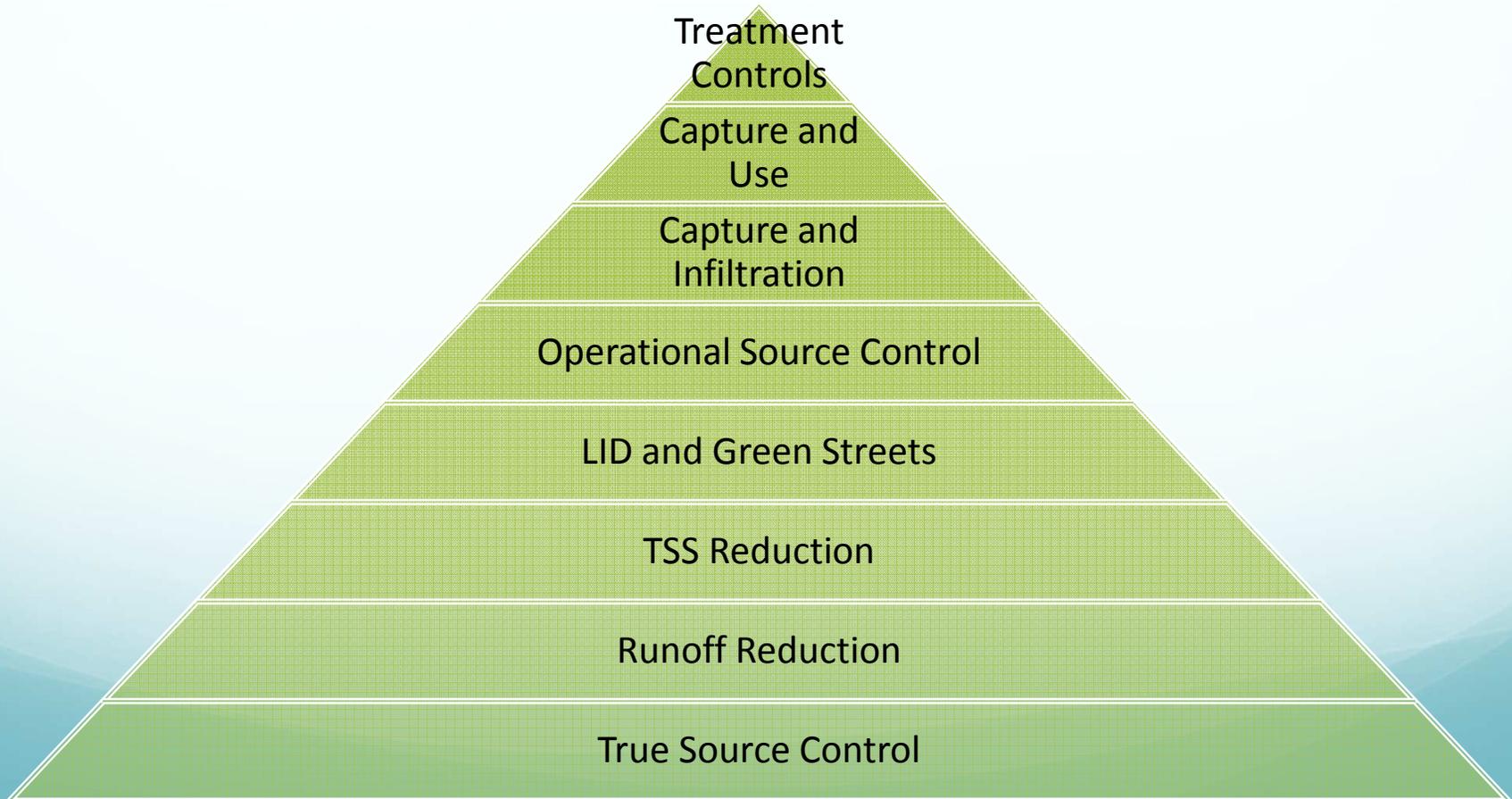


LOS CERRITOS CHANNEL
WATERSHED GROUP

Bellflower
Cerritos
Downey
Lakewood
Long Beach
Paramount
Signal Hill

Los Angeles County
Flood Control District

Water Quality Improvement Hierarchy





LOS CERRITOS CHANNEL
WATERSHED GROUP

Bellflower
Cerritos
Downey
Lakewood
Long Beach
Paramount
Signal Hill

Los Angeles County
Flood Control District

Control Measures

Adopted LID

Bellflower
Cerritos
Downey
Lakewood
Long Beach
Paramount
Signal Hill

Adopted Green Streets

Bellflower
Cerritos
Downey
Lakewood
Paramount
Signal Hill

Long Beach is under a different MS4 Permit and the Green Street Policy is under their “complete Streets” but will be updated under their new MS4 permit and can be provided at that time.

Control Measures

- Minimum Control Measures
- Non-structural Control Measures
 - True source control
 - Runoff reduction, including continued water conservation and improved irrigation practices
 - TSS reduction, including vacant land ordinances

Control Measures

- Structural Control Measures
 - Focus on Regional Water Capture Projects
 - Could cost as much as \$332 million
 - Preliminary work on three sites
 - Funding sources needed

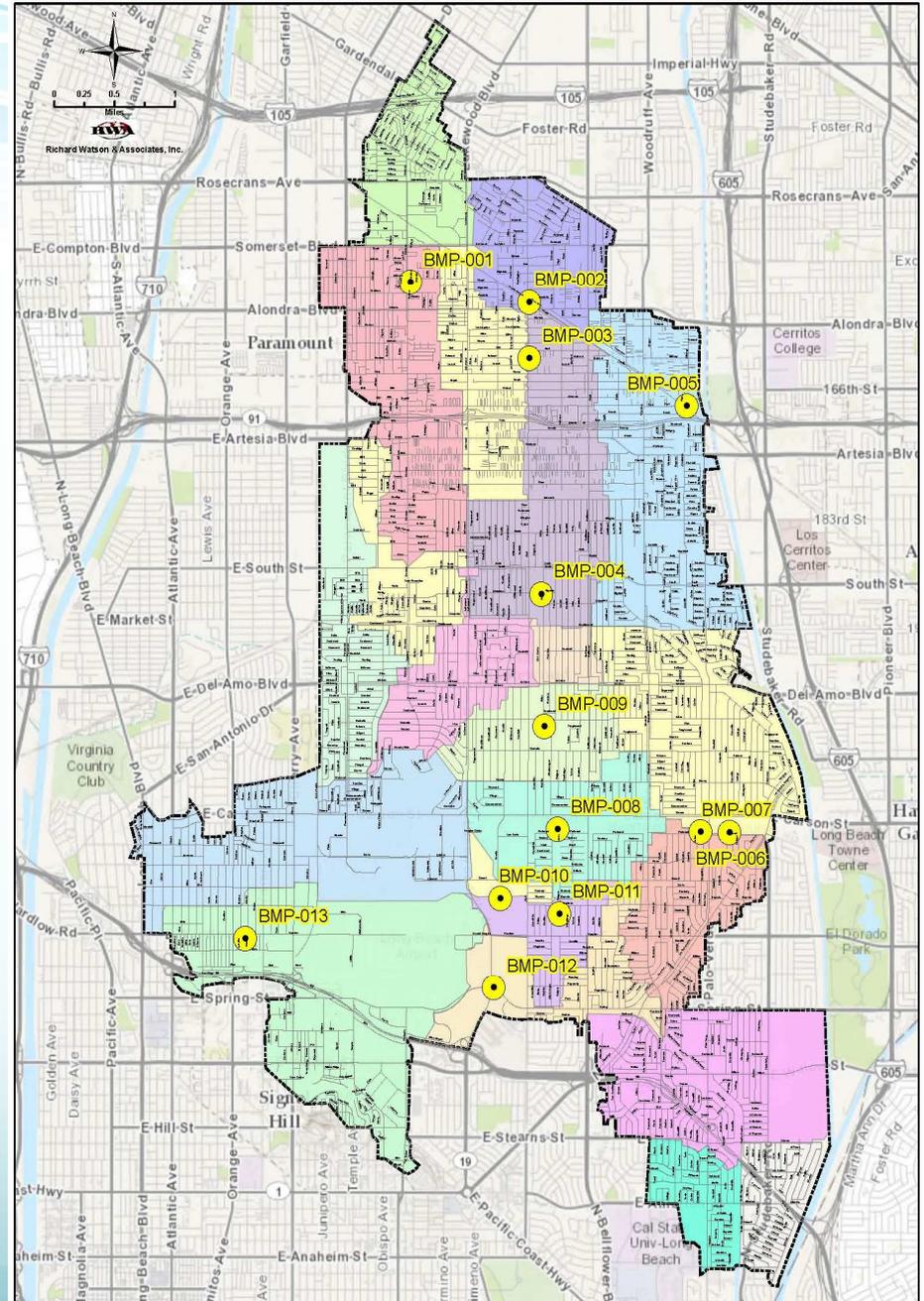


LOS CERRITOS CHANNEL
WATERSHED GROUP

13 sites as LCC Potential Projects

Site Name	Location
Progress Park	Paramount
Bike Trail	Bellflower (Clark Ave)
Sims Park	Bellflower
Mayfair Park	Lakewood
Caruthers Park	Bellflower
Heartwell Park	Long Beach (Palo Verde Channel)
Junior Golf Course	Long Beach
Heartwell Park	Long Beach (Clark Channel)
Pan American Park	Long Beach
Skylinks	Long Beach (Wardlow Channel)
Wardlow Park	Long Beach
Skylinks LCC	Long Beach
Reservoir Park	Signal Hill

Los Cerritos Channel
Potential Public Parks and Golf Courses BMP Sites



Prepared by: ECKERSALL, LLC



LOS CERRITOS CHANNEL
WATERSHED GROUP



Artesia
Bellflower
Cerritos
Diamond Bar
Downey
Hawaiian Gardens
La Mirada
Lakewood
Long Beach
Norwalk
Paramount
Pico Rivera
Santa Fe Springs
Signal Hill
The County of Los Angeles
Whittier
Los Angeles County Flood Control District

Lower San Gabriel River
and Los Cerritos Channel
Watershed Committees

Public Participation

- Held joint stakeholder meeting with Lower San Gabriel River Watershed

You are cordially invited to a presentation of
the Draft Watershed Management Program



Date: April 30th, 2014

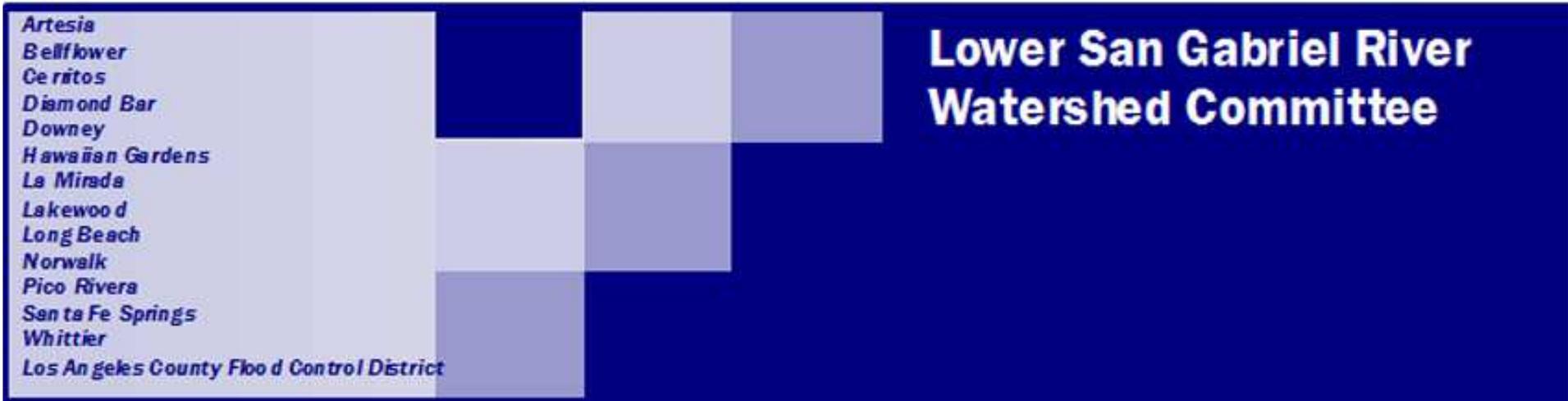
Time: 9 am

Location: City of Lakewood Civic Center/
Sycamore Room (5000 Clark Ave. Lakewood, CA 90712)

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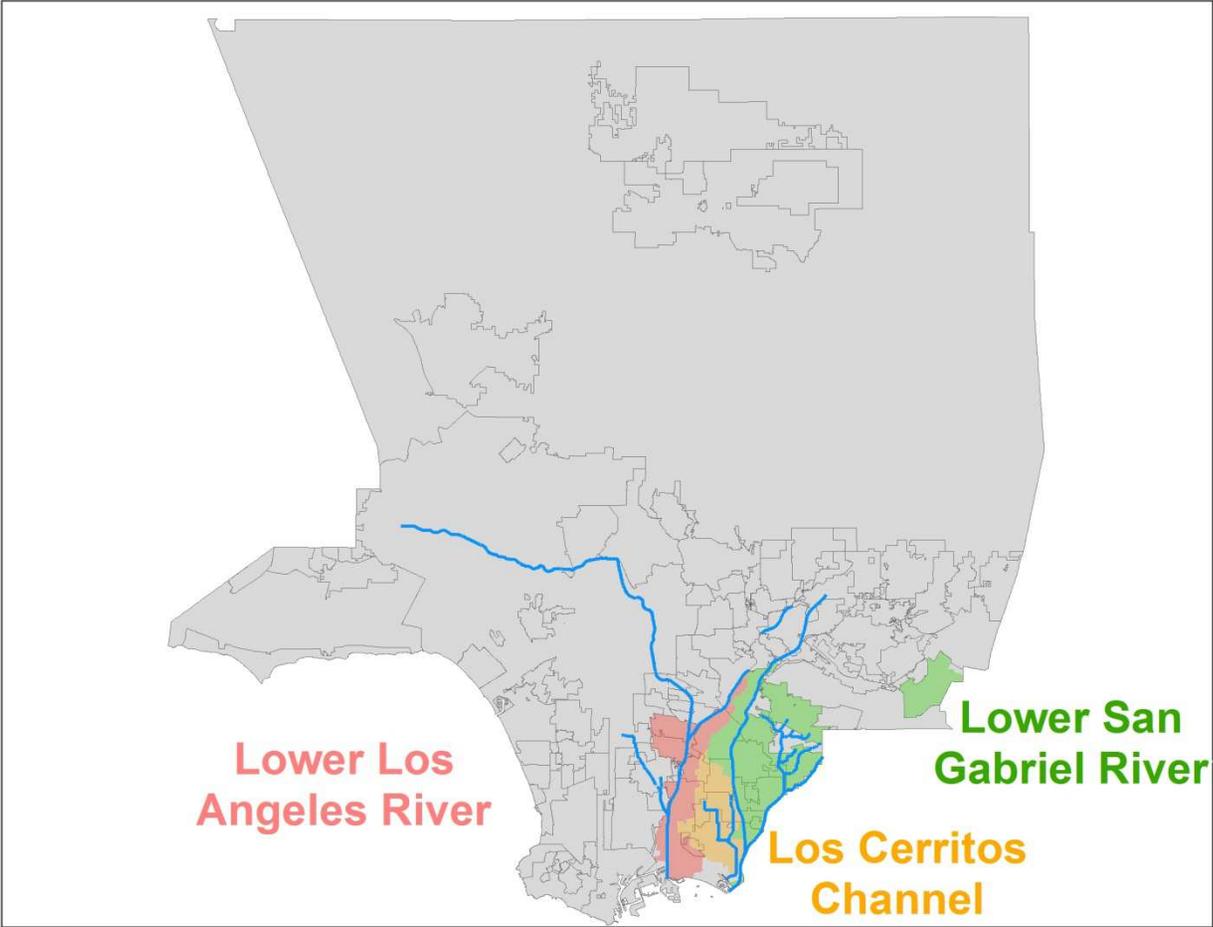
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Konya Vivanti at (562) 866-9771 ext. 2507, Rich Watson at (949)855-6272 or
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The Lower San Gabriel River Watershed

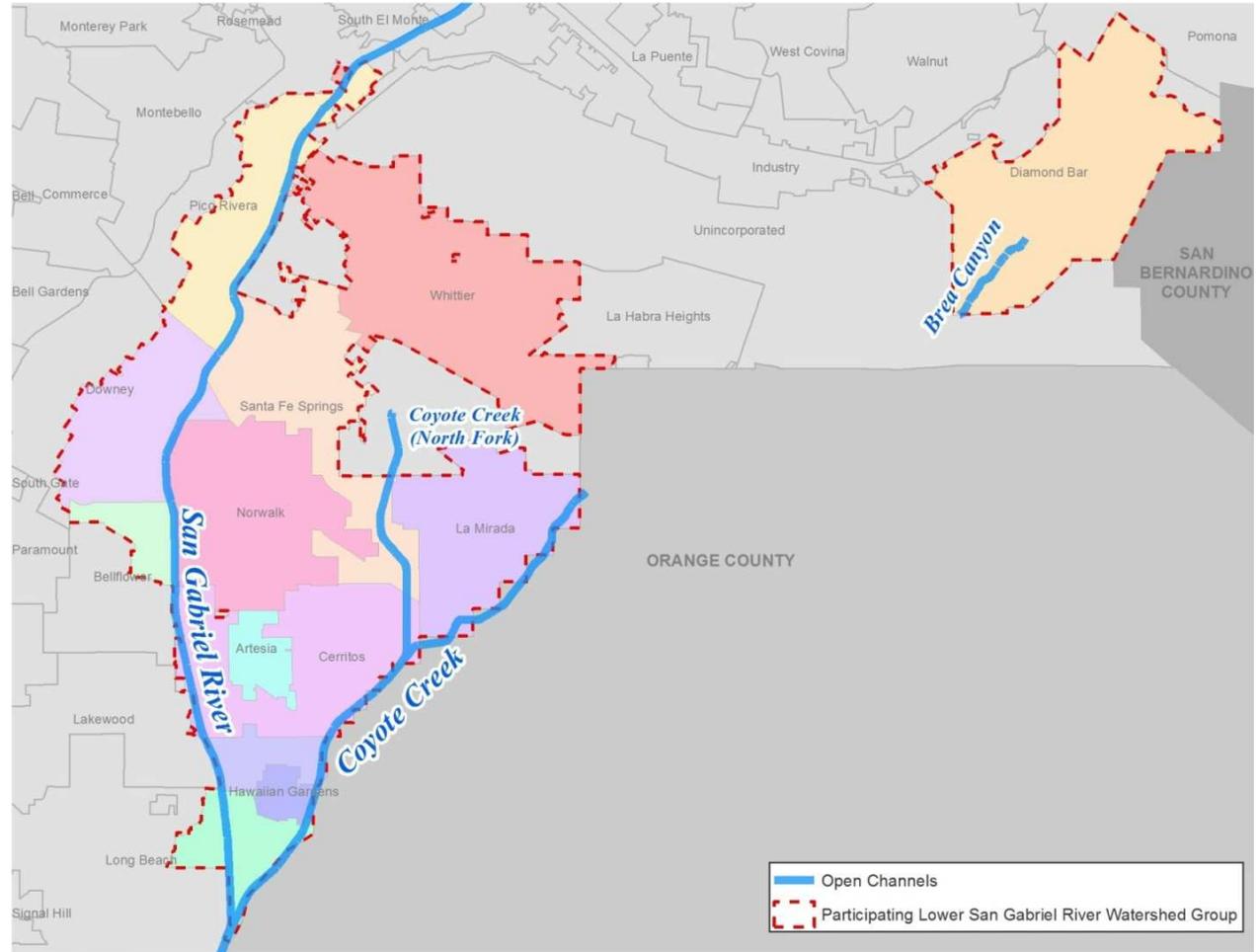
Speakers: Adriana Figueroa
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Watershed Location



Date: 10/7/2014

Artesia
 Bellflower
 Cerritos
 Diamond Bar
 Downey
 Hawaiian Gardens
 La Mirada
 Lakewood
 Long Beach
 Norwalk
 Pico Rivera
 Santa Fe Springs
 Whittier
 Los Angeles County
 Flood Control
 District



Watershed Effort

Meeting
monthly
since **2011**

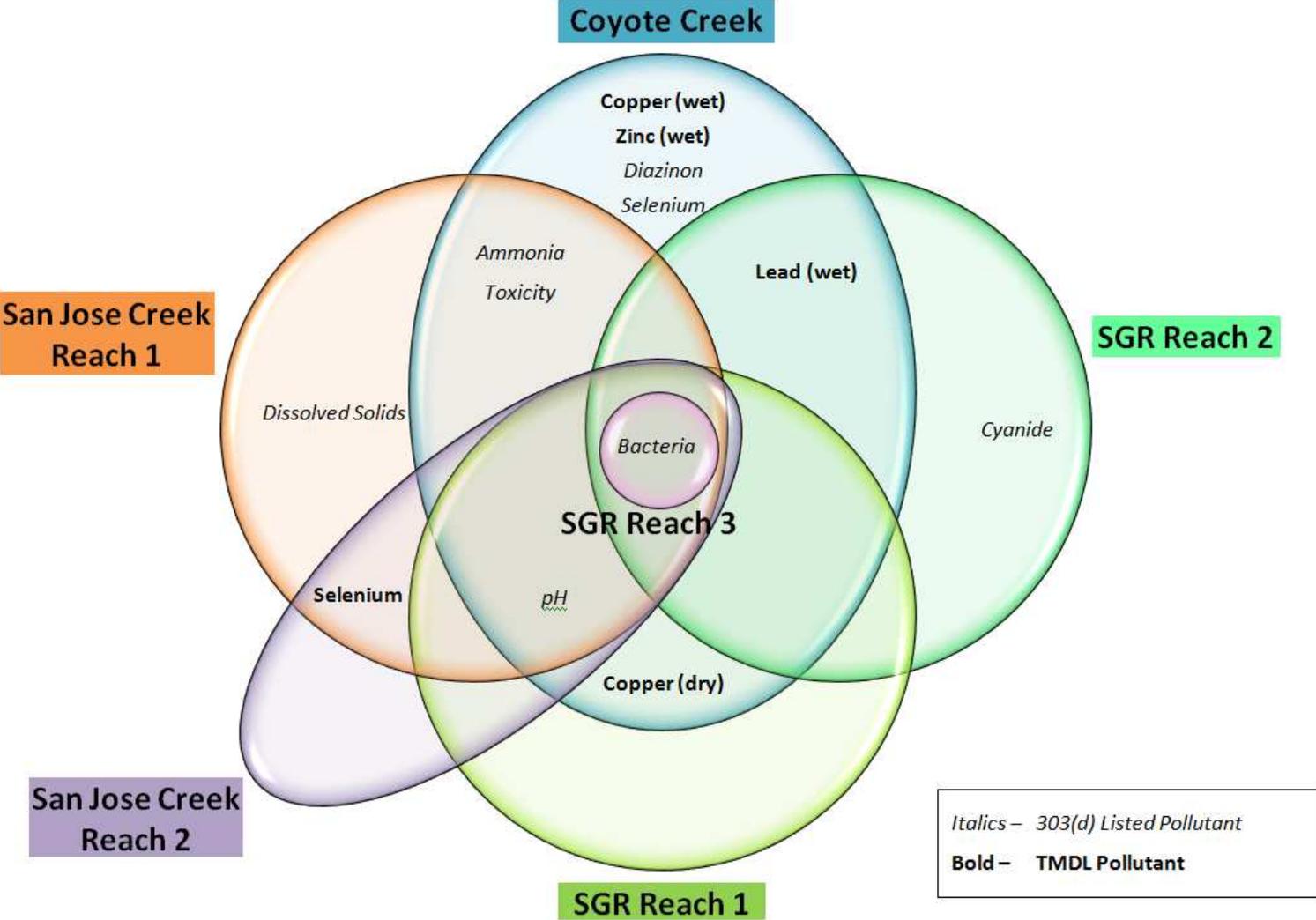




Followed a very similar WMP approach:

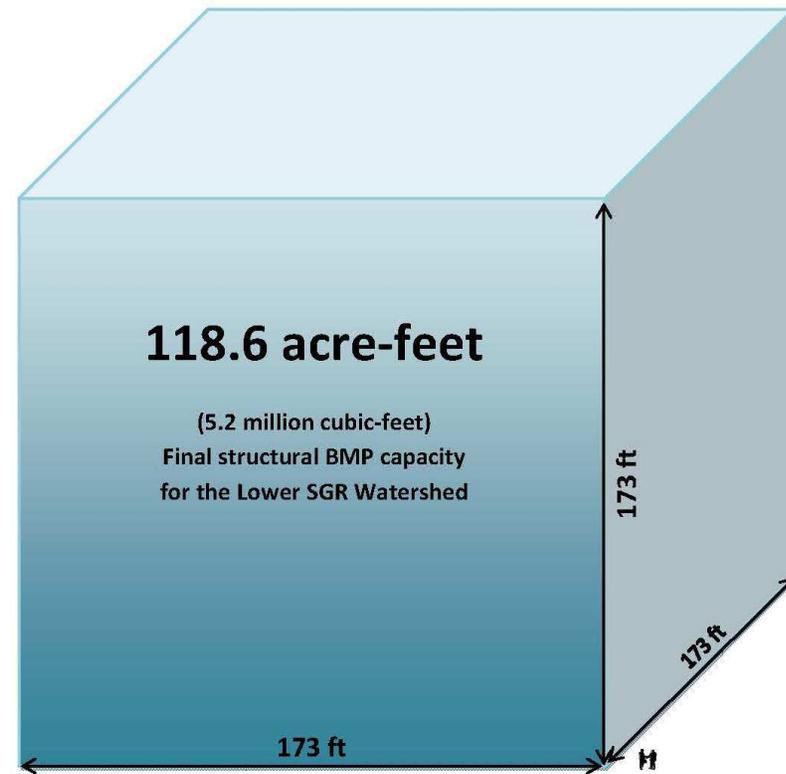
- The same RAA team,
- The same Watershed Control Measures team,
- The same GIS based Watershed Management Database

Water Quality Priorities

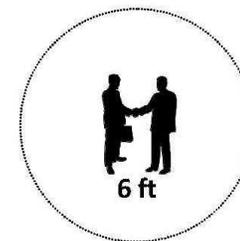


Reasonable Assurance Analysis

- Treatment systems must be sized to capture (or equivalently treat) **40 million gallons** of runoff.



- Project watershed cost estimate
 - Up to \$63 million





RAA Established Water Capture Targets

San Gabriel River

Jurisdiction	Milestone	POLLUTANT REDUCTION PLAN*	
		Total Estimated BMP Volume (acre-ft)	
		Incremental	Cumulative
Norwalk	10% 2017	NS**	NS**
	35% 2020	0.1	0.1
	Final	0.3	0.3

Every City has been assigned milestone targets

Coyote Creek

Jurisdiction	Milestone	POLLUTANT REDUCTION PLAN	
		Total Estimated BMP Volume (acre-ft)	
		Incremental	Cumulative
Norwalk	10% 2017	NS*	NS*
	35% 2020	0.2	0.2
	Final	4.6	4.8

This example is the City of Norwalk

* Nonstructural practices achieve 10% milestone



Potential Project sites

This example for the City of Norwalk

Subwatershed	Land Use Designation	Site Name	Address	Latitude	Longitude	Approx. Site Area (Acres)	Max Hypothetical Tributary Area (A _{TRIBUTARY} , Acres)	Max Hypothetical Design Capture Volume (DCV, Ac-ft)
San Gabriel River	Open Space and Recreation	Arthur Gerdes Park	14700 Gridley Rd.	33.897	-118.0899	8.1	117	9.7
		New River Park	13432 Halcourt Ave.	33.908	-118.1017	4.5	66	5.5
		Orr Park	12130 S. Jersey Ave.	33.921	-118.0845	3.5	51	4.2
		Glazier Park	10801 Fairton St.	33.895	-118.1039	1.9	28	2.3
Coyote Creek	Open Space and Recreation	John Zimmerman Park	13031 Shoemaker Ave.	33.912	-118.0569	13.2	192	15.9
		Hermosillo Park	11959 162nd St.	33.885	-118.0772	8.7	126	10.4
		Norwalk Park	1300 Clarkdale Park	33.91	-118.0719	6.8	100	8.2
		Holifield Park	15021 Bloomfield Ave.	33.893	-118.0665	22.7	331	27.3
	Government Institution	Norwalk City Hall	12700 Norwalk Blvd.	33.916	-118.0712	9.5	139	11.4

Sites are based on preliminary assessment



Control Measures

Adopted LID

Artesia
Bellflower
Cerritos
Diamond Bar
Downey
Hawaiian Gardens
La Mirada
Lakewood
Long Beach
Norwalk
Pico Rivera
Santa Fe Springs
Whittier

Adopted Green Streets

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Accomplishments Include



The Regional Board has seen this slide many times, Downey's Discovery Park infiltration system is in the San Gabriel River Watershed.

Public Participation

- Public input was sought during the development of the WMPs.
- Joint stakeholder meeting with Los Cerritos Channel.



**You are cordially invited to a presentation of
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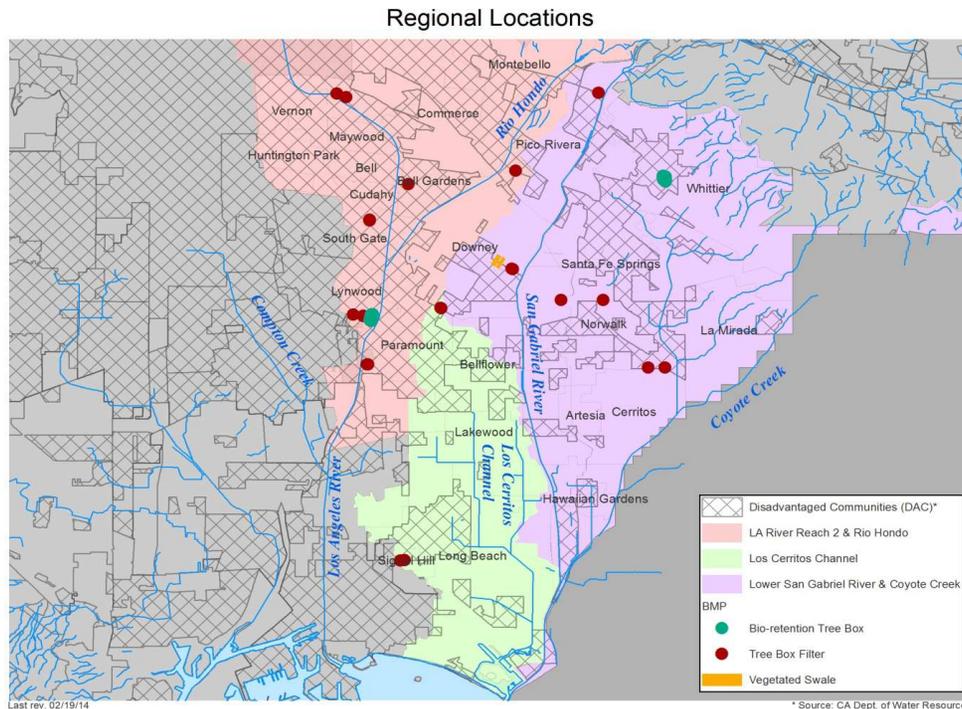
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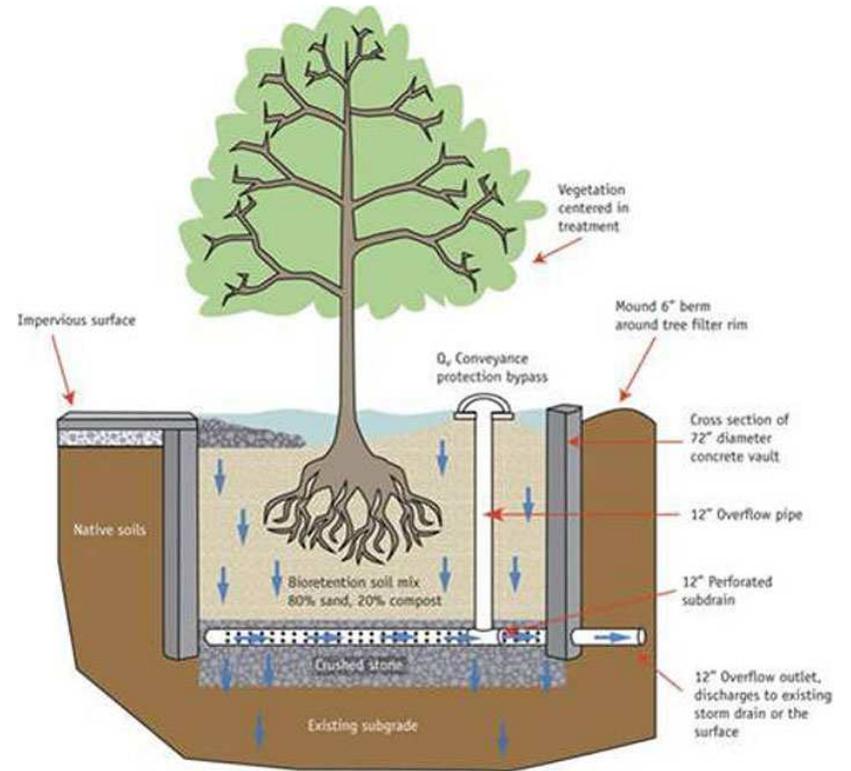
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Next steps?

All 3 watersheds



Each red dot is a (Green) street BMP





Summary For All Three Watersheds

- Long term Management Committees and agreements
- Shared resources to develop the WMPs, spending \$1.8 million
- Potential Project sites have been identified
- Project costs estimated up to \$688 million, That is a real obstacle. Agencies are working with the League and Contract Cities to identify funding solutions
- Funding formula for regional projects remain to be worked out
- The next projects are already underway



The Board and Staff are to be commended for encouraging communities to work together on watershed projects.

Thank you for your time

Wildlife photographed this year in the concrete lined section of Coyote Creek.