

# South Bay IRWMP Stakeholder Workshop

June 3, 2008

Welcome,  
Introductions and  
Purpose

# Workshop Agenda

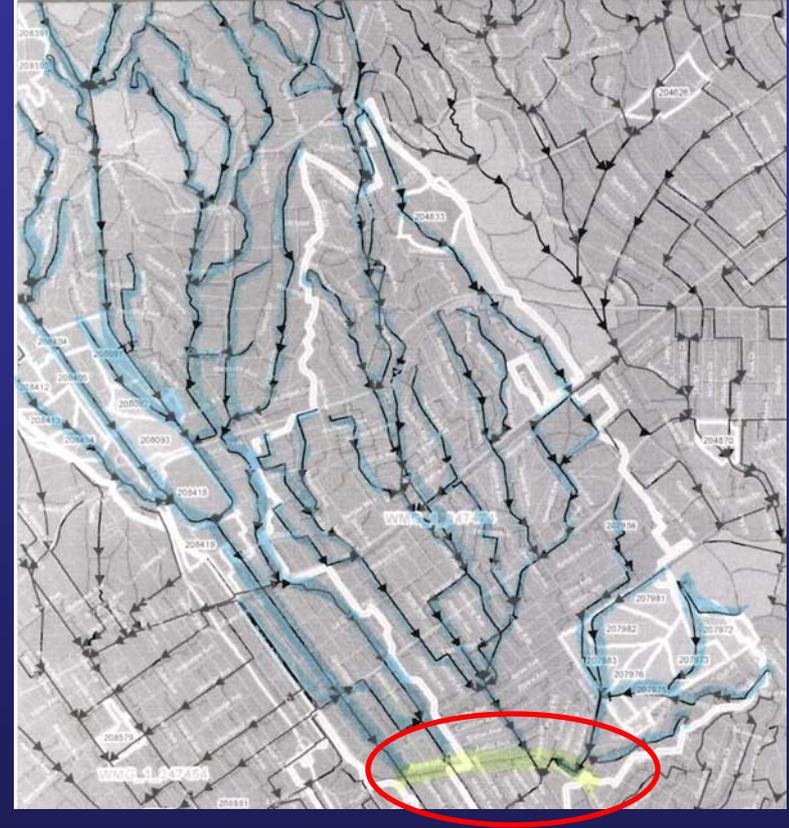
- Project Proponent Presentations
- Project Feedback and Integration Discussion Lunch
- IRWMP Funding Opportunities
- LA IRWMP Next Steps

# Light Rail For Cheviot

Jonathan Weiss

# Exposition Green Corridor

Exposition Right of Way in Upper Ballona Creek Watershed

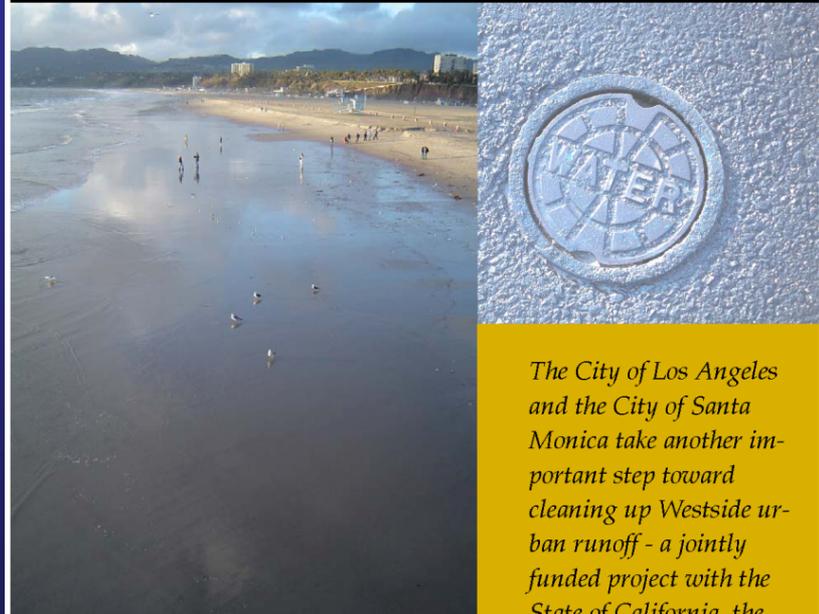


Light Rail for Cheviot

# Project Description

- Four storm drains funnel water across Exposition ROW
- Apply techniques from award winning **Westside Water Quality Improvement Project (WWQIP)** in larger scale to help achieve TMDLs for Ballona Creek.
- **WWQIP** treats 100% dry weather flow (2-3 CFS) and 36 CFS wet weather flow.
- With  $\geq 4x$  the area, Expo could have  $\geq 4x$  the **WWQIP** capacity.

## Westside Water Quality Improvement Project - SAC



*The City of Los Angeles and the City of Santa Monica take another important step toward cleaning up Westside urban runoff - a jointly funded project with the State of California, the California Coastal Conservancy, Santa Monica Bay Restoration Commission, and the City of Santa Monica with assistance from the County of Los Angeles Public Works.*

### Project Objective

The main goal of the Westside Water Quality Improvement Project - SAC is to treat urban runoff to the maximum extent possible from eastern parts of Santa Monica and parts of west Los Angeles. Other goals of the project include reducing urban runoff pollution, improving and preserving water quality entering Ballona Creek and the Santa Monica Bay, and protecting beneficial uses of our coastal waters.

# Project Details

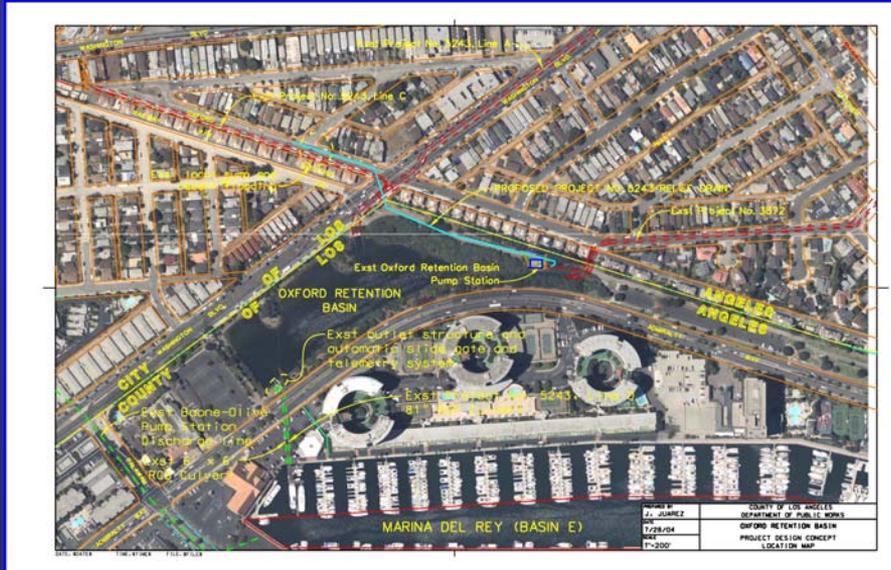
- \$1,000,000 to \$10,000,000?
- Metro hopes to begin building on Exposition Right of Way beginning in 2010.
- Potential funding from State of California, California Coastal Conservancy, Santa Monica Bay Restoration Commission, Metro, City of Los Angeles, and others.

# Opportunities for Integration

- Aside from cleaning and conserving water:
  - Maintain open space
  - Restore habitat
  - Provide recreational features, such as biking, walking & running paths
  - Outdoor classroom
  - Beautify transportation if Expo light rail is built ... and, if not, *more of the above!*

Los Angeles County  
Department of Public  
Works

# Oxford Retention Basin: Multiuse Water Quality Enhancement Project



# Project Description

- **Flood Protection**

- Dredge deposited material, construct relief drain and upgrade pump plant

- **Water Quality**

- Water and sediment quality analysis, install water rejuvenation devices, and upgrade trash racks

- **Aesthetics**

- Ornamental steel perimeter fencing, native landscaping, interpretive signage, observation decks

- **Recreation**

- Walking/Jogging Path, improved bike path, observation decks

- **Operation and Maintenance**

- Improved access for trash removal



# Project Details

Conceptual Design	\$ 200,000
Final Design	\$ 1,200,000
Project Management and Permitting	\$ 300,000
Construction Engineering	\$ 400,000
Construction	\$ 7,400,000
Water and Sediment Quality Analysis	\$ 150,000
Water Quality BMP – Water Rejuvenation Devices	\$ 450,000
<b>Total Cost</b>	<b>\$10,100,000</b>

<b>Project Schedule</b>	
Project Concept Report	June 2008
Project Design Concept	June 2009
Final Design and Permitting	June 2010
Award Construction Contract	January 2011
Construction Start	April 2011
<b>Construction Completion</b>	<b>April 2012</b>

Partnership - 44% LAFCD and LA County, 53% LA City, 2% Culver City, 1% Caltrans

# Opportunities for Integration

- The primary focuses of this project are Flood Control and Water Quality.
- Opportunities to work with others may be found with regards to the Aesthetics and Recreation of this project.

# SEPULVEDA FEEDER INTERCONNECTION

## BACKGROUND INFORMATION

- The single source of water that supplies Los Angeles County Waterworks District No. 29 is from the Metropolitan Water District through a connection with West Basin Municipal Water District.
- The water supply is delivered to the City of Malibu and the Topanga Canyon area through a 30-inch high-pressure transmission main from the District's interconnection approximately 15 miles away.
- The water then travels another 20 miles through the transmission main in Pacific Coast Highway (PCH) to the westerly boundary of the District.
- The geology below the service area lacks groundwater basins capable of producing an adequate supply of groundwater that meets current water quality standards.

# SEPULVEDA FEEDER INTERCONNECTION PROJECT DESCRIPTION

- We are proposing the addition of a new water source into the District through a new interconnection with MWDs' Sepulveda Feeder to stabilize and boost the pressure gradient for the regions of Malibu, Topanga Canyon and Marina del Rey.
- The project consists of installing 1,800 linear feet of 30-inch diameter water main and a regulating station.
- The proposed connection with MWD will be located at the upstream side of the Venice Pressure Control Station near the intersection of Sepulveda and Venice Blvd.



PROPOSED 30" WATER MAIN -  
1,800 FEET



SAN DIEGO FWY

VENICE BLVD

SEPULVEDA BLVD

SAWTELLE BLVD

PROPOSED TIE-IN POINT

EXISTING WEST BASIN  
MWD CONNECTION  
WB-26B

# SEPULVEDA FEEDER INTERCONNECTION PROJECT BENEFITS / OBJECTIVES

- Maintain and enhance public infrastructure related to water resources.
- Increase water system reliability for Malibu, Topanga Canyon and Marina del Rey.
- Reduce power consumption by increasing head for 10 pump stations feeding from PCH transmission main.

# City of Manhattan Beach

Kathleen McGowan

# Manhattan Beach Green Belt Low-Flow Infiltration Project Concept

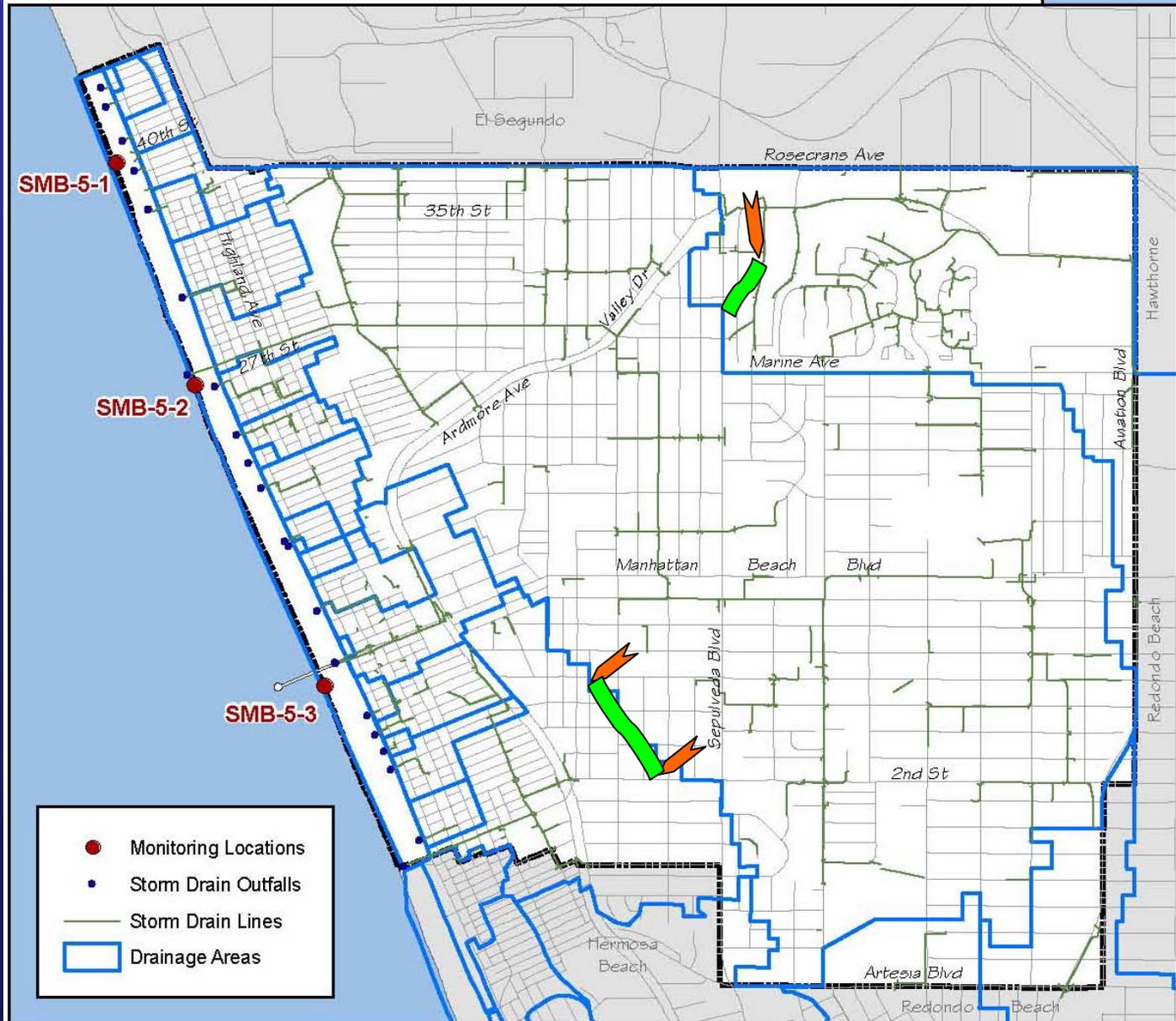


Kathleen McGowan

# Manhattan Beach Green Belt Low-Flow Infiltration Project

- **Location:** Existing linear greenbelt parkland in between Ardmore Ave. and Valley Drive
- **Two sites:**
  - near 30th Street
  - from 2nd to 8th Streets
- **Subsurface:** low flow infiltration for storm drains

# Manhattan Beach Green Belt Low-Flow Infiltration Project



# Manhattan Beach Green Belt Low-Flow Infiltration Project

- intercept dry weather flows and wet weather low-flows from existing storm drains draining approx. **56 acres**
  - screened for trash and gross solids removal
  - gravity flow to a network of 24” diameter underground plastic pipes with perforated inverts (approx. 3200 total linear feet)
  - percolation into the sandy soils which underlie the greenbelt

# Manhattan Beach Green Belt Low-Flow Infiltration Project

- Estimated cost: \$300,000-\$500,000
- Benefits:
  - reduce dry weather flows and wet weather low-flows from 56 acres
  - Reduce bacteria exceedances at the beach
  - Reduce other pollutant loads in runoff from developed areas
  - Improve flood protection

# Manhattan Beach Manhattan Strand Low flow Infiltration Trench Project Concept

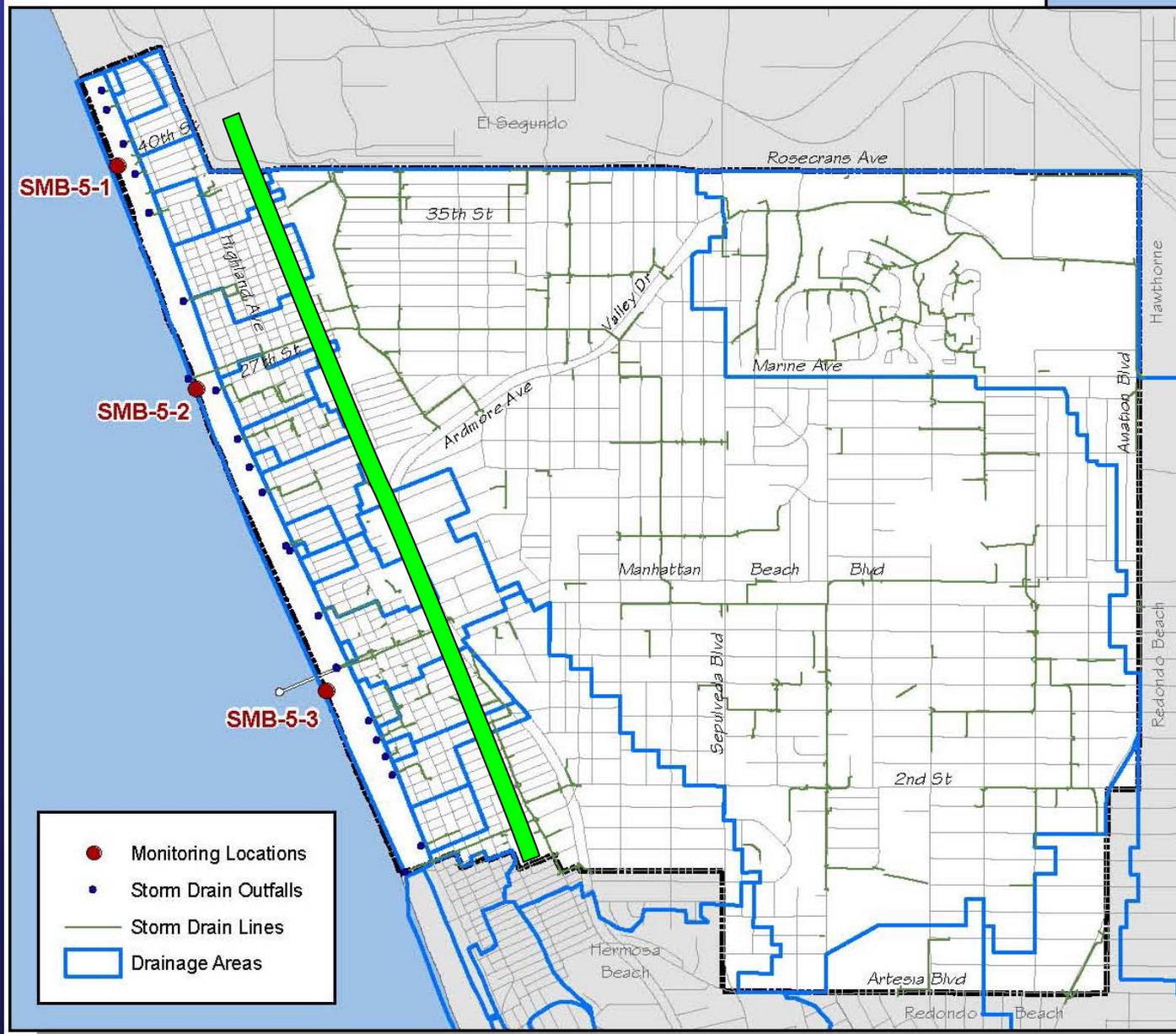


Kathleen McGowan

# Manhattan Strand Low-Flow Infiltration Trench

- **Location:** Below sand along base of strand wall
- **Extent:** Along 1.5 miles of public beaches
- **Subsurface:** low flow infiltration for storm drains

# Manhattan Strand Low-Flow Infiltration Trench



# Manhattan Strand Low-Flow Infiltration Trench

- Estimated cost: \$2-3 million
- Benefits:
  - Reduce/eliminate bacteria exceedances along 1.5 miles of popular beaches during:
    - Summer dry weather
    - Winter dry weather
    - First flush of wet weather events
  - Reduce other pollutant loads in runoff from developed areas

# City of Santa Monica

Neil Shapiro

# 16<sup>th</sup> Street Watershed Runoff Use Demo Project



City of Santa Monica

# Project Description

- Use treated dry and wet weather runoff from the City's 16<sup>th</sup> Street Sub-Watershed and from the Penmar Water Quality Improvement Project (City of Los Angeles) for use in the City's Marine Park for irrigation.

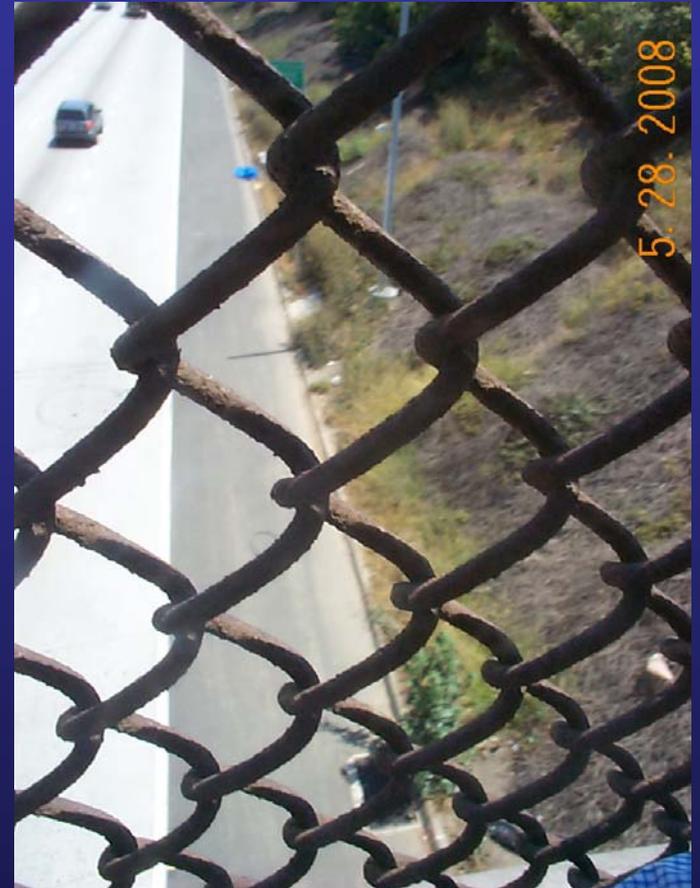
# Project Details

- Appr. \$4,000,000
- 4 years from time of grant or other complete funding
- Partner with City of Los Angeles

# Opportunities for Integration

- Integrating watersheds and drainage from cities of Santa Monica and Los Angeles.
- Using/reusing wet and dry weather flows.
- Avoiding the need for imported potable water for landscape irrigation.
- Maximizing local water supplies.
- Promoting sustainability.

# Freeway Runoff Infiltration Demo Project



City of Santa Monica

# Project Description

- Harvest and treat wet weather runoff from the Santa Monica Freeway and infiltrate it into the slopes of the freeway within the City, reducing runoff to the storm drain and Bay.



# Project Details

- Appr. \$1,000,000 (depending upon number of sites)
- 3 years from time of grant or other complete funding
- Partner with Caltrans

# Opportunities for Integration

- Integrating watersheds and drainage from the City of Santa Monica and Caltrans.
- Using wet weather flows for groundwater recharge.
- Supplementing local water supplies.
- Promoting sustainability.
- Use the model BMP strategy for freeways throughout the state.

# Memorial Park Runoff Treatment & Project



City of Santa Monica

# Project Description

- Harvest, treat and use off-site dry and wet weather runoff from the Kenter Canyon Sub-Watershed (drains cities of Santa Monica and Los Angeles), largest and most volume of runoff, for use in the City's expanded Memorial Park for irrigation.

# Project Details

- Appr. \$4,000,000
- 4 years from time of grant or other complete funding
- Partner with City of Los Angeles

# Opportunities for Integration

- Integrating watersheds and drainage from cities of Santa Monica and Los Angeles.
- Using/reusing wet and dry weather flows.
- Avoiding the need for imported potable water for landscape irrigation.
- Maximizing local water supplies.
- Promoting sustainability.
- Community outreach.
- Scheduled park expansion planned; integrate urban runoff management.

# Small Pocket Park Runoff Treatment & Use Demo Project



City of Santa Monica

# Project Description

- Harvest, treat and use off-site dry and wet weather runoff from highly commercial corridors (Lincoln Blvd.) and residential areas for irrigation, using neighborhood parks for storage and use.

# Project Details

- Appr. \$2,000,000
- 4 years from time of grant or other complete funding
- Partner with local neighborhoods
- Pocket parks are ideal locations for harvesting offsite runoff for storage and use.

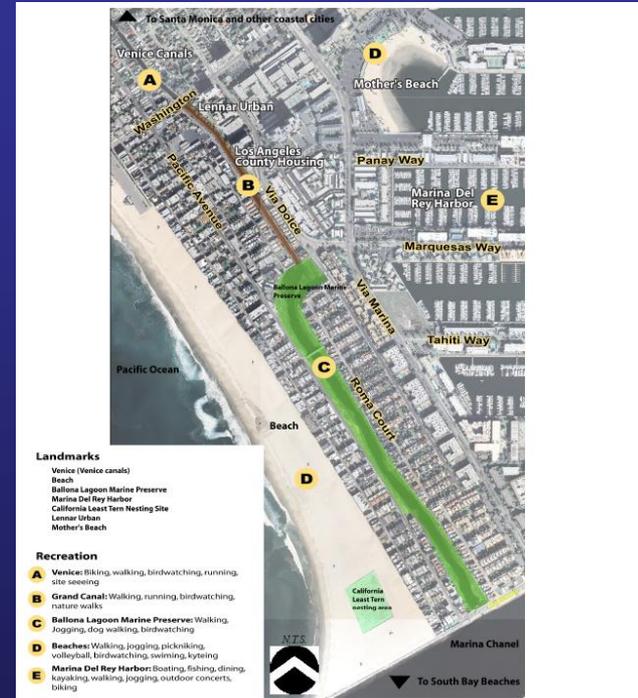
# Opportunities for Integration

- Integrating watersheds and drainage.
- Using/reusing wet and dry weather flows.
- Avoiding the need for imported potable water for landscape irrigation.
- Maximizing local water supplies.
- Promoting sustainability.
- Community outreach.

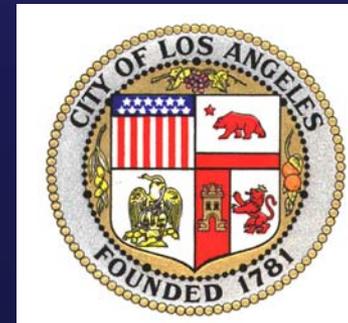
# Santa Monica Bay Restoration Foundation

Sean Bergquist

# Grand Canal Restoration and Water Quality Improvement Project



Project  
Sponsors:





# Project Description



LEGEND	
	Vehicular Route
	One-Way Vehicular Route
	Pedestrian Route
	Fencing
	Decorative Fencing
	Pedestrian Bridge
	Pocket Park
	Naturalized Area
	Stormwater Capture Site



The objectives of this project are to establish a balance of ecological habitat types, address endangered species and exotic species concerns, increase stability of the banks, improve water quality through improved stormwater management, and balance public access, flood protection and protection of wildlife



# Project Details



## Pre-Design Concept Cost Estimate

	Alternative 1	Alternative 2
<i>Access</i>	\$1,987,096.00	\$957,536.00
<i>Biology</i>	\$2,689,945.00	\$2,441,344.00
<i>Storm Water</i>	\$2,290,536.00	\$2,054,014.00
<b>TOTAL</b>	<b>\$6,967,577.00</b>	<b>\$5,452,894.00</b>

Approx. Schedule: Final Design – 6 months  
Implementation – 6 months to 1 year  
Monitoring and Project Maintenance – 3 years

Project Partners: City of Los Angeles, Lennar and SMBRF

Potential Partners: U.S. EPA and Coastal Conservancy



# Opportunities for Integration



**Habitat Restoration:** Ballona Wetlands Ecological Reserve, Ballona Lagoon Marine Preserve and Venice Beach Least Tern Preserve, as well as other adjacent habitats

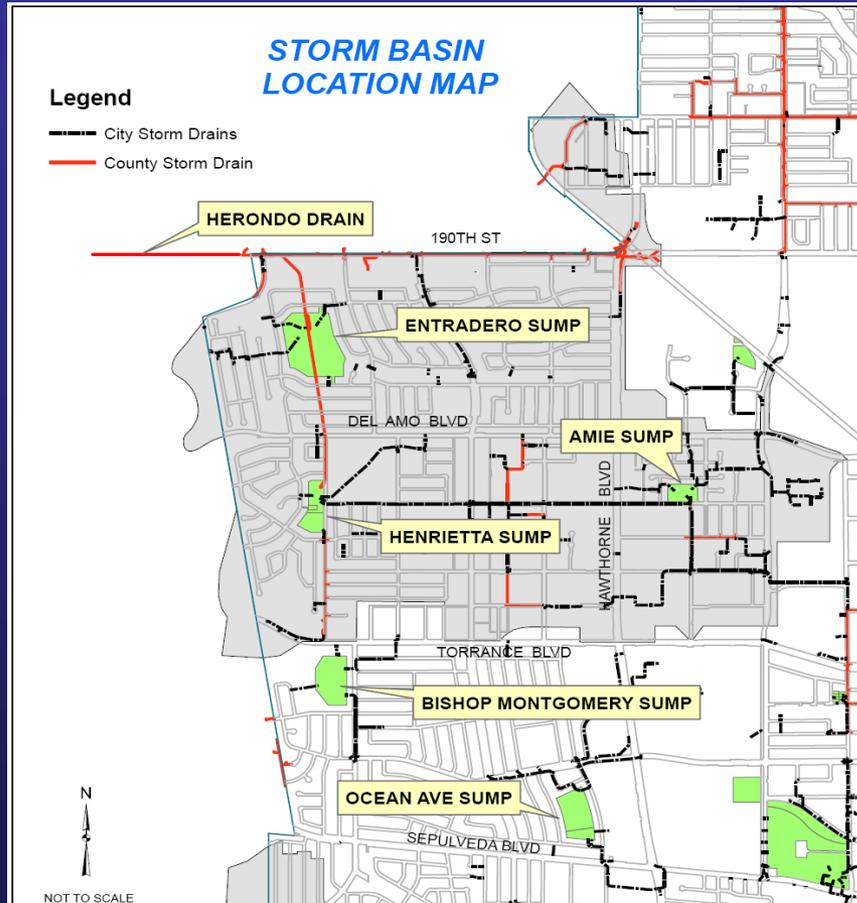
**Water Quality:** Existing BMPs at Washington Blvd and Via Marina, MDR and Ballona Estuary TMDL implementation

**Public Access:** Provides improved public access at Grand Canal, connecting Marina Del Rey with Venice Beach and Bike Path.

# City of Torrance

John Dettle

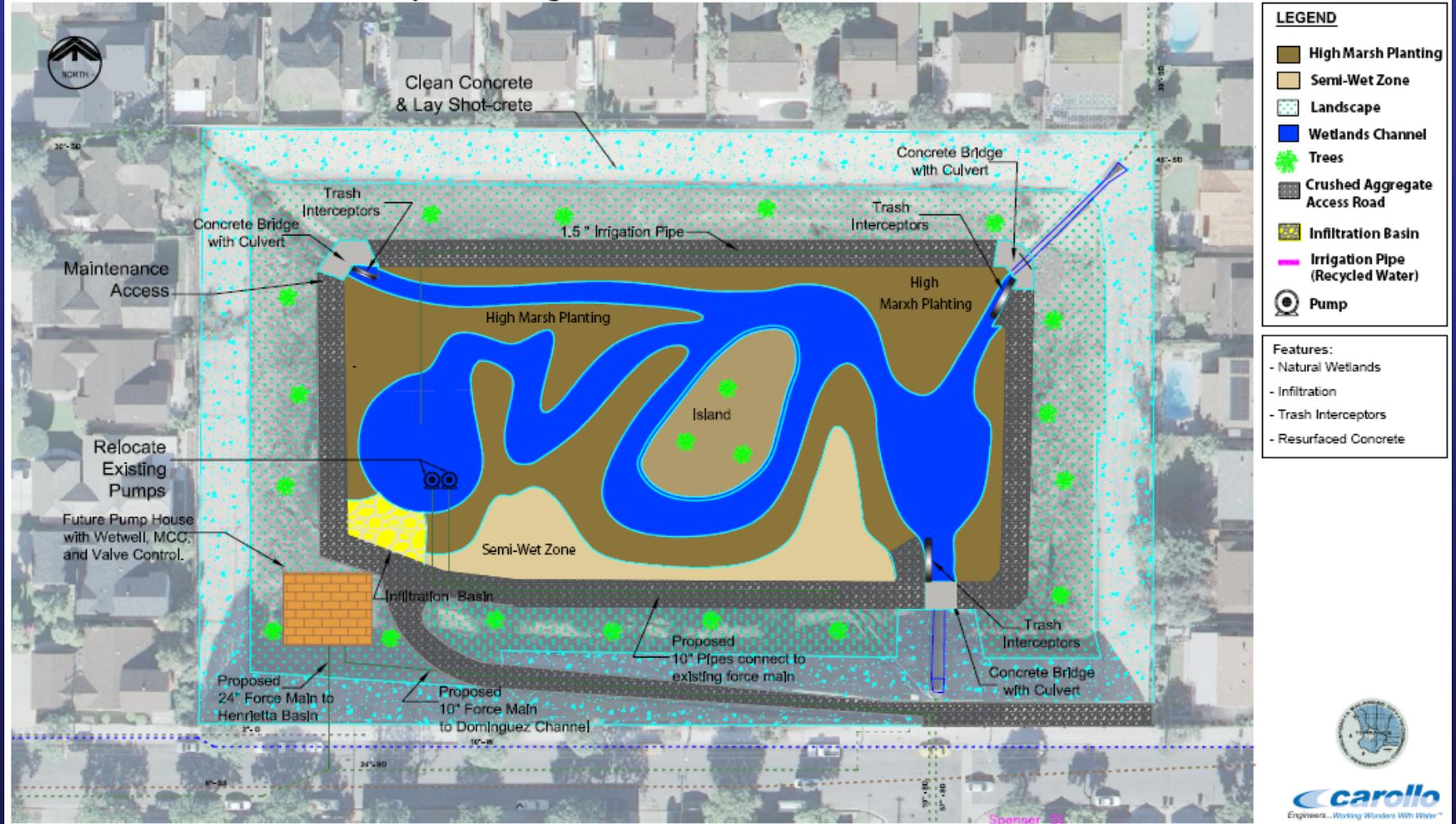
# Amie Stormwater Basin Enhancements



City of Torrance

# Project Description

## Amie Detention Basin - Conceptual Design



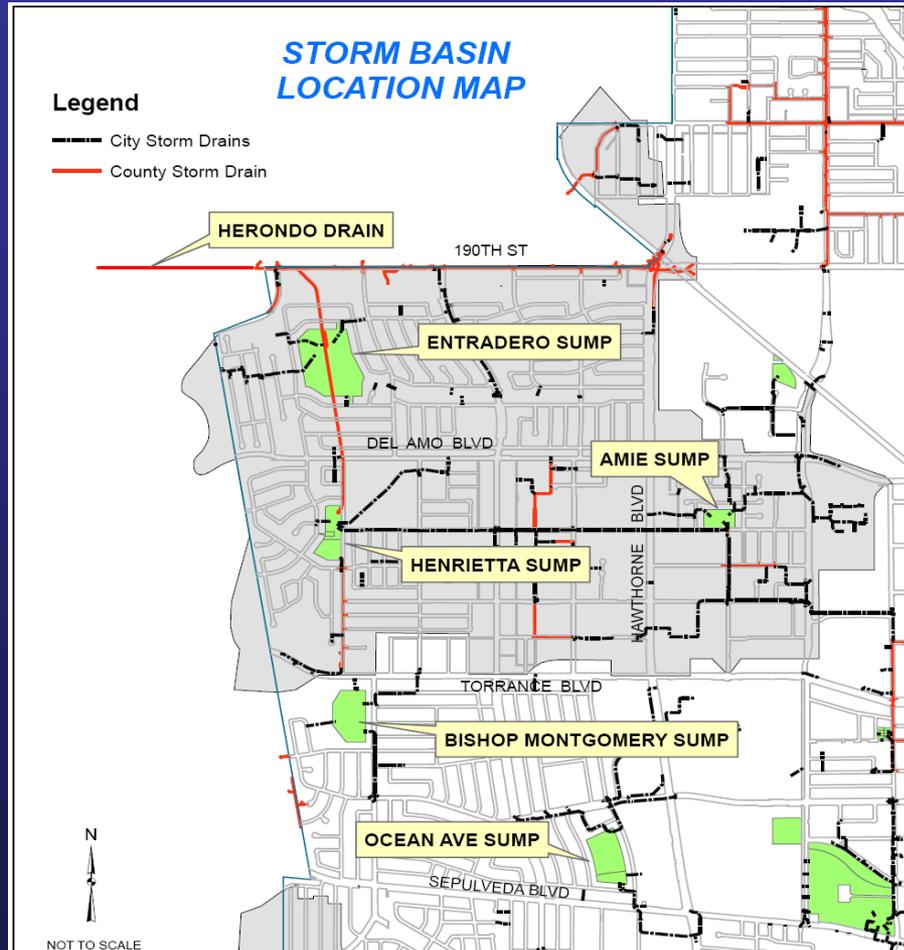
# Project Details

- Budget est. \$1,200,000
- Design in 2009 and Construction 2010
- Potential Partners include Los Angeles County, WRD & Jurisdictional Groups 5&6

# Opportunities for Integration

- Compliance with Santa Monica Bay Beaches Bacteria TMDL for Jurisdictional Groups 5 & 6
- Groundwater Recharge over Saline Plume
- Reduced flows to County's Herondo Drain Low Flow Diversion Pump Station
- Habitat Restoration along Pacific Flyway
- Water Conservation using basin water for irrigation

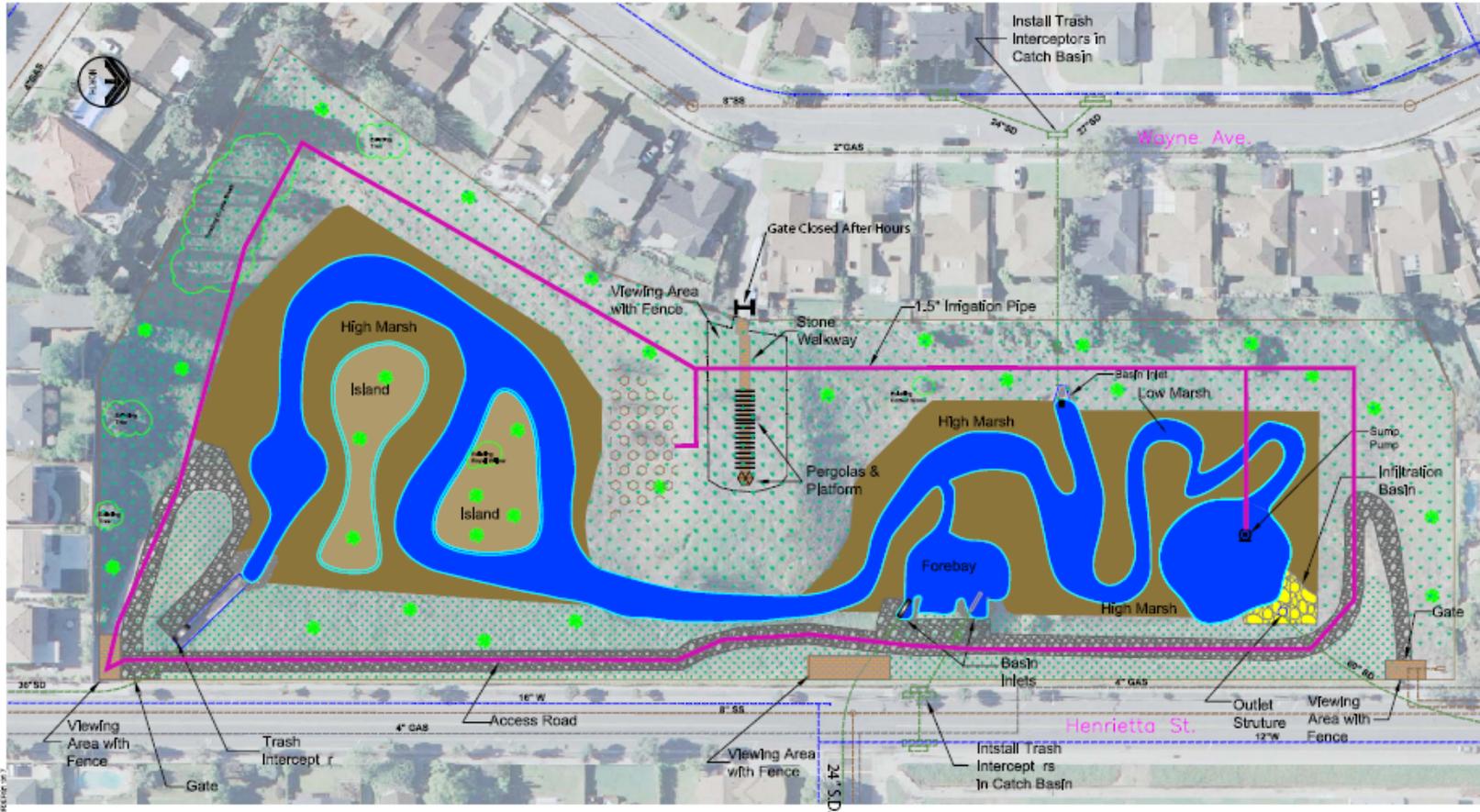
# Henrietta Stormwater Basin Enhancements



City of Torrance

# Project Description

## Henrietta Detention Basin - Conceptual Design



### LEGEND

- High Marsh
- Wetlands
- Channel
- Landscape
- Trees
- Crushed Aggregate Access Road
- Infiltration Basin
- Irrigation Pipe (Recycled Water)
- Pump

### Features:

- Natural Wetlands Treatment
- Trash Interceptors and Catch Basin Inserts
- Infiltration Basin
- Public Viewing Areas
- Recirculation of Water

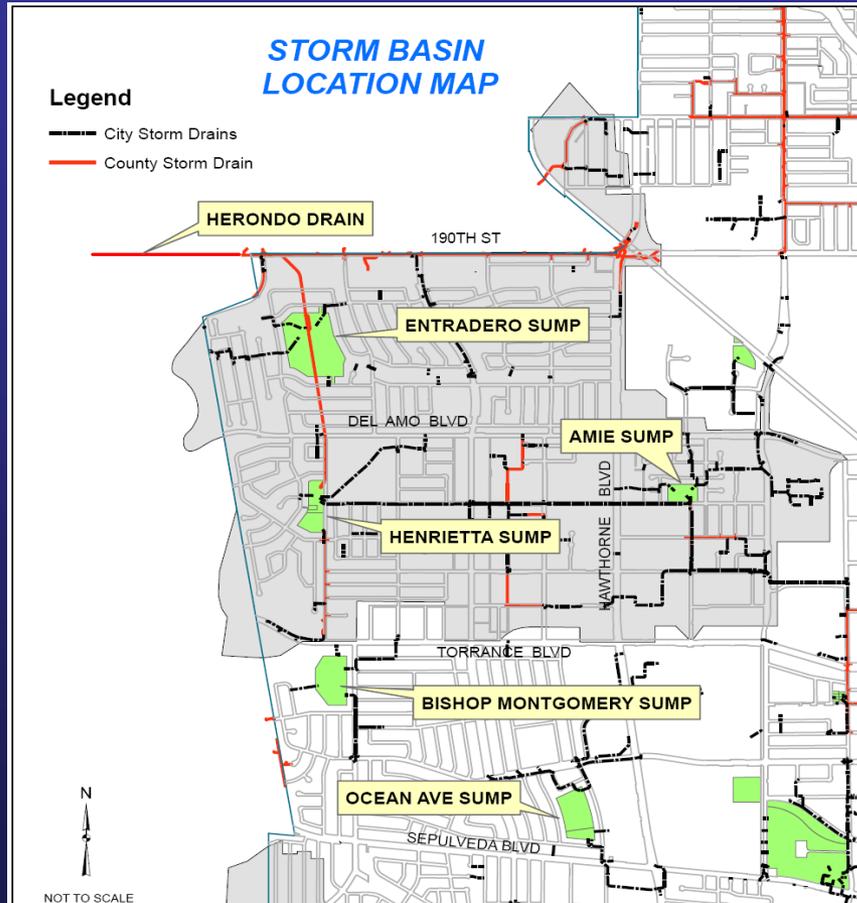
# Project Details

- Budget est. \$1,400,000
- Design in 2009 and Construction 2010
- Potential Partners include Los Angeles County, WRD & Jurisdictional Groups 5&6

# Opportunities for Integration

- Compliance with Santa Monica Bay Beaches Bacteria TMDL for Jurisdictional Groups 5 & 6
- Groundwater Recharge over Saline Plume
- Reduced flows to County's Herondo Drain Low Flow Diversion Pump Station
- Habitat Restoration along Pacific Flyway
- Limited Public Access for Nature Viewing
- Water Conservation using basin water for irrigation

# Entradero Stormwater Basin Enhancements



City of Torrance

# Project Description

## Entradero Detention Basin - Conceptual Design



### LEGEND

	Landscape
	Trees
	Crushed Aggregate Trail
	Infiltration Basin
	Irrigation Pipe (Recycled Water)
	Pump
	Berm

### Features:

- Sedimentation/Trash Dam
- Infiltration Basin
- Trash Interceptors
- Improved Walking Trails
- Public Viewing Area
- Enlarged Field Space
- Use of Recycled Water
- Landscape Improvements



# Project Details

- Budget est. \$2,000,000
- Design in 2009 and Construction 2010
- Potential Partners include Los Angeles County, WBMWD, WRD & Jurisdictional Groups 5&6

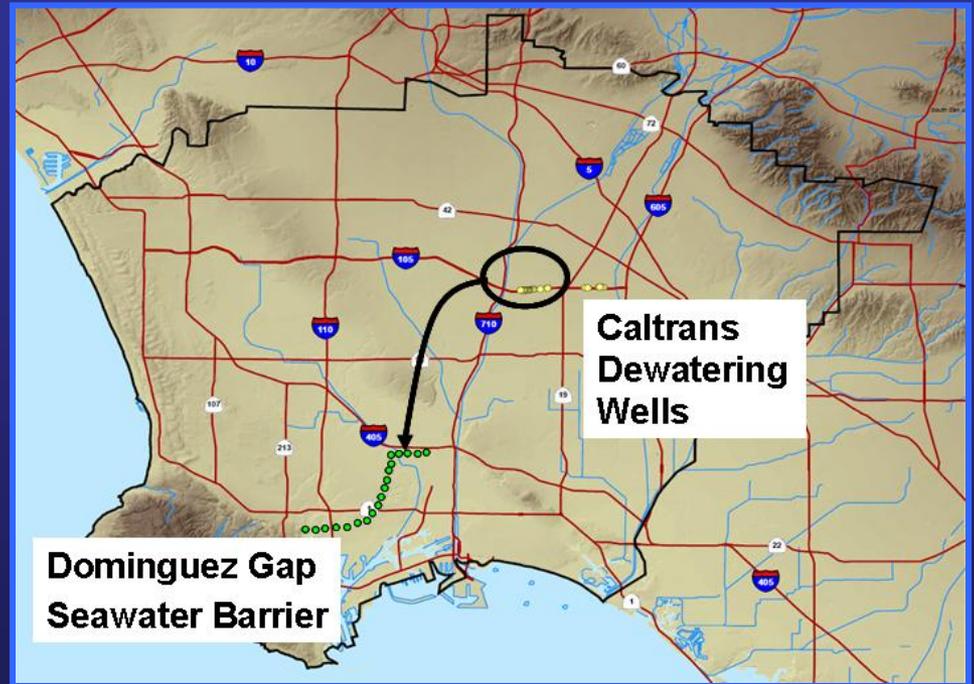
# Opportunities for Integration

- Compliance with Santa Monica Bay Beaches Bacteria TMDL for Jurisdictional Groups 5 & 6
- Groundwater Recharge over Saline Plume
- Reduced flows to County's Herondo Drain Low Flow Diversion Pump Station
- Habitat Restoration along Pacific Flyway
- Enhanced Trails for Nature Walking and Cross Country Running
- Water Conservation using Recycled Water

# Water Replenishment District of Southern California

Jason Weeks

# I-105 Freeway to Dominguez Gap Barrier Pipeline Gap Barrier Pipeline



Water Replenishment District of  
Southern California

# Project Description

- A portion of the I-105 freeway between the San Gabriel and LA rivers was completed below the original land surface. To mitigate high groundwater, Caltrans constructed a series of dewatering wells to control the groundwater level below the freeway surface.
- This project involves treating this 2,000 afy that is currently wasted to the ocean and conserving it in the West Coast Groundwater Basin through the Dominguez Gap Barrier (DGB) to offset imported water demands
- Major project components include
  - 8 miles of pipeline from the dewatering wells to Dominguez Gap Barrier
  - A new deep well
  - 1,300 gpm treatment plant
- Water from the new treatment facility will be augmented with 2,500 afy from the new well to provide 4,500 afy to the DGB, thereby reducing imported water demands by a like amount.

# Project Details

- Budget

- Total Project Cost: \$32M
  - \$8M funding assistance from Caltrans already secured

- Schedule of Implementation

- CEQA in process
  - October 2008
- Design/permitting
  - October 2008 – December 2009
- Construction
  - January 2010 – December 2012

## Partnerships

- Caltrans

# Opportunities for Integration

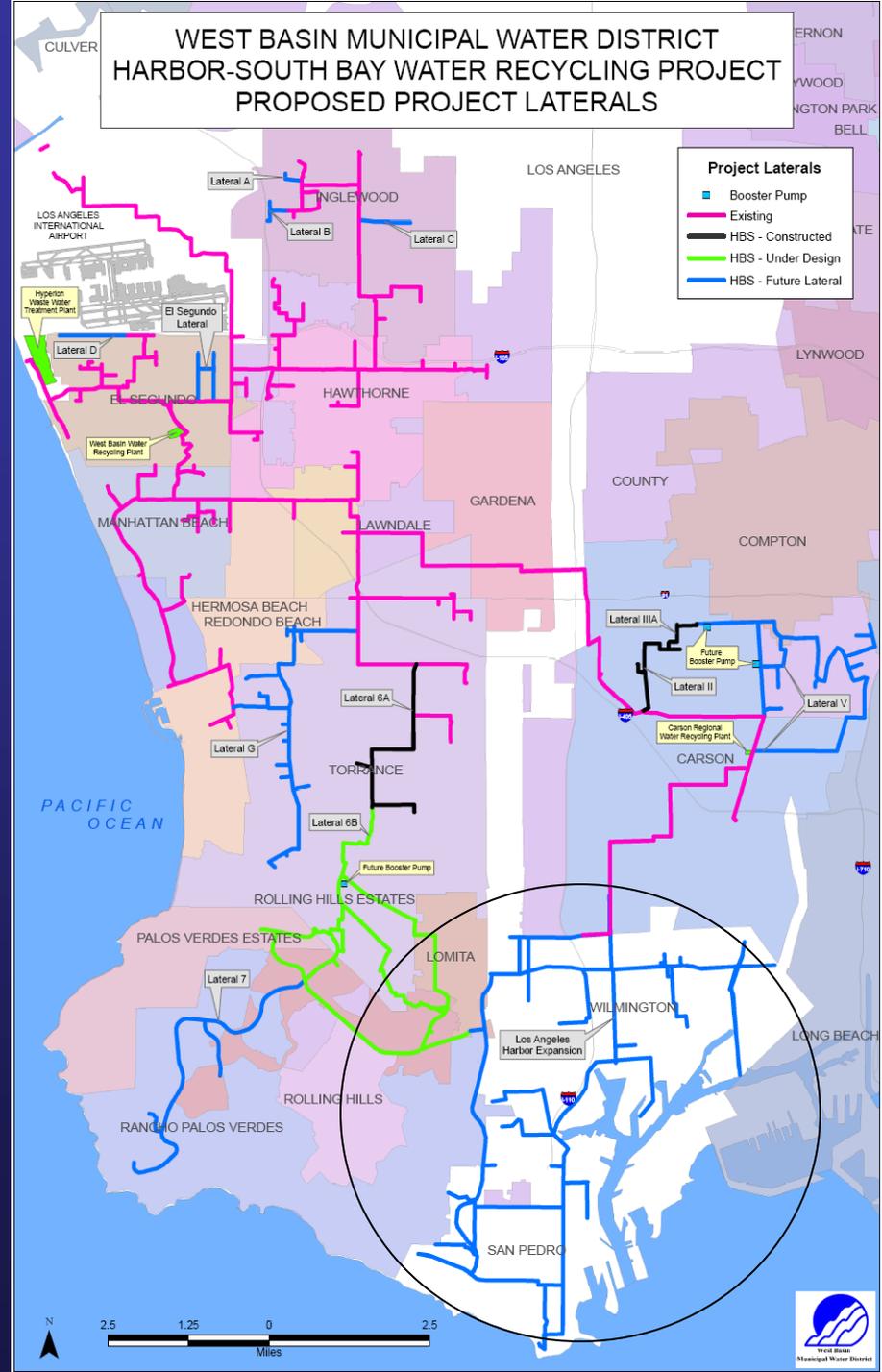
- Water conserved as part of this project will directly offset 4,500 afy of imported water demands
- Possible partnerships with imported water agencies
- Others?

# West Basin Municipal Water District

Leighanne Reeser

# Harbor / South Bay Recycled Water Project

West Basin Municipal Water District / LADWDP



# Project Description

- This project proposes to extend the existing West Basin Water Recycling System distribution line through Carson and the LA Harbor area.
- It will connect major refineries and industry.
- This project will include a nitrification treatment in Carson.
- This distribution line will also connect to another portion of West Basin's service area that will supply recycled water to the Palos Verdes Peninsula area.

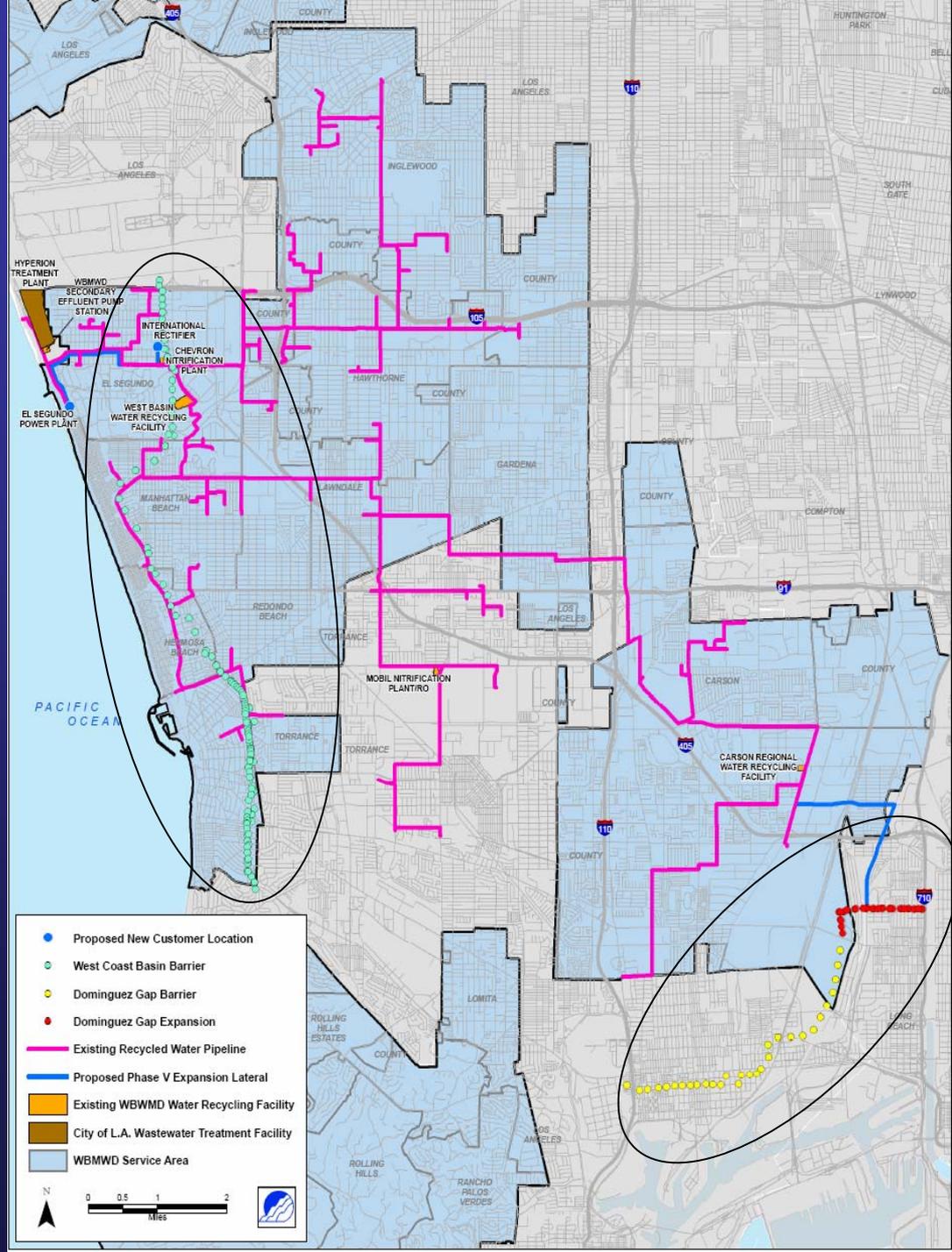
# Project Details

- Budget: Design- ~\$6M  
Construction- \$50M - \$70M
- Schedule of Implementation:
  - Feasibility Study- completed 2008
  - Pre-Design- completed 2008
  - Design- completed 2008
  - Construction: 2009-2011
- Partnerships: LADWP (project within service area), Water Replenishment District of So. Ca (manages groundwater basin), Customer Agencies (GW Pumpers), Dept. of Public Health & RWQCB (permitting)

# Opportunities for Integration

- Increased water reliability
- Diversion of wastewater discharge to ocean
- Imported water and groundwater savings
- Reduction of seawater intrusion
- A lower Water Replenishment District Replenishment Assessment for both West Basin and Central Basin pumpers
- Increased local production
- Provide 10 MGD or 10,000 AFY of Recycled Water replacing groundwater & potable water

# Injection of Recycled Water to the West Coast and Dominguez Gap Barriers



	Proposed New Customer Location
	West Coast Basin Barrier
	Dominguez Gap Barrier
	Dominguez Gap Expansion
	Existing Recycled Water Pipeline
	Proposed Phase V Expansion Lateral
	Existing WBMWD Water Recycling Facility
	City of L.A. Wastewater Treatment Facility
	WBMWD Service Area

West Basin Municipal Water District

# Project Description

This project will perform the following:

- Increase injection from 75% RW to 100% RW to the West Coast Barrier
- Increase injection from 25% RW to 50% RW to the Dominguez Gap Barrier
- Provide ~ 2.5MGD – 5.0MGD for WCB
- Provide ~ 1MGD – 5MGD for DGB
- Treatment processes: MF/RO, advanced oxidation processes (UV and hydrogen peroxide addition)

# Project Details

- Budget: Construction ~\$25M - \$40M (WCB), \$6M - \$35M (DGB)
- Schedule of Implementation:
  - Agreements: 2008 - 2009
  - Design: 2008 - 2009
  - Construction: 2009 - 2010
- Partnerships: Water Replenishment District of Southern California (customer & groundwater manager), Los Angeles County Department of Public Works (operate & maintain barriers), Dept. of Public Health & RWQCB (permitting), Customer Agencies

# Opportunities for Integration

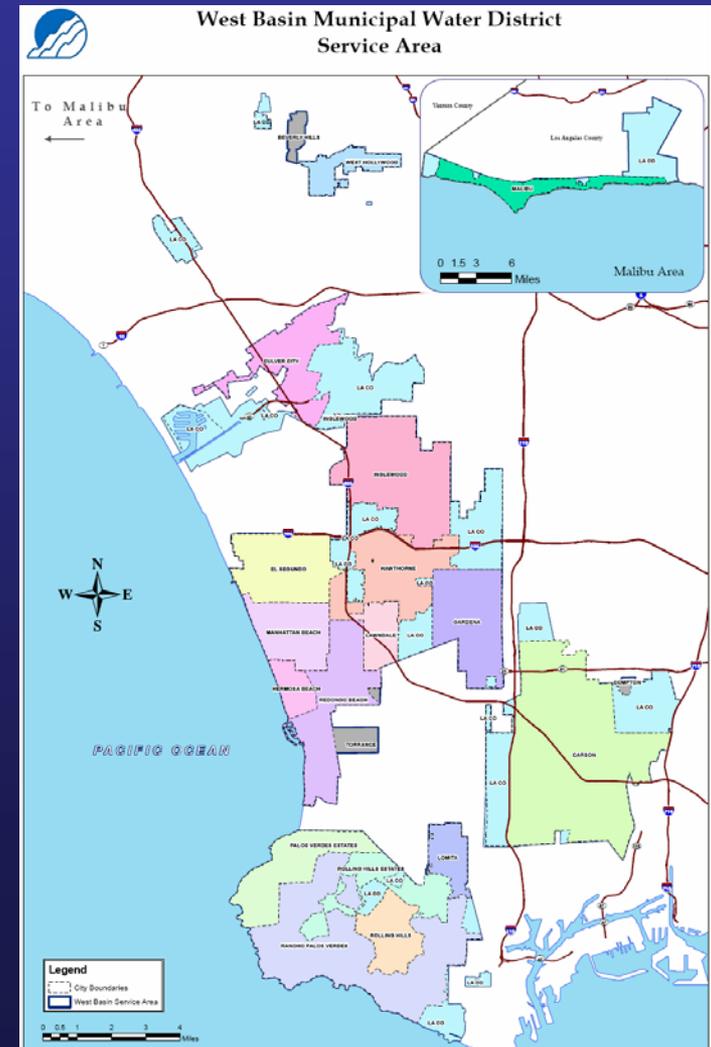
Benefits of the project are:

- Increased water reliability
- Diversion of wastewater discharge to ocean
- Imported water and groundwater savings
- Increased local production

# Irrigation Equipment / Water Budget Program



West Basin Municipal  
Water District



# Project Description

- The program is designed to provide a comprehensive landscape survey that identifies the following:
  - leaks
  - mismatched sprinkler heads
  - proper sprinkler head uniformity
  - proper irrigation controller setting
  - proper use of plants and turf
  - other issues associated with landscaping
- Performs audits on 210 acres of irrigated landscaping, develops water budgets, identifies applicable incentives, and provides recommendations of landscape improvements
- Conserves 315 AFY of imported water supplies

# Project Details

- Budget: \$330K
- Schedule of Implementation:
  - Pilot Program underway: 2007 – 2008
    - 70 acres
    - 210 AF saved
    - \$110K
  - Larger Project: 2009- 2010
    - 210 acres
    - 630 AF saved
    - \$330K
- Partnerships: Customer Agencies, Metropolitan Water District

# Opportunities for Integration

Benefits of the project are:

- Provides a comprehensive approach to landscape water conservation that engages property owners
- Improves water supply reliability
- Improves water quality by reducing dry weather runoff
- Educates the property owners of a site's current water use and how it can be reduced by providing recommendations of equipment replacement and watering schedules.

# IRWMP 2008-09 Schedule

	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09
<b>IRWMP Planning</b>	█	█	█	█	█	█	█	█	█	█	█							
Update Existing IRWMP	█	█	█	█	█	█	█											
Prop 84 Grant Guideline Review and Comment				█	█	█	█											
Prop 84 Planning Grant Application									█	█	█							
<b>DAC Outreach</b>	█	█	█	█	█	█	█											
Establish DAC contact list		█																
DAC Outreach		█	█	█	█	█	█											
DAC Workshop				█														
DAC Project Development					█	█	█											
<b>IRWMP Prop 84 Implementation</b>				█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
Grant Guideline Review and Comment				█	█	█	█											
Project Proponent Guidance and Workshops								█	█	█	█							
Grant Application												█	█	█	█	█	█	█

# Funding Opportunities

# LA IRWMP Next Steps

**Thank You!**