

Regional MS4 Permit Reissuance Workshop # 1

Los Angeles River (LAR), San Gabriel River (SGR), and Los Cerritos
Channel/Alamitos Bay (LCC/AB) watersheds



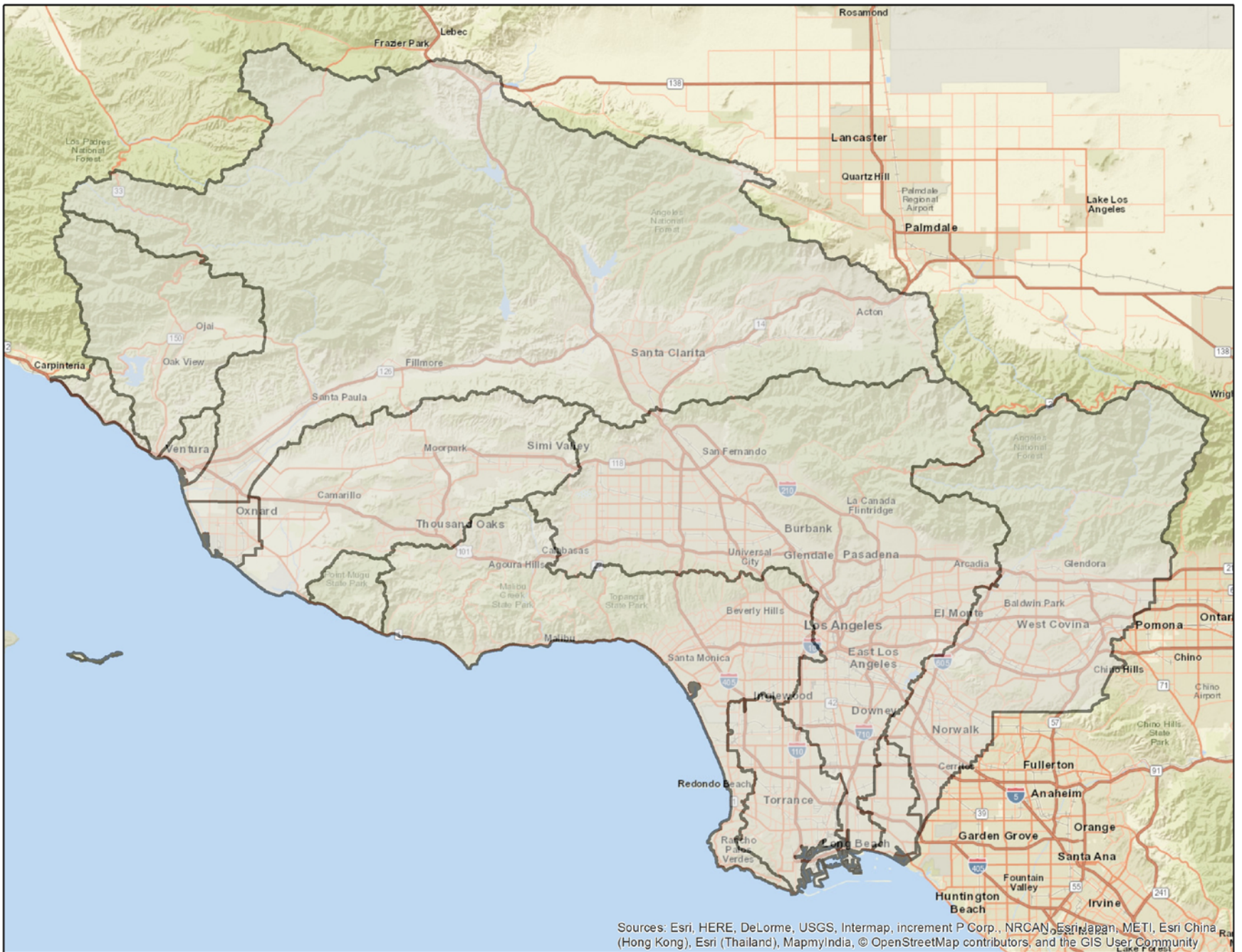
Outline

- Permit Background
- Monitoring Data
- Programmatic Elements





Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), MapmyIndia, © OpenStreetMap contributors, and the GIS User Community



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Today's Workshop

- Today's workshop will give an overview of trends across the region but focus on monitoring data and permit implementation updates for the following watersheds:
 - Los Angeles River Watershed
 - San Gabriel River Watershed
 - Los Cerritos Channel/Alamitos Bay Watershed



Upcoming Board Workshops

- July Board Workshop(7/12/18):
 - Monitoring data and permit implementation updates for the following watersheds:
 - Santa Clara River Watershed
 - Dominguez Channel Watershed (including Machado Lake Sub-Watershed)
 - Santa Monica Bay Watershed (including Marina del Rey, Malibu Creek, Ballona Creek Sub-Watersheds)
 - Regional Permit overview
- September Board Workshop (9/13/18):
 - Monitoring data and permit implementation for Ventura County
 - Regional Permit overview
- Workshops on Specific Regional Permit Topics: TBD

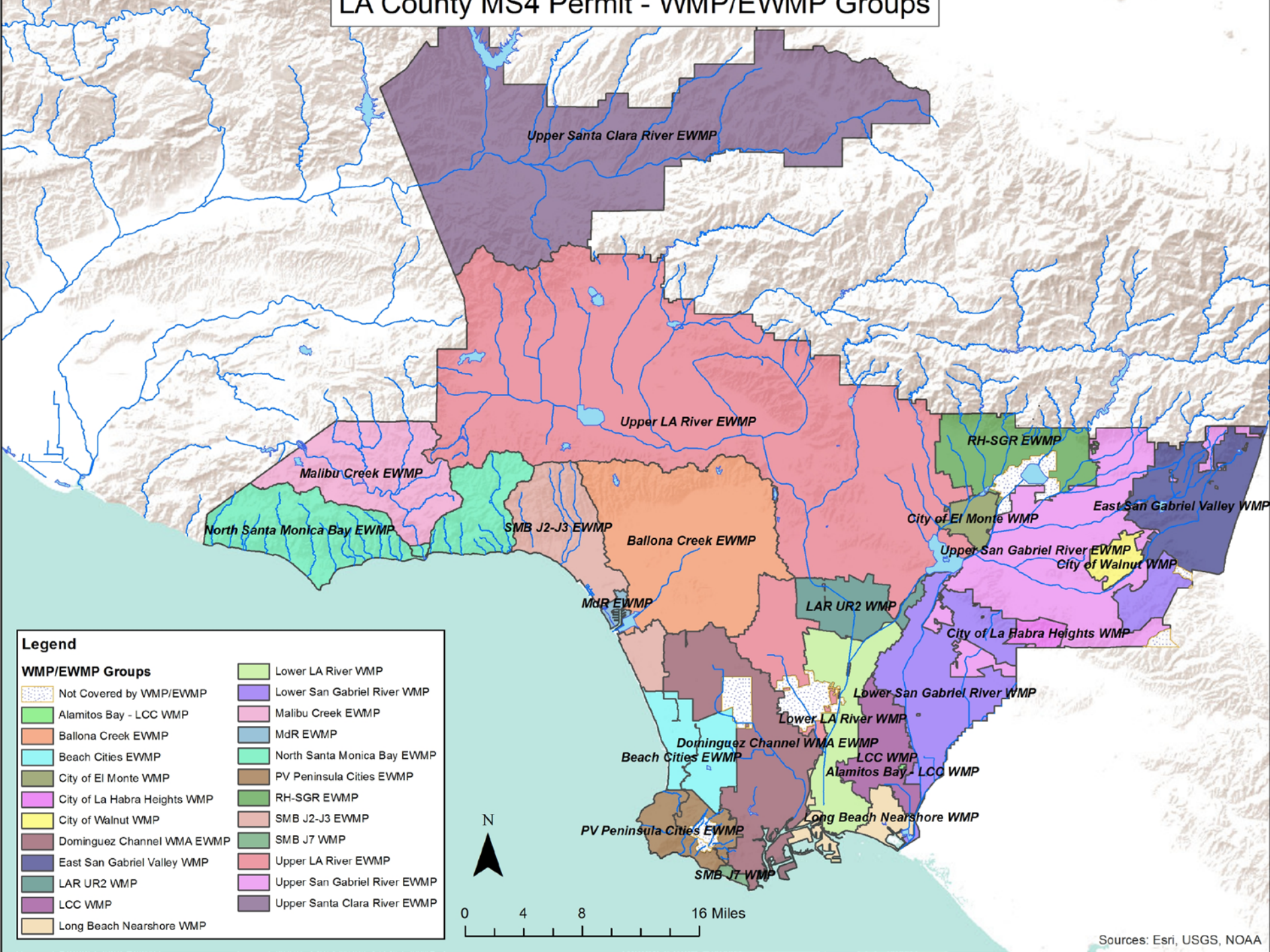


Introduction to WMP/EWMP and CIMP/IMP Approach

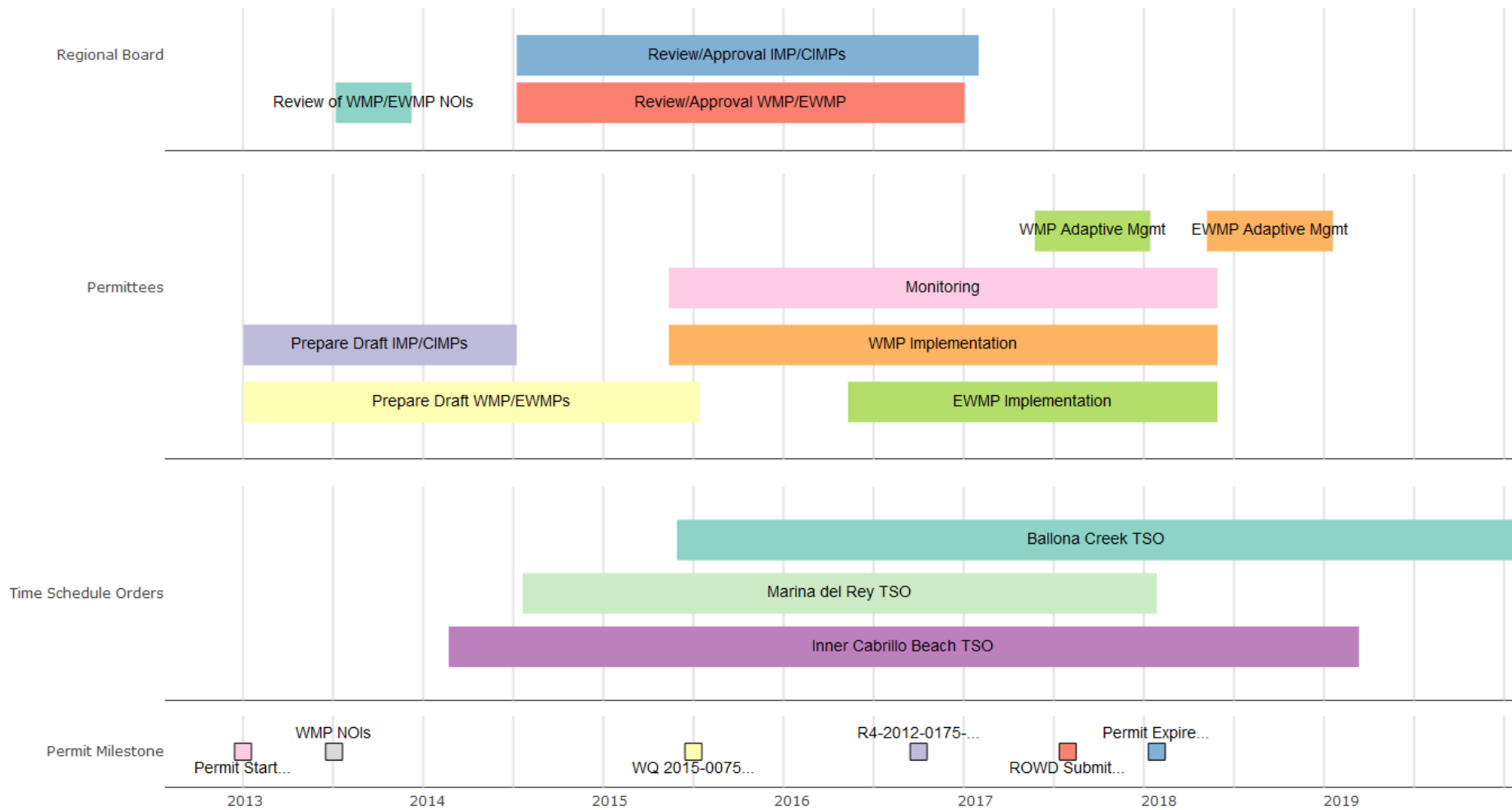
- Permit Implementation Pathways:
 - Baseline Requirements
 - Alternative Compliance Option:
 - Watershed Management Program (WMP)
 - Enhanced Watershed Management Program (EWMP)
- Permit Monitoring:
 - Integrated Monitoring Program (IMP)
 - Coordinated Integrated Monitoring Program (CIMP)
 - Regional Board Monitoring Directive



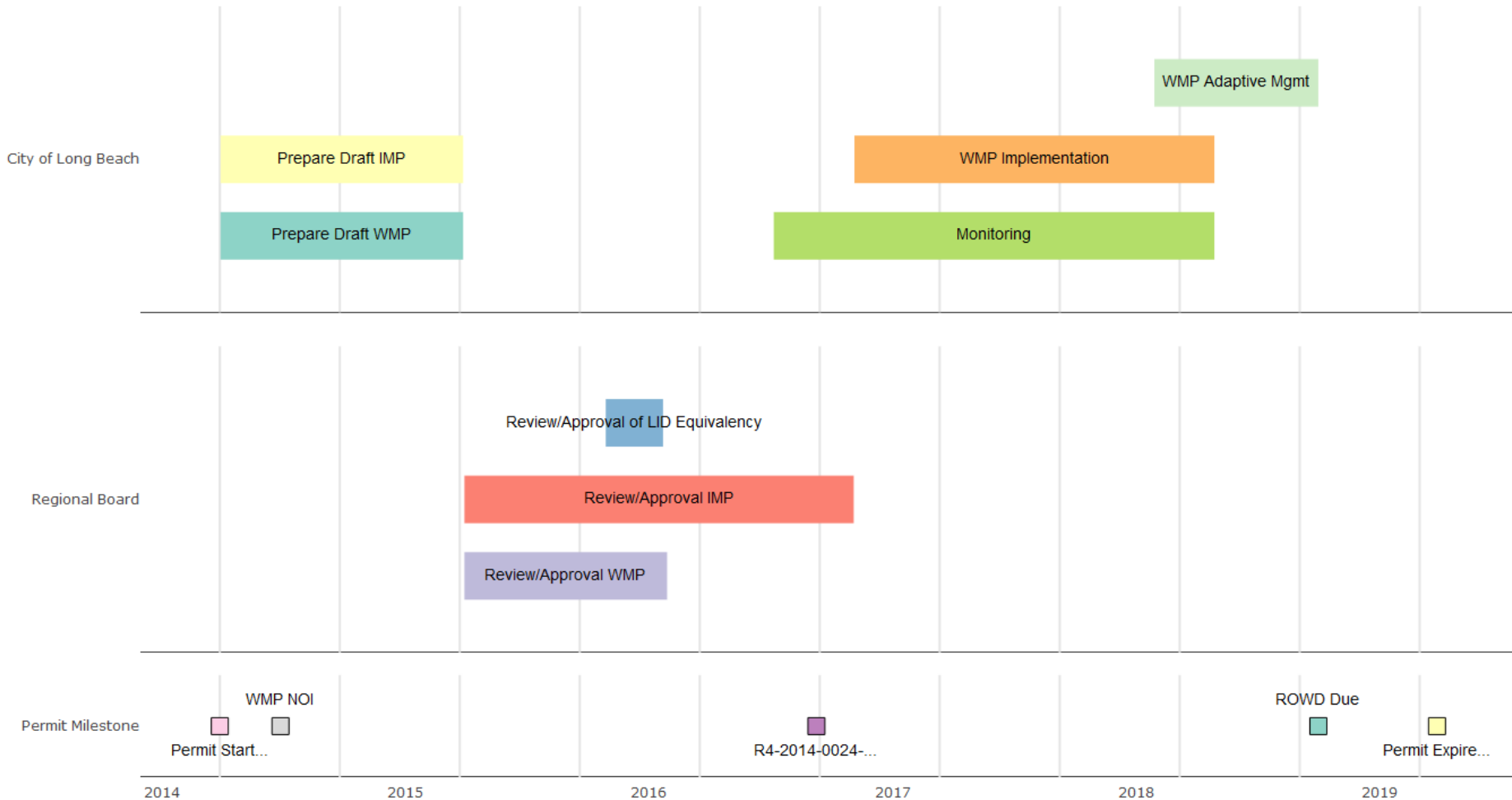
LA County MS4 Permit - WMP/ EWMP Groups



LA County MS4 Permit Timeline



City of Long Beach MS4 Permit Timeline



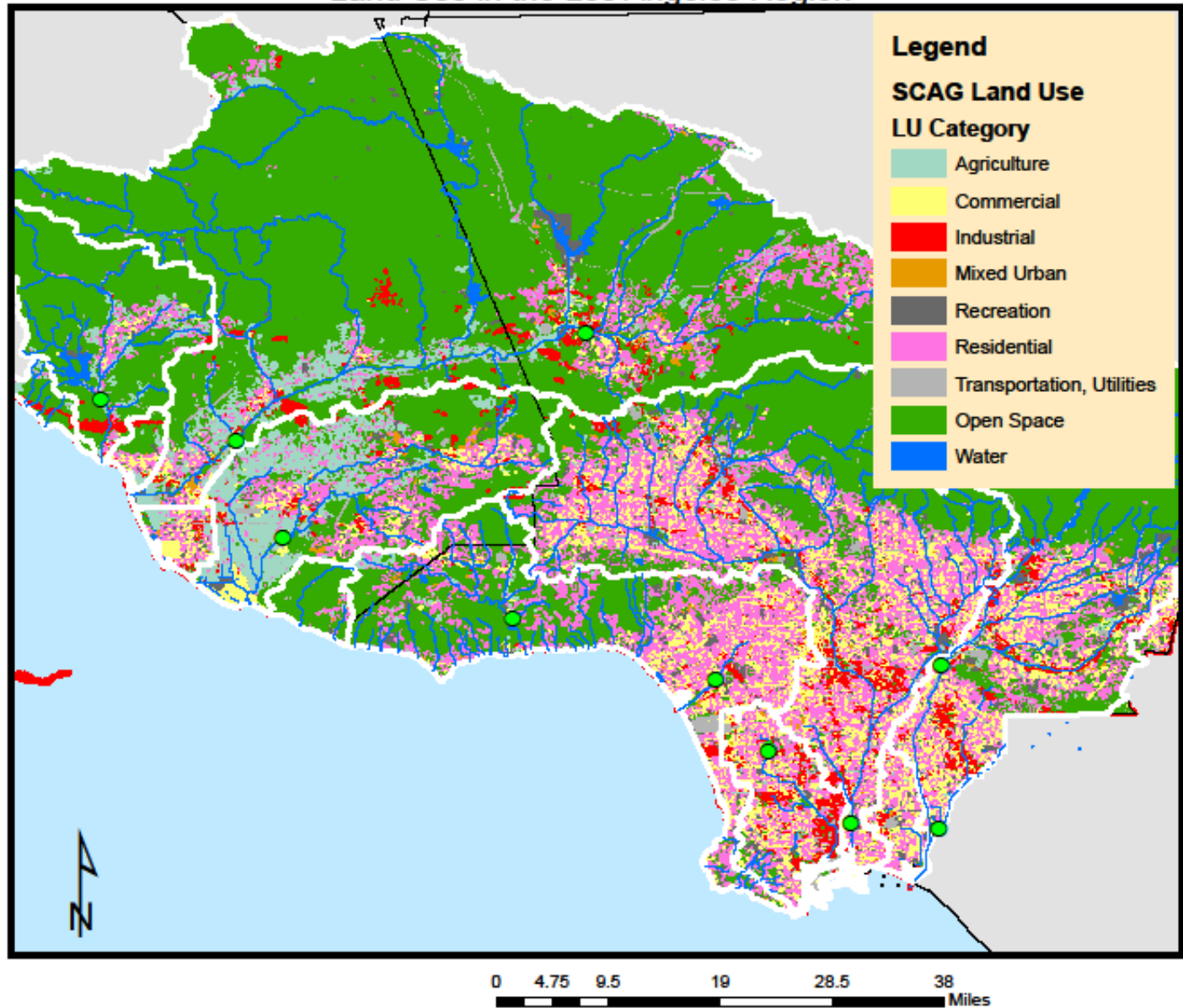
REGION-WIDE MONITORING DATA



Pollutant Concentrations at Mass Emissions Stations During Wet and Dry Weather



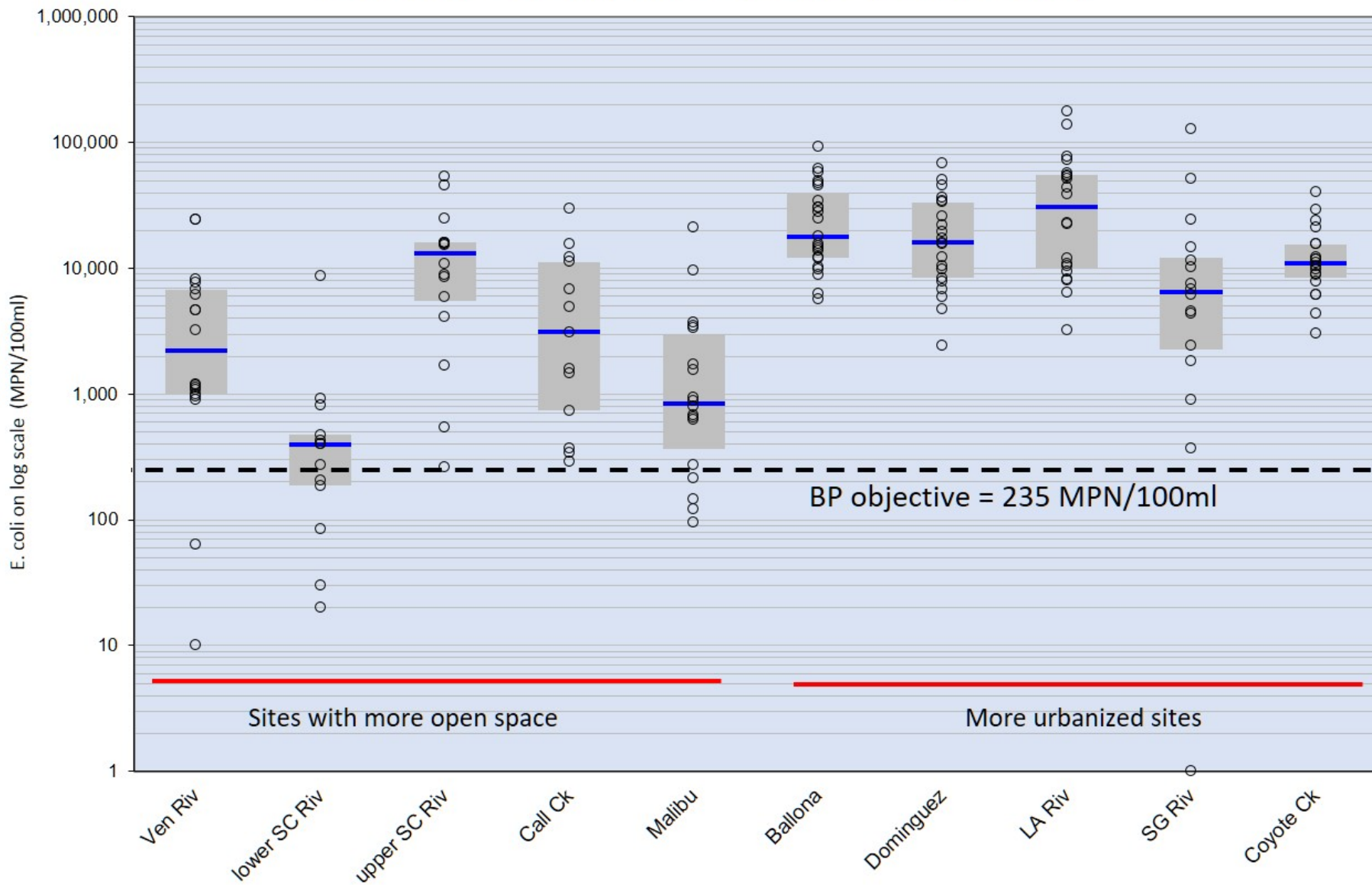
Mass Emissions MS4 Monitoring Stations (green) and Land Use in the Los Angeles Region



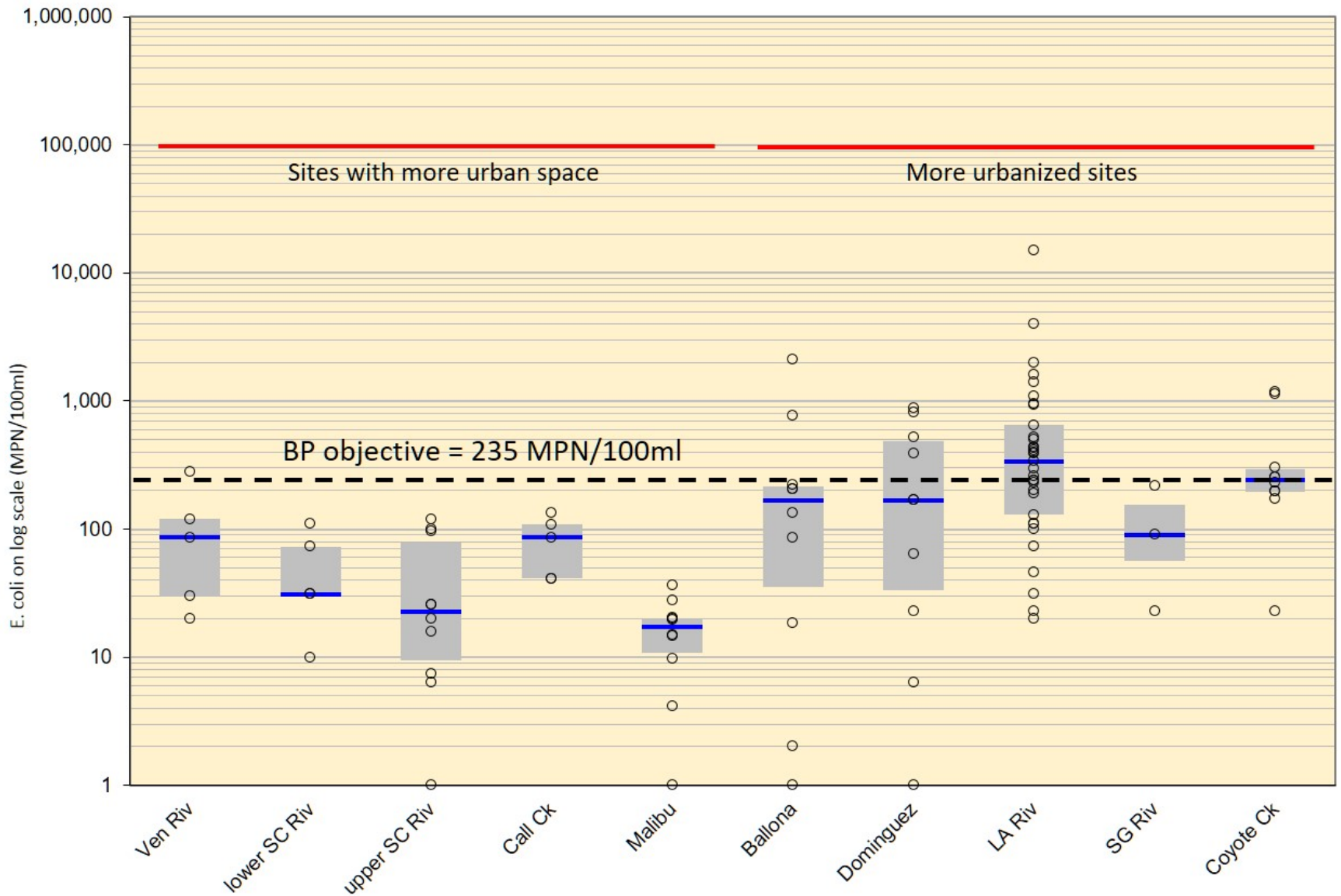
***E. COLI* IN THE REGION DURING WET AND DRY WEATHER**



***E. coli* During Wet Weather at Mass Emissions Stations in Ventura and Los Angeles Counties During Fall 2012 to Spring 2017 with Basin Plan Objective (dashed line)**



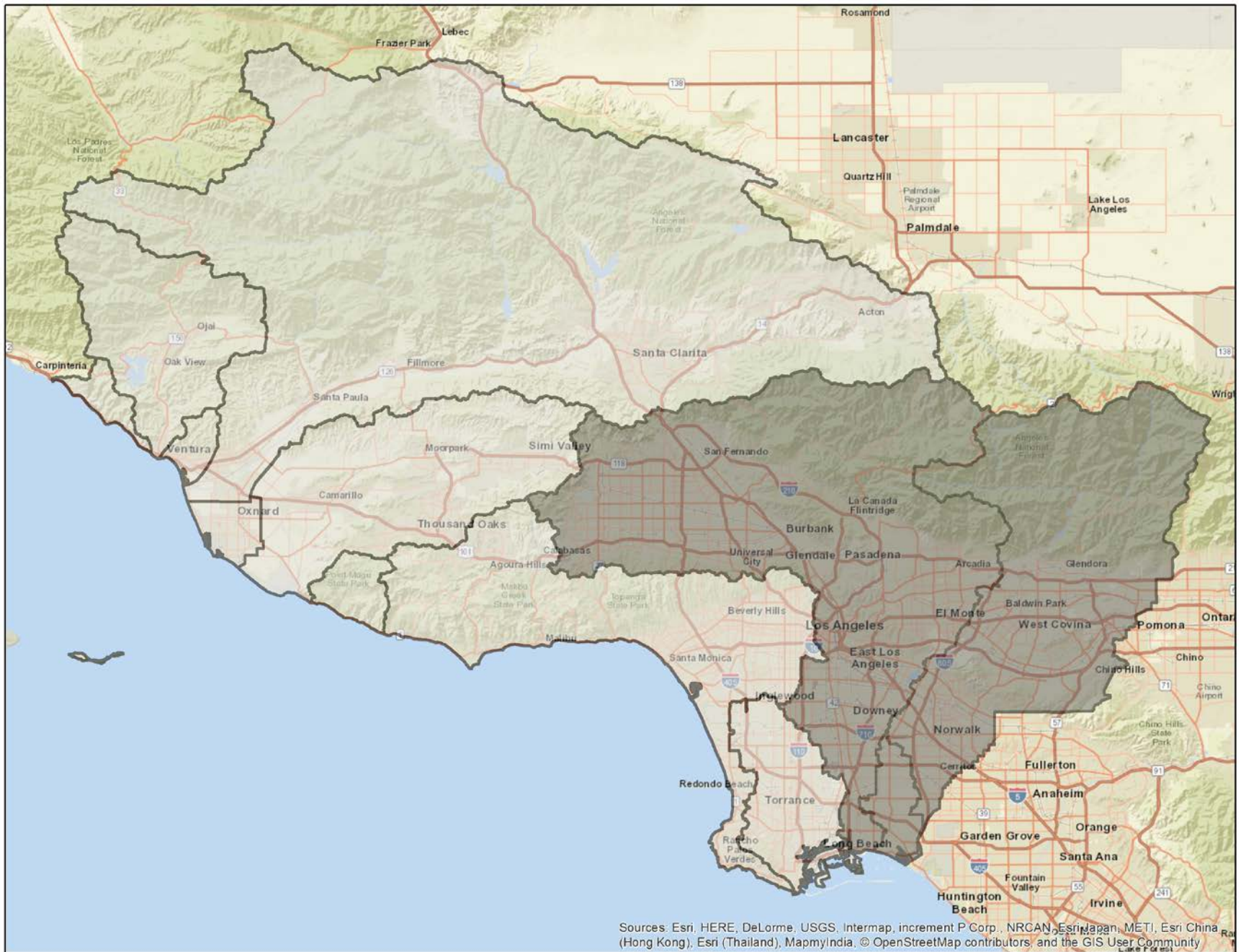
***E. coli* During Dry Weather at Mass Emissions Stations in Ventura and Los Angeles Counties During Fall 2012 to Spring 2017 with Basin Plan Objective (dashed line)**



MONITORING DATA

Los Angeles River, San Gabriel River, and Los Cerritos Channel/Alamitos Bay watersheds





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TMDLs with Past Interim and/or Final Compliance Dates in LAR, SGR, and LCC watersheds

TOTAL MAXIMUM DAILY LOADS (TMDL)	COMPLIANCE DATE: UP TO 2017
Los Angeles River and Tributaries Metals TMDL	Interim – 50% dry and 25% wet by the Effective Date of the Order
*Long Beach City Beaches and Los Angeles River Estuary Bacteria TMDL – USEPA Promulgated	Final - Effective Date of the Order
*Los Angeles Area Lakes TMDLs – USEPA Promulgated	Final - Effective Date of the Order
**San Gabriel River and Impaired Tributaries Metals and Selenium TMDL – USEPA Promulgated	Final - Effective Date of the Order
**Los Cerritos Channel Metals – USEPA Promulgated	Final - Effective Date of the Order
Colorado Lagoon OC Pesticides, PCBs, Sediment Toxicity, PAHs, and Metals TMDL	Interim – Effective Date of the Order
Los Angeles River Watershed Trash TMDL	Final - 9/30/2016
Legg Lake Trash TMDL	Final - 3/6/2016

*USEPA Promulgated TMDLs: Compliance schedule per approved WMP/EWMP

**SGR and LCC Metals TMDL: Final - 2023 (dry) and 2026 (wet) based on TMDL Implementation Plans adopted by the Board after the issuance of the LA County MS4 Permit.

Los Angeles River Watershed

Monitoring Data

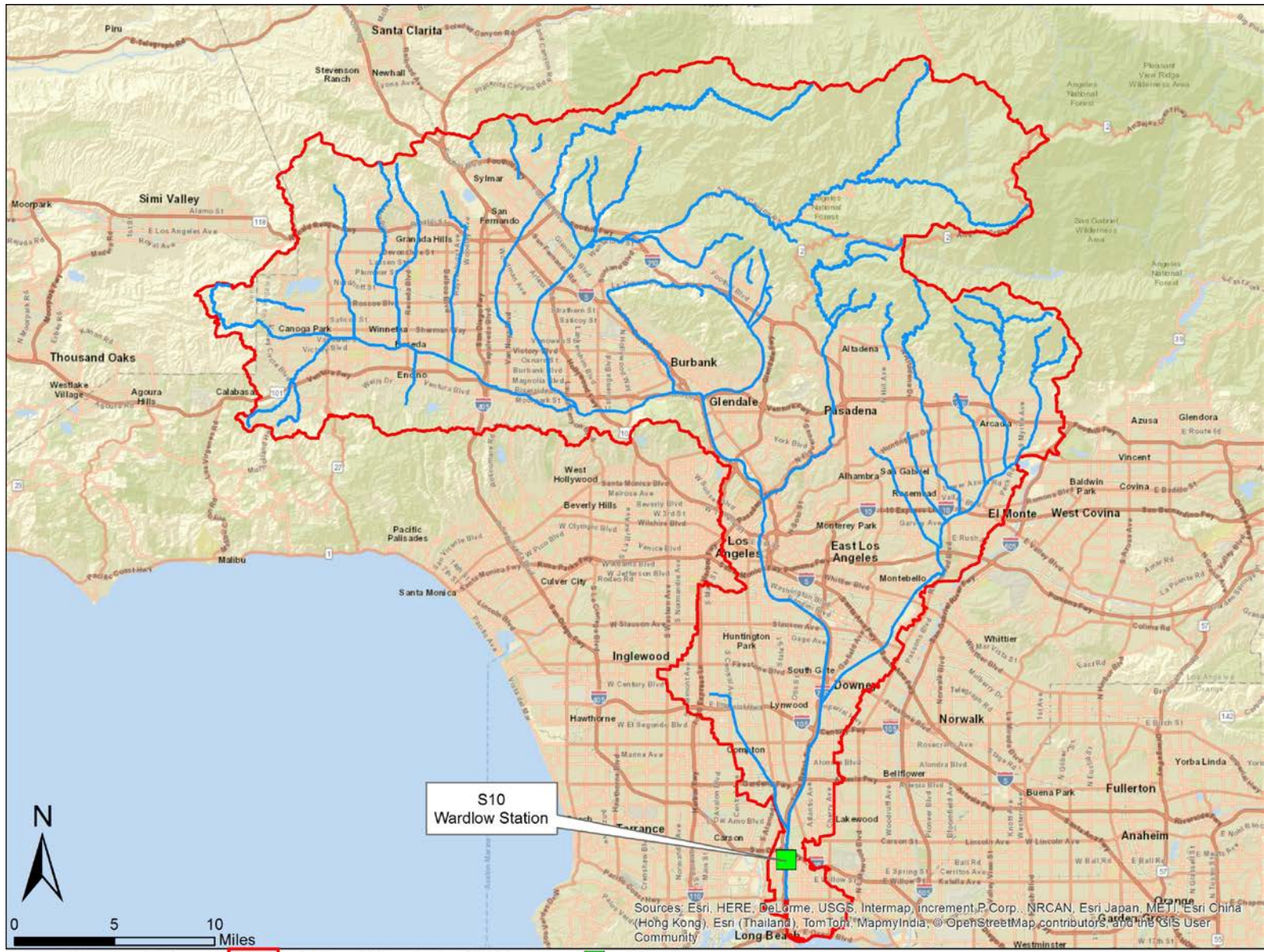


Photo Credit: Mel Melcon / Los Angeles Times



Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

Before
2012 LA
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MS4
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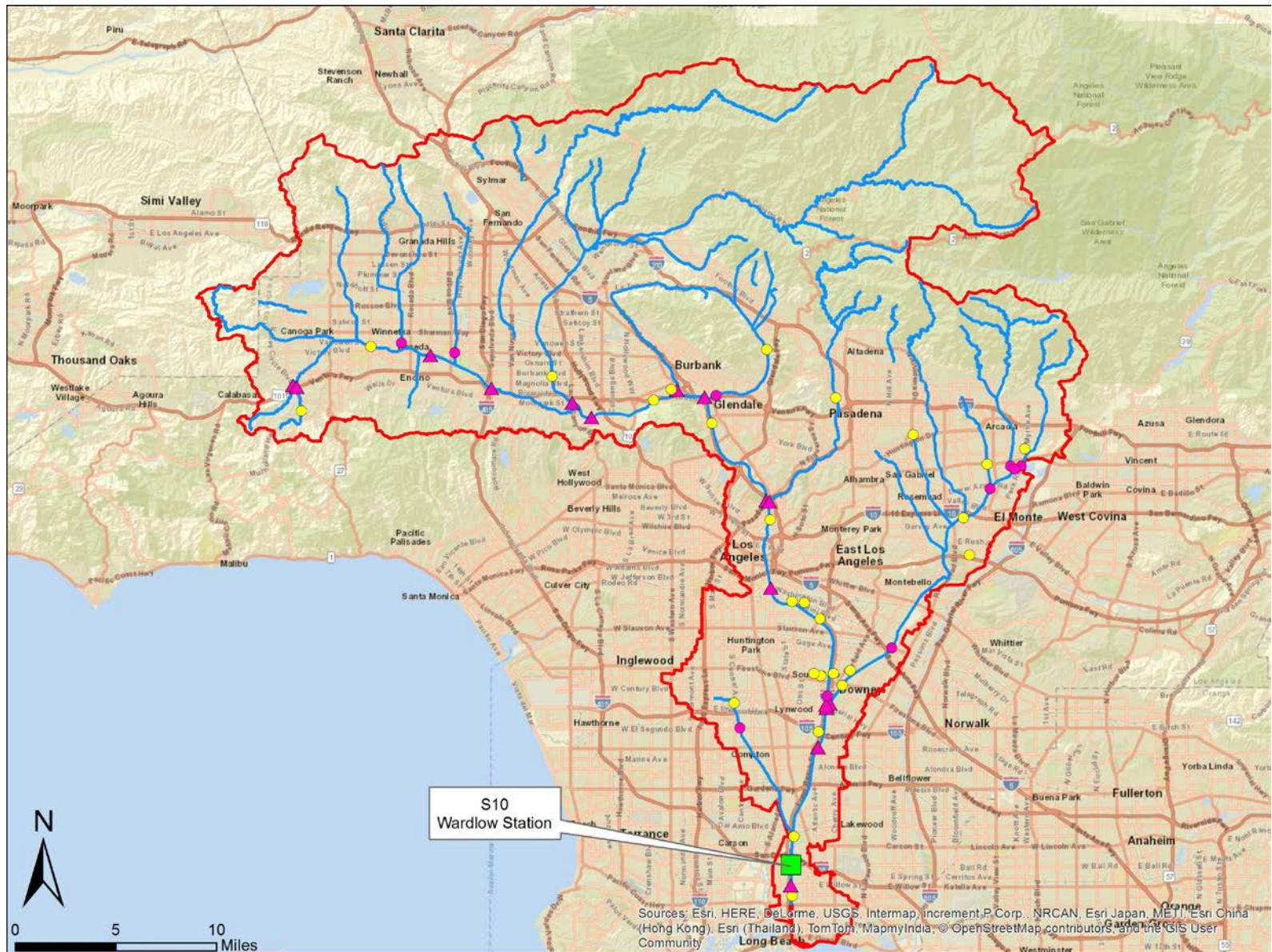


S10
Wardlow Station

Sources: Esri, HERE, DeLorme, USGS, Intermap, increment, P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

— Rivers and Stream LA River Watershed Stations: ME (1)

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S10
Wardlow Station

Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

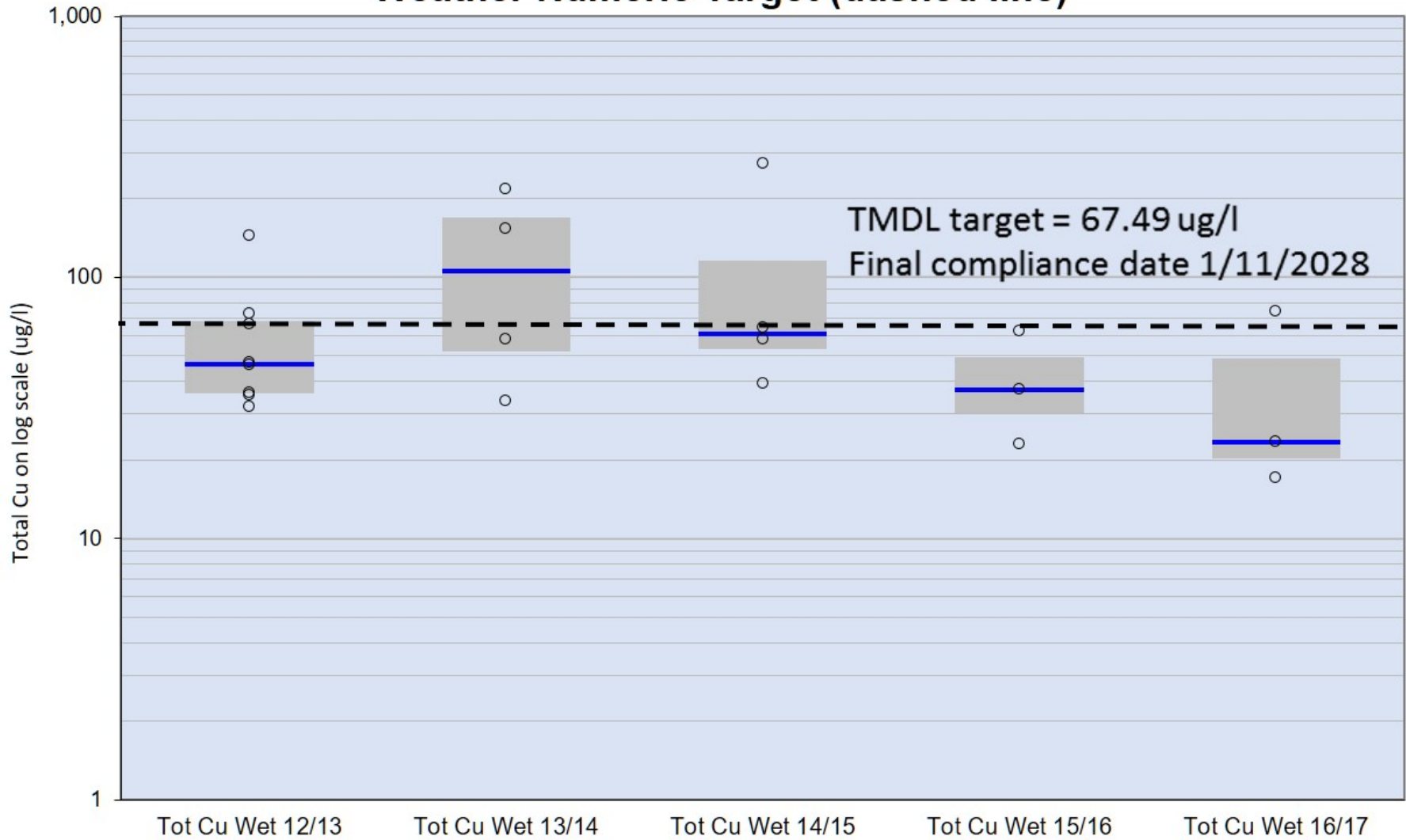
- Rivers and Stream
- LA River Watershed
- Stations:**
- ME (1)
- Outfall (26)
- RW (10)
- ▲ RW (Existing TMDL) (16)

Results at Los Angeles River Mass Emissions Stations Through Time During Wet and Dry Weather

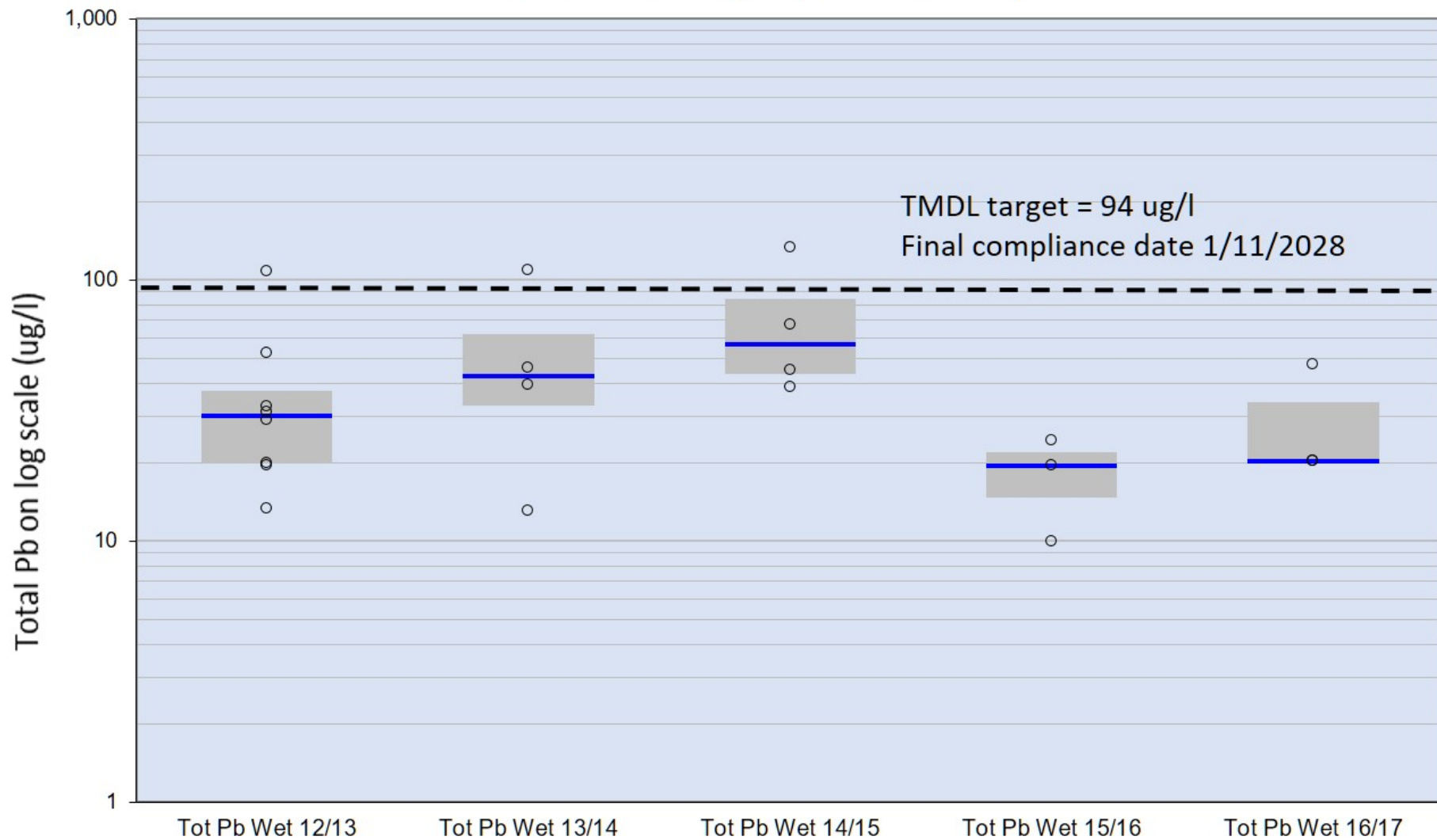
S10 - Wardlow



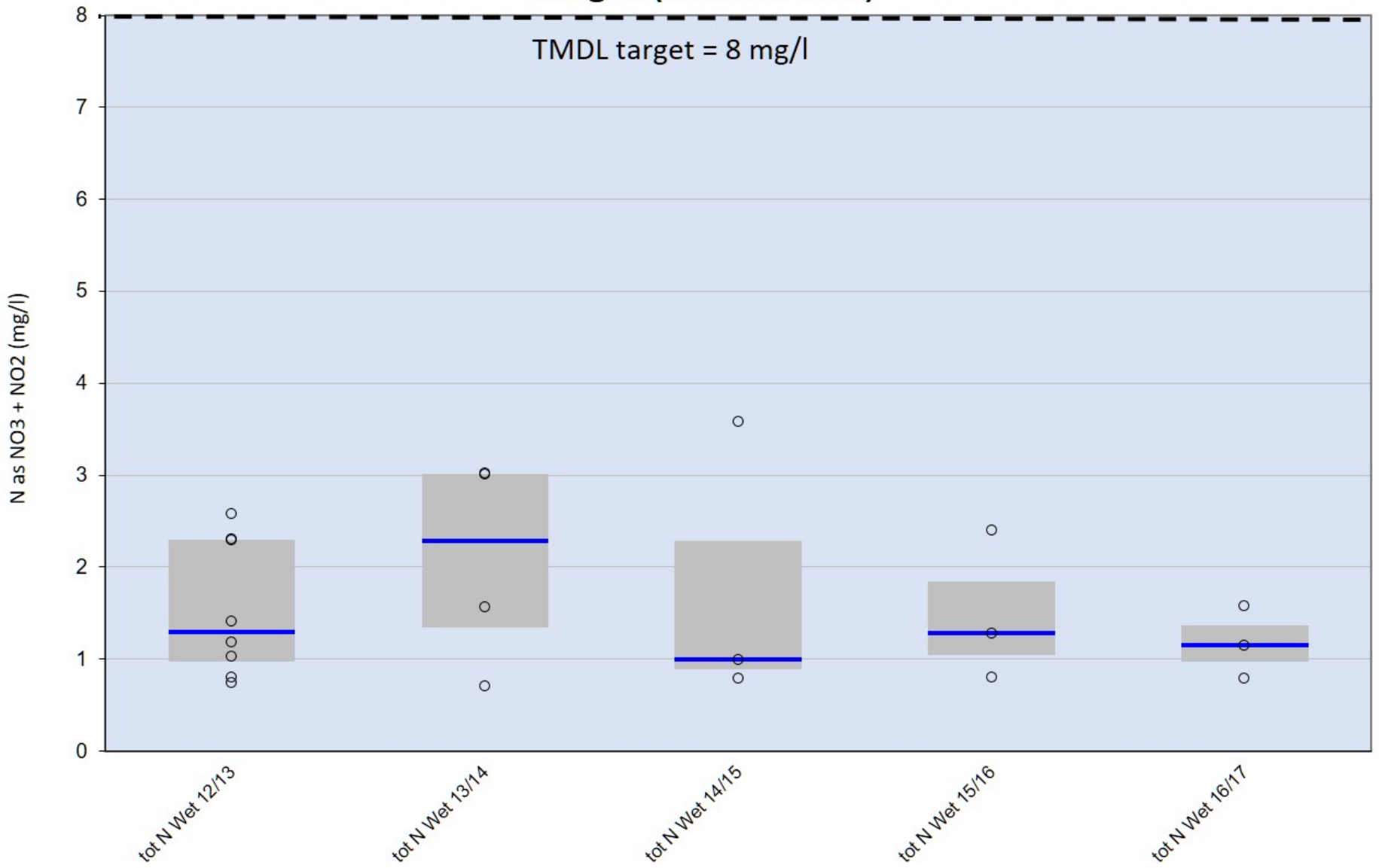
Total Copper at Los Angeles River Mass Emissions Station During Wet Weather Fall 2012 - Winter 2017 with TMDL Wet Weather Numeric Target (dashed line)



Total Lead at Los Angeles River Mass Emissions Station During Wet Weather Fall 2012 - Winter 2017 with TMDL Wet Weather Numeric Target (dashed line)



Nitrogen (as NO₃ + NO₂) at Los Angeles River Mass Emissions Station During Wet Weather 2012 - 2017 with TMDL Numeric Target (dashed line)



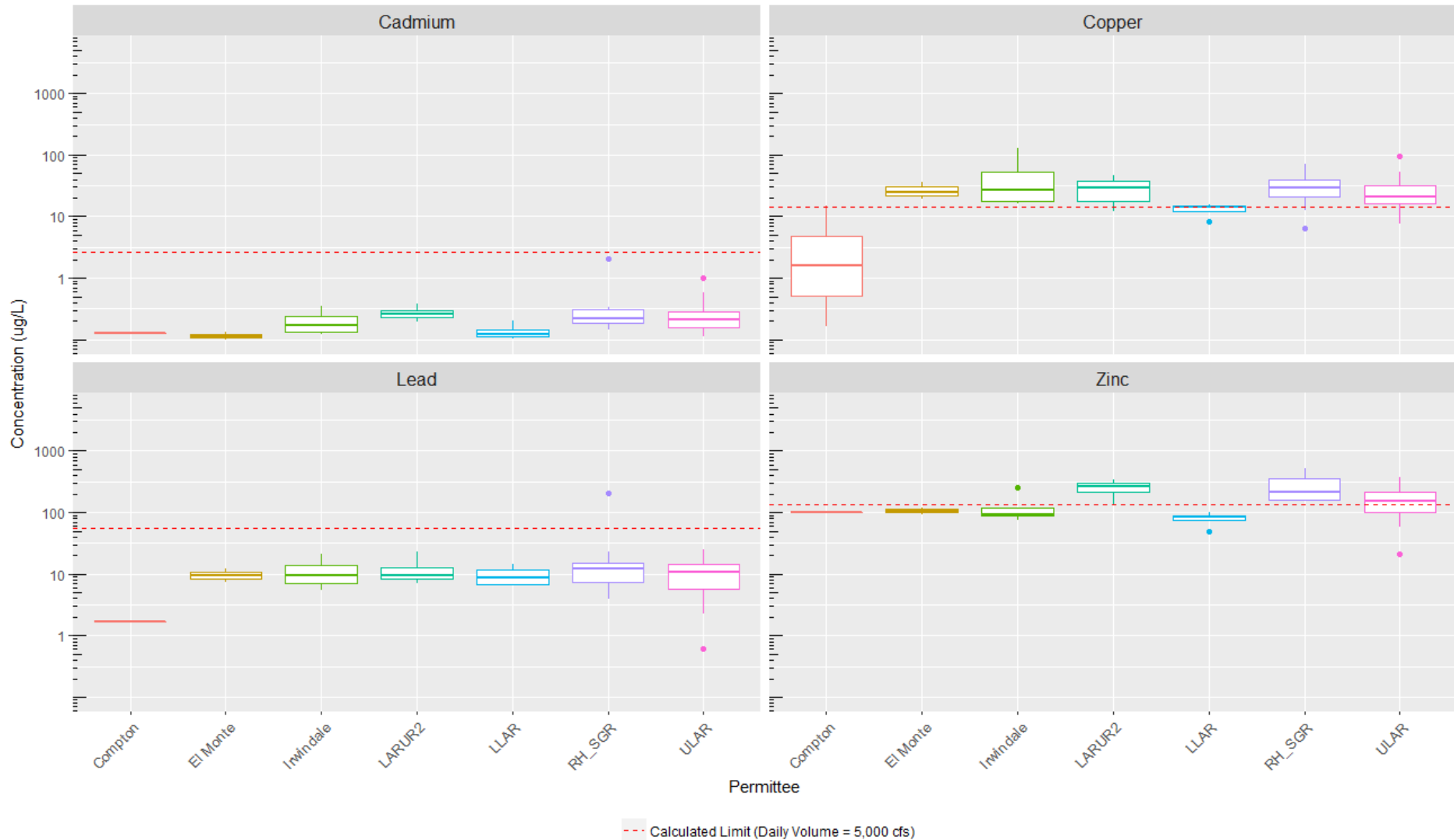
Results at Los Angeles River Watershed Outfalls

Metals and Nitrogen Compounds



LA River Metals TMDL

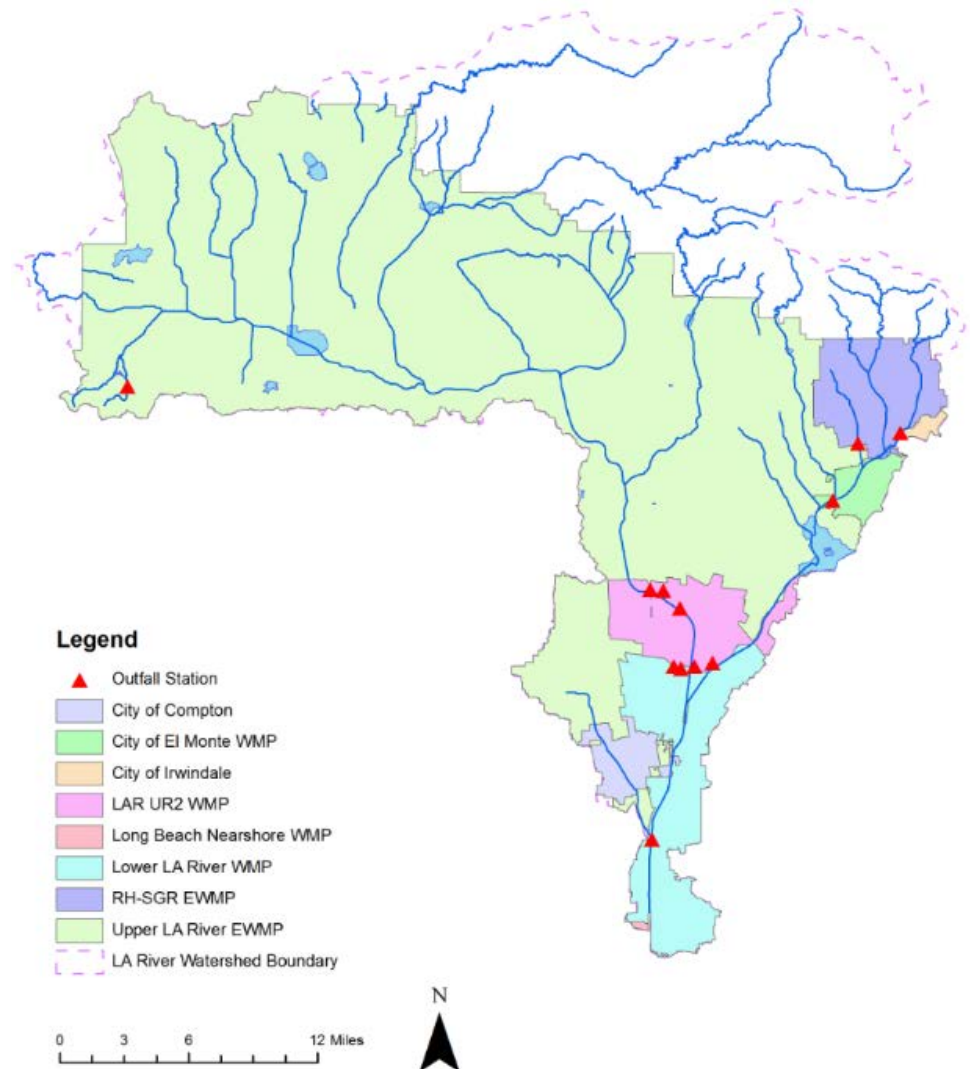
Total Metals in Outfalls Discharging to the LA River During Wet Weather (2015/16 to 2016/17)



LA River Nitrogen TMDL

Outfall Monitoring

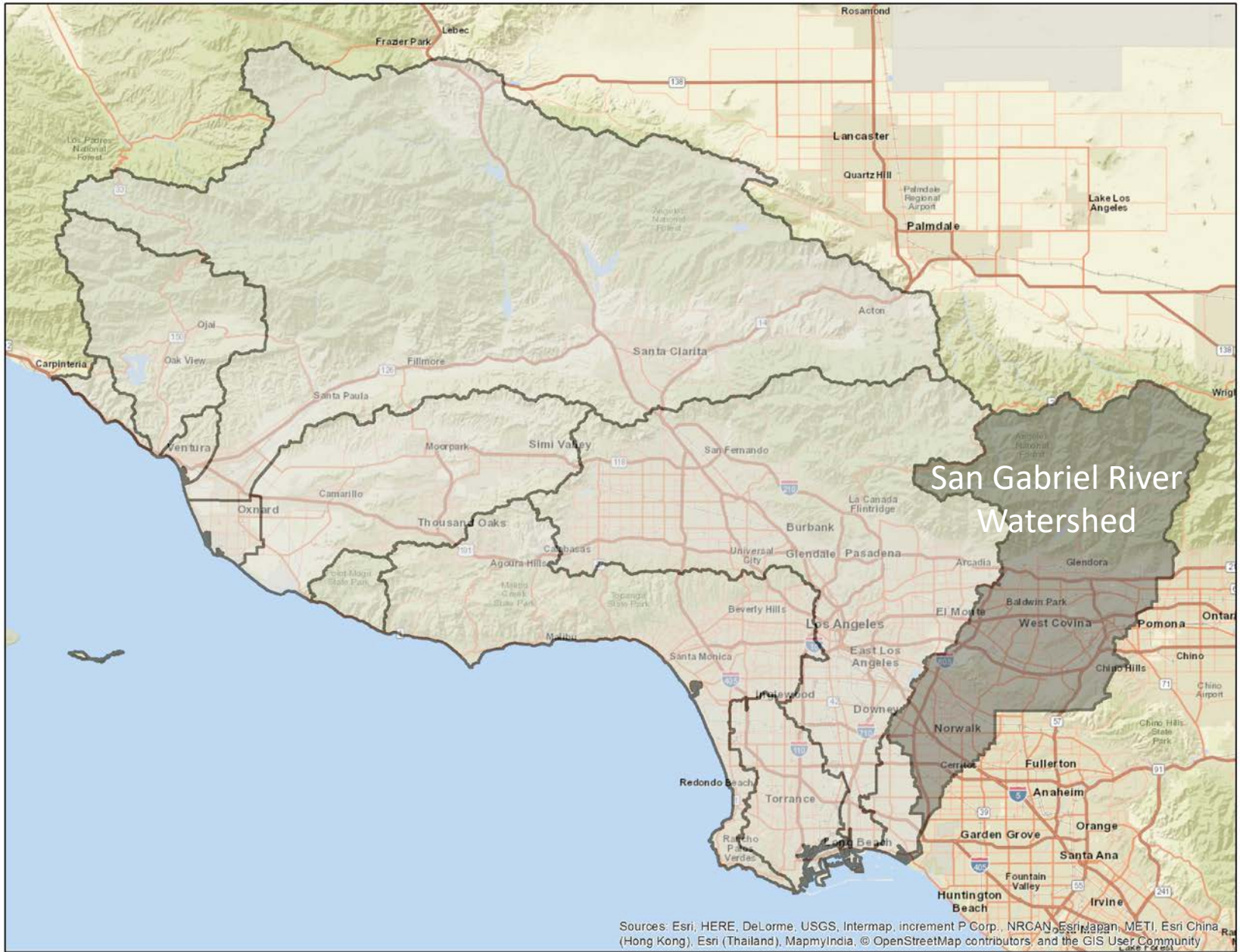
	Samples	Exceedances
Ammonia-N	35	0
Nitrate-N + Nitrite-N	35	1



San Gabriel River Watershed

Monitoring Data

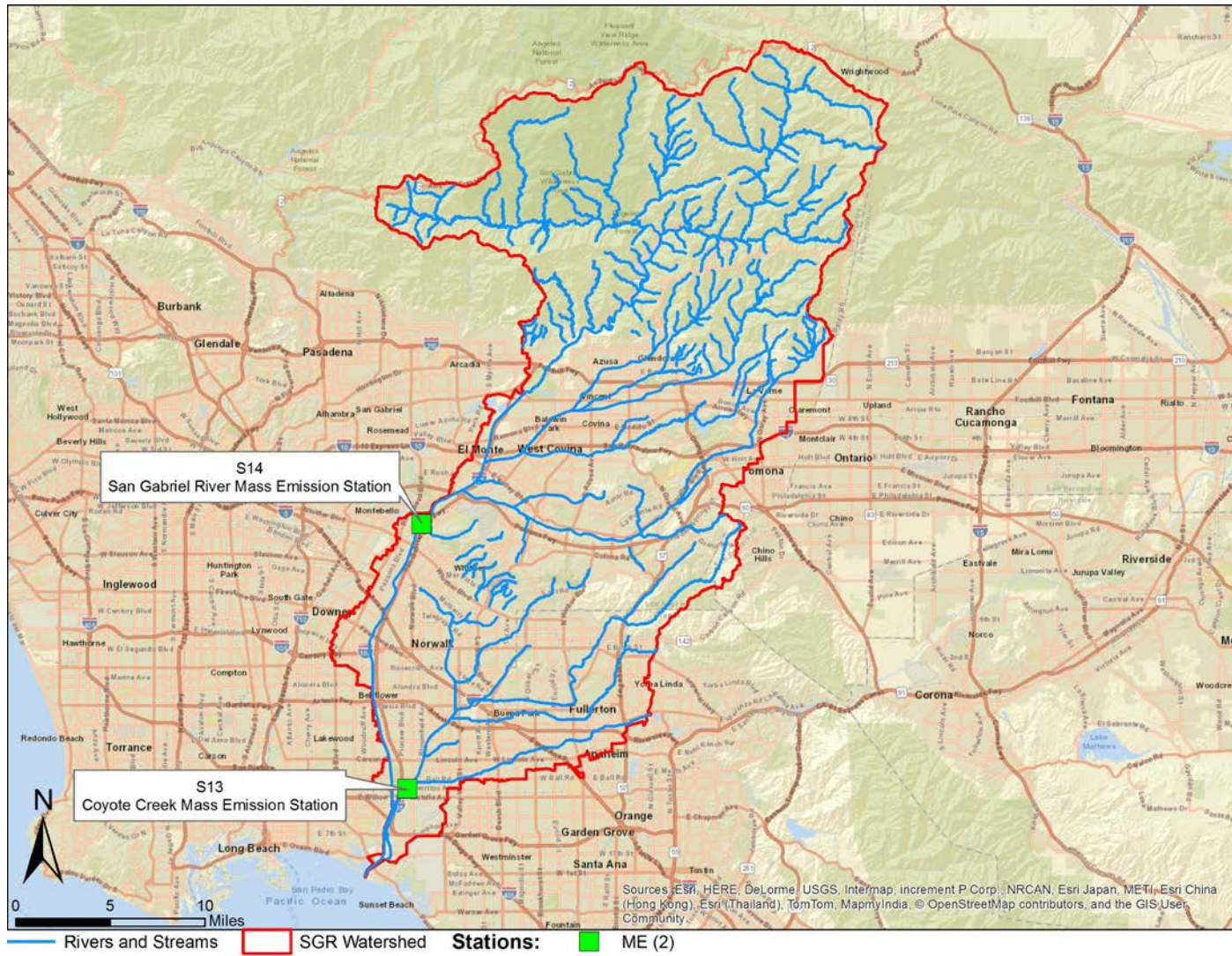




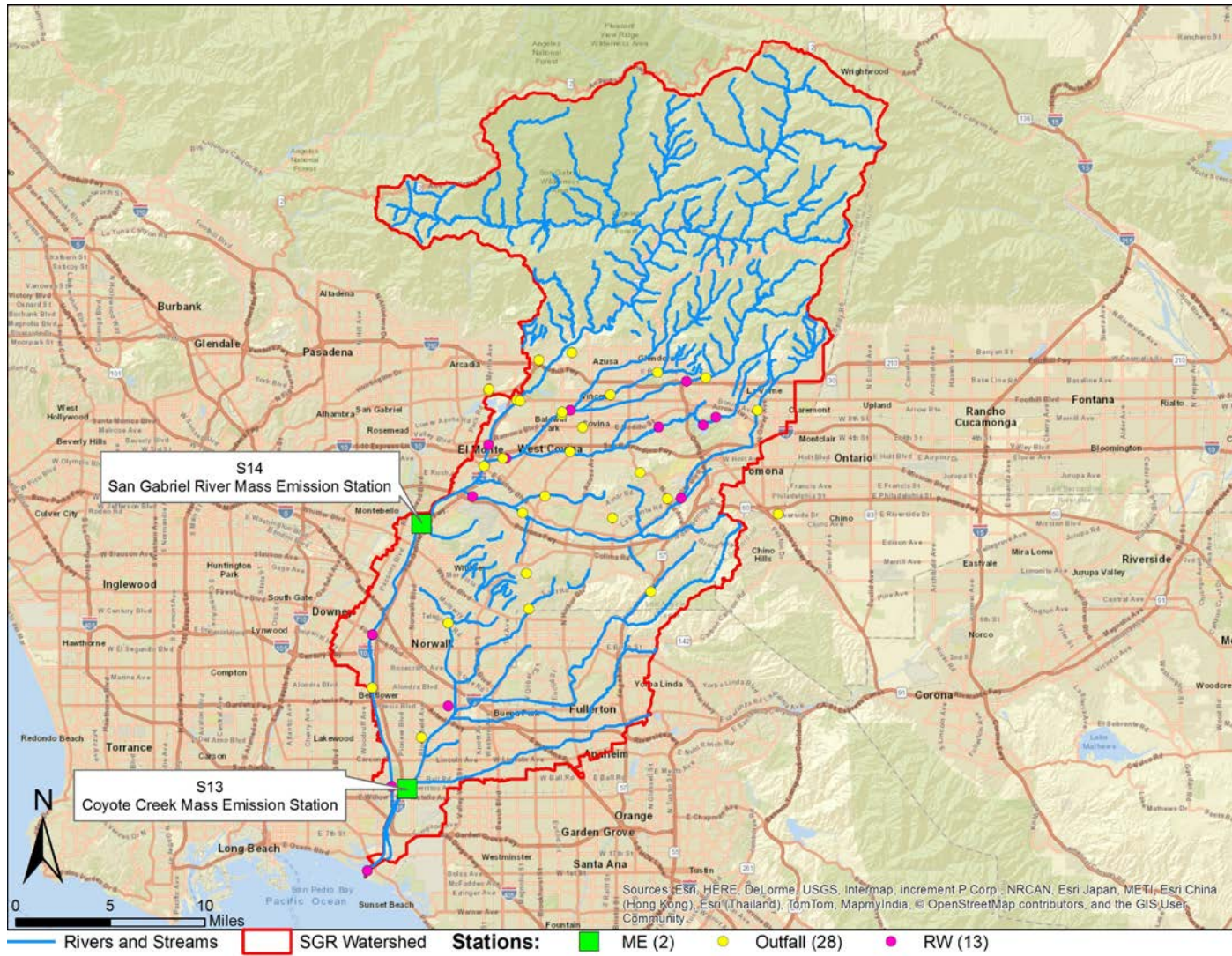
San Gabriel River Watershed

Sources: Esri; HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

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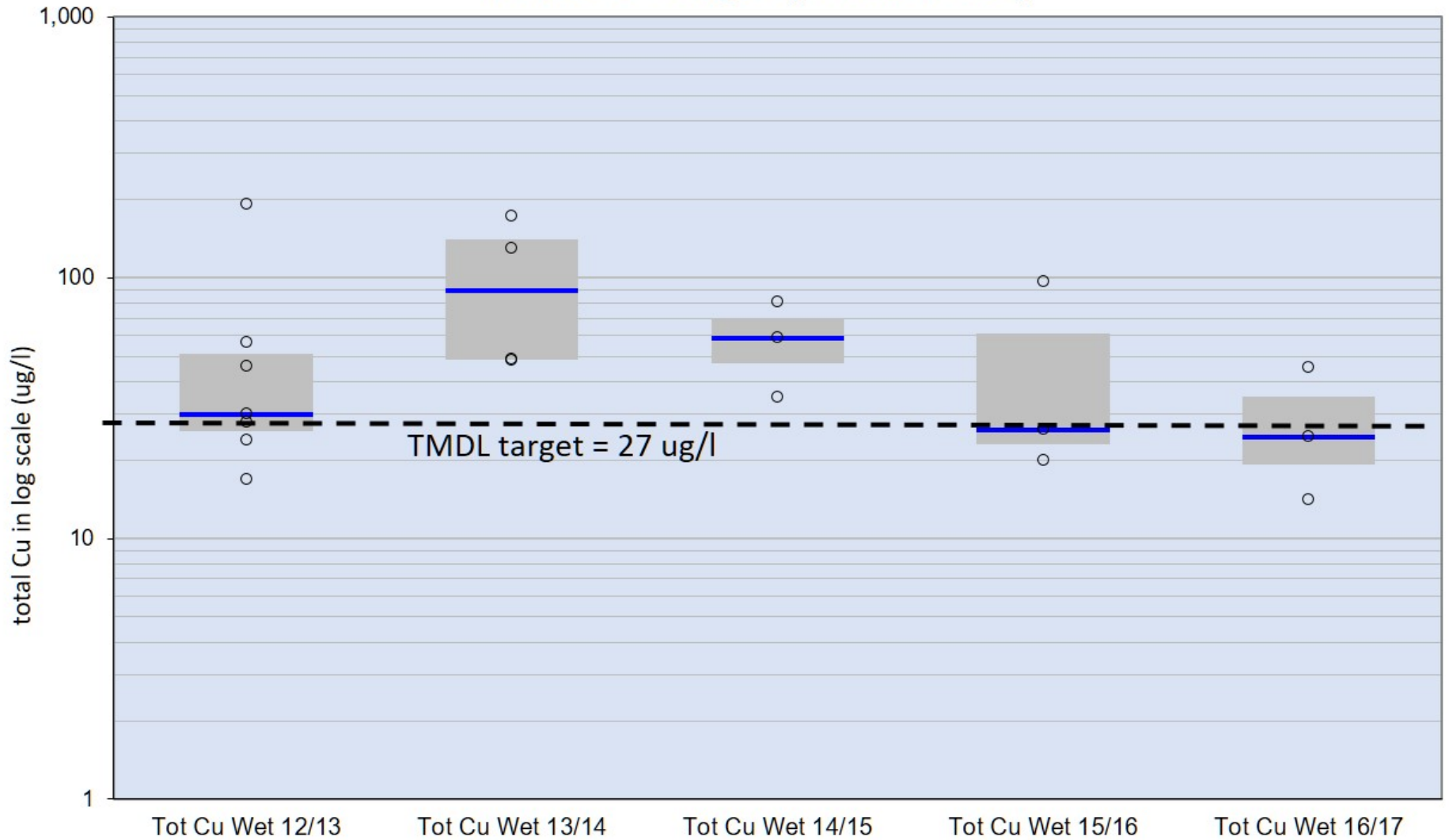


Results at San Gabriel River Watershed Mass Emissions Stations Through Time During Wet and Dry Weather

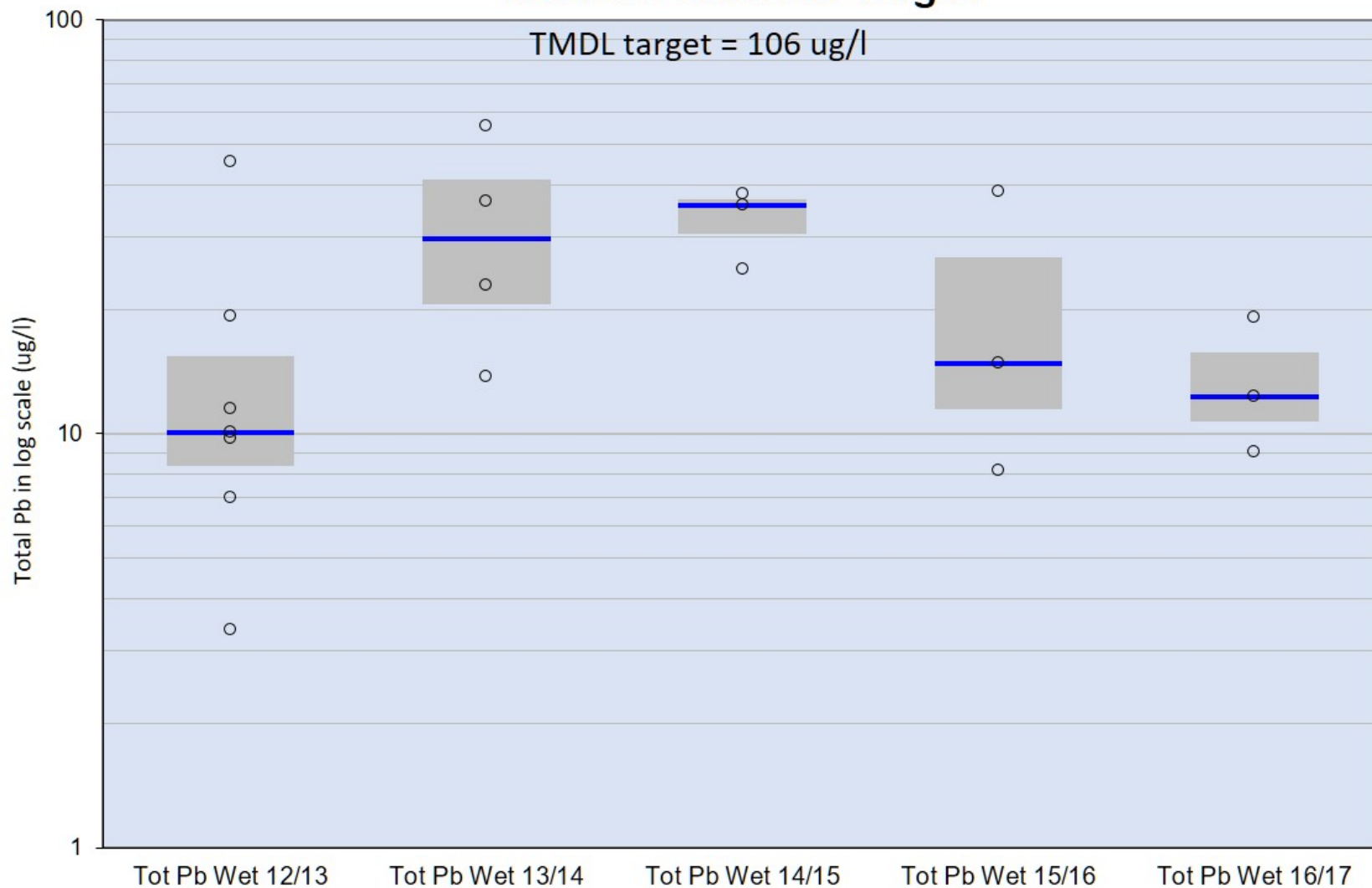
S13 (San Gabriel River) & S14 (Coyote Creek)



Total Copper at Coyote Creek Mass Emissions Station During Wet Weather Fall 2012 - Winter 2017 with TMDL Wet Weather Numeric Target (dashed line)



Total Lead at Coyote Creek Mass Emissions Station During Wet Weather Fall 2012 - Winter 2017 with TMDL Wet Weather Numeric Target



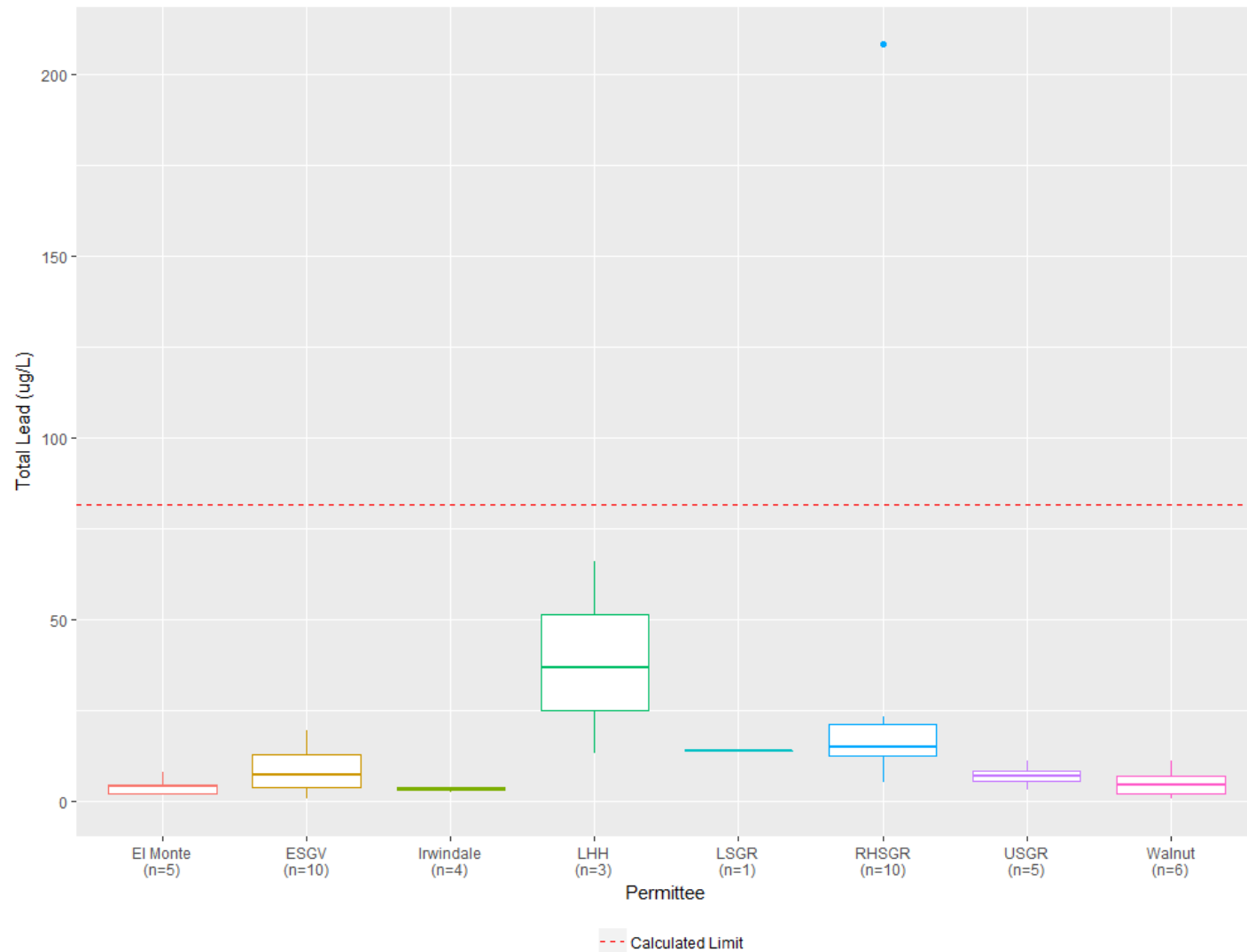
Results at San Gabriel River Watershed Outfalls

Metals



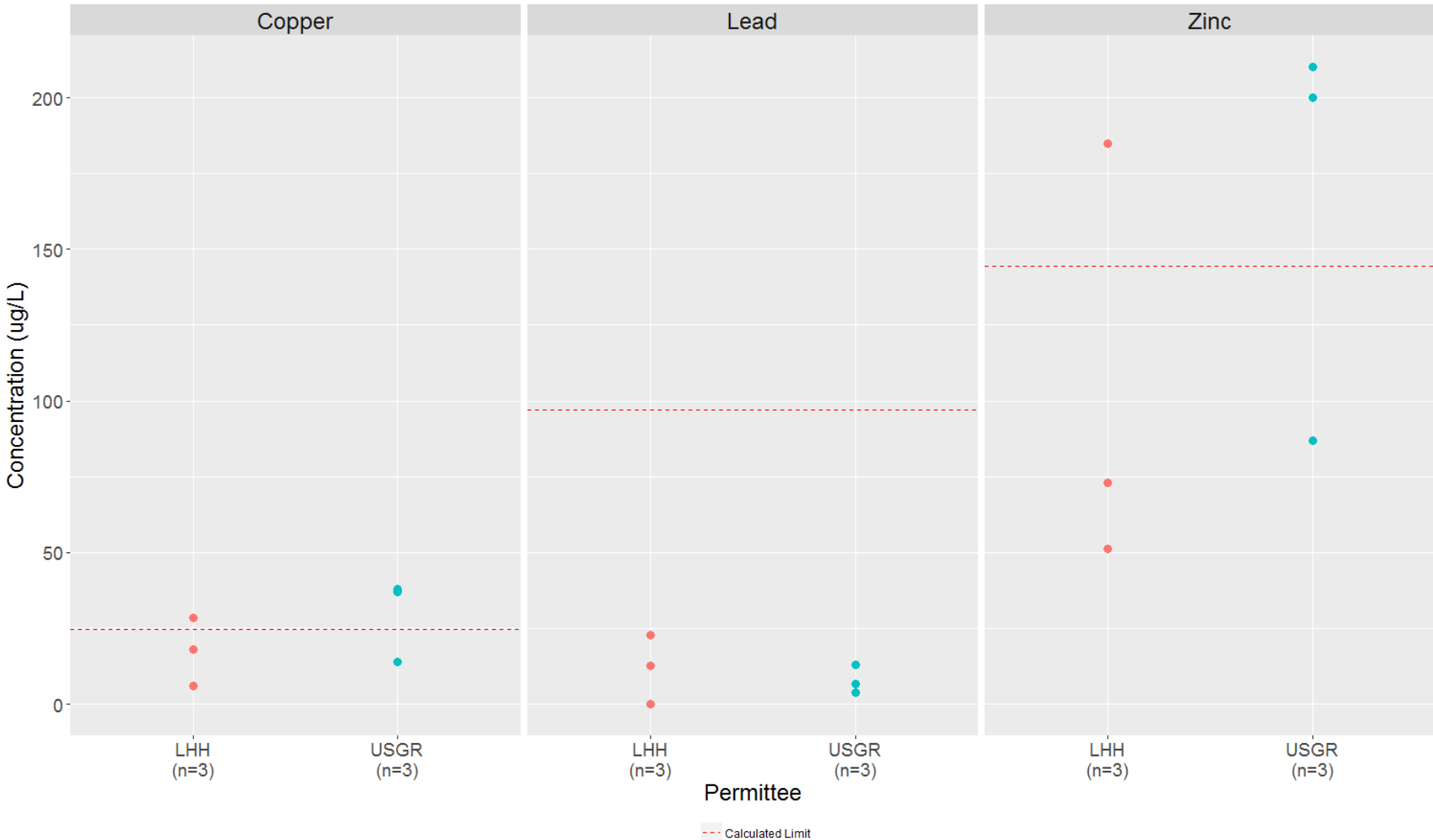
San Gabriel River Metals TMDL

Total Lead Measured in Outfalls Discharging to San Gabriel River Reach 2 During Wet Weather (2015/16 to 2016/17)



San Gabriel River Metals TMDL

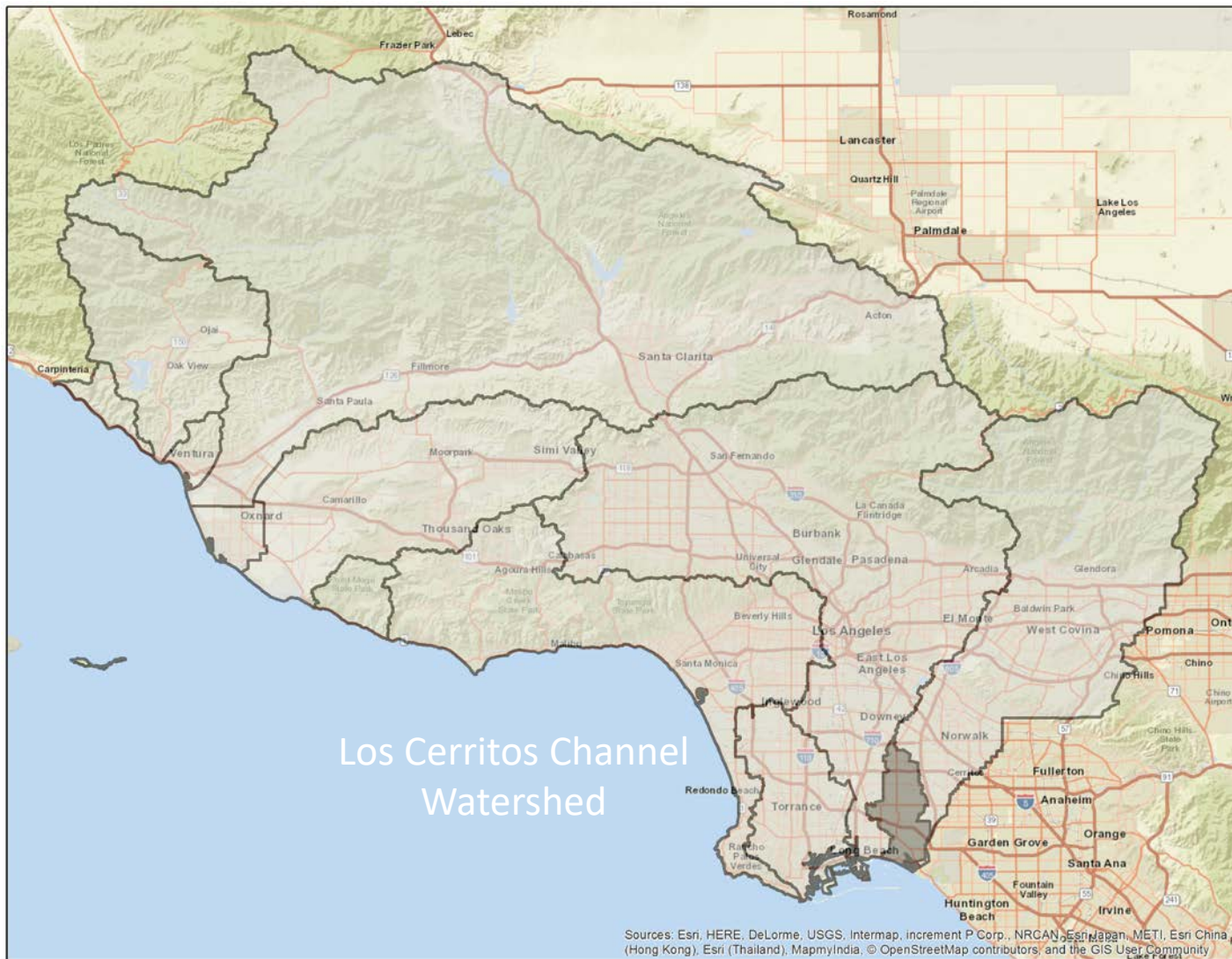
Total Metals Measured in Outfalls Discharging to Coyote Creek During Wet Weather (2015/16 to 2016/17)



Los Cerritos Channel / Alamitos Bay Watershed

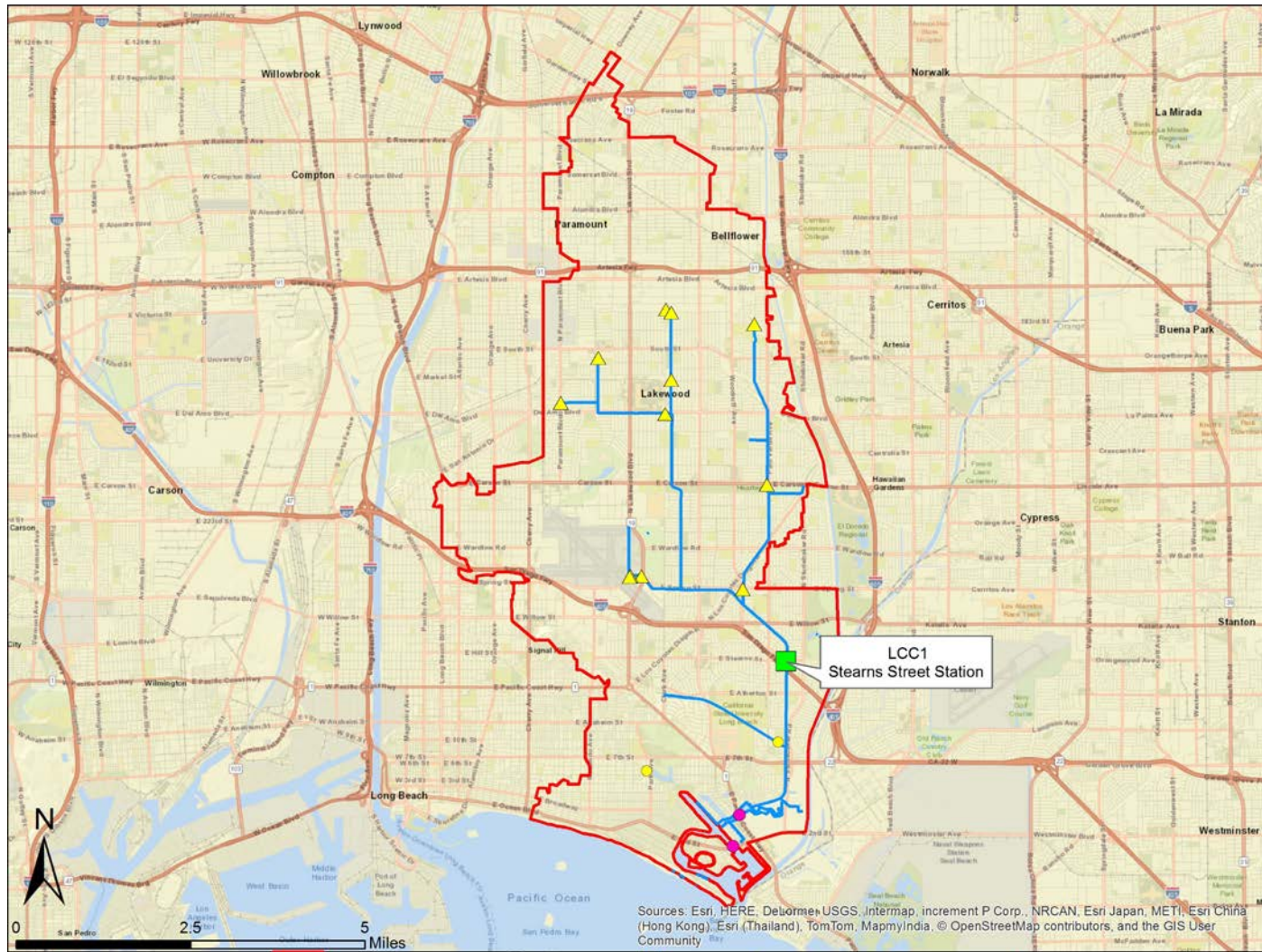
Monitoring Data





Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

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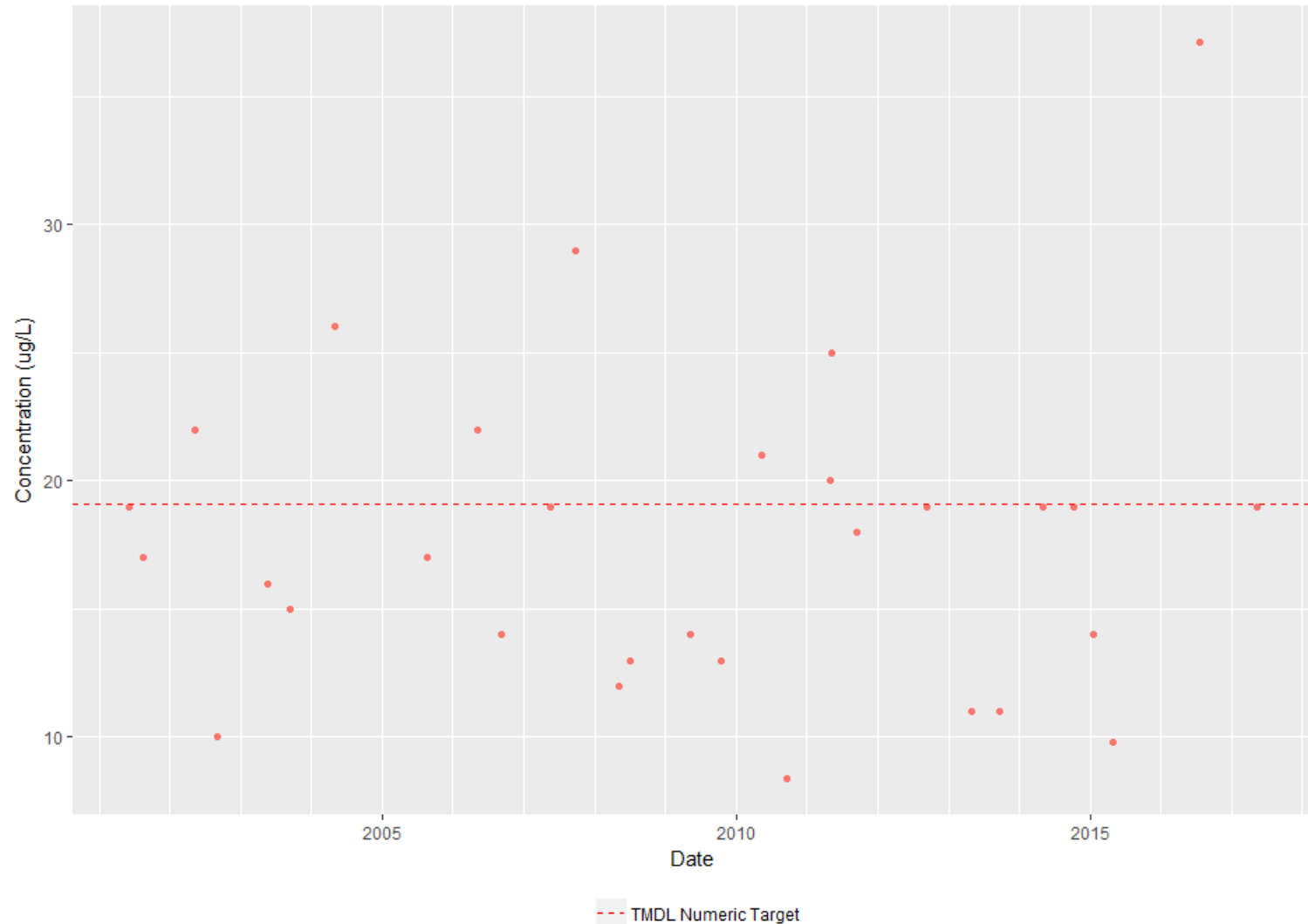
Los Cerritos Channel Metals TMDL

Total Metals Measured During Wet Weather Events - Los Cerritos Channel @ Stearns Street (2000 to 2017)

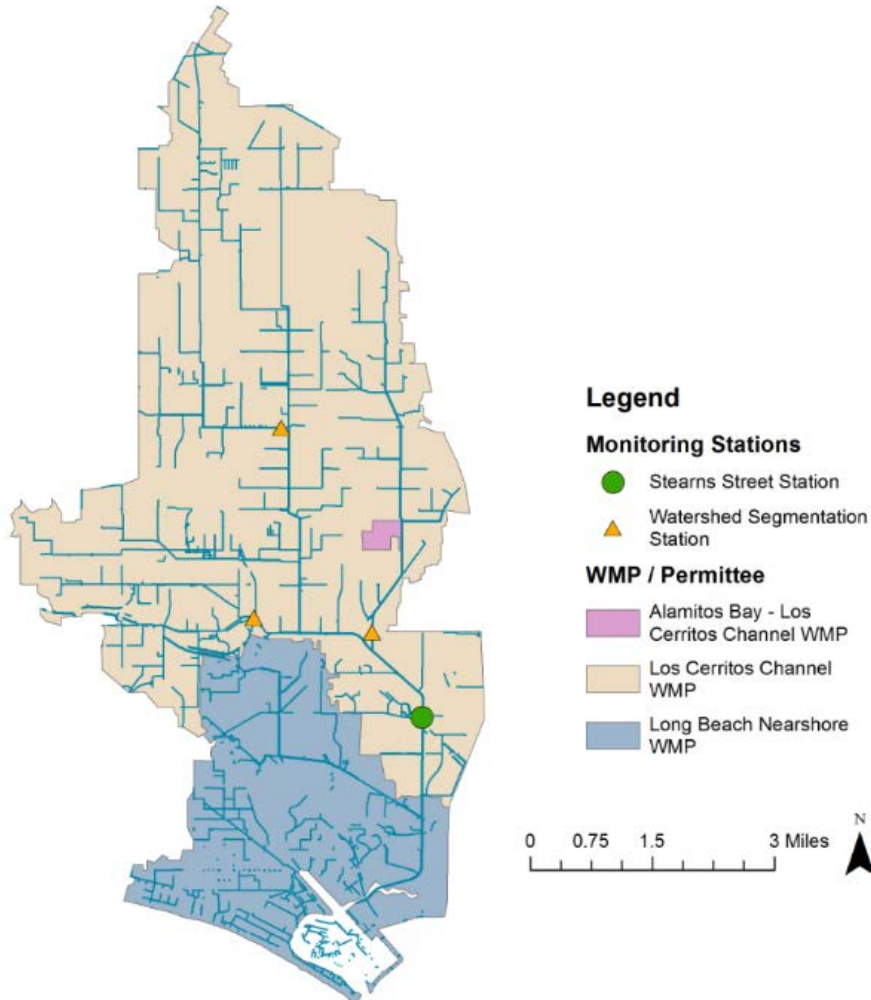


Los Cerritos Channel Metals TMDL

Total Copper Measured During Dry Weather Events - Los Cerritos Channel @ Stearns Street (2000 to 2017)



Los Cerritos Channel Metals TMDL



Primary Watershed Segmentation Monitoring (Wet Weather)

	Samples	Exceedances
Copper	13	13
Lead	13	0
Zinc	13	13

Monitoring Data Analysis Issues

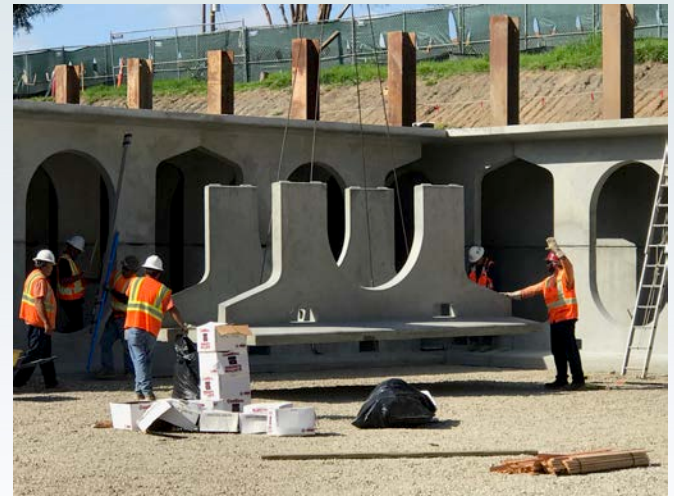
- Issues:
 - Missing data
 - Data reporting errors/inconsistencies
- Possible solutions:
 - Require Permittees to submit data to the California Environmental Data Exchange Network (CEDEN) in CEDEN format.

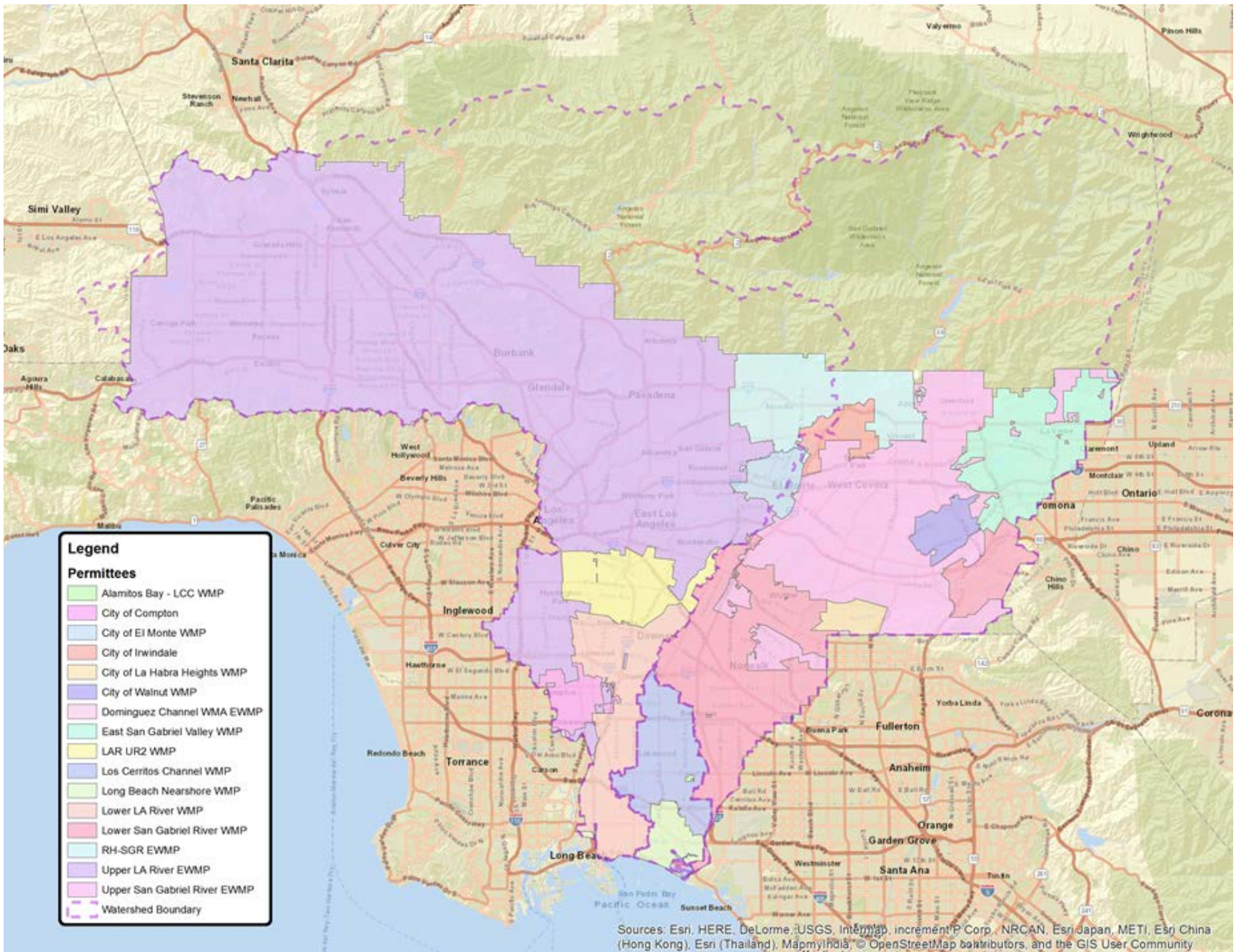




Credit: Torrent Resources, City of LA

PROGRAMMATIC ELEMENTS





Requests for Modifications by Each Group/Permittee

Group	WMP/EWMP Request for Modification	Status	IMP/CIMP Request for Modification	Status
Upper Los Angeles River	Requested on 9/28/2017	Approved 12/14/2017	--	N/A
Los Angeles River Upper Reach 2 Sub-watershed	--	N/A	--	N/A
Lower Los Angeles River	Requested on 6/29/2017	Approved 8/25/2017	YES	Approved 12/7/2017
Rio Hondo/San Gabriel River	Requested on 9/29/2017	Approved 11/13/2017	--	N/A
Alamitos Bay/ Los Cerritos Channel	--	N/A	--	N/A
Upper San Gabriel River	--	N/A	YES	Approved 12/2/2016
East San Gabriel Valley	--	N/A	YES	Public Comment due 5/7/2018
Lower San Gabriel River	Requested on 6/30/2017	Approved 8/25/2017	YES	No approval needed
Los Cerritos Channel	Requested on 6/30/2017	Approved 8/9/2017	YES	No approval needed
El Monte	Requested on 6/29/2017	Approved 8/25/2017	N/A	N/A
Irwindale	N/A	N/A	--	N/A
La Habra Heights	Requested on 6/3/2017	Approved 8/25/2017	N/A	N/A
Walnut	--	N/A	--	N/A
Compton	N/A	N/A	N/A	N/A

Status of Multi-Year Efforts by WMP/EWMP Groups

Group	# of Projects Completed	Example of Significant Projects
Upper Los Angeles River	13	Avalon North Green Alley
Los Angeles River Upper Reach 2 Subwatershed	4	Vernon Avenue and 26 th Street Prop 84 Tree Wells
Lower Los Angeles River	10	San Gabriel River and Wilderness Park restoration
Rio Hondo/San Gabriel River	0	Revised EWMP
Alamitos Bay/ Los Cerritos Channel	3	Installation of Full Capture Devices
Upper San Gabriel River	7	Walnut Creek Nature Park Improvements
East San Gabriel Valley	3	Rooftop Runoff Reduction Program (La Verne)
Lower San Gabriel River	5	Del Amo Boulevard Rehabilitation Project
Los Cerritos Channel	6	Paramount Blvd. Urban Renovation Project
El Monte	5	Johnson/Tyler Sewer Main Rehabilitation
La Habra Heights	4	Septic Tank Program
Walnut	2	Enhanced street sweeping

Prop. 1, Prop. 84 & Caltrans Projects Within the Los Angeles River, San Gabriel River, and Los Cerritos Channel/Alamitos Bay Watersheds

Proposition 1 Projects:

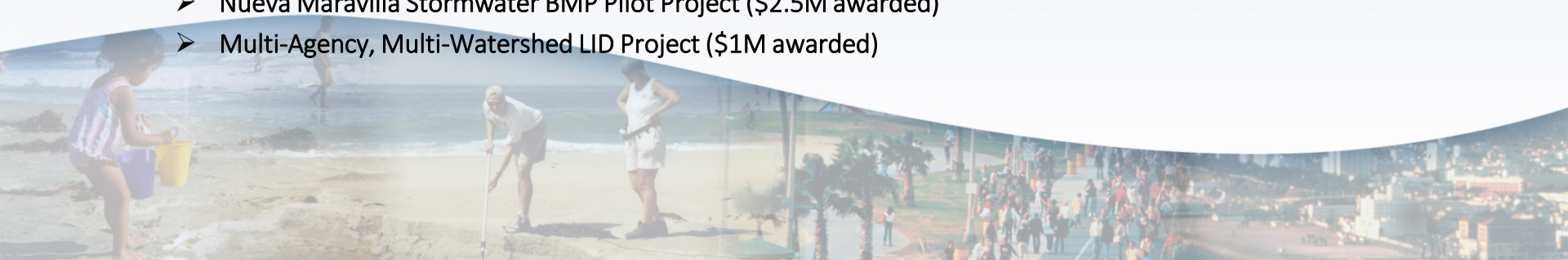
- Tujunga Spreading Grounds Enhancement Project (\$7M awarded)
- East Los Angeles Sustainable Median Stormwater Capture Project (\$2M awarded)
- South Gate Urban Orchard Demonstration Project (\$8M awarded)
- John Anson Ford Park Infiltration Cistern: Phase I (\$10M awarded)
- Central Jefferson High Green Alley Project (\$2.4M awarded)
- San Fernando Regional Park Infiltration Project: Planning (\$0.5M awarded)

Caltrans Co-funded Projects:

- Bolivar Park Water Capture Project in Lakewood – \$11 million (Agreement with City of Lakewood)
- SB 4 Water Capture Project at Long Beach Airport – \$11 million (Agreement with City of Signal Hill)
- Caruthers Park Water Capture Project in Bellflower – \$13 Million (Agreement with City of Bellflower)
- Mayfair Park Water Capture Project in Lakewood – \$15 million (Agreement with City of Lakewood)
- Long Beach MUST Project (first Phase only) in City of Long Beach – \$28 million (Agreement with City of Long Beach)

Proposition 84 Projects:

- Avalon Green Alley North and South Projects (\$2M awarded)
- Laurel Canyon Boulevard Green Street Project (\$2M awarded)
- Los Angeles County Metro Permeable Paver Replacement Project (\$0.75M awarded)
- Markham Middle School Bioswale Project (\$1M awarded)
- Nueva Maravilla Stormwater BMP Pilot Project (\$2.5M awarded)
- Multi-Agency, Multi-Watershed LID Project (\$1M awarded)



Stormwater Retention by WMP/EWMP Group since Effective Date of 2012 Permit

WMP/EWMP Group	BMP Capacity required for Compliance with Near-term Milestones (acre-feet)	Total BMP Retention Capacity Achieved since 2012 (acre-feet)	% Capacity Achieved
Upper Los Angeles River	546.23	114.37	21*
Lower Los Angeles River	148.4	11.14	7*
Alamitos Bay/Los Cerritos Channel	0.16	0.21	131
Upper San Gabriel River	0.05	9.08	182
East San Gabriel Valley	0	9.026	**
Lower San Gabriel River	0	31.39	**
Los Cerritos Channel	0	3.28	**

* Group reported meeting their water quality milestone for 2017

** No retention BMPs were required for compliance with milestones in current permit term

Order of Permittee Presentations

Order	Order of Permittee and Stakeholder Presentations
1	Upper Los Angeles River EWMP Group
2	<i>City of Rosemead</i>
3	Los Angeles River Upper Reach 2 Subwatershed WMP Group
4	Lower Los Angeles River WMP Group
5	City of Compton
6	Rio Hondo/San Gabriel River Water Quality EWMP Group
7	<i>City of Duarte</i>
8	City of Irwindale
9	City of El Monte (Individual WMP)
10	East San Gabriel Valley WMP Group
11	City of Walnut (Individual WMP)
12	City of La Habra Heights (Individual WMP)
13	Upper San Gabriel River EWMP Group
14	Lower San Gabriel River WMP Group
15	<i>Whittier, Santa Fe Springs & West Covina</i>
16	Los Cerritos Channel WMP Group
17	Alamitos Bay and Los Cerritos Channel WMP Group
18	LACFCD
19	LA Waterkeeper, Heal the Bay, NRDC
20	Other Interested Persons