

# Reissuing the City of Salinas Municipal Stormwater Permit

Central Coast Water Board  
Meeting

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March 22, 2019  
Watsonville, CA

Dominic Roques, PG  
Tamara Anderson, PE



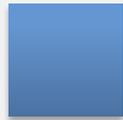
# Presentation



Schedule



Water Quality Challenge



Permits Evolve/Programs Mature



Directions for New Permit



Opportunities for Program Improvement

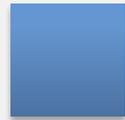
# Takeaways



Permit has grown in complexity



City has made significant progress



Improving urban runoff quality remains challenging



Attainment of water quality standards is the goal of the permit



Permit will provide options and flexibility for City to achieve compliance

# Schedule



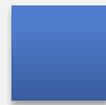
February 26  
Public Workshop



March 22  
Central Coast Water Board Meeting



June 5  
Draft Permit Released for Public Comment



June/July  
Public Workshop



July 19  
Public Comments Due



**September 19**  
**Board Meeting – Staff**  
**Recommends Reissuance**

# Stormwater Regulation

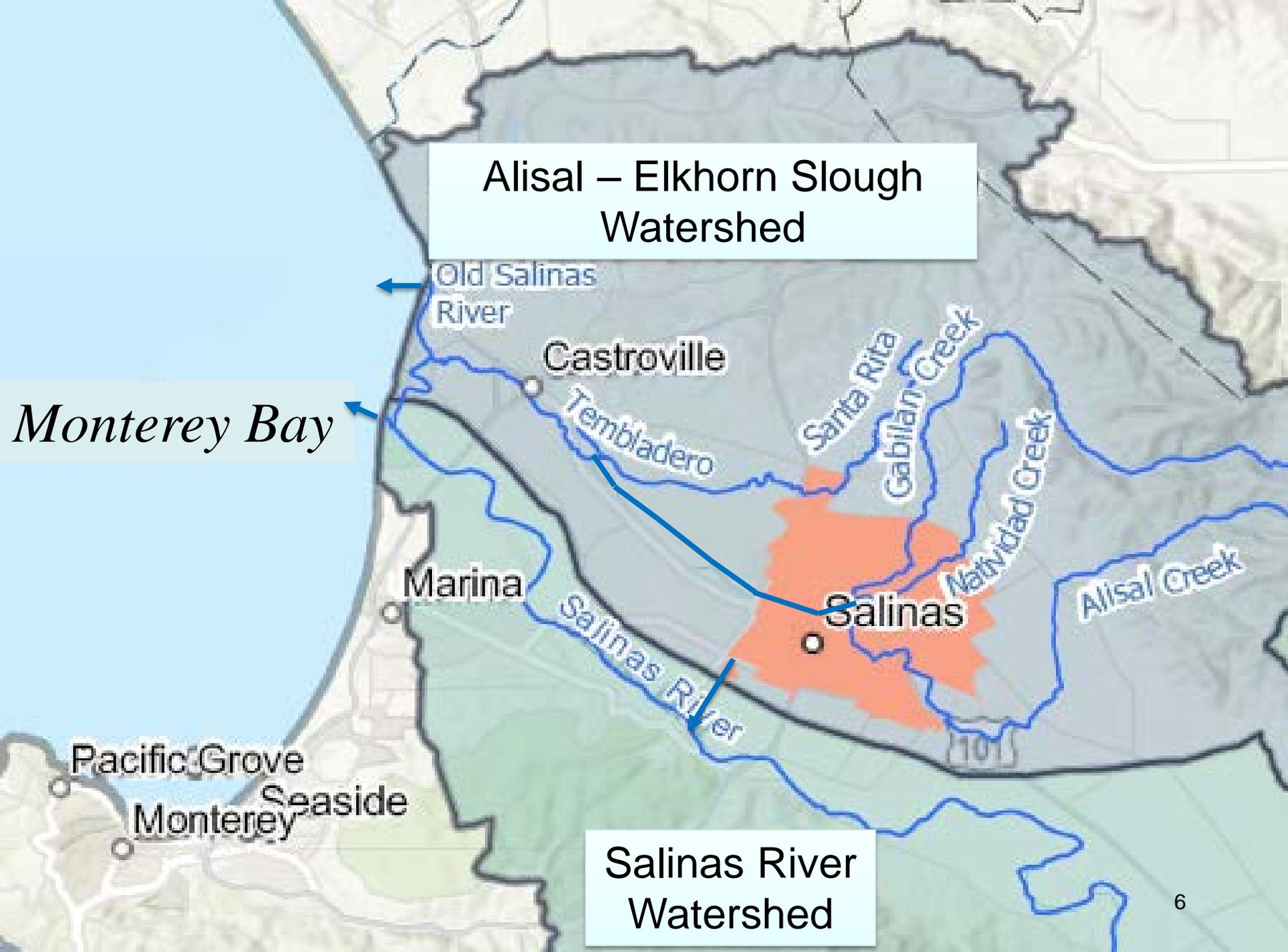
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- National Pollutant Discharge Elimination System (NPDES)
- MS4: Municipal Separate Storm Sewer System
- Phase I MS4 Permit
- Salinas Permits: 1999, 2005, and 2012



Alisal – Elkhorn Slough Watershed

*Monterey Bay*



Old Salinas River

Castroville

Tembladero

Santa Rita

Gabilan Creek

Natividad Creek

Marina

Salinas River

Salinas

Alisal Creek

Pacific Grove

Monterey Seaside

Salinas River Watershed

101

# Receiving Water Limitations

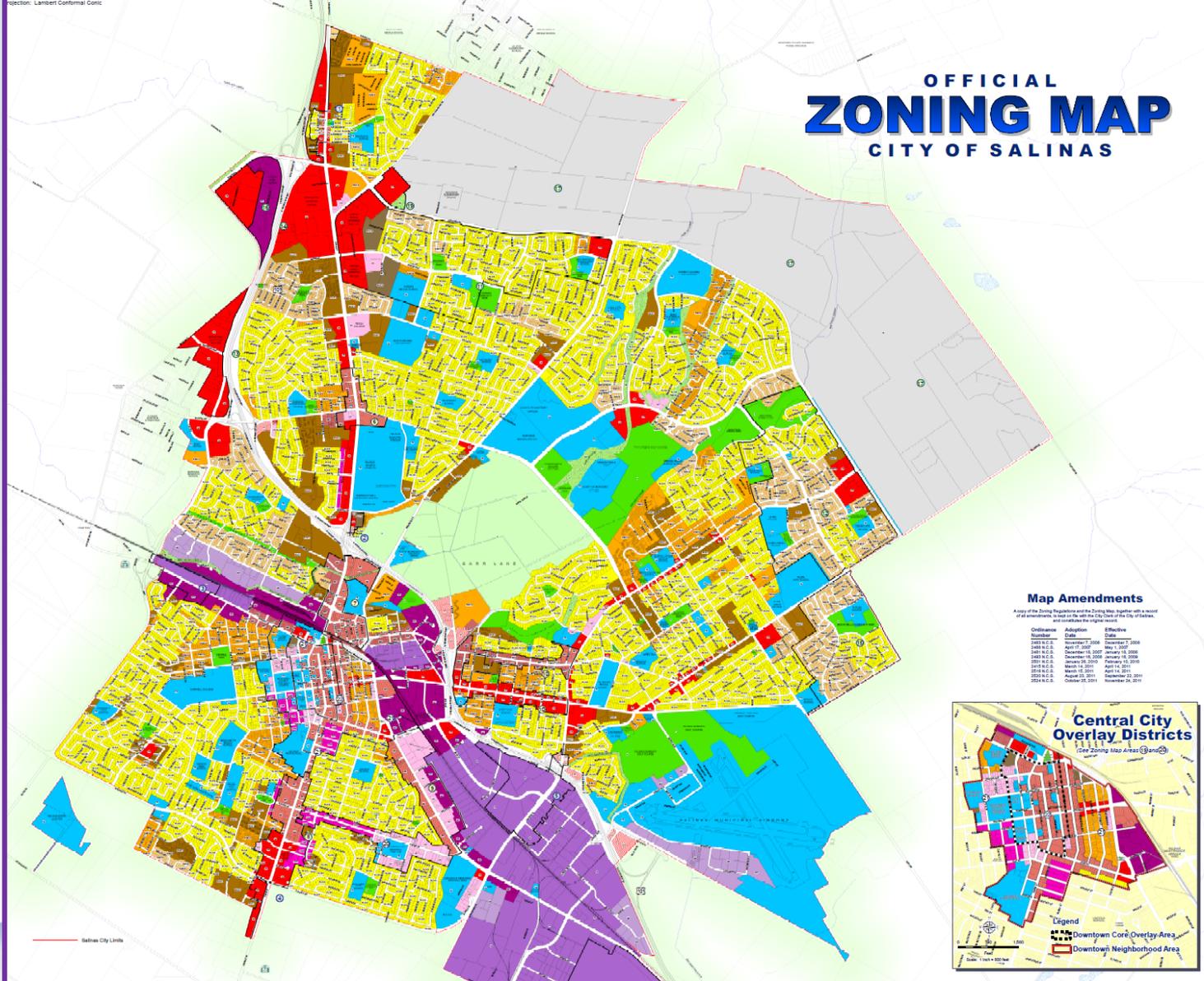
*“Discharges from the MS4 shall not cause or contribute to exceedances of water quality standards in any receiving waters”*

- Basin Plan Water Quality Objectives
- Sediment Toxicity TMDL - 2023
- Fecal Coliform TMDL - 2024
- Nutrient TMDL - 2026 and 2034
- Trash Requirements - 2030



# OFFICIAL ZONING MAP

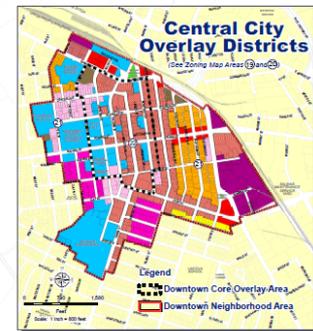
## CITY OF SALINAS



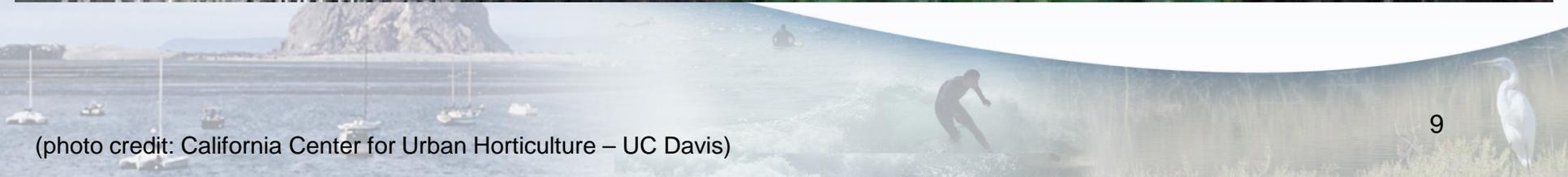
### Map Amendments

A review of the Zoning Regulations and the Zoning Map, together with a report of amendments, is set forth in the City Clerk's Office City of Salinas and is available for public review.

Ordinance Number	Adoption Date	Effective Date
2005 O.C.D.	November 2, 2005	December 7, 2005
2006 O.C.D.	April 27, 2006	May 1, 2006
2007 O.C.D.	December 18, 2007	January 15, 2008
2008 O.C.D.	December 15, 2008	January 19, 2009
2009 O.C.D.	March 14, 2009	April 14, 2009
2010 O.C.D.	March 22, 2010	April 14, 2010
2011 O.C.D.	October 25, 2011	November 21, 2011



References: Salinas Municipal Code  
Chapter 37, Zoning  
Article 8, Establishment of Zoning Districts and Designations  
Sec. 8-22-010, Districts established



(photo credit: California Center for Urban Horticulture – UC Davis)



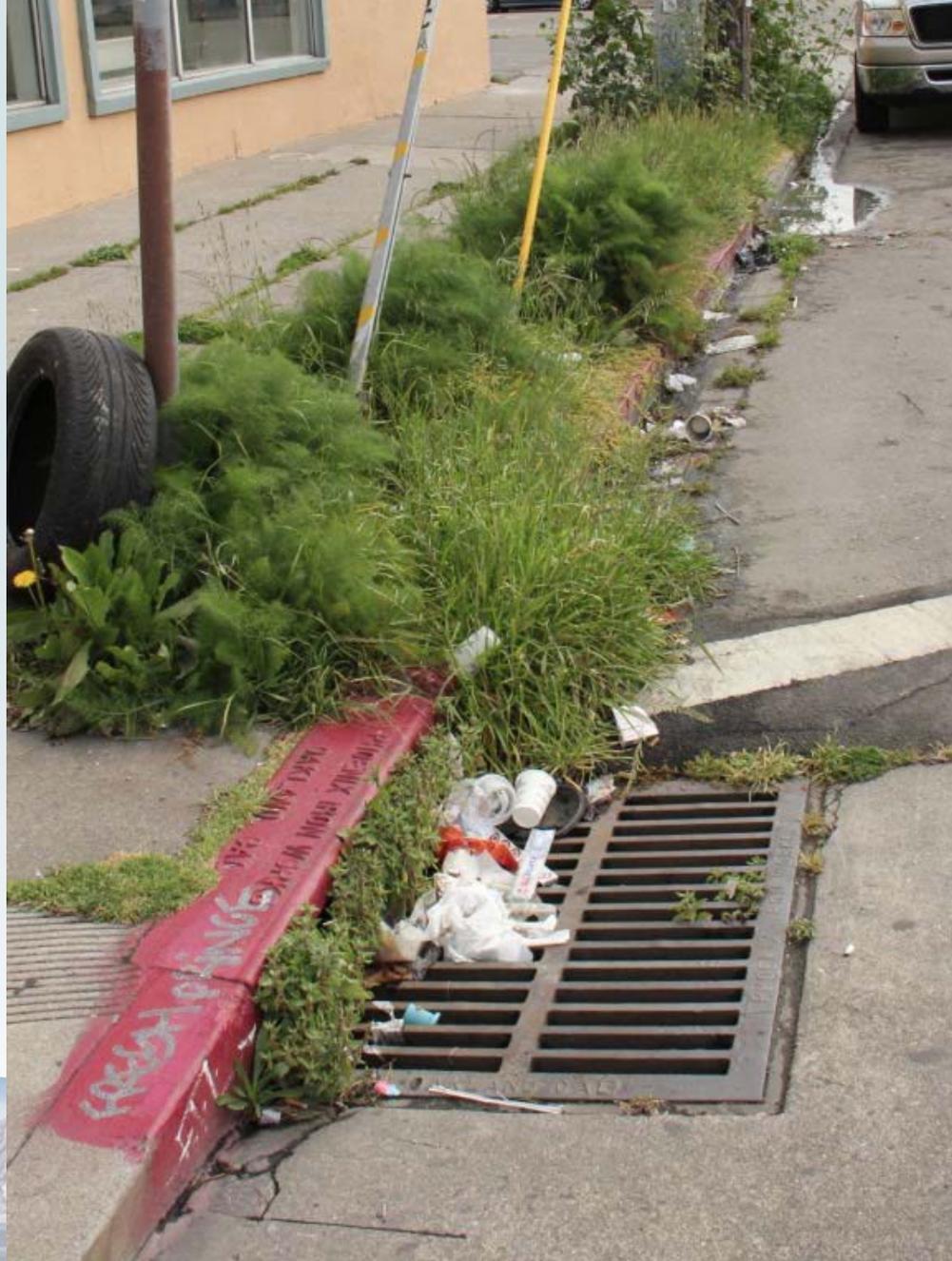
(photo credit: City of Salinas)



(photo credit: San Francisco PUC)

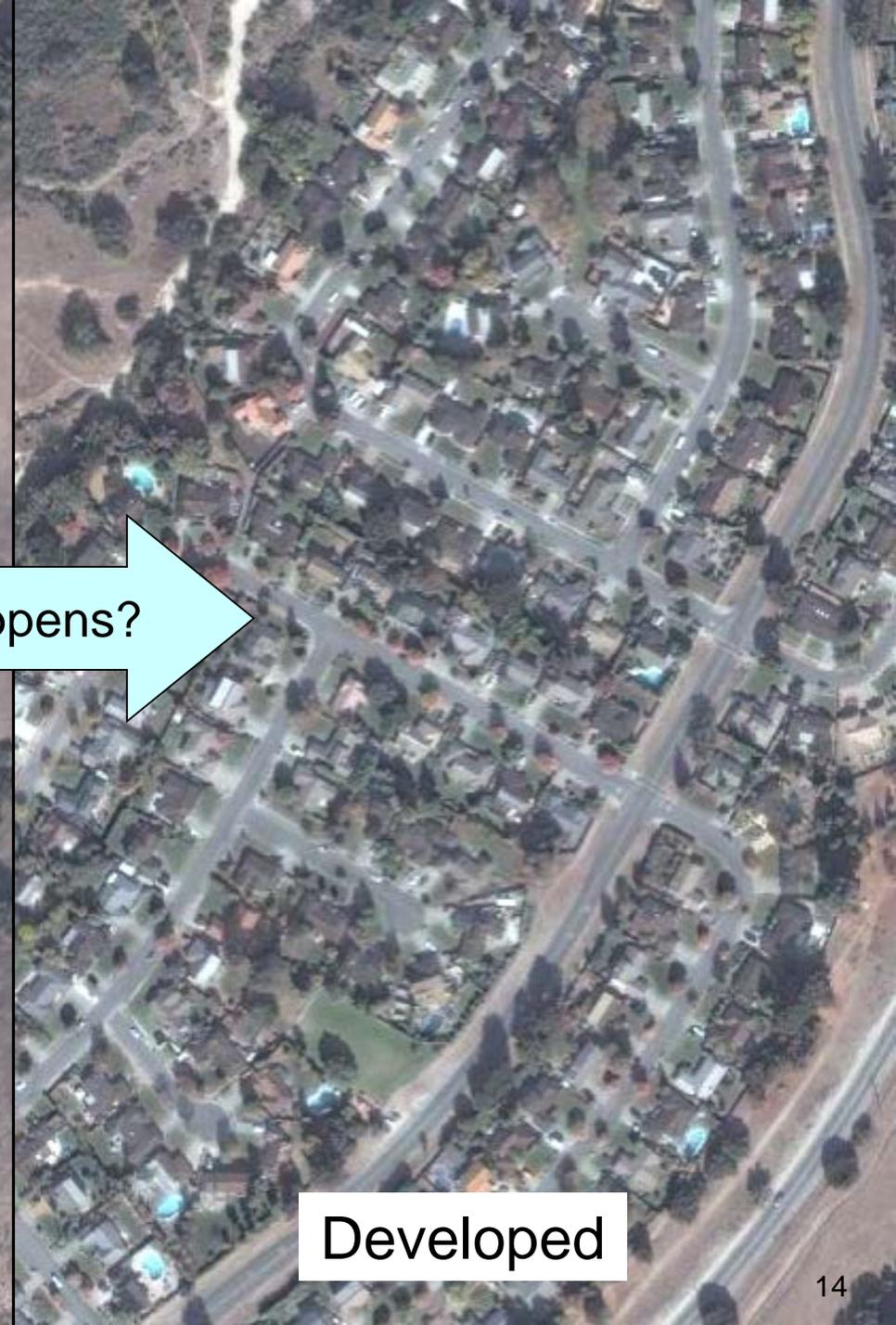








Natural



Developed

What happens?



(photo credit: ASCE Library, by N. Del Monaco)

## Directly Connected Imperviousness:

Stormwater conveyed directly from impervious surface to storm drain or waterway





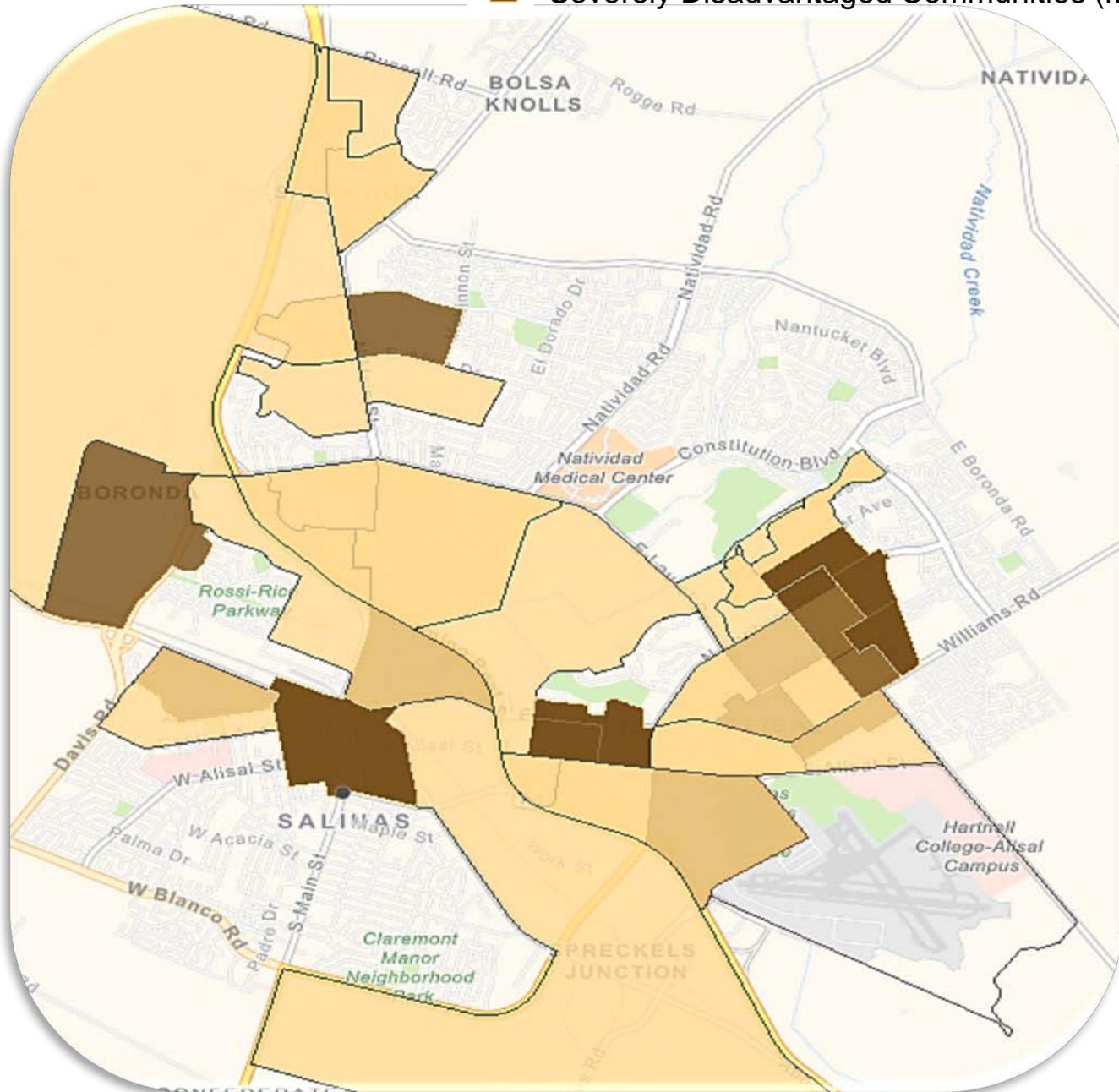
(photo credit: City of Salinas)

# Agricultural Processing



Disadvantaged Communities ( $\$38,270 > \text{MHI} < \$51,026$ )

Severely Disadvantaged Communities ( $\text{MHI} < \$38,270$ )





## Socio-economic Factors

## Disadvantaged Communities:

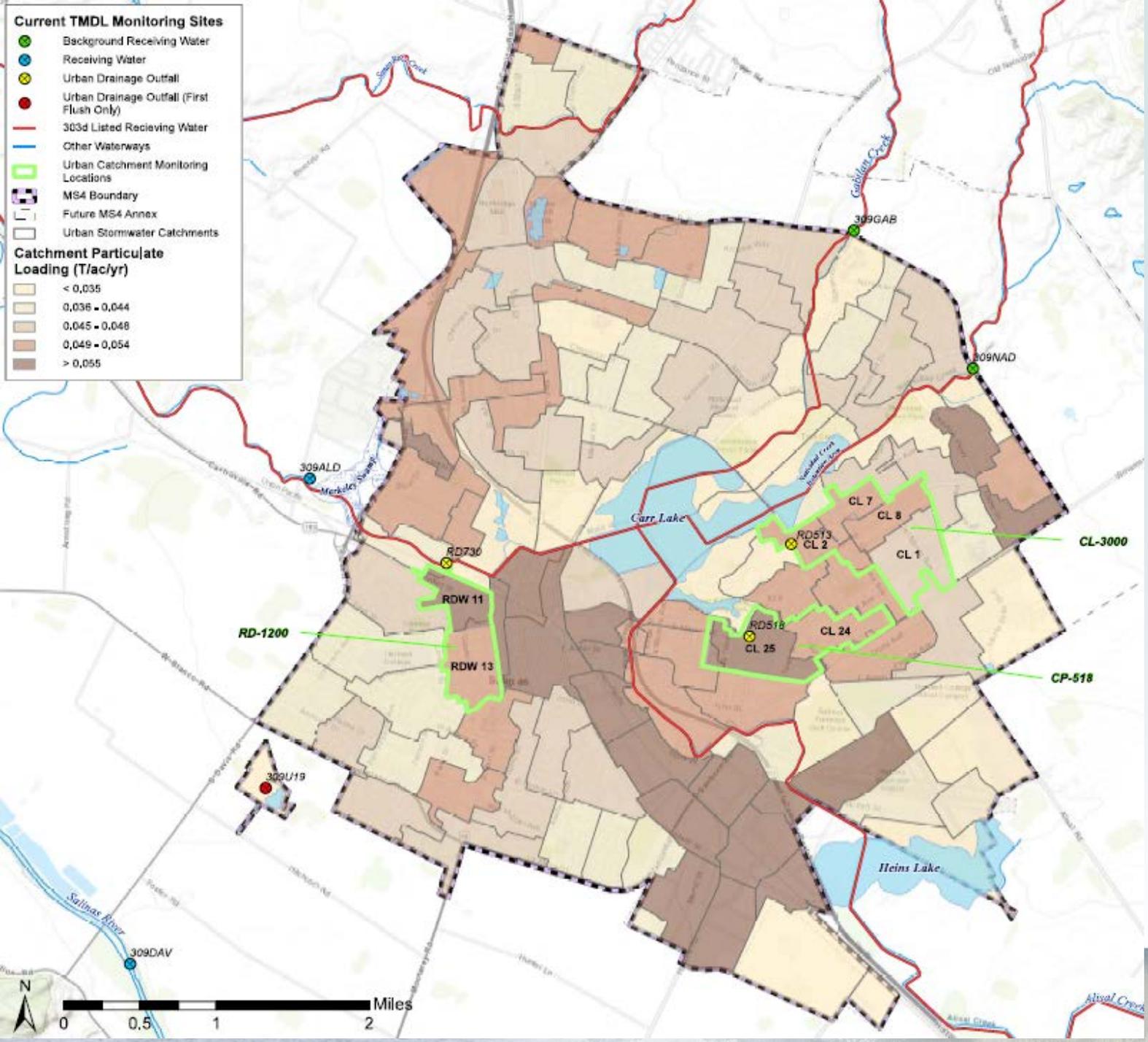
- Smaller tax base
- Stormwater competing with:
  - Public Safety
  - Libraries
  - Parks and Recreation
  - Street Repair

## Conditions on the ground:

- High-density residential
- Relatively transient population
- Homelessness

# Water Quality Challenges

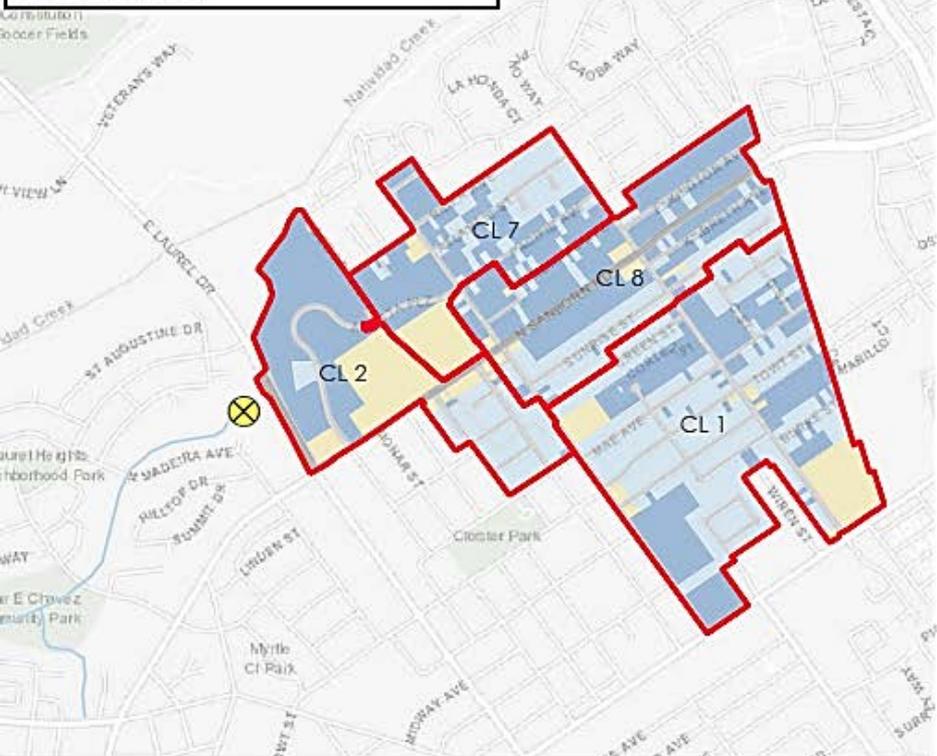




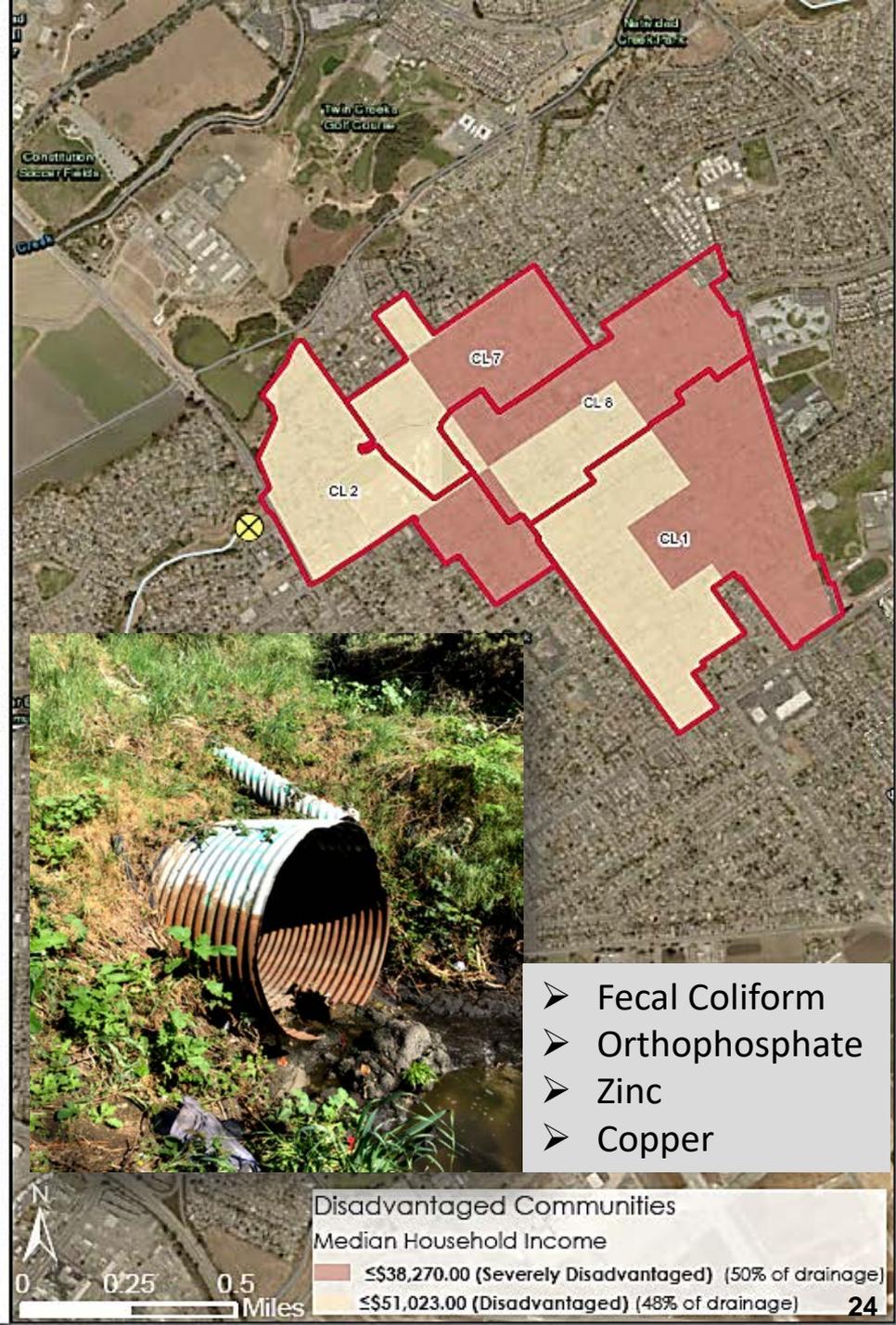
# Percentage of Samples Exceeding Action Levels and Water Quality Goals

	pH	TURBIDITY	DISSOLVED OXYGEN	ORTHO-PHOSPHATE	NITRATE	FECAL COLIFORM	COPPER	ZINC
<b>Urban Catchment Pilot Projects (2014 – 2016)</b>								
<b>CL-3000 (residential)</b>	5%	15%	44%	30%	--	26%	0%	0%
<b>RD-6000 (industrial)</b>	0%	24%	24%	24%	--	17%	0%	0%
<b>RD-1200 (mixed use)</b>	0%	20%	0%	0%	--	60%	0%	0%
<b>MS-3000 (retail)</b>	0%	24%	10%	24%	--	12%	0%	0%
<b>Salinas Pump Station (2006 – 2016) and River Outfalls (2014 – 2016)</b>								
<b>Pump Station</b>	7%	0%	13%	80%	0%	59%	27%	53%
<b>River Outfall</b>	3%	3%	3%	30%	60%	41%	27%	55%

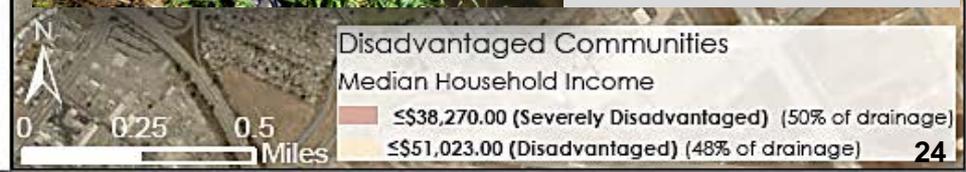
Total Drainage Area: 343.0 acres  
 Site: Acosta Plaza (RD513)  
 Urban Drainage Outfall Monitoring  
 938 E Laurel Dr



- Legend**
- urban outfall monitoring site
  - other
  - 303(d) listed receiving water
  - urban catchment
- Land Use Classification**
- high traffic roads
  - moderate traffic roads
  - low traffic roads
  - industrial
  - commercial/institutional
  - multi-family residential
  - cultivated
  - other
  - single family residential



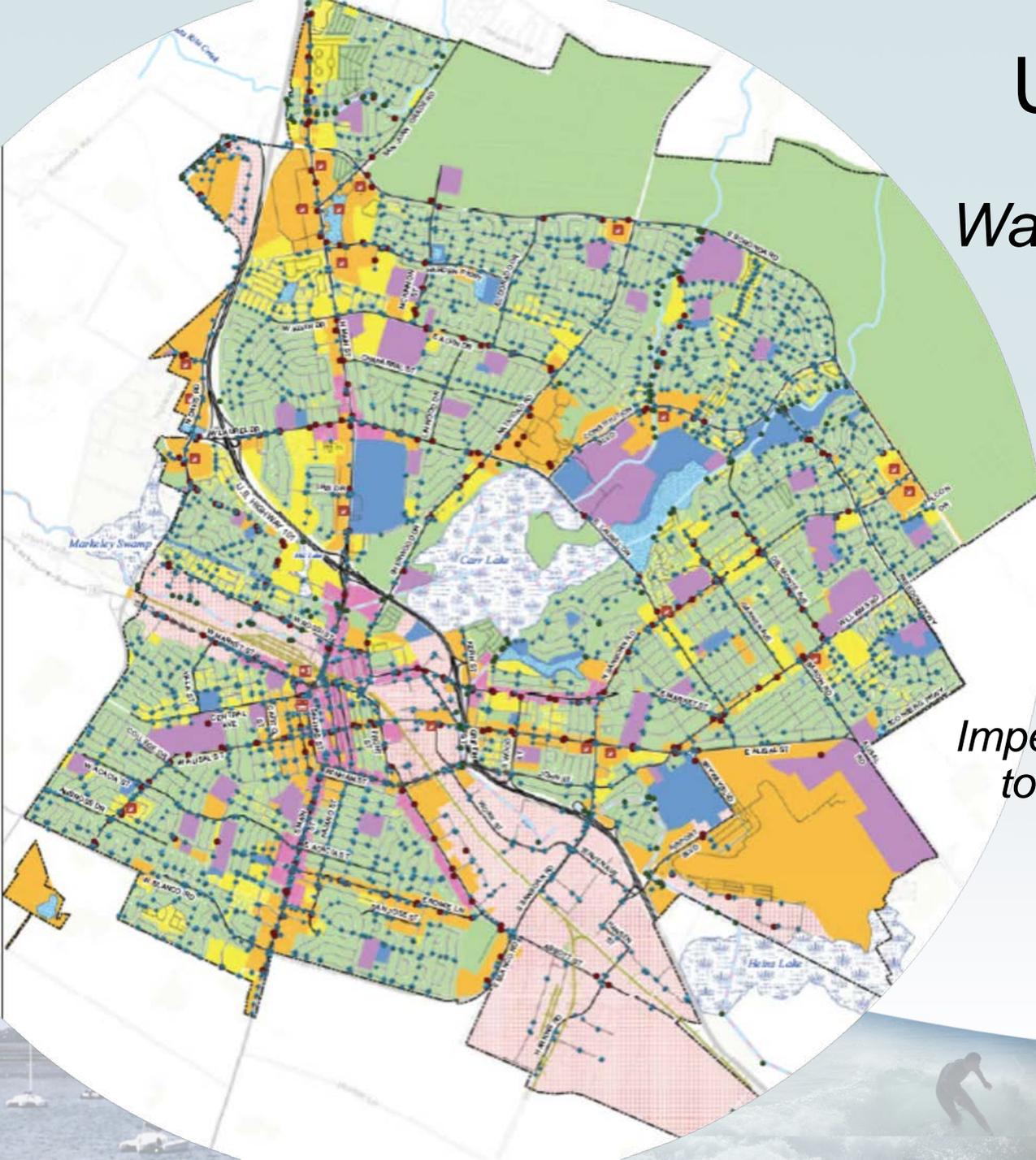
- Fecal Coliform
- Orthophosphate
- Zinc
- Copper



# Urban Runoff: A Complex Water Quality Problem



*Impervious surfaces connected  
to MS4 = efficient pollutant  
conveyance*



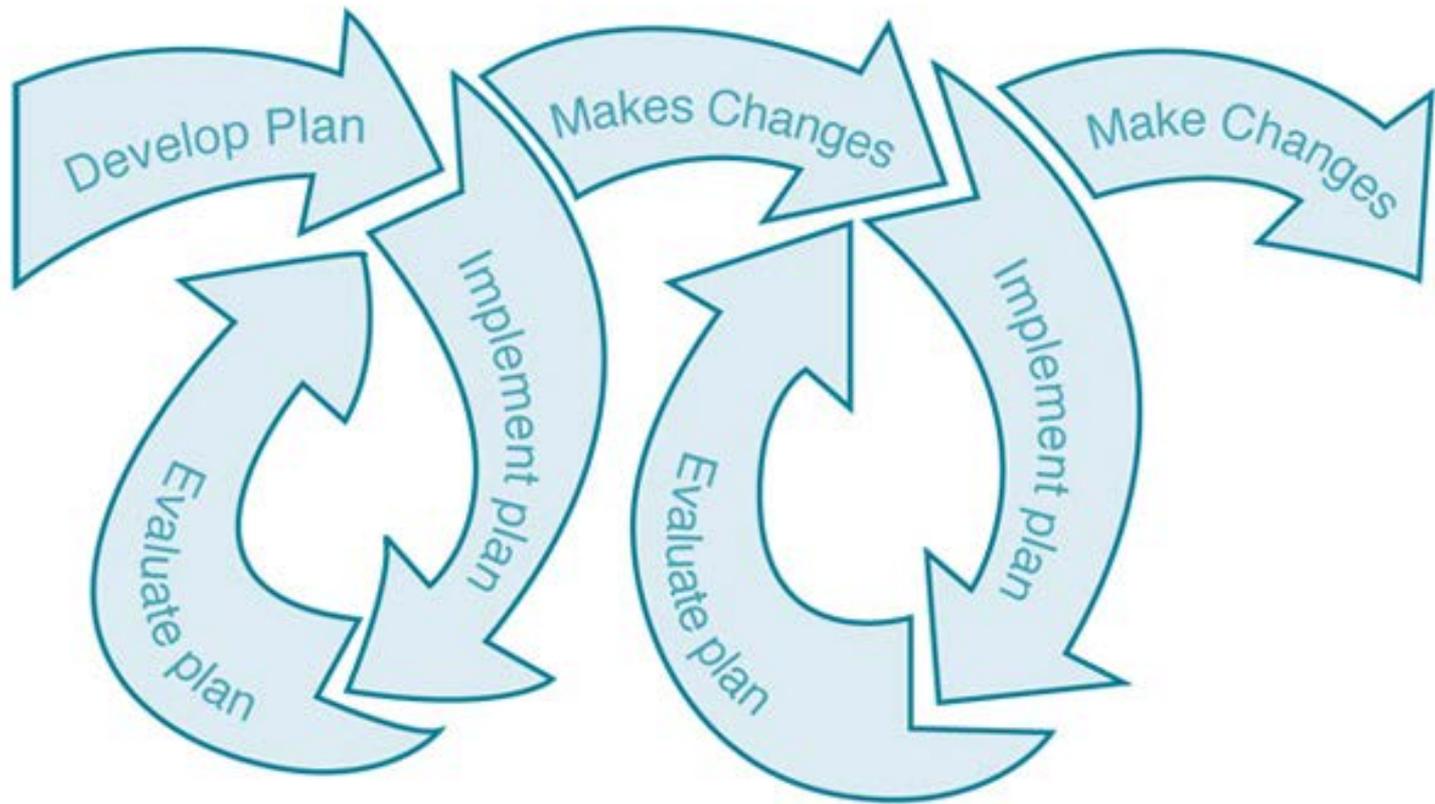
# 1990s

## Municipal Stormwater Permits

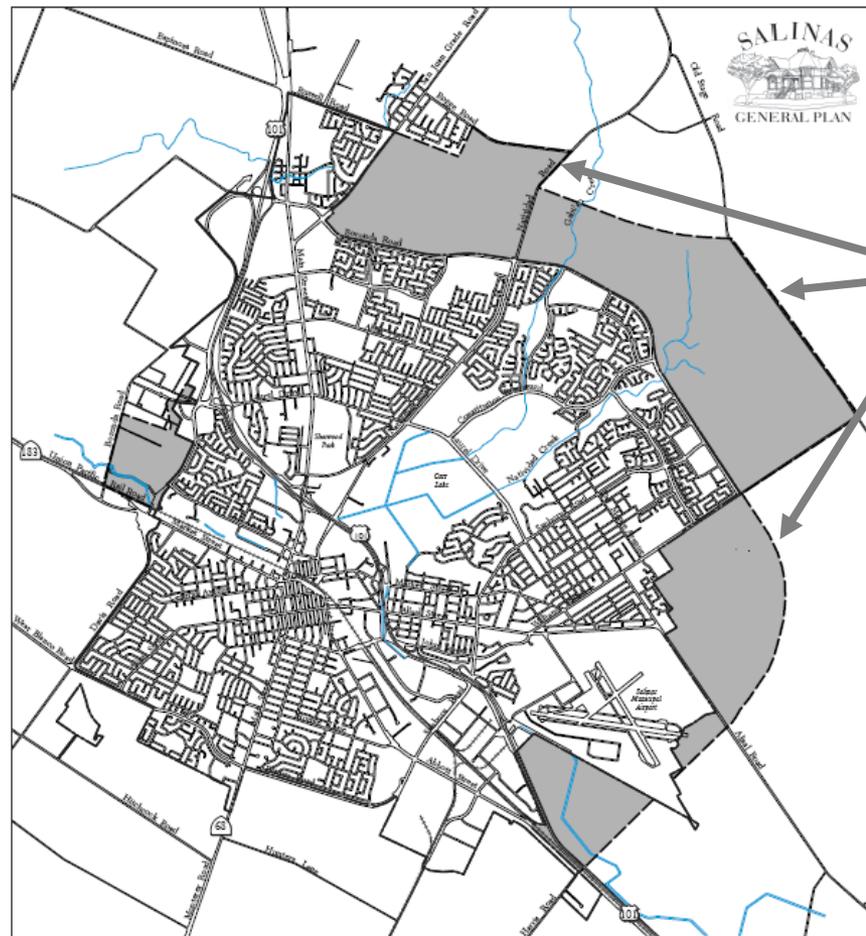
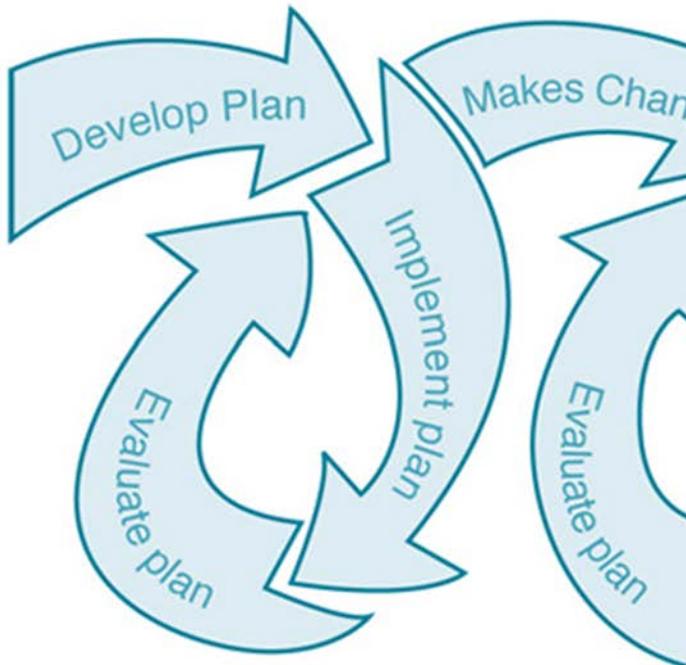
- Receiving Water Limitations (*“shall not cause or contribute...”*)
- Implement management measures:
  - Public education & outreach
  - Construction management
  - Commercial & industrial source controls
  - Illicit discharge control
  - Municipal operations
- Reduce to *Maximum Extent Practicable*

# City's First Permit 1999

## Reliance on Iterative Process



# 2005 Permit



**Future  
Growth  
Areas**



# Post-Construction Requirements

## Low Impact Development

- Minimize pollutants



# 2012 Permit

Requires:

- Pollutant load modeling
- Urban catchment prioritization
- Tracking structural controls
- Spatially-based information management



# The Permitting Challenge

- City has made progress implementing management measures
- Water quality problems persist



# The Permitting Challenge

- “...*must not cause or contribute to a violation of water quality standards in receiving waters...*”
- Iterative approach not achieving compliance
- This calls for an alternative approach to compliance



# Alternative Compliance Pathways

- Flexibility
- Longer timescales
- Manage at watershed scale
- Green infrastructure
- Stormwater capture and use
- Multi-benefit projects
- Reasonable Assurance Analysis



# Directions for Next Permit

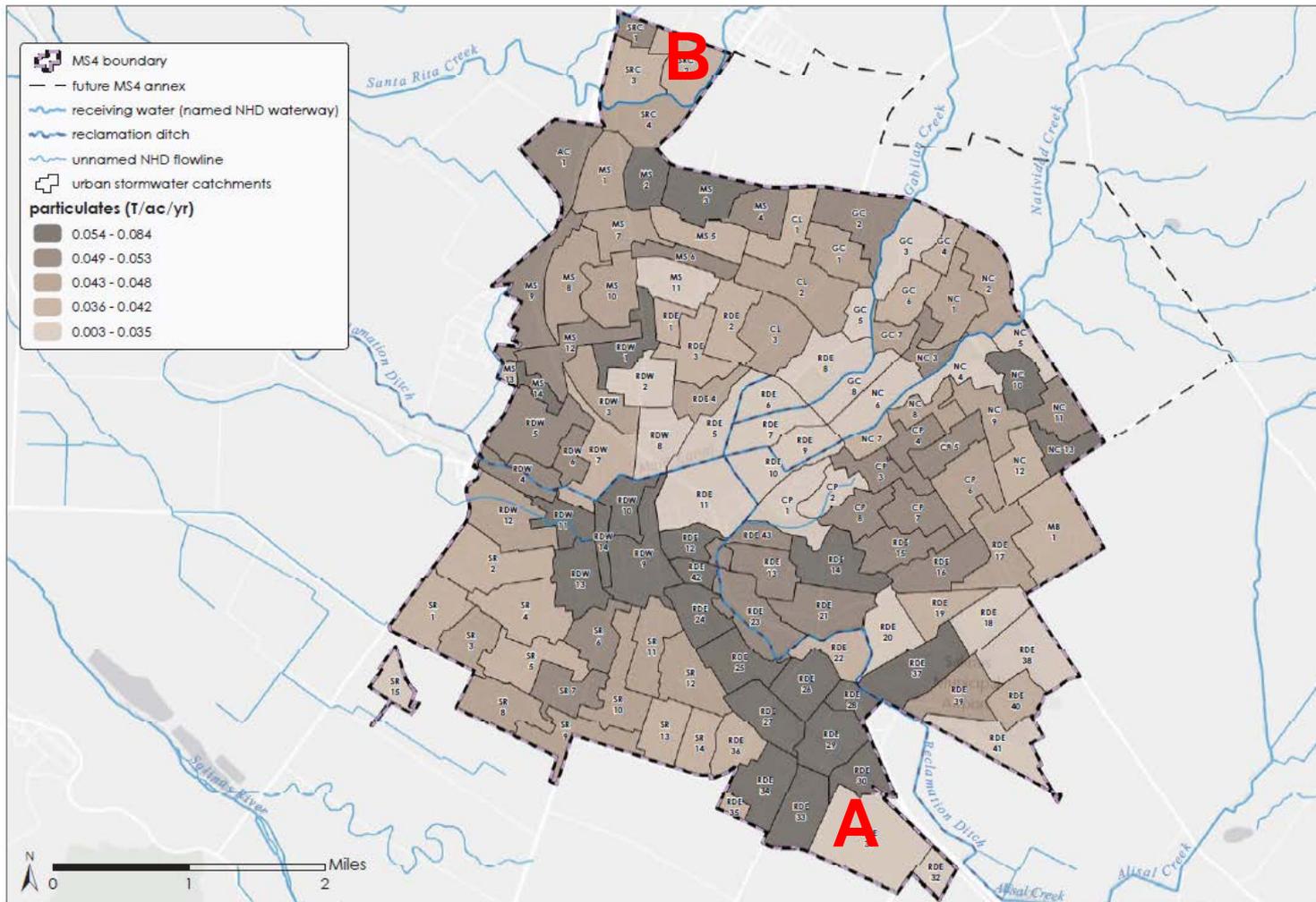
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Current Permit	Revised Permit
<b>Water Quality Condition Improvements</b>	
Historical iterative approach	Alternative compliance options
<b>Requirements</b>	
Prescriptive	Less prescriptive
<b>Reporting</b>	
Extensive	Minimal
<b>Program Funding</b>	
Limited direction	Framework to support future funding

# Directions for Next Permit

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# Potential Alternative Compliance Options

## *Volume Reduction*

Capture and retain runoff → address full suite of pollutants through one solution

- Longer timeframe
- Incentivize
- Multi-benefit solutions



# Multi-Benefits

```
graph LR; A[Multi-Benefits] --- B[Habitat]; A --- C[Water Supply]; A --- D[Flood Control]; A --- E[Sustainable Mobility]; A --- F[Climate Change Mitigation]; A --- G[Community Enhancements];
```

Habitat

Water Supply

Flood Control

Sustainable  
Mobility

Climate Change  
Mitigation

Community  
Enhancements

# Potential Alternative Compliance Options

## *Modified Iterative Approach*

- Emphasizes management measures
- Reasonable Assurance Analyses
  - Links between actions and water quality targets
  - Best available data
  - Communicate uncertainty
  - Validation milestones





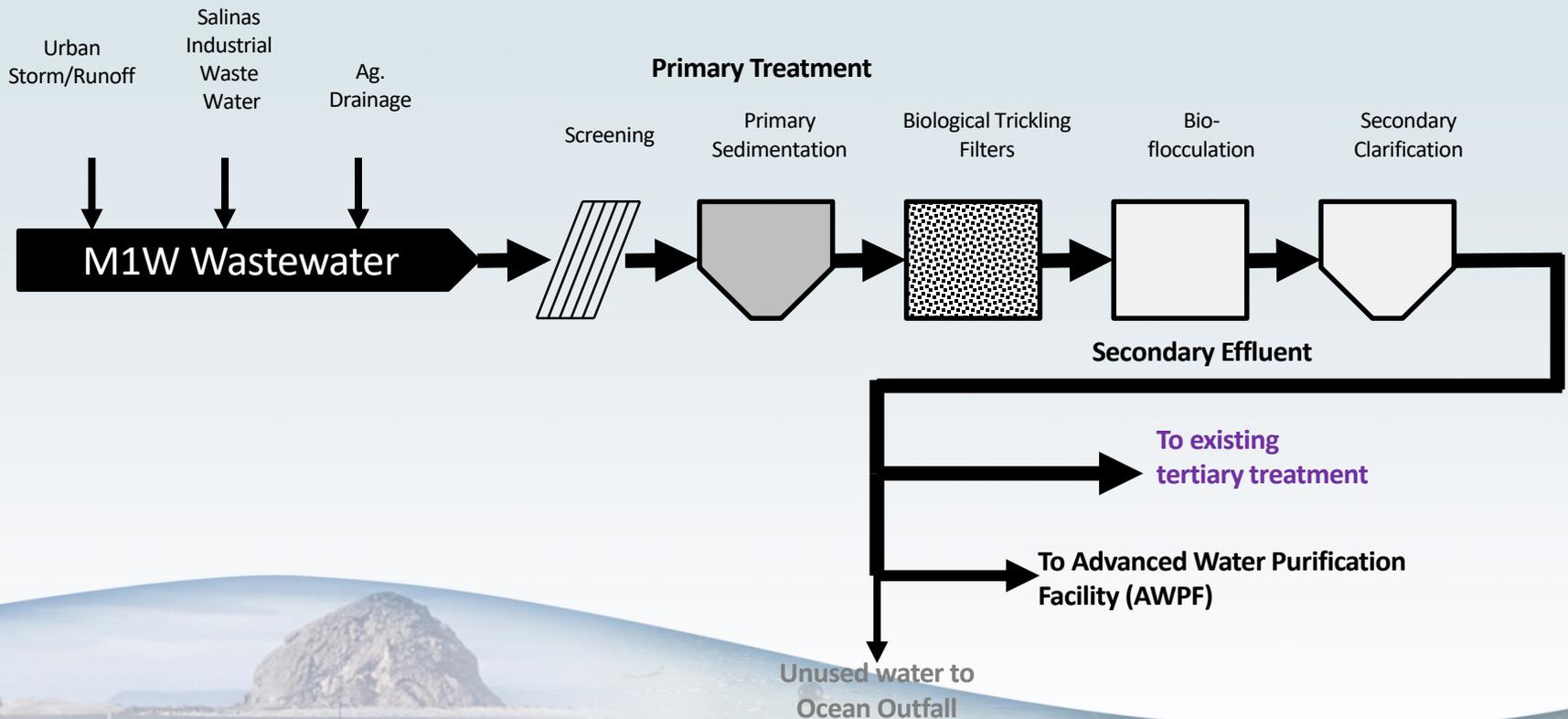
Carr Lake

# Carr Lake – Restoration Project

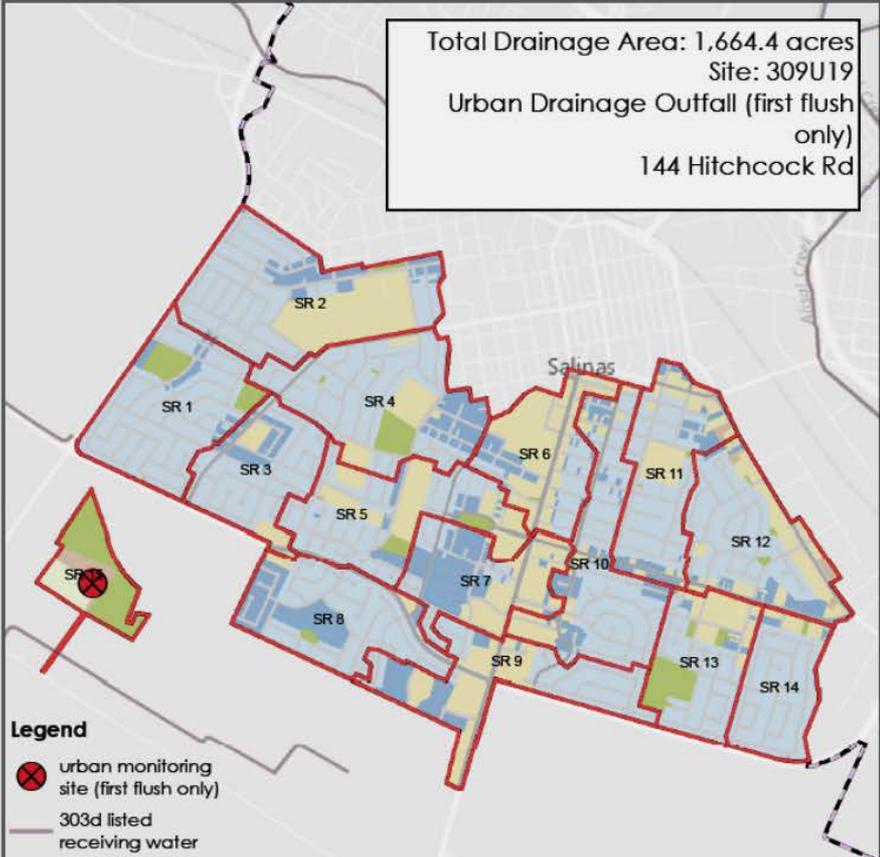


# Pure Water Monterey

## Blending of Sources then Treatment

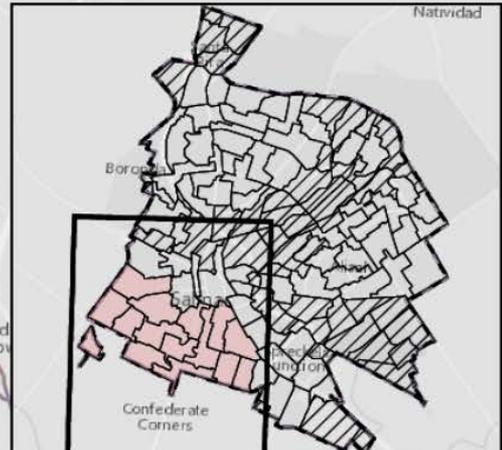


Total Drainage Area: 1,664.4 acres  
 Site: 309U19  
 Urban Drainage Outfall (first flush only)  
 144 Hitchcock Rd



- Legend**
- urban monitoring site (first flush only)
  - 303d listed receiving water
  - receiving water
  - urban catchment

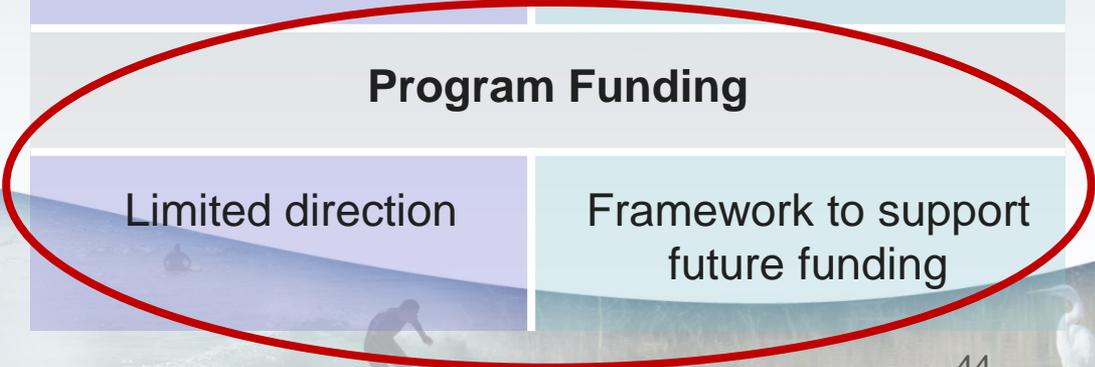
- Land Use**
- commercial / institutional
  - industrial
  - multi-family residential
  - single family residential
  - cultivated
  - other/open space
  - high traffic road
  - medium traffic road



# Directions for Next Permit

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# Framework to Support Future Funding

- Asset Management Planning
  - Infrastructure condition & performance
  - Climate change stressors
  - Forecasting & budget
- City making progress



# Takeaways



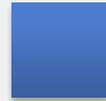
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**September 19  
Board Meeting – Staff Recommends  
Reissuance**

