Public Works Agency

Ventura County Watershed Protection District

J Street Drain Project

Public Information Meeting

September 26, 2011

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J Street Drain History – Part I

- 1956 J Street Drain Constructed
- 1961 Earthen Channel Concrete-Lined
- 1984 FEMA Flood Insurance Study
- 2005 South Oxnard Floodplain Study
- 2005 Project Ranking and Selection

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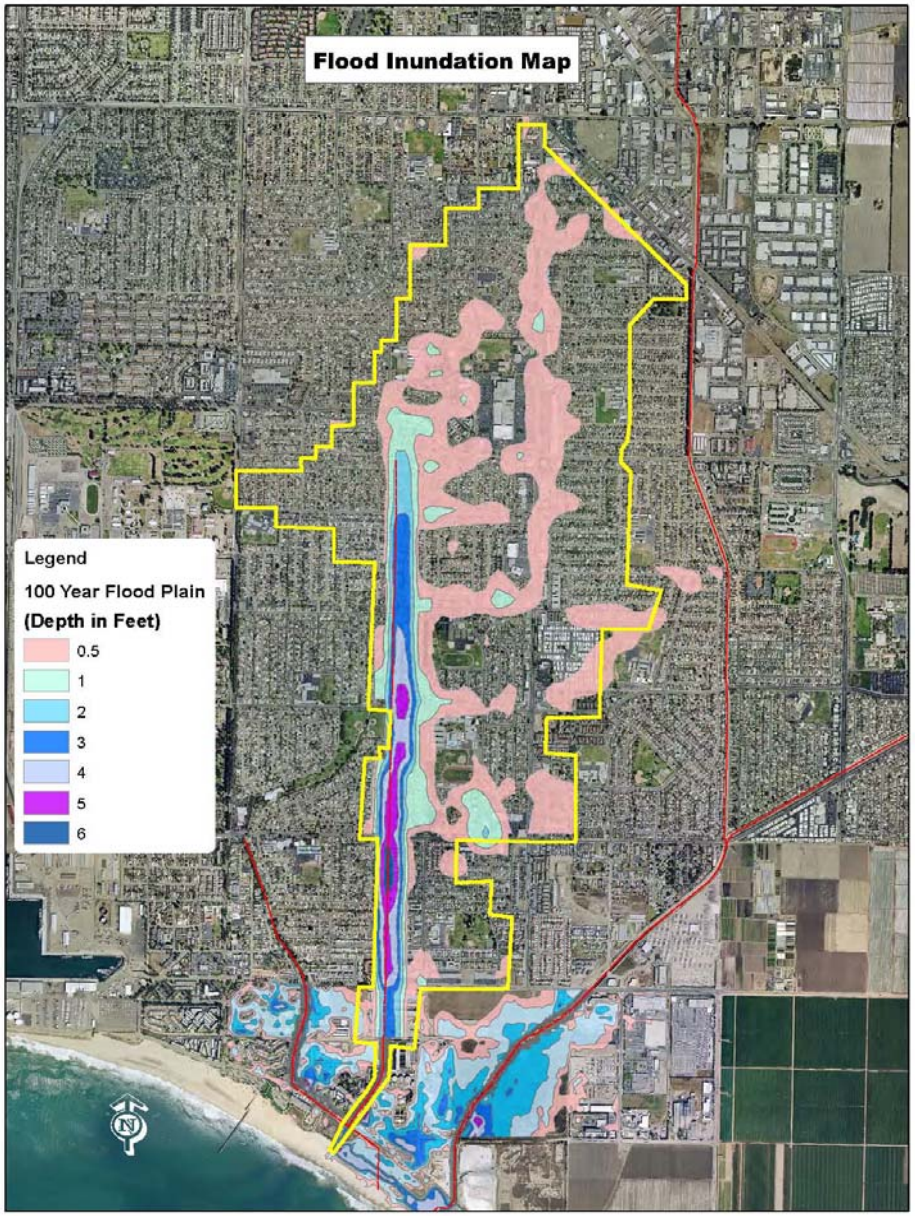

FLOOD PROTECTION

- Over 400 Homes and Businesses would be Removed from the Flood Plain
- $ 56,000,000 Flood Damage Reduction
- $33,000,000 Construction Cost

Background:
Project Prioritization Criteria

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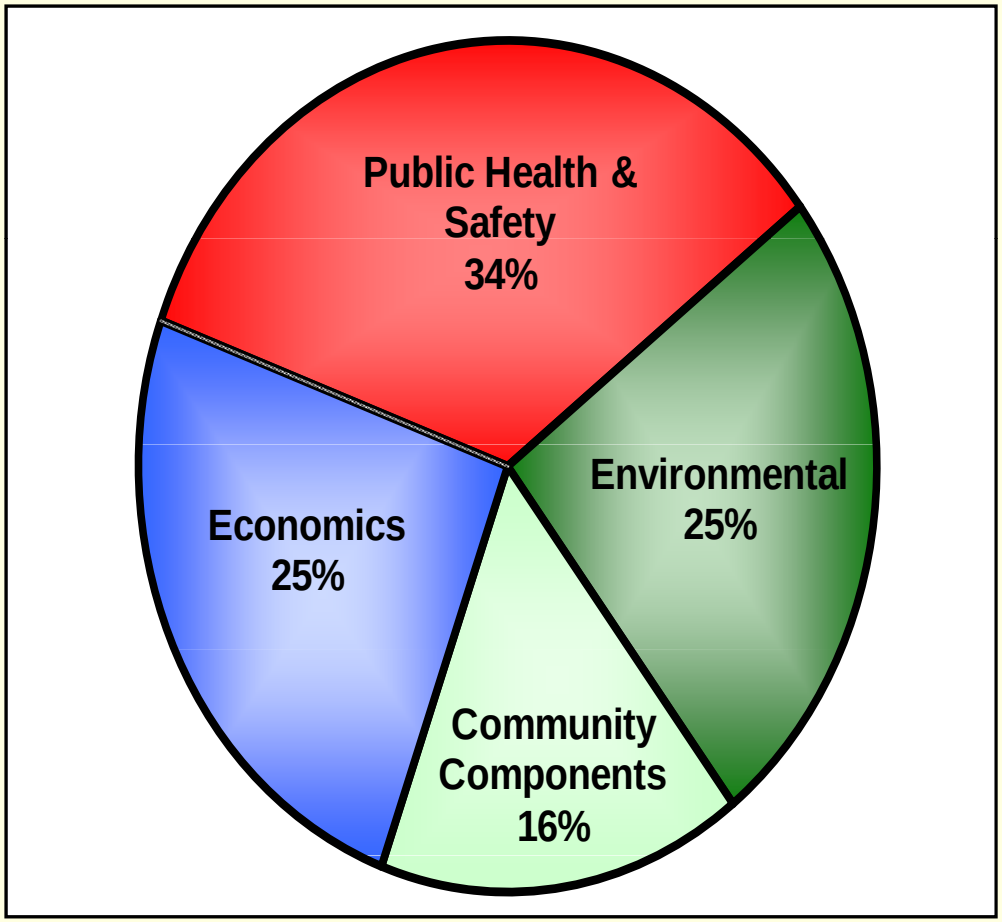
CATEGORY	FACTORS
Public Health & Safety	Flooding of buildings, streets, agricultural resources (extent, magnitude & repairs)
Environ.	Streambank and habitat protection, water quality and supply impacts, CEQA and regulatory issues
Community Components	Recreation and socio-economic benefits, construction impacts and stakeholder acceptance
Project Economics	B/C ratio, Property Acquisition, Constructability, Sustainability & Funding



Background:
District Revenue Sources

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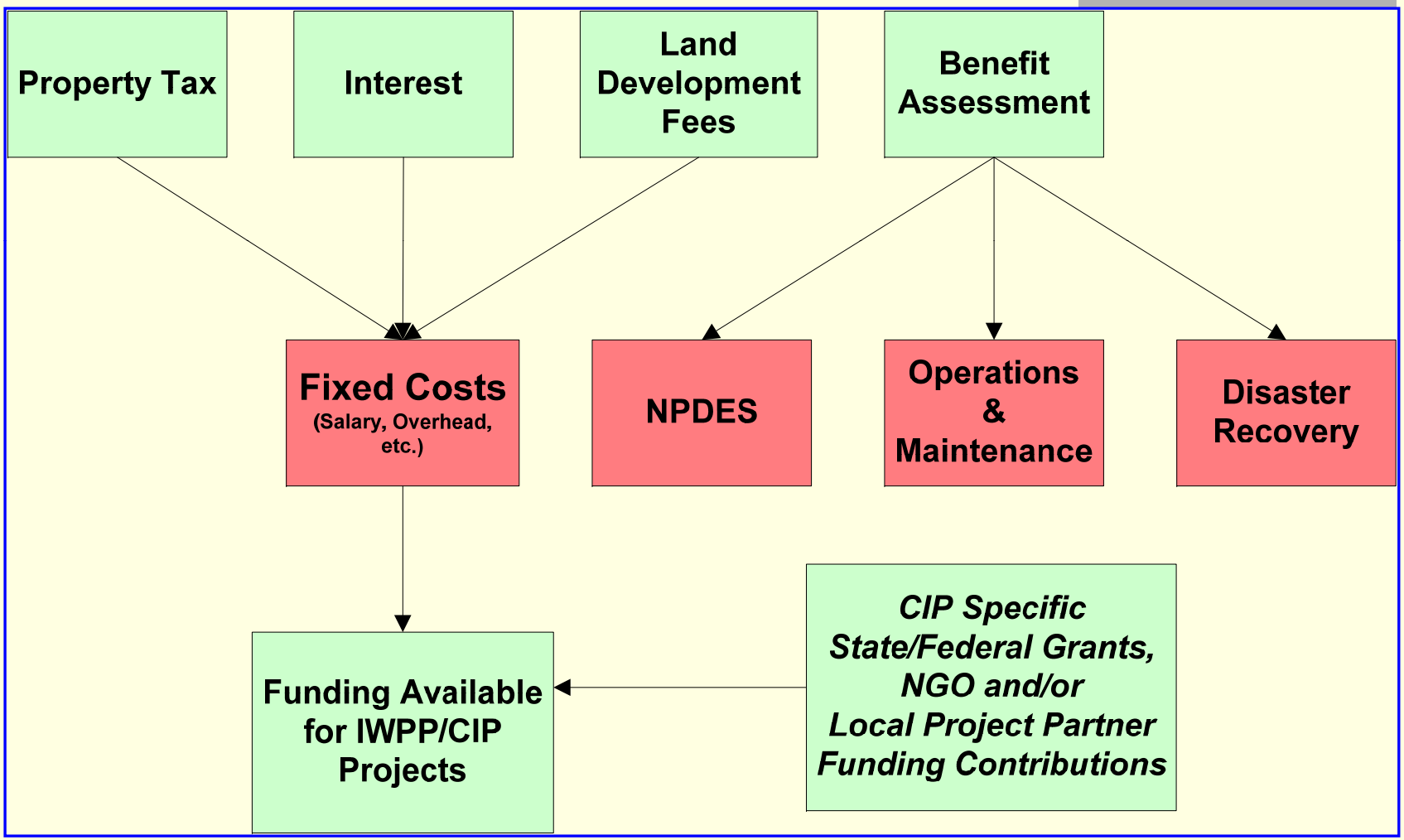

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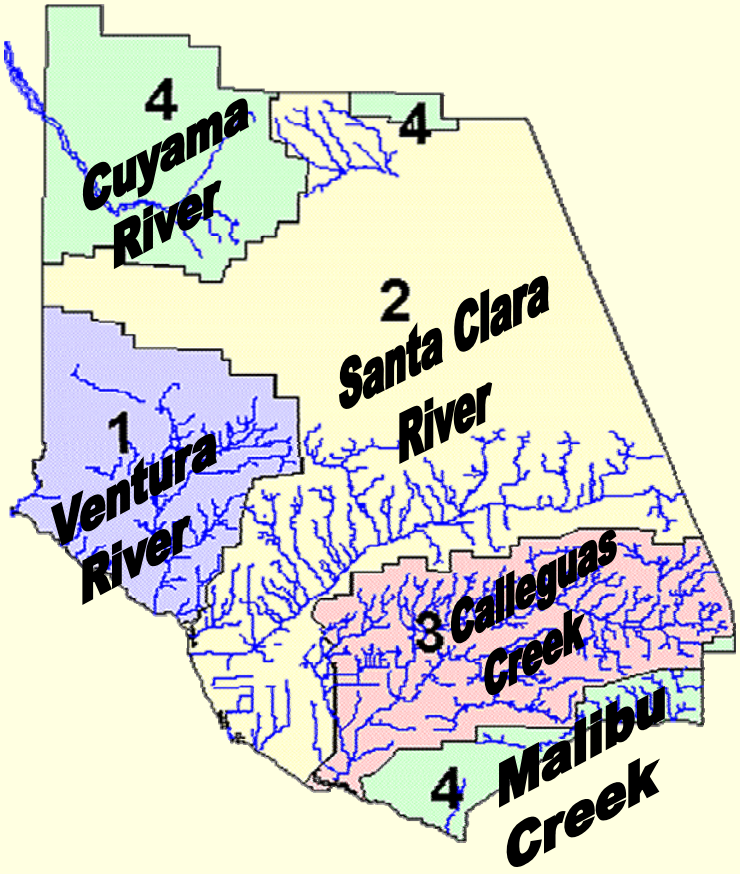
Background: Watersheds, Zones and Facilities



- Area: 1800 Square Miles
- Four Zones
- Three Major Watersheds
  - Calleguas Creek
  - Santa Clara River
  - Ventura River
- 10 Cities and the County Unincorporated Areas
- Facilities:
  - 209 Channel Miles
  - 68 Levee Miles
  - 44 Debris and Detention Basins
  - 4 Pumping Plants

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Background: Annual Fixed Revenues

Property Tax Revenues:

- Zone 1 (Ventura): $1.9 Million
- Zone 2 (Santa Clara): $7.9 Million
- Zone 3 (Calleguas): $6.0 Million
- Zone 4 (Malibu/Cuyama): $120,000

Annual Benefit Assessment:

- O&M All Zones: $7.9 Million
- NPDES: $1.4 Million

J Street Drain History – Part 2

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- 2008 Preliminary Design & CEQA Initiated
- 2009 DEIR Release for Public Review
- 2010 Flood Emergency North of Ormond Lagoon
- 2010-2011 EPA Released New Halaco Results
- 2010-2011 Completion of Additional Studies
- 2011 Release of RDEIR for Public Review

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January 18, 2010
Flood Emergency

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January 18, 2010
Flood Emergency

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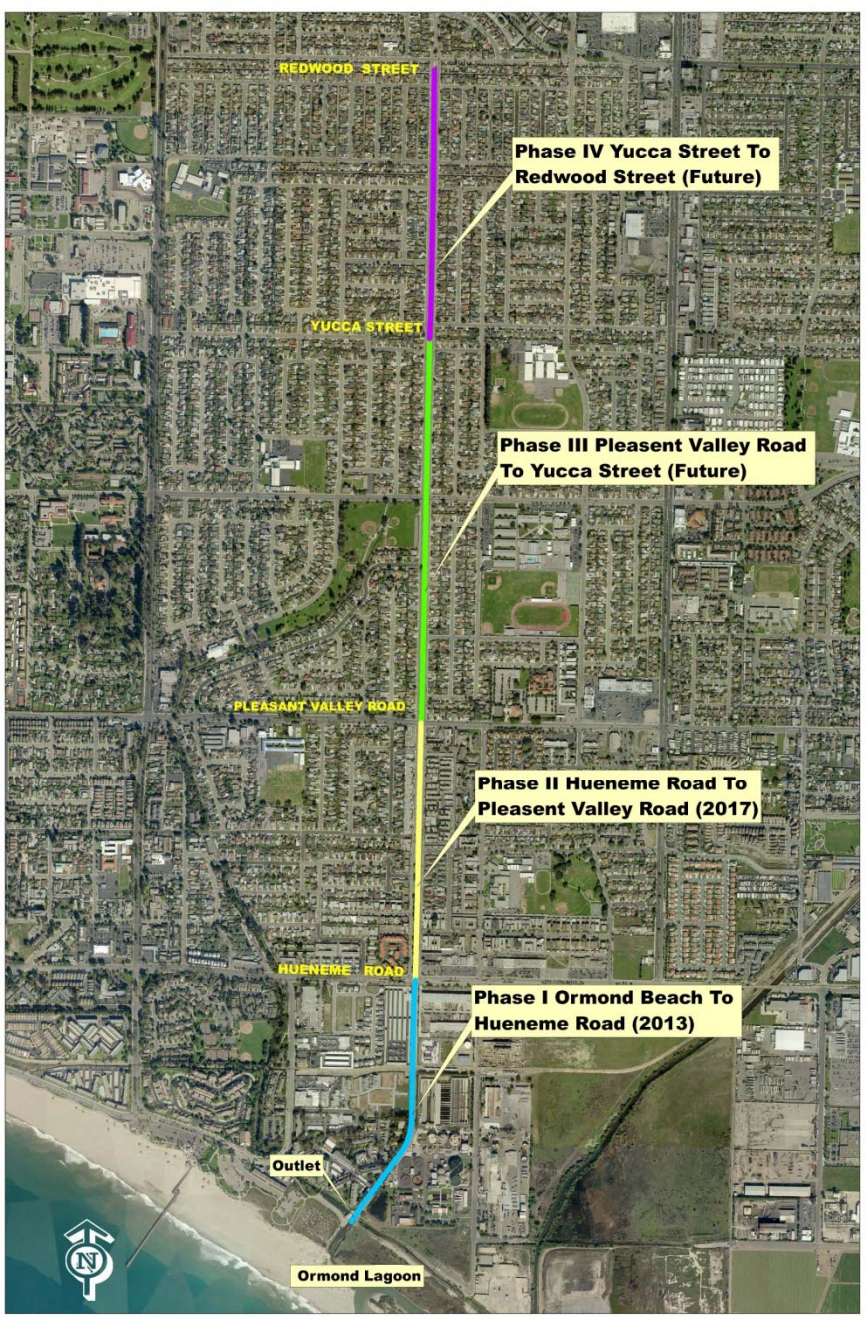
PROJECT PHASES



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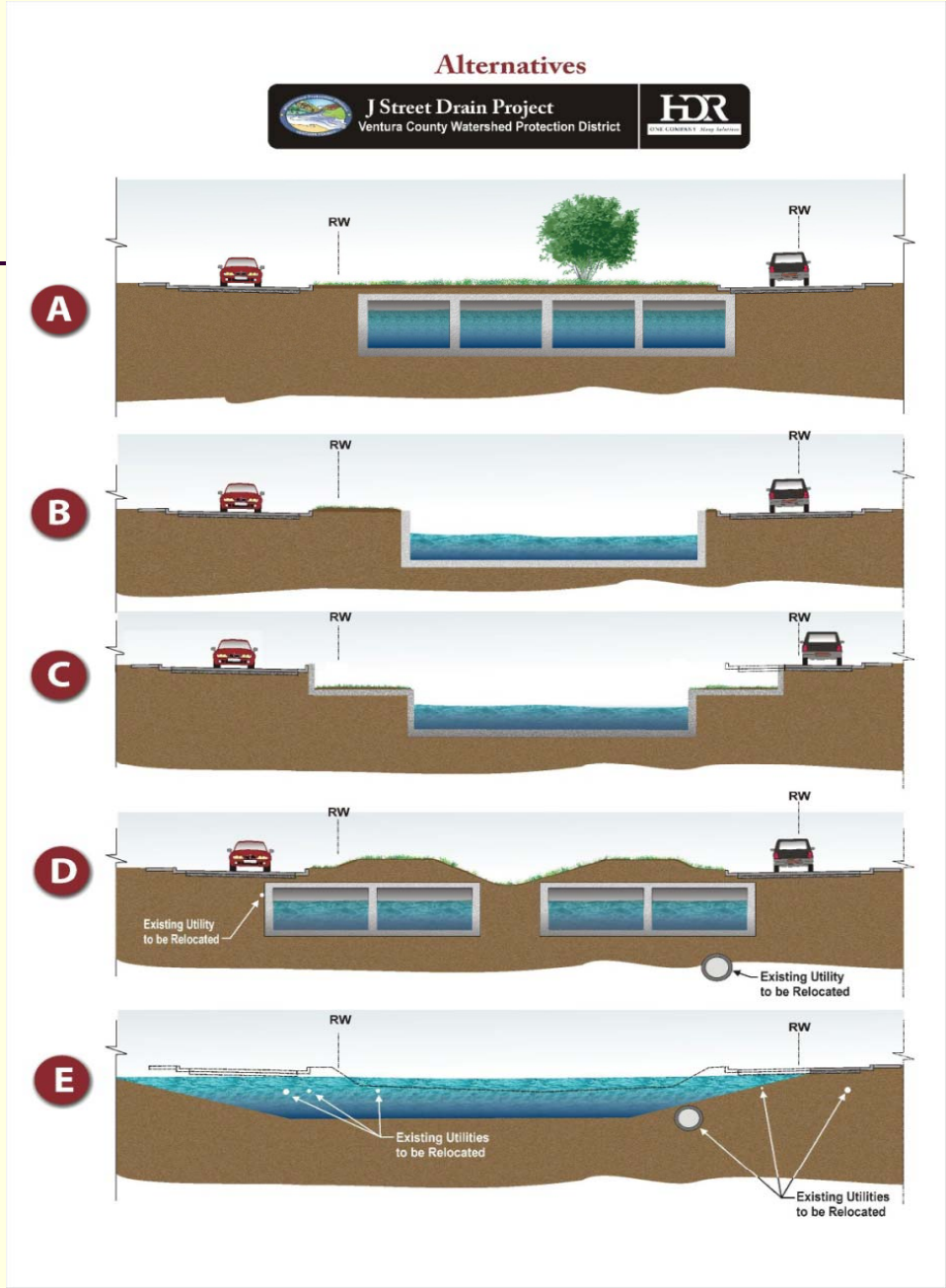

CHANNEL ALTERNATIVES

– Reinforced Box Culvert (not south of Hueneme Road)

– **Vertical Wall Channel (Preferred Alternative)**

– Low Flow Channel with Overflow Area

– Dual Reinforced Box Culvert (not south of Hueneme Road)

– Natural Channel Section

Trench vs. Vertical Shoring

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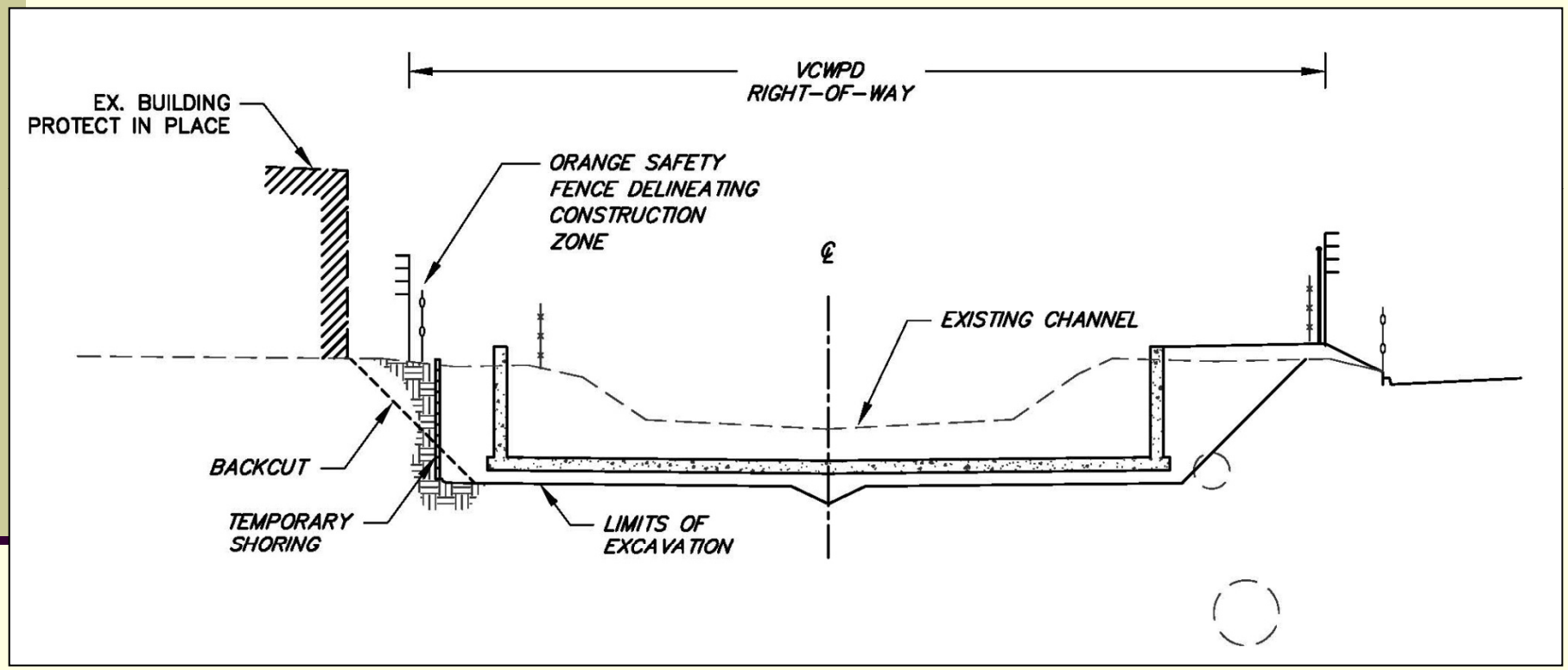

Outlet Design Alternatives

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– J St Drain Outlet at Ormond Beach

- Alternative A: Dike System (Direct Outlet to Ocean)
- Alternative B: Lagoon Expansion with BEMP
  (Compatible with Coastal Conservancy Restoration Goals)
- **Alternative C (Preferred Alternative):**
  Natural Breach with BEMP
  (Compatible with Coastal Conservancy Restoration Goals)

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Alternative A: Dike System

LEGEND
- Open Water

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HDR ONE COMPANY | Many Solutions

Alternative B: Natural System

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Ventura County Watershed Protection District

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Alternative C: Preferred

Beach Elevation Management Plan

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- Replaces Emergency Action Plan (EAP) in 2009 DEIR
- Response to January 18, 2010 flood emergency
- Monitor beach sand berm elevation before predicted storms
- Target safe water surface elevation based on January 2010 event flood analysis
- If needed, shave top of berm to facilitate natural breach during future storm event
- BEMP would not directly breach lagoon

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Ormond Beach Lagoon Emergency Beach Grooming - October 18, 2010

Additional Studies

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- Studies were needed to address new information and public comments:
  - Inland Flooding Study to refine the proposed EAP
  - Coastal Processes investigation to determine maximum safe elevation of beach sand berm
  - Hydrogeology Study to determine effect of groundwater dewatering on Halaco plume
  - Sediment Transport Study for Proposed Outlet to Lagoon
  - Mosquito Technical Study

Inland Flooding Study

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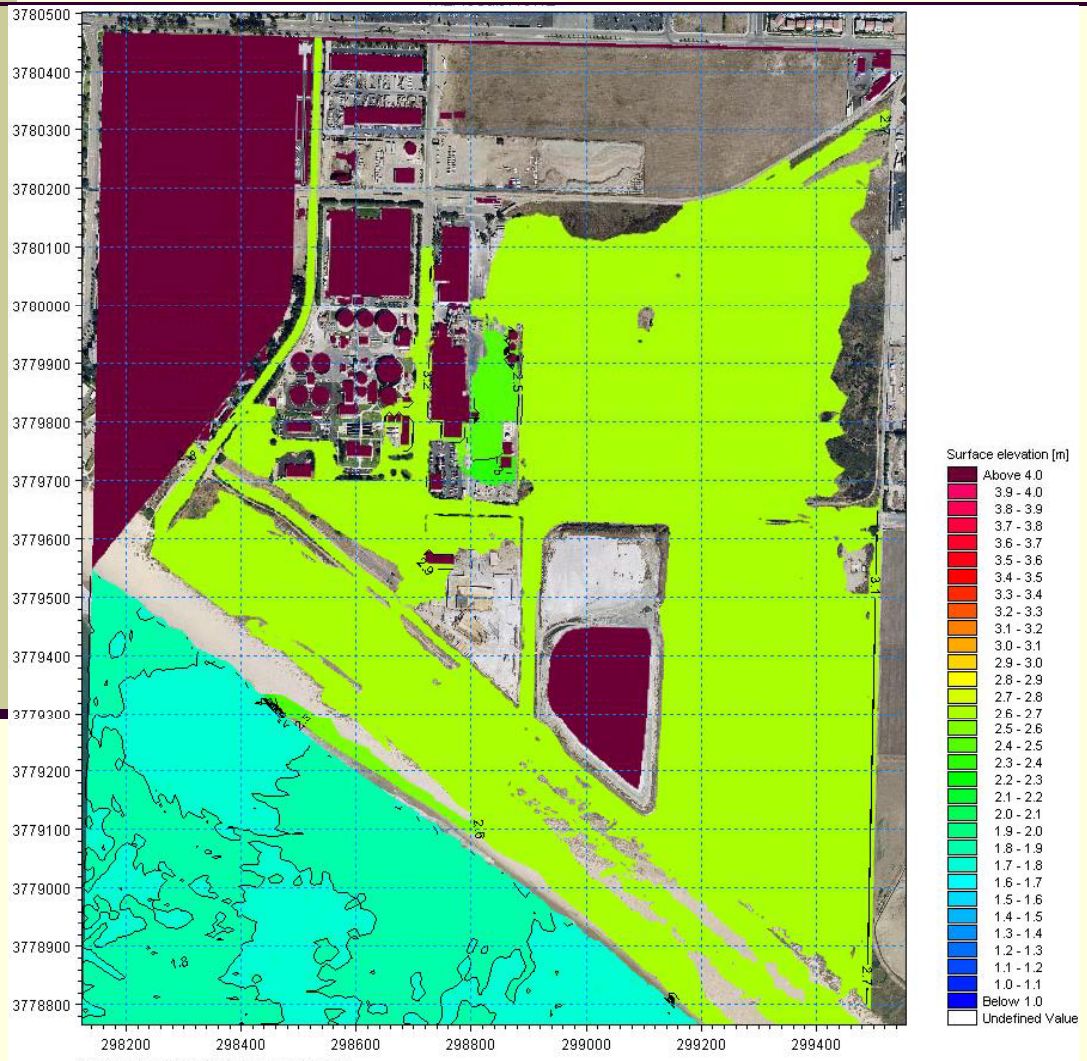

January 17-18, 2010 Flooding

-Flooding occurred at the Oxnard Wastewater Treatment Plant and the International Paper Plant

-The total rainfall from this storm was equivalent to a 2-Year Storm

-Storms & high surf of Dec 2009 – Jan 2010 caused the sand berm to grow approximately 1.5 feet higher than expected

-County staff breached the sand berm near J Street Drain to relieve flooding conditions

Inland Flooding Study

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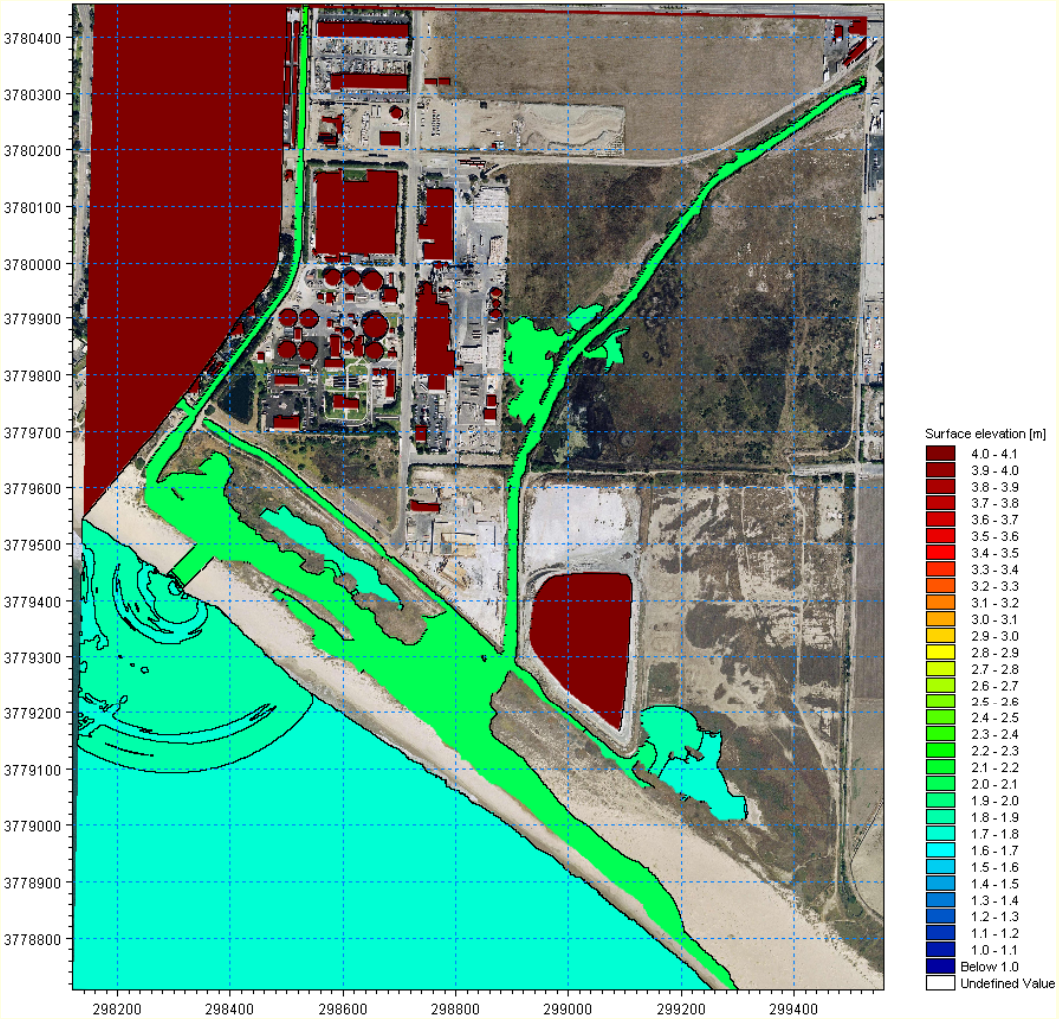

100-Year WS with Grooming

-Manage berm height near J St Drain to 6.5 feet NGVD

-Additional storm flows will cause the berm to breach

-Under breached conditions Ormond Beach Lagoon becomes a tidal waterbody

-Maximum water surface in lagoon is 7.5 feet NGVD

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Coastal Processes Investigation

Project	Year Dredged	Quantities (CY)	Disposal Site
Channel Islands	FY01	1,235,950	Hueneme Beach
	FY03	2,062,695	
	FY05	2,140,915	
	FY07	1,171,035	
	FY09	**2,198,040**	
	FY11	968,530	
Port Hueneme	FY01	0	
	FY03	0	
	FY05	27,200	
	FY07	0	
	FY09	**686,000***	
	FY11	0	

Beach Nourishment Plan

-USACE sand bypass to Hueneme Beach

-Bypass operation occurs every 2 years

-2009 sand bypass quantity was 2,884,040 cubic yards (CY)

-Increased sand at Hueneme Pier by 3 feet

-Increased sand berm at Ormond Beach Lagoon by 1.5 feet

Hydrogeology Study

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Evaluate effects from dewatering in J Street Drain that is necessary during construction (2-4 months of pumping to lower water table ~3 to 6 ft)

Objectives:

- 1 - Identify pathway of groundwater flow in response to dewatering – southern portion only
- 2 – Evaluate potential plume migration from Halaco Superfund Site
- 3 – Identify potential mitigation to prevent movement of groundwater from the Halaco Site

Hydrogeology Study: Conclusions

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- Mitigate by installing sheet piling to minimize migration of Halaco Site groundwater toward J Street Drain
- Refined field testing to identify the geographic extent of mitigation measure is pending
- Migration of groundwater from Halaco Site in response to dewatering will not reach the dewatering wells

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Figure 1: Aerial Photo of Study Area

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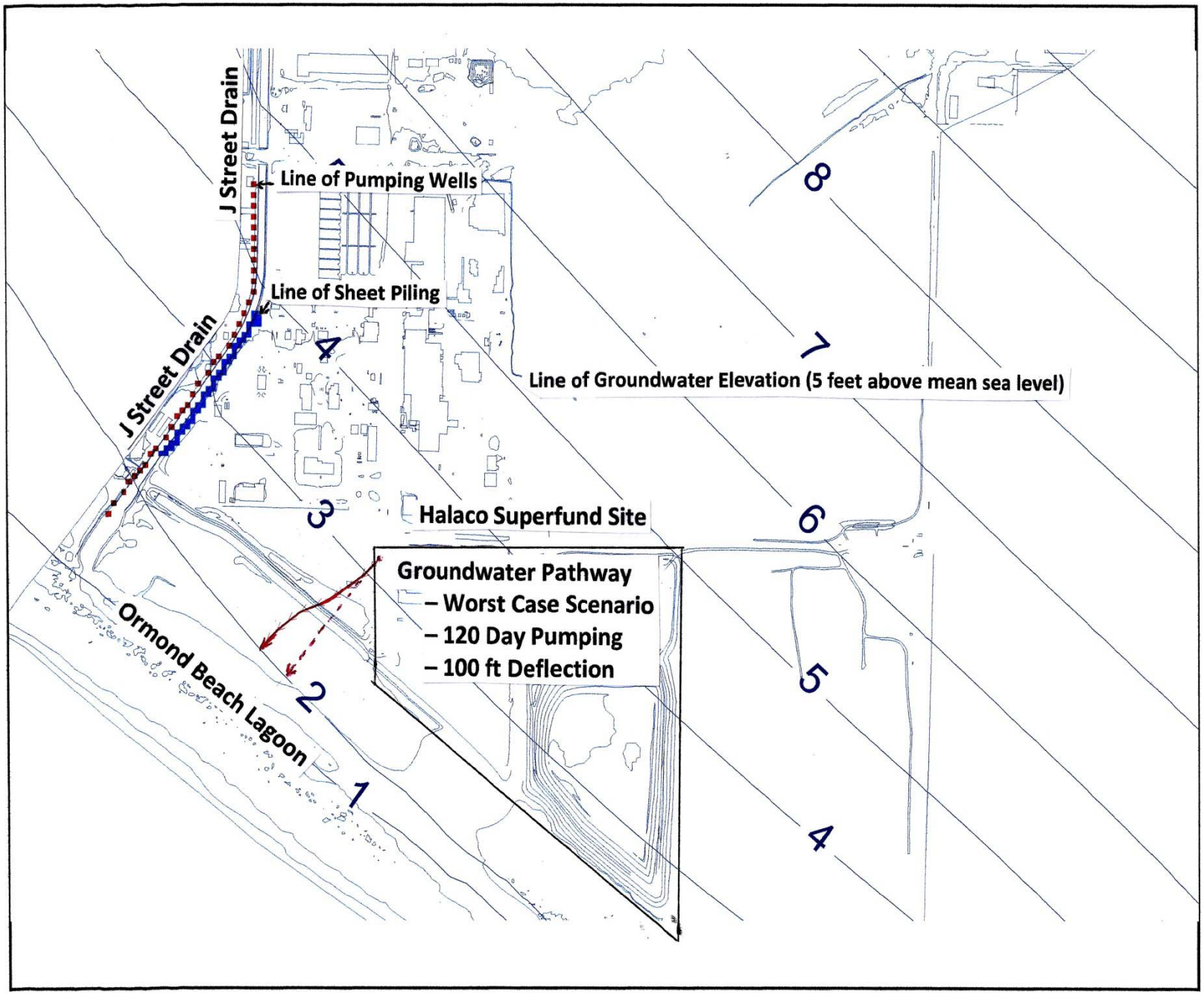

Sediment Transport Study

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- Objectives
  - Investigate potential for existing lagoon bottom to erode once beach sand berm is breached.
  - Identify recurrence interval for flood able to provide positive drainage from the proposed J Street Drain outlet (2.5 ft lower than existing lagoon bottom) to the ocean.
  - Determine if an equilibrium slope will form in the lagoon bottom.

Sediment Transport Study

Public Works Agency

- Conclusions
  - Two sequential 2-year floods would erode lagoon bottom to provide positive drainage.
  - One 5-year flood would have the same results.
  - In either case, an equilibrium channel bottom slope forms similar to the slope of the proposed J Street Drain channel.
  - Once eroded, the lagoon bottom is not anticipated to fill in from J Street Drain discharges, however, the berm will form again.

Sediment Transport Study

Public Works Agency

- Procedure
  - Sediment transport numerical modeling with U.S. Army Corps of Engineers HEC-RAS computer program.
  - Simulations started at time of berm breach.
  - Berm elevation reduced to elevation 1.0 ft NGVD (3.4 ft NAVD).
  - Diurnal tidal series used for downstream boundary condition
  - Simulations started at both low and high tide

Sediment Transport Study

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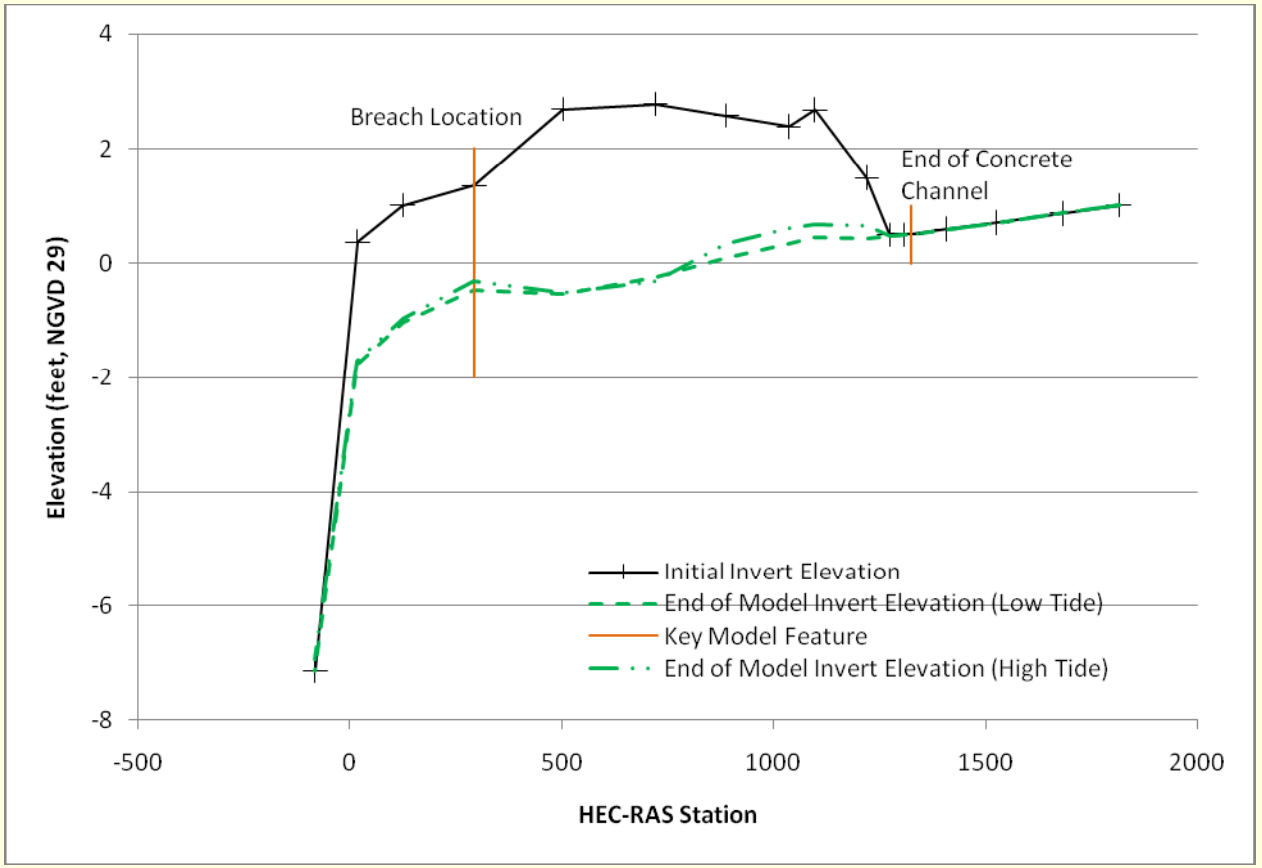
- Results for two sequential 2-year floods



Outlet to Ormond Lagoon

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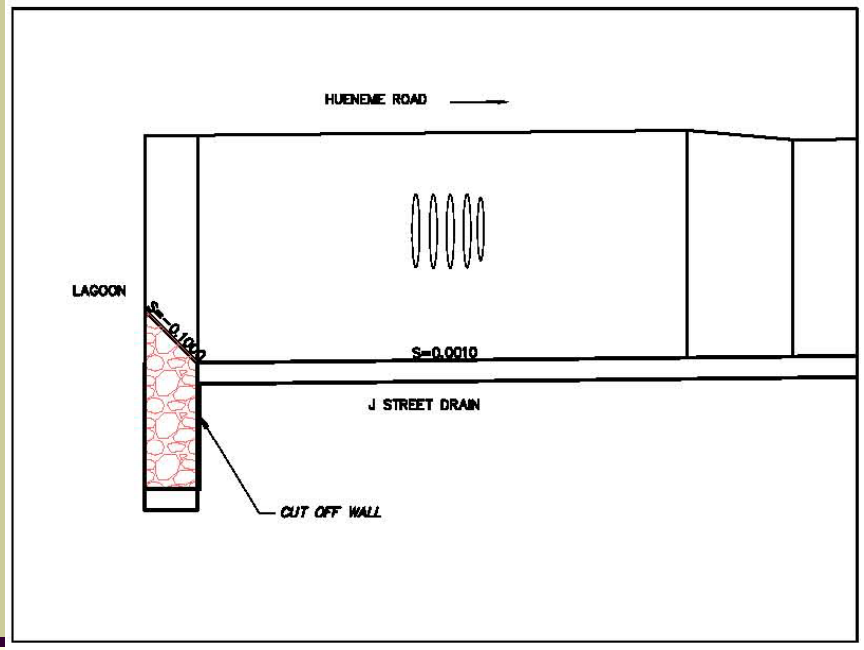
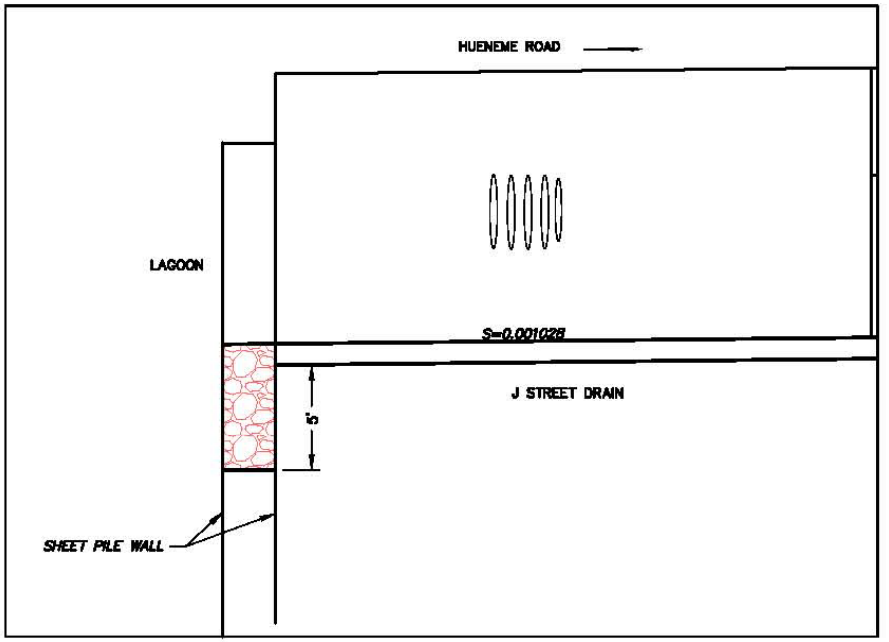


November 2009 DEIR Design



September 2011 RDEIR Design

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Mosquito Study Summary

- Proposed changes to channel amplify channel's negative effects on mosquito breeding
- Vertical walls most desirable to prevent cover
- Deeper channel provides better habitat for fish
- Wider channel creates more wind/wave action
- Preserves existing ease or safety of access

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Mosquito Study Summary

- Ormond Beach Lagoon primary source of mosquitoes in immediate area
- The undeveloped floodplain of OID and urban areas may produce substantial mosquitoes
- New sources at OWWTP in 2009 were identified and addressed
- Evidence suggests current JSD, Hueneme Drain Pump Station, and Hueneme Drain provide poor mosquito habitat
- Proposed project would have no expected change to public health with regard to mosquito production

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Environmental Process

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- California Environmental Quality Act (CEQA) of 1970
  - Public Disclosure of Project Environmental Impacts
  - Provide Project Impact Information to Decision Makers
  - Incorporate Measures to Reduce Significant Impacts

Environmental Process

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- J Street Drain CEQA Compliance To Date
  - Initial Public Meetings in 2008 and 2009 (not required by CEQA).
  - Scoping Meeting: 02/25/2008
  - Draft Initial Study and Notice of Preparation
    Review Period: 04/10 through 05/09/2008
  - Draft Environmental Impact Report Public Meeting: 11/17/2009
    Review Period: 11/02 through 01/15/10 (extended from 12/16/2009)
  - Release Revised DEIR for Public Review (September 23 through November 7, 2011)
  - Public Meeting: September 26, 2011

DEIR 2009 Comments

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- 185 Comment Letters Received
  - 176 from private citizens
  - 3 letters from environmental organizations
  - 6 letters from government agencies

Comment Summary

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- Mosquitos
- Project is unnecessary (no flooding) and unfunded
- Just breach the lagoon
- Does design consider global warming?
- Construction noise
- Vibration damage to homes
- Direct impact to landscaping
- Aesthetic/property value effects from tree loss
- More floodwater = more contact with Halaco
- More trash conveyance

Comment Summary

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- Prefer box culvert N of Hueneme Rd, overflow channel S of Hueneme Rd
- Consult with CDFG on bird nesting mitigation
- Mitigation insufficient to prevent endangered species take
- Emergency breaching outside the rainy season impacts endangered species

Environmental Process

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- J Street Drain CEQA Next Steps
  - RDEIR Public Review Period: 09/23 – 11/07/2011
  - Respond to Public Comments on RDEIR Adequacy
  - Prepare Final EIR
  - Ventura County Board of Supervisors Hearing: Estimated December 2011

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Thank you for your interest

- If you have any questions, please contact:
  - Kirk Norman, Project Engineer, 805-654-2017
  - Angela Bonfiglio Allen, Environmental Planner, 805-477-7175
- To review the DEIR, please go to:
  - www.JStreetDrain.com