Los Angeles County NPDES Permit for Municipal Separate Storm Sewer System (MS4) and Pesticides

Control Urban Insects and Protect Urban Water Quality Presentation

March 6, 2017

Los Angeles County Flood Control System

- Los Angeles County Flood Control District encompasses
  - more than 3,000 square miles,
  - 85 incorporated cities, unincorporated Los Angeles County and Los Angeles County Flood Control District
  - 2.1 million land parcels
  - Serves 9 million people
  - 240,000 businesses
- Watersheds
  - Santa Clara, San Gabriel, Los Angeles, Santa Monica Bay, Dominguez Channel, Los Cerritos
- Drainage infrastructure within incorporated and unincorporated areas in every watershed, including
  - 500 miles of open channel,
  - 2,800 miles of underground storm drain, and
  - an estimated 120,000 catch basins

Storm Water =
flow from rain or wet weather

Non Storm Water = flows not from rain or wet weather

Rain falls on roads and parking lots collecting oil, litter and heavy metals

Overwatering wastes water and can transport lawn chemicals to curb

Curb and gutter move storm water and dry weather flows to the storm drain system to prevent flooding

Storm drain in parking lot

Spills wash into the storm drain if not cleaned up

Storm drains in street connect to pipe that empties at the Santa Clara River

Storm drain outfall at the Santa Clara River

Storm drain outfall flowing into channel during rain

Channel flowing to river during rain

Channels and storm drains connect to the Santa Clara River

You Might Be Bathing In It

https://www.youtube.com/watch?v=81YJb7c8aDc#action=share

Upper Santa Clara River Watershed

- Angeles National Forest, Los Angeles County unincorporated (Acton, Agua Dulce, Lake Hughes, Val Verde, Castaic) and City of Santa Clarita (Valencia, Newhall, Saugus, Canyon Country)

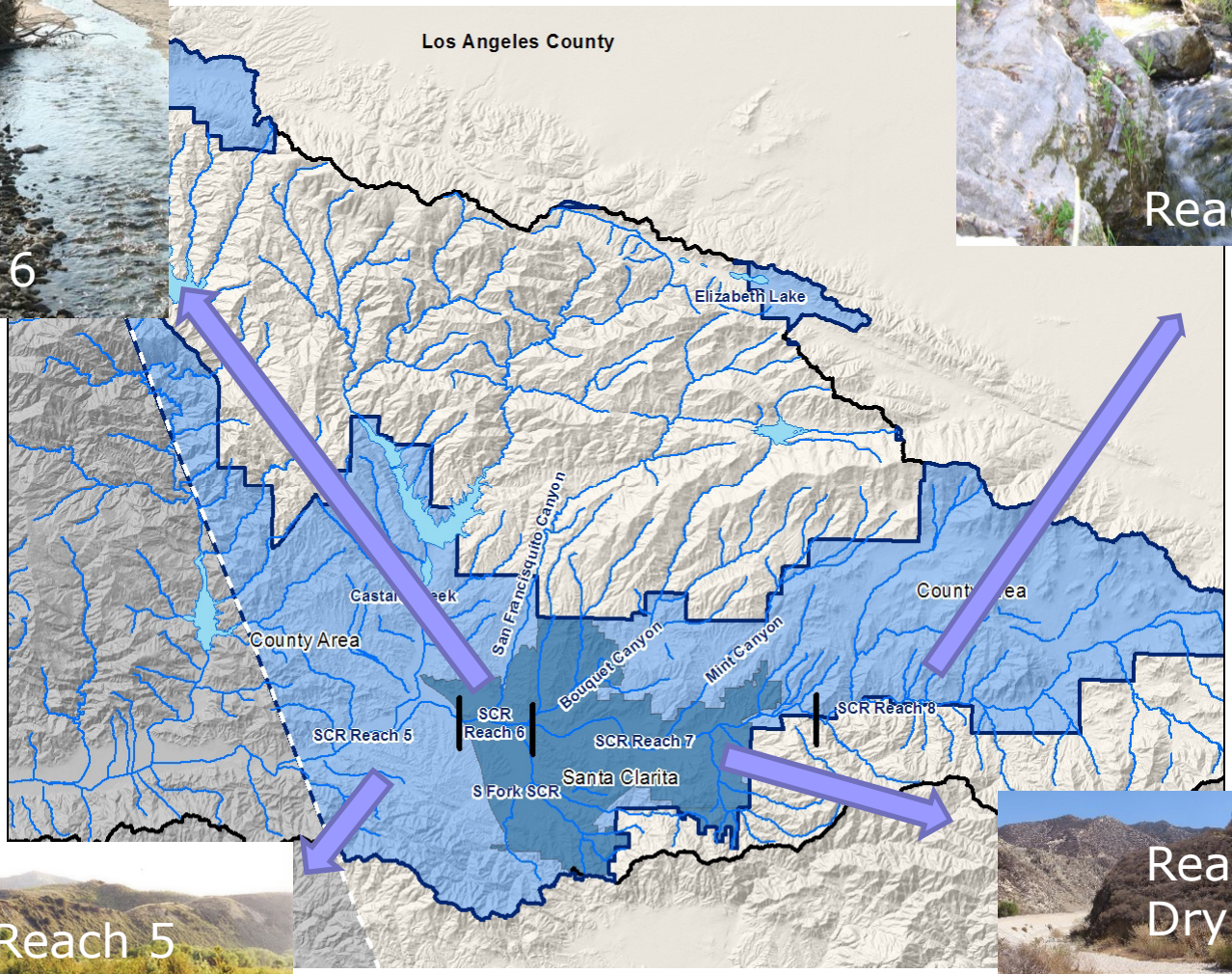
- Upper Santa Clara, 654 square miles, entire Santa Clara River watershed 1,634 square miles

- Nearly ninety percent of the watershed is open space with approximately eighty-eight percent being undeveloped raw land

- Over 250,000 people in the Santa Clarita Valley with 213,000 within City limits (3rd largest city in population and size in LA County)

- Newhall Ranch outside of the scope of the NPDES Permit, but coordinating with their monitoring program

Typical View of the Santa Clara Reaches



Santa Clara River

Provides Wildlife Habitat, Supports Endangered Species and Passive Recreation

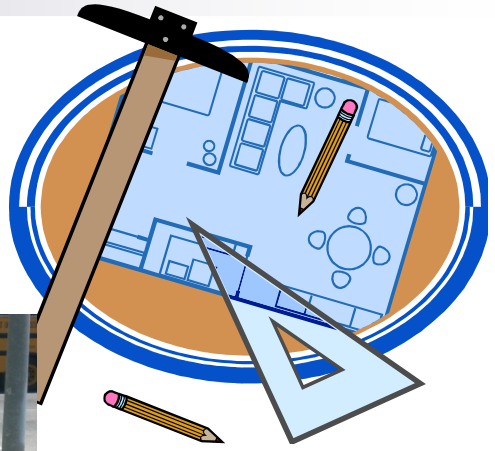
Recharges Half Santa Clarita Valley Drinking Water Supply

Municipal Separate Storm Sewer (MS4) National Pollutant Discharge Elimination System (NPDES) Permit

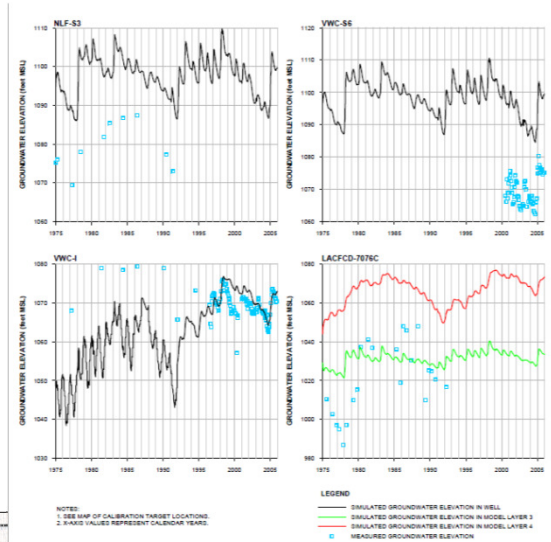
- Goal: Prevent Pollution to the Storm Drain System and Receiving Waters
- Approach to Compliance
  - 1990 to 2012 – actions
  - 2012 to current - numeric
- Regulatory
  - Clean Water Act
    - Federal EPA
  - Porter Cologne – CA Water Code
    - State Water Resourced Control Board
    - Regional Water Quality Control Board

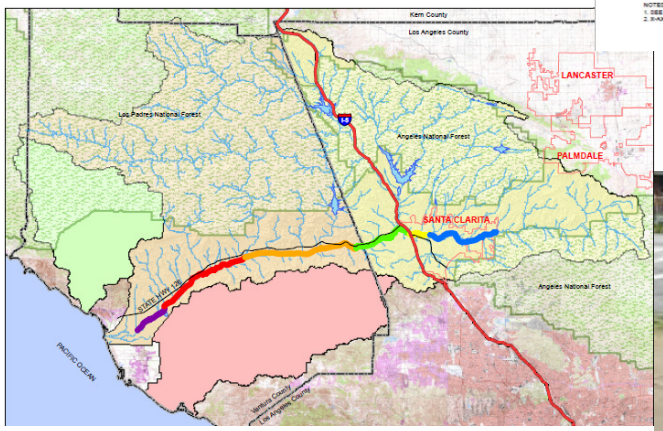
Current State Requirements of the Storm Water Program

- General Municipal Requirements
- Outreach
- Illicit Discharges/ Illicit Connections Control
- Industrial Control
- Construction Activity Control
- Development Planning



- Total Maximum Daily Loads
- Watershed Planning
- Advanced Monitoring

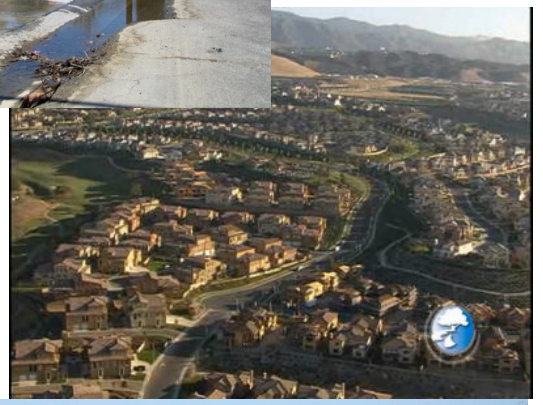




Allowable Non-Storm Water Discharges

Some discharges are allowed to enter the storm drain system

- Exempt
  - Authorized by an NPDES Permit
  - Authorized by CERCLA
  - Emergency fire fighting activity
  - Natural springs
  - Flows from riparian habitats
  - Diverted stream flows (authorized)
  - Uncontaminated groundwater
  - Rising ground water
- Conditionally exempt, essential
  - Non-Emergency fire fighting activity
  - Discharges from potable water distribution
- Conditionally exempt
  - Dewatering of lakes
  - Landscape irrigation
  - Dechlorinated swimming pool water
  - Decorative fountains
  - Residential car washing
  - Street/sidewalk wash water
  - Water from crawl space pumps



Required Conditions for Conditionally Exempt Non-Storm Water Discharges

- Runoff due to potable landscape irrigation must be minimized through water efficient landscaping standards
- Outreach and education program focusing on water conservation
- Landscape water use efficiency
- Implement BMPs to minimize runoff and prevent introduction of pollutants to the MS4 and receiving water
- Implement water conservation programs to minimize discharge by using less water

Is this using landscape water efficiently?

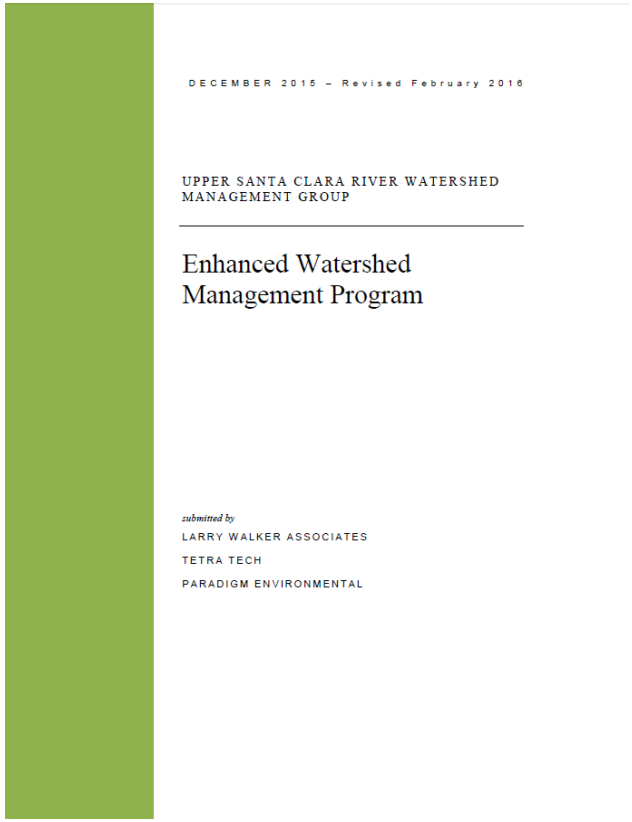
WATERSHED PLANNING

TOTAL MAXIMUM DAILY LOADS

AND

ADVANCED MONITORING

Enhanced Watershed Management Plan and Coordinated Integrated Monitoring Program



DECEMBER 2015 – Revised February 2016

UPPER SANTA CLARA RIVER WATERSHED MANAGEMENT GROUP

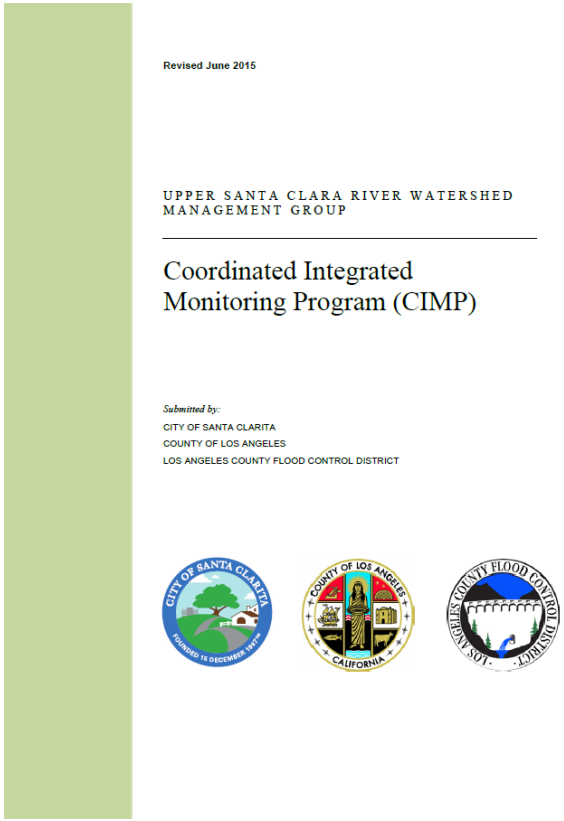
Enhanced Watershed Management Program

submitted by

LARRY WALKER ASSOCIATES

TETRA TECH

PARADIGM ENVIRONMENTAL



Revised June 2015

UPPER SANTA CLARA RIVER WATERSHED MANAGEMENT GROUP

Coordinated Integrated Monitoring Program (CIMP)

Submitted by:

CITY OF SANTA CLARITA

COUNTY OF LOS ANGELES

LOS ANGELES COUNTY FLOOD CONTROL DISTRICT

Coordinated Integrated Monitoring Program

- Implementing in a collaborative manner
  - Los Angeles County Public Works
  - Los Angeles County Flood Control District
  - Los Angeles County Sanitation District
  - City of Santa Clarita
  - Tetra Tech (contract monitoring firm)
- Integrated monitoring from multiple programs, permits and TMDLs
- Incorporate
  - Receiving Water Monitoring
  - Storm Water Outfall Monitoring
  - Non-Storm Water Outfall Monitoring
  - New Development/Re-Development Effectiveness Tracking
  - Regional Studies and Bioassessment
- Assess program effectiveness through adaptive management
- Just completed second year of monitoring

CIMP Monitoring Locations

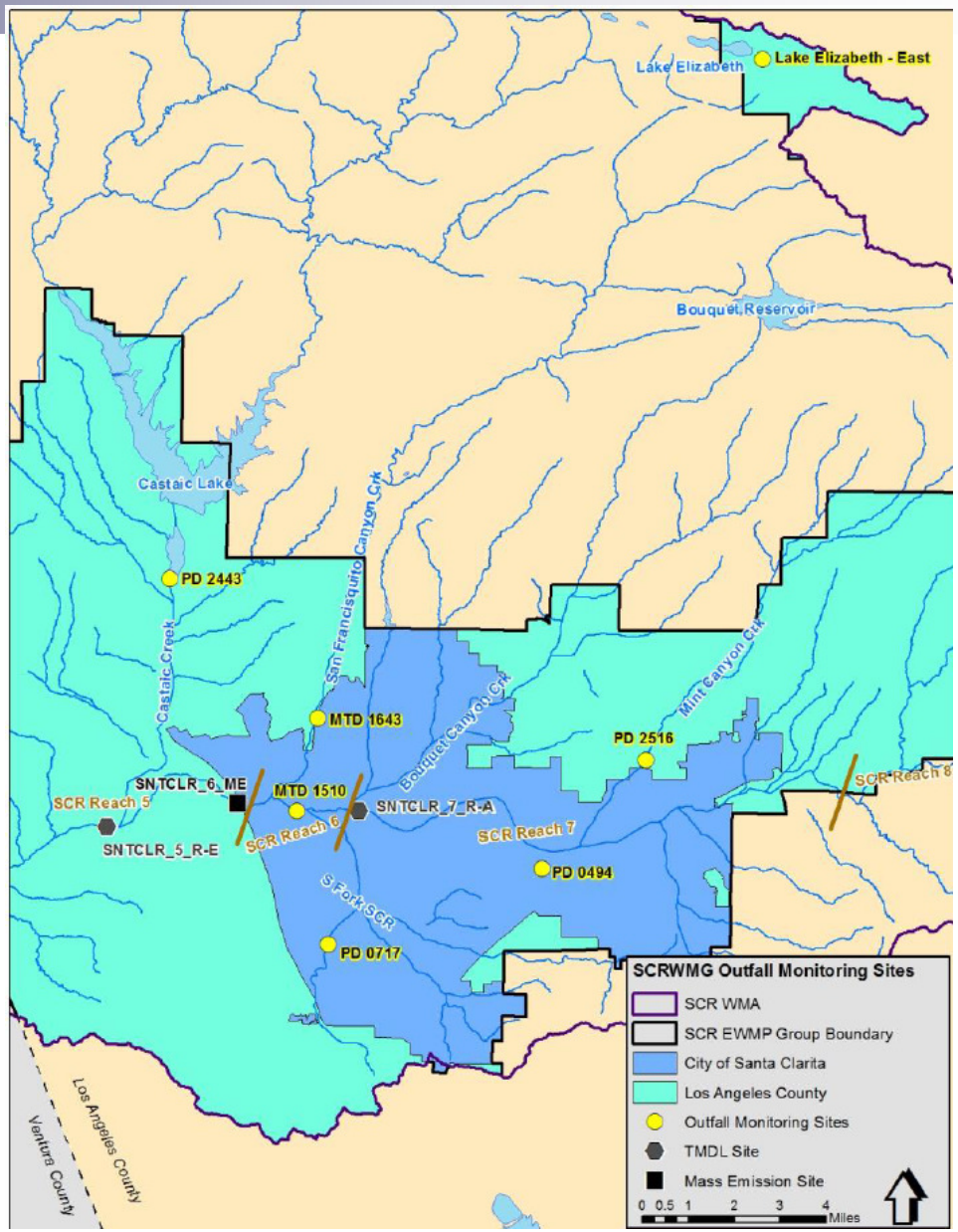
3 wet weather samples when 70% chance of 1 inch storm or greater

2 dry weather samples when no rain within 72 hours (January and July)

Yellow are storm drain outfalls

Grey/black river monitoring locations

Reach 7 monitoring station is dry many times, even in wet weather



Monitoring water quality at end of pipe at storm drain outfall

Outfall Screening Program

	Receiving Water	No. of Major Outfalls	No. of Outfalls Screened	Total No. of Outfalls Screened Since 12/28/2012	Total Confirmed	Total Abated	Total Attributed to Allowable Sources	Total No. Being Monitored
1	Upper Santa Clara River - All	218	218	218	4	0	n/a	4
2								
3								

Adaptive Management

- Source identification investigations when significant dry weather flows or water quality exceedances occur
- First investigation will focus drainage area is about three miles long by one miles long over 80 million square feet or 1,800 acres – to search for sources of dry weather flow and pollution
- Commercial shopping areas, medical centers single family and multi family residential and open space land uses

Argentinian Ants and Overwatering

"One thing that we've noticed is that the abundance of the Argentine ants is positively correlated with soil moisture … Because Southern California is irrigating in many areas**, regions that have naturally dry soil become perfect habitats for the moist soil-loving Argentine ant. Efforts to decrease water usage will not only decrease the density of the ants, but will also help in conserving water.** Areas that practice water conservation seem to have fewer problems involving the Argentine ant compared to places that have not cut down on water usage." – UC San Diego Guardian February 2011

http://ucsdguardian.org/2011/02/17/findings-may-control-invasive-argentine-ants-in-calif/

State Monitoring: Pyrethoids

Region 4. Summary toxicity and chemistry data . Statistically significant trends are noted with arrows.

No Toxicity | Some Toxicity | Moderate Toxicity | High Toxicity

	Primary			Toxicity	Average Total Concentration (ng/g)					
Station Code	5km Land Use	Years Sampled		(5-Year % Survival)	Pyrethroids	PAH	4 Metals	DDT	PCB	PBDE
Ventura River Bio 0	Open	2008	2012	104	5.31		91.4	0.626	5.485	
Bouquet Canyon Creek	Urban	2010	2012	0	1153		329	0	11.6	
Santa Clara River Estuary	Ag/Urban	2008	2012	103	2.16		85.6	5.25 ↓	0.389	
Sespe Creek	Ag/Open	2008	2012	107	1.98		99.1	0.372	0.677	
Ballona Creek Downstream of Centinela	Urban	2008	2012	50	308 ↑	934	402	12.8	27.5	56.7
San Gabriel River RA-2	Urban	2008	2012	66	157	789	226	5.75	4.01	16.0
Calleguas Creek Below Camrosa WWTP	Ag/Open	2008	2012	90	9.28		80.6	59.7 ↓	6.56	
Los Angeles River at Willow	Urban	2010	2012	72	137	215	232	3.17	6.07	42.1

What can chemical applicators do to reduce the problem?

- If rain is predicted in the next 24 hours, do no apply chemicals to landscapes
- Promote and use Integrated Pest Management
- Use the least toxic method and as little as possible
- Inform your clients to shut off their irrigation until the chemical is utilized, or suggest that you shut off irrigation
- Remind clients to follow package instructions for any chemical application they apply themselves
- Consider lawn alternatives
- Refer clients to greensantaclarita.com or scvh2oprograms.com for reduction in runoff through efficient irrigation and pollution prevention information

Questions ?