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November 13, 2012

Regional Permit Workshop



Overview

- ◎ Orange County Stormwater Program
 - Established Program
 - Applies In-Depth Experience and Expertise
 - Achieving Results

- ◎ Critical Policy Issues Need to be Considered
 - Compliance Needs to be Attainable
 - Prior Progress and Public Processes cannot be Ignored
 - Bacteria TMDL
 - Green Streets
 - Hydromodification

- ◎ Regional Permits and Permitting

Orange County Stormwater Program Experience and Expertise

- ◎ 22 years of program implementation (MS4 permits since 1990)
- ◎ County and City staff bring 100's of years of collective water quality experience
- ◎ Nationally recognized consultant expertise has assisted in all areas of program development
- ◎ Highly acclaimed program elements:
 - Land Development – OC Engineering Council Engineering Project Achievement Award 2012
 - Public Education – CASQA Outstanding Outreach and Media Project

Orange County Stormwater Program Achieving Results

- ◎ Water Quality Management Plans
 - Comprehensive Model WQMP, Technical Guidance, and HMP
 - Developed through a collaborative process
 - Developed by experts in LID & Hydromodification
 - Hundreds of WQMPs processed and structural BMPs installed over the current and past permits

Orange County Stormwater Program Achieving Results

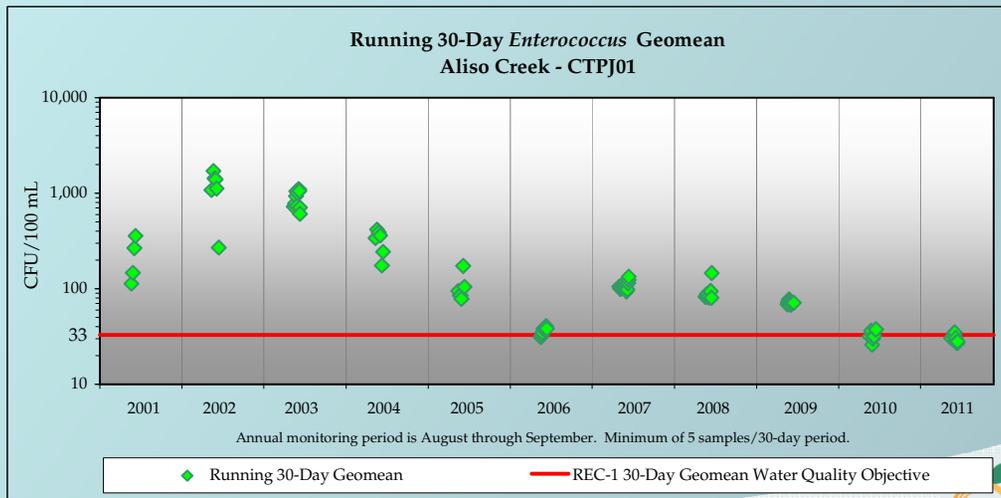
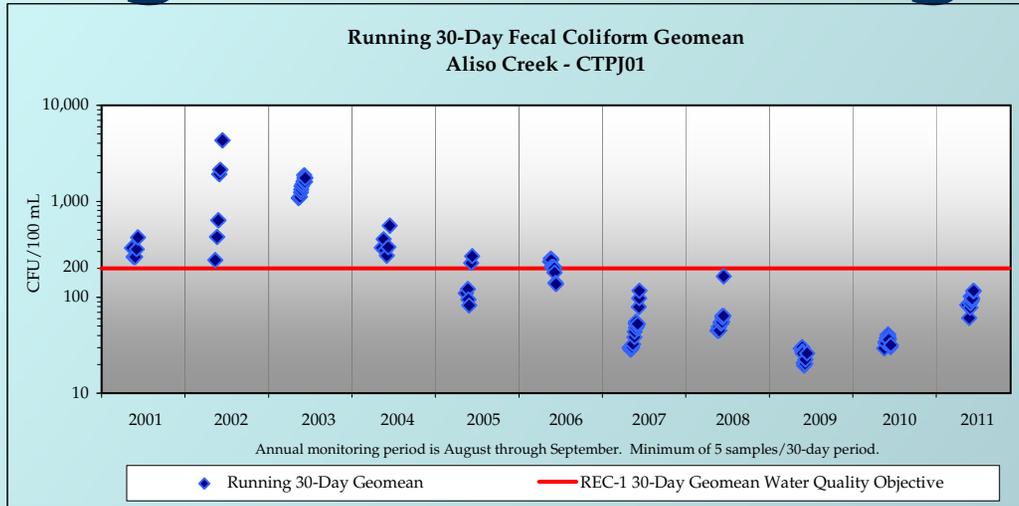
- ◎ Heal The Bay 2012 Beach Water Quality Report Card Highlights
 - Excellent - 94% A or B grades (89% were A).
 - Wet weather grades - 69% A or B grades (15% better than the five-year average)
 - 10 consecutive months (June 21, 2011 to April 6, 2012) OC did not have any beach closures
 - Unprecedented (longest w/o a closure)

Orange County Stormwater Program Achieving Results

- ◎ Baby Beach in Orange County had a long history of chronically polluted beach water.
- ◎ CBI funds allowed the City of Dana Point to install a storm drain diversion.
- ◎ Since the diversion became operational in May 2007, Baby Beach has earned excellent water quality grades during the summer dry weather.



Orange County Stormwater Program Achieving Results



Critical Policy Issues

- ◎ Compliance Needs to be Attainable
- ◎ Prior Progress and Public Processes Cannot Be Ignored
 - Bacteria TMDL
 - Green Streets
 - Hydromodification
- ◎ Regional Permits and Permitting

Compliance Needs to be Attainable

- ◎ Issue: Receiving Water Limitations and Ninth Circuit Decision has created strict liability for discharges causing or contributing to a violation of a water quality standard irrespective of source or significance.
- ◎ Basis: “Runoff Retention” is preferred management strategy for addressing “imperviousness” and progress is tied to development cycle and retrofit opportunities – wet weather urban runoff management is a long term endeavor.

Compliance Needs to be Attainable

◎ Receiving Water Limitations

- Ninth Circuit Decision: NRDC vs. LACFCD
- ...offers no textual support for the proposition that compliance with certain provisions [i.e. the iterative process] shall forgive non-compliance with the discharge prohibitions.....

Footnotes: November 20 SWRCB Workshop
US Supreme Court

Compliance Needs to be Attainable

- ◎ Recommendation:
- ◎ Direct staff to work with the Co-permittees to revise Sections A, D and E to base compliance on development and implementation of the WQIP.
- ◎ Direct staff to advocate for WQIP-based “compliance mechanism” at State Board workshop

Bacteria TMDL Provisions

Nancy Palmer
City of Laguna Niguel
*Bacteria TMDL Stakeholder Advisory
Group*

A Long Road

- ⦿ Language in Bacteria Total Maximum Daily Load documents and Basin Plan Amendments painstakingly developed over 10 years to achieve concurrence and support from Stakeholder Advisory Group, Staff, public, Permittees, Federal EPA and Board
- ⦿ Total Maximum Daily Loads and Bacteria TMDL Implementation Provisions incorporated into Basin Plan via Board-approved Amendments

Draft Permit TMDL Provisions Aren't Consistent with BPAs

- ⦿ TMDL provisions must be consistent with the assumptions and requirements of Basin Plan Amendments (40 CFR 122.44(d)(1)(vii)(B))
- ⦿ Basin Plan Amendments express Regional Board's intent for how TMDLs would be incorporated into the MS4 Permit
- ⦿ Several critical points where the Draft Permit is **contrary** to the intent of Basin Plan Amendments approved by this Board

Critical Points of Inconsistency

- ⦿ TMDL-defined Waste Load Allocations not carried forward into Permit
- ⦿ Intent for feasible WQBELs not respected
- ⦿ Monitoring sampling requirements altered
- ⦿ Key compliance demonstration methods omitted
- ⦿ Re-opener provisions and purpose not acknowledged

Net Result: Non-compliance and Mandatory Minimum Penalties

Bacteria Waste Load Allocations from TMDLs Not Incorporated

- ◎ Bacteria TMDLs allocated numeric daily, monthly, annual and seasonal bacteria *Waste Loads* to Permittees, reflecting flow volumes
- ◎ 40 CFR 122.44(d)(1)(vii)(B) requires Water Quality Based Effluent Limits (WBELs) in MS4 Permits to be consistent with any available TMDL Waste Load Allocations (WLAs)
- ◎ Draft Permit defines bacteria Water Quality Objective *concentrations*, instead of the available TMDL WLAs, as WQBELs

BPAs' Intent for Feasible WQBELs Not Respected

- ◎ Text: “WQBELs may be expressed as numeric effluent limitations (NELs), when feasible, and/or as a best management practice program of expanded or better-tailored BMPs.”
- ◎ Draft Permit fails to include either “better BMPs” or TMDL WLAs for expressing WQBELs
- ◎ Draft expresses WQBELs only as Water Quality concentration NELs, which State Board’s Blue Ribbon Panel concluded were *not feasible*; i.e., not reasonably achievable, for MS4 Permits

BPA Re-Opener Provision Not Acknowledged

- ◎ Board committed to a 5-year re-opener of TMDL
- ◎ Recognized there was no local reference data available, so non-local exceedance-frequencies were used in the TMDL, and need to be corrected through research
- ◎ Draft Permit sets non-local exceedance-frequencies as final compliance requirement
- ◎ Doesn't acknowledge re-opener's role in correcting the final compliance criteria

Sampling Requirements and Starting Line Altered

- ◎ BPA provided for wet-weather sampling “within 24 hours of the end of a storm event”; and set 1996-2002 as baseline for assessing progress
- ◎ Draft Permit requires sampling “within the first 24 hours of the first storm event of the season”; and sets baseline as 2002-2010
- ◎ Translation: Sets up sampling during worst-case concentration conditions, and negates credit for progress already made toward interim 50% compliance

Key Compliance Demonstration Methods Omitted

- ◎ BPA allows for final compliance by demonstrating implementation of Best Management Practices to “control all anthropogenic sources of indicator bacteria”
- ◎ Draft Permit does NOT allow for either BMP-based or load-based final compliance

How It All Adds Up

- ◎ The Draft's WQBELs are not going to be achievable, and Permittees will be out of compliance and in violation of NELs
- ◎ Noncompliance with Numeric Effluent Limits in Permit = Mandatory Minimum Penalties for violations {Section 13385 Water code}
- ◎ Regional Board has no discretion when it comes to MMPs, even for minor violations {Section 13385 Water code}

Corrections Needed

- ◎ Incorporate TMDL Waste Load Allocations as Water Quality Based Effluent Limits
- ◎ Correct the starting line and monitoring requirements
- ◎ Re-affirm the re-opener commitment to correct the finish-line criteria
- ◎ Allow for final compliance option through implementing BMPs

Recommendation

- ◎ Direct your Staff to work with the Stakeholders to correct all the TMDL provisions that are inconsistent with Federal law, contrary to the intent of the Basin Plan Amendments, and will result in non-discretionary Mandatory Minimum Penalties

“Green Streets” and Hydromodification

Scott Taylor
RBF

Critical Policy Issues: LID and Hydromodification - Roads

Issue: USEPA guidance “Managing Wet Weather with Green Infrastructure: Green Streets” should be compliance for municipal roadway projects

Basis:

⊙ **SD Regional Permit**

- Inconsistent with existing other So Cal MS4 permits
- Does not consider roadway constraints; inflexible
- Potential to impede retrofit roadway projects

⊙ **USEPA Guidance**

- Used in all other So Cal MS4 permits - national standard
- Considers roadway constraints; provides flexibility
- Encourages retrofit of roadways to the MEP

Retrofit of Existing Roadways

Example



Retrofit of Existing Roadways



- ◎ Constraints
 - Slope
 - Existing Drainage/Storm Drain

Retrofit of Existing Roadways



◎ Constraints

- Slope
- Existing Drainage/Storm Drain
- **Limited Right-of-Way**
- **Physical Constraints**

Retrofit of Existing Roadways



⦿ Constraints

- Slope
- Existing Drainage/Storm Drain
- Limited Right-of-Way
- Physical Constraints

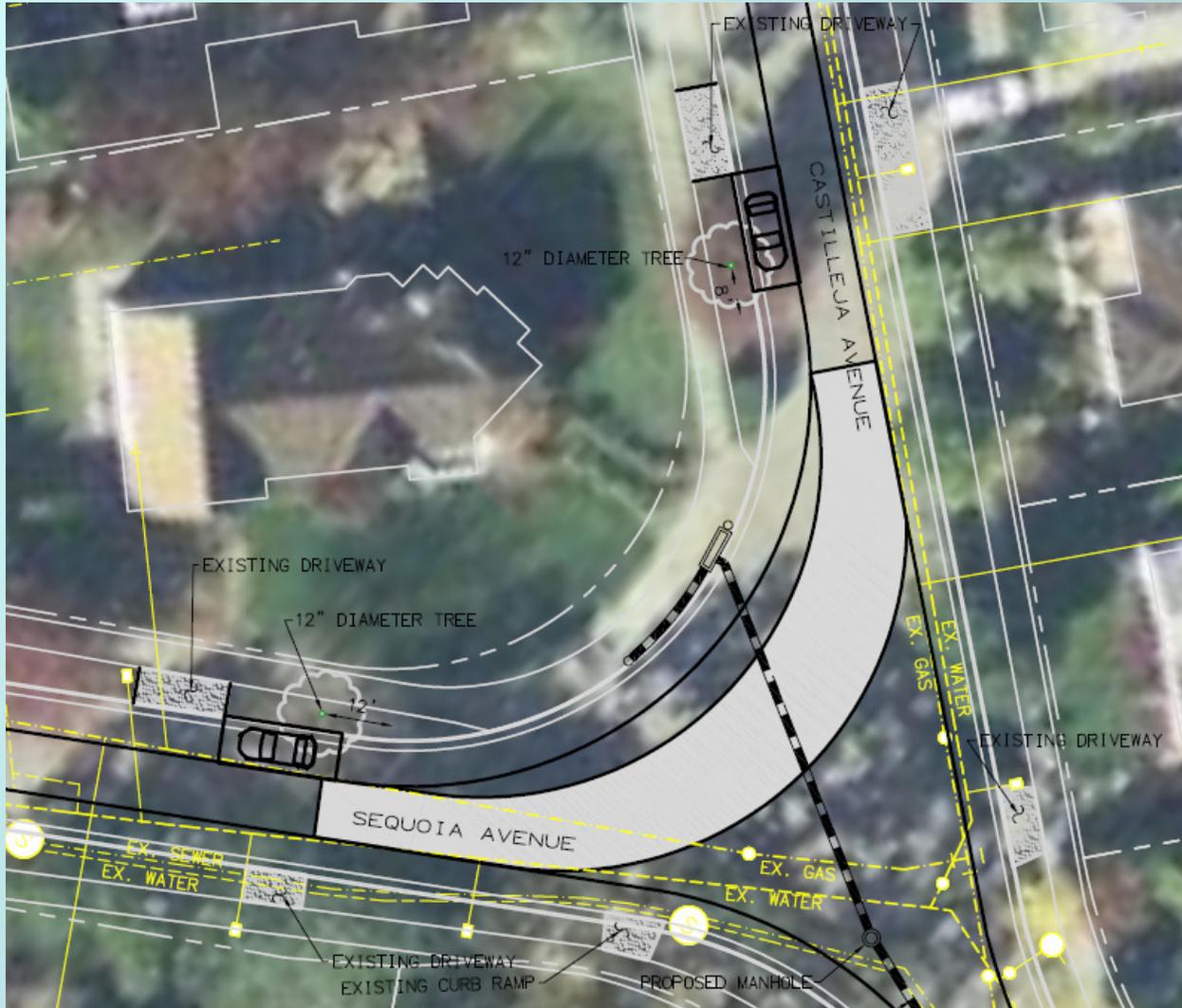
– Utilities

– Geotechnical

– Structural Concerns

– Street Trees

Retrofit of Existing Roadways



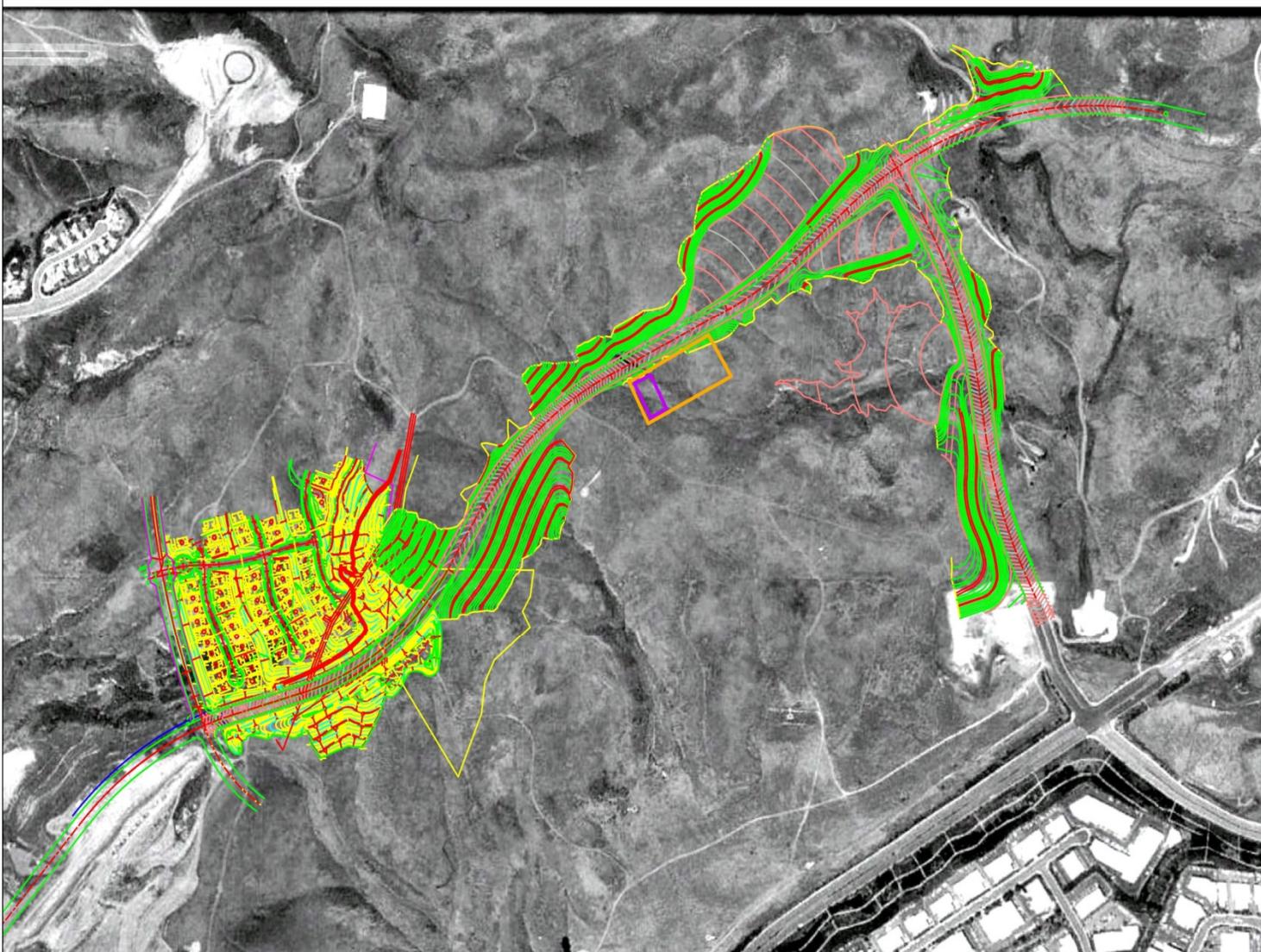
- ◎ Constraints
 - Slope
 - Existing Drainage/Storm Drain
 - Limited Right-of-Way
 - Physical Constraints
 - Utilities
 - Geotechnical
 - Structural Concerns
 - Street Trees
 - **Parking**
 - **Fire Truck Access**

Retrofit of Existing Roadways



- ◎ Constraints
 - Slope
 - Existing Drainage/Storm Drain
 - Limited Right-of-Way
 - Physical Constraints
 - Utilities
 - Geotechnical
 - Structural Concerns
 - Street Trees
 - Parking
 - Fire Truck Access
 - Proposed BMPs
 - Biofiltration Planters
 - Pervious Pavers

New Roadways



Constraints

- Utilities
- Geotechnical
 - Soils
 - Cut & Fill
- Slope
- Physical Constraints
- Parking
- Pedestrian Access
- Bicycle Access

Additional Footprint

- Hydromod Basin (orange)
 - 3 acres
- Biofiltration (purple)
 - 0.5 acres
- Roadway
 - 12.4 acres

Critical Policy Issues: LID and Hydromodification - Roads

Recommendation: Direct staff to include the USEPA guidance “Managing Wet Weather with Green Infrastructure: Green Streets” as the compliance standard for municipal roadways

Critical Policy Issues: Hydromodification

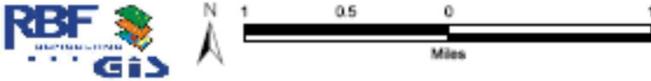
- ◎ **Issue:** The permit uses a one size fits all approach to applicability of hydromodification management which is not appropriate as the criteria should not apply to engineered channels

- ◎ **Basis:**
 - No environmental benefit as the engineered channels are designed to accept increased flows
 - Engineered channels serve a flood control purpose (Legislative Mandate)
 - No opportunity for restoration for engineered channels when there is adjacent development

Example 1: Prima Deschecha



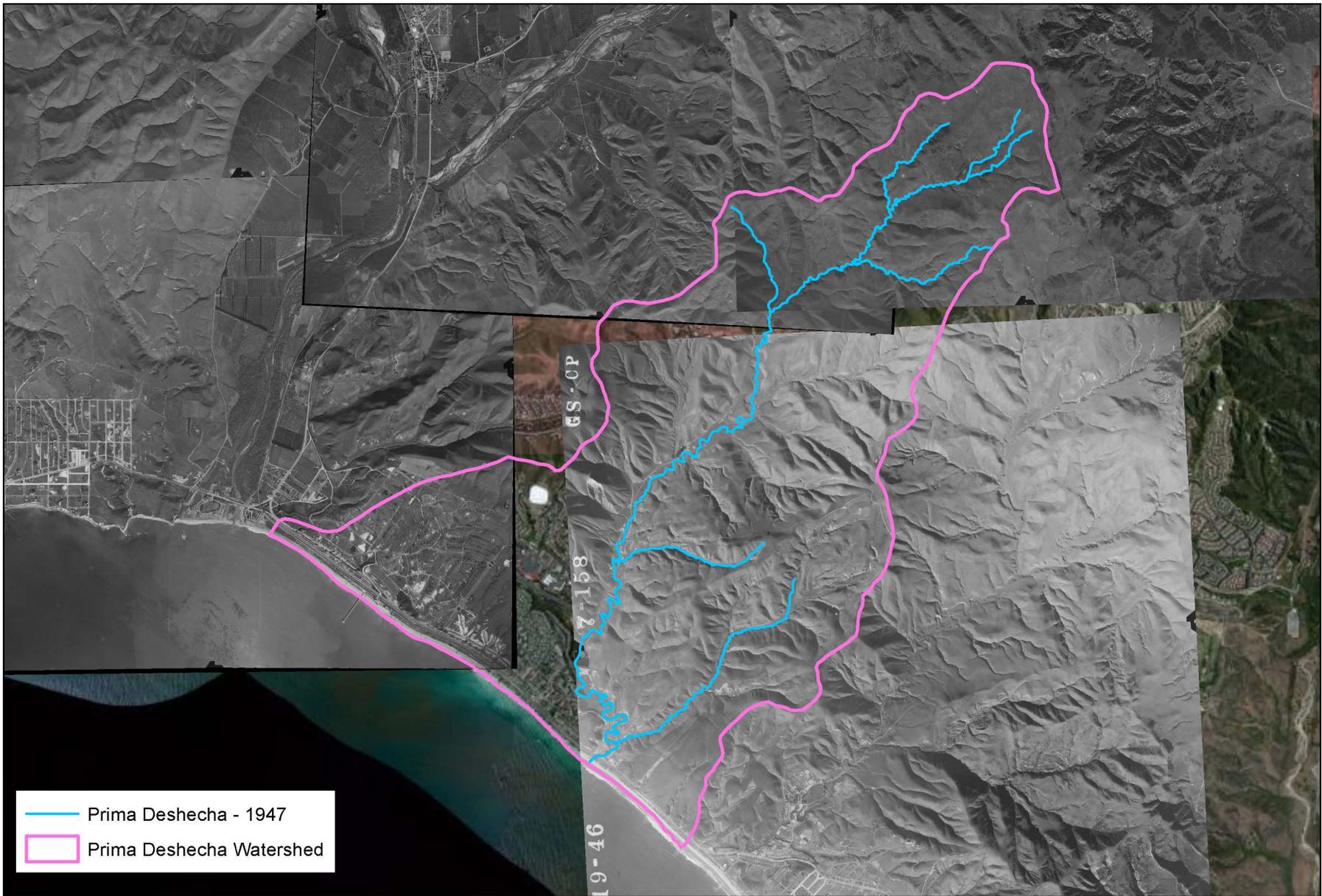
- Prima Deshecha - 1947
- Prima Deshecha Creek - 2012
- Prima Deshecha Watershed



Prima Deshecha Watershed - Comparison 1947/2012
San Diego Regional Water Quality Control Board

Sources: ESRI; OGIW; OC Parks; Microsoft Satellite Imagery; SDRWQCB

South OC Hydromodification Workshop



— Prima Deshecha - 1947
□ Prima Deshecha Watershed

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Prima Deshecha - Aerial - 1947
San Diego Regional Water Quality Control Board

Sources: ESRI; OCPW; OC Parks; Microsoft Satellite Imagery; SDRWQCB

South OC Hydromodification Workshop

- Prima Deshecha - 1947
- 1979 - 100-year floodplain
- 1979 - 500-year floodplain



Prima Deshecha Watershed - 1947 Alignment San Diego Regional Water Quality Control Board

Sources: ESRI; OCPW; OC Parks; Microsoft Satellite Imagery; SDRWQCB

Regional Permit Discussion - Hydromodification in South Orange County



- Prima Deshecha - 1947
- Prima Deshecha - 2012
- 1979 - 100-year floodplain
- 1979 - 500-year floodplain



Prima Deshecha Watershed - 1947 vs. 2012 Alignment
San Diego Regional Water Quality Control Board

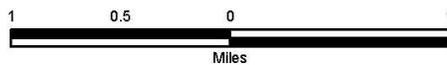
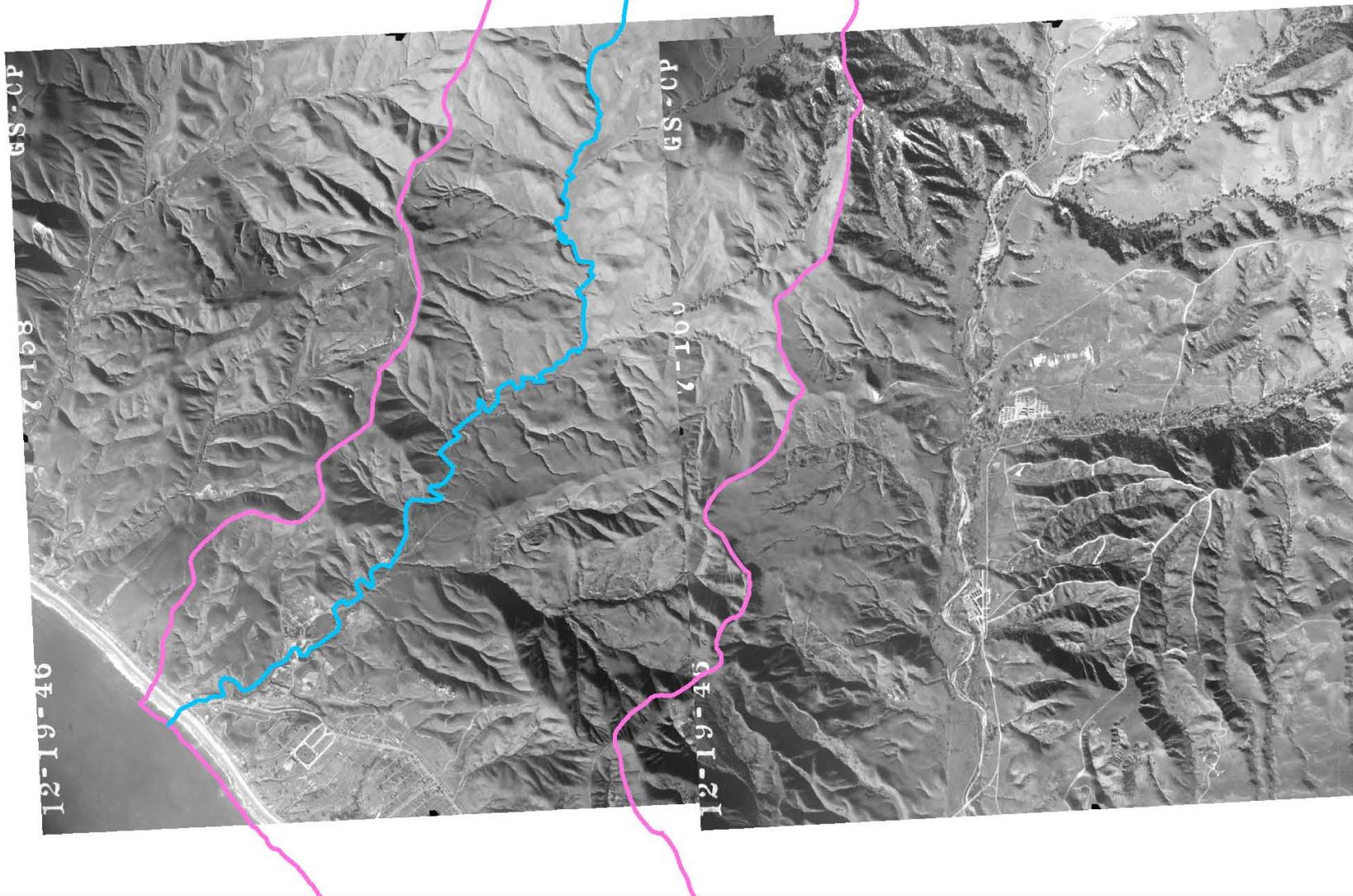
Sources: ESRI; OCPW; OC Parks; Microsoft Satellite Imagery; SDRWQCB

Example 2: Segunda Descheca



Segunda Deshecha Watershed - Comparison 1947 vs. 2012
 San Diego Regional Water Quality Control Board

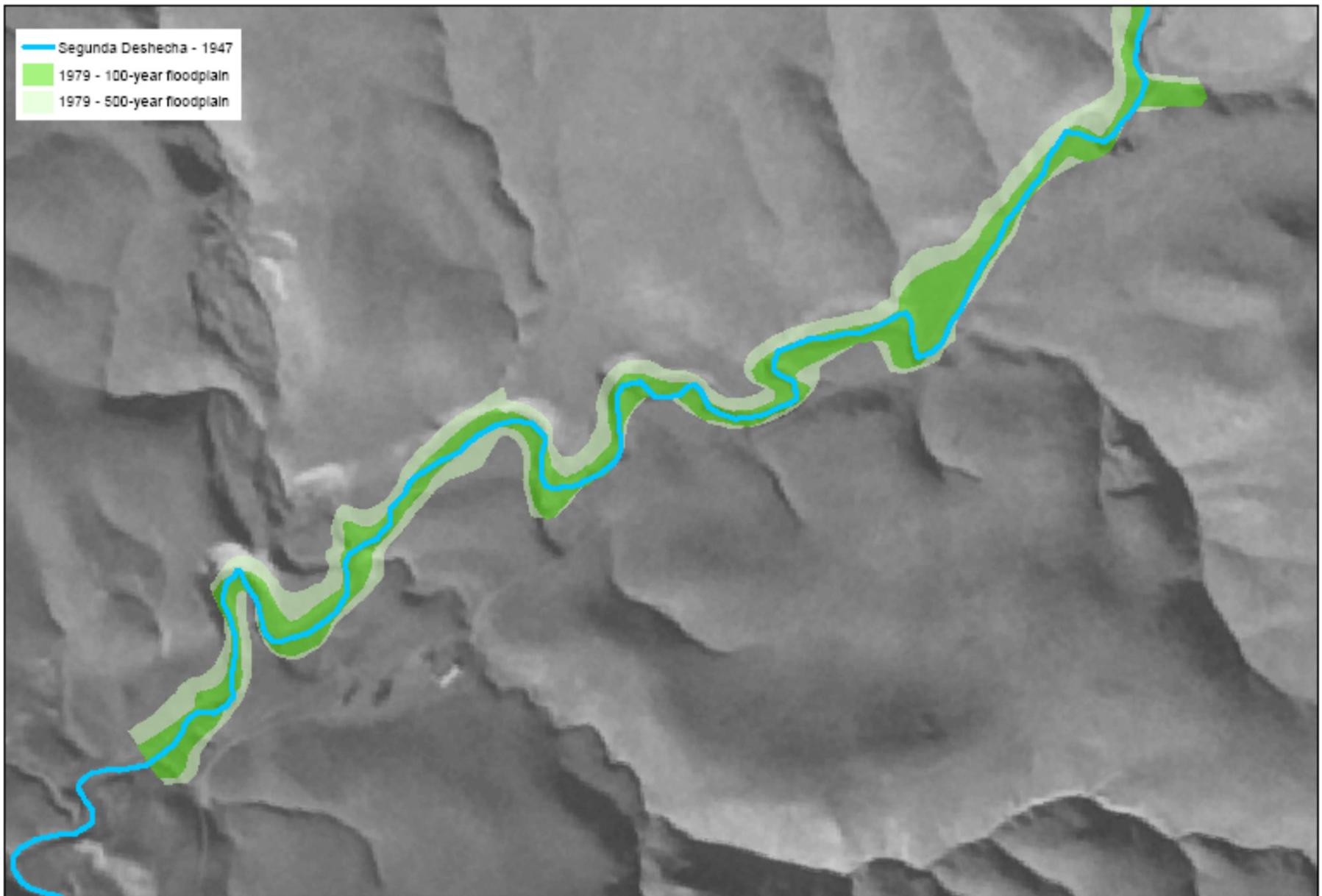
Sources: ESRI; OCPW; OC Parks; Microsoft Satellite Imagery; SDRWQCB



Segunda Deschecha Watershed - Aerial - 1946
San Diego Regional Water Quality Control Board

Sources: ESRI; OCPW; OC Parks; Microsoft Satellite Imagery; SDRWQCB

South OC Hydromodification Workshop



- Segunda Deshecha - 1947
- 1979 - 100-year floodplain
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Segunda Deshecha Watershed - 1947 Alignment
San Diego Regional Water Quality Control Board

Sources: ESRI; OCPW; OC Parks; FEMA; USGS; Microsoft Satellite Imagery; SDRWQCB

Regional Permit Discussion - Hydromodification in South Orange County



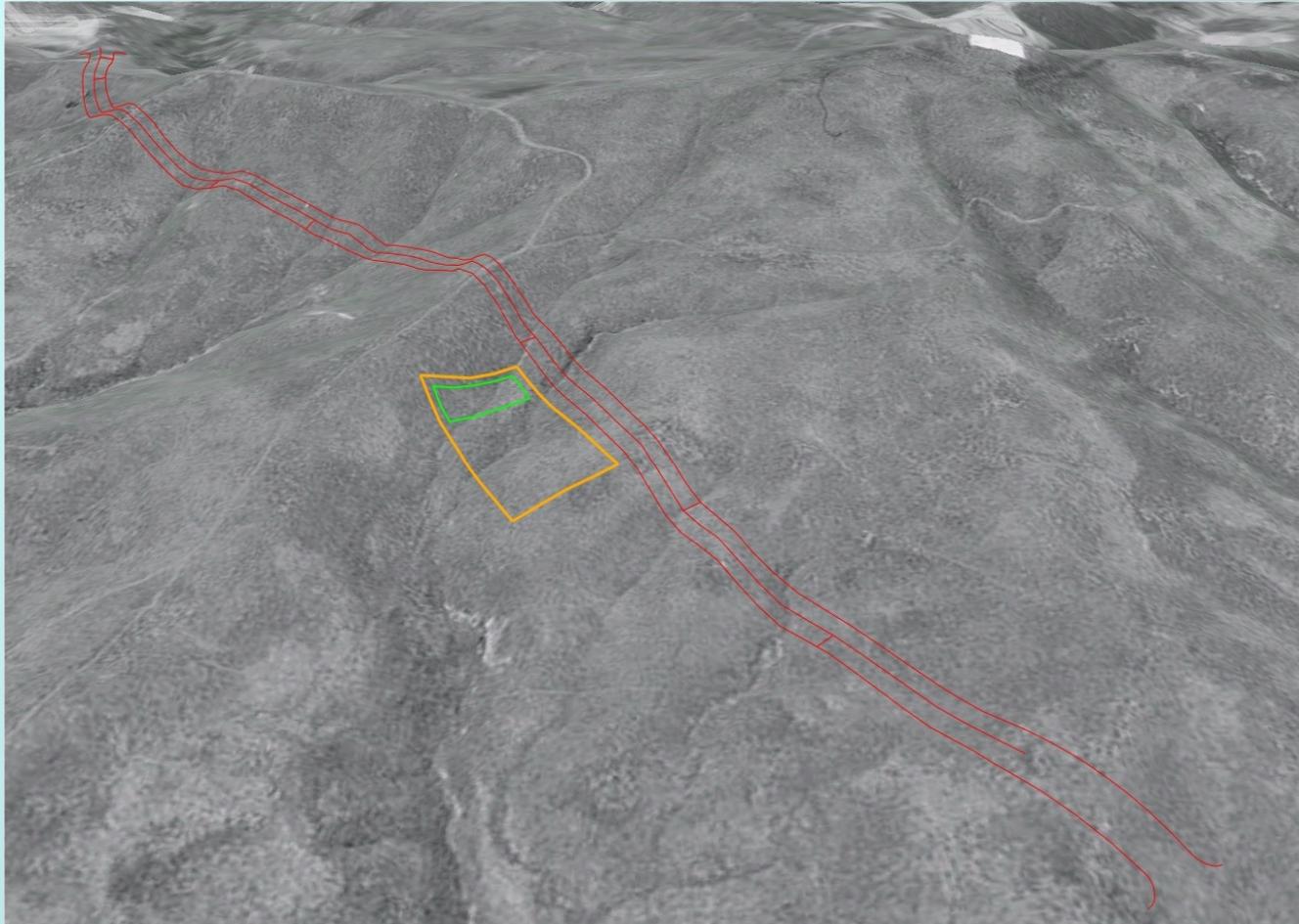
- Segunda Deshecha - 2012
- Segunda Deshecha - 1947
- 1979 - 100-year floodplain
- 1979 - 500-year floodplain



Segunda Deshecha Watershed - 1947 vs. 2012 Alignment
San Diego Regional Water Quality Control Board

Sources: ESRI; OCPW; OC Parks; USGS; FEMA; Microsoft Satellite Imagery; SDRWQCB

Hydromodification Management & LID Costs



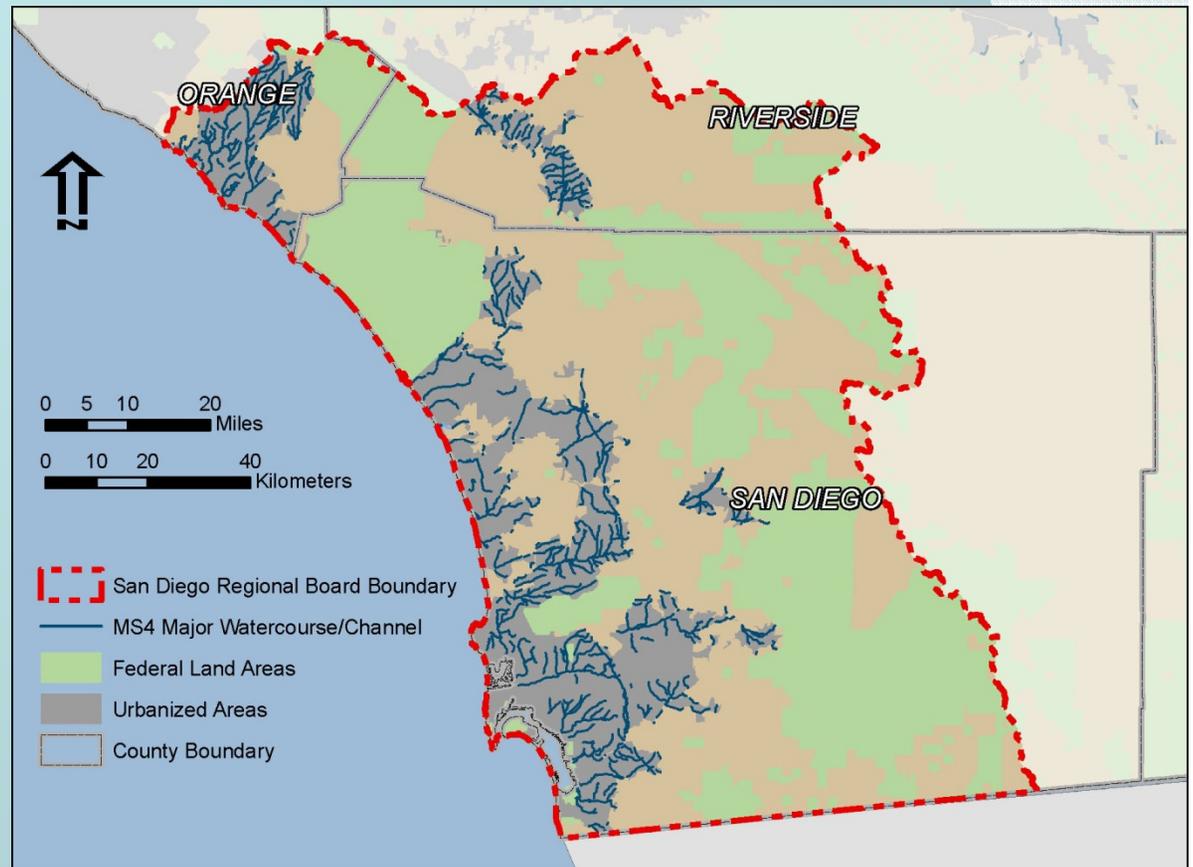
- ◎ Hydromod Basin (orange)
 - Volume: 11.5 ac-ft
 - Size: 3 acres
 - \$2.8 Million
- ◎ Biofiltration (green)
 - Volume: 0.9 ac-ft
 - Size: .5 acres
 - \$540,000

Critical Policy Issues: Hydromodification

Recommendation: Direct staff to include a special condition that engineered channels are not subject to the hydromodification criteria

Critical Policy Issues: Regional Permit Not Consistent with CWA

- Regional Permitting Approach Requires Adjacency:
 - an interconnected MS4,
 - common jurisdiction, or
 - common watershed
- San Juan Hydrologic Unit in South OC drains to the Pacific Ocean



Summary

- ◎ Critical Policy Issues Need to be Addressed:
 - Compliance Needs to Be Attainable
 - Prior Progress and Public Processes Cannot Be Ignored
 - LID and Hydromodification – Roads
 - Hydromodification
 - Bacteria TMDL

- ◎ Recommendation: Direct staff to continue the dialogue