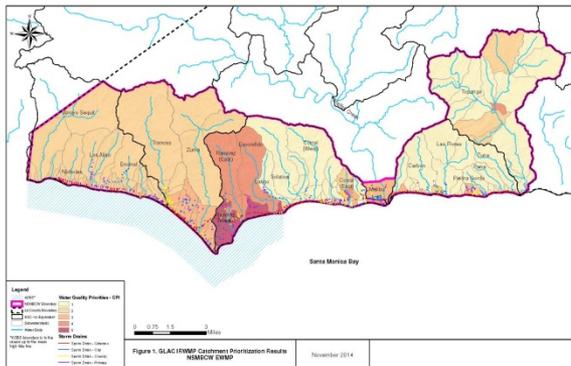
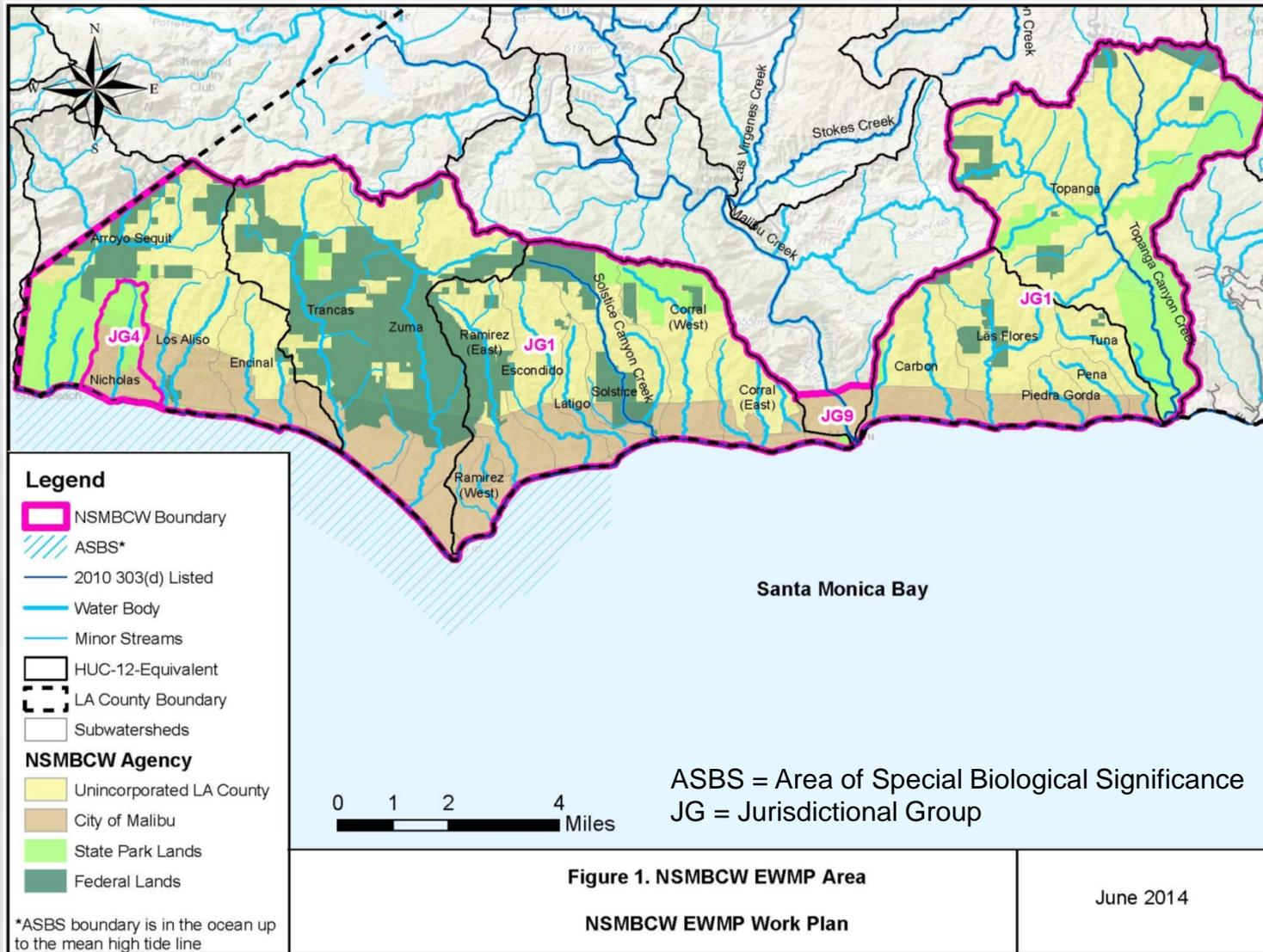


NORTH SANTA MONICA BAY COASTAL WATERSHEDS ENHANCED WATERSHED MANAGEMENT PROGRAM

Public Workshop #2
King Gillette Ranch, Calabasas
November 13, 2014



NSMBCW WATERSHED



REVIEW & OVERVIEW

Public Meeting #1

- Overview of Enhanced Watershed Management Program (EWMP) Process
 - Water Quality Priorities
 - Control Measures to Address Water Quality Priorities
 - Reasonable Assurance Analysis (RAA)
- Overview of Coordinated Integrated Monitoring Program (CIMP)

Public Meeting #2

- Identification of Potential Regional EWMP Projects

BACKGROUND

- The Municipal Stormwater Permit requires agencies to identify potential projects to improve water quality and provide other benefits (“Regional EWMP Projects”)
- Areas not draining to these projects must use scientific modeling to show that water quality objectives will be met
 - This modeling process is called the Reasonable Assurance Analysis (RAA)
 - The RAA may lead to the identification of additional, smaller-scale water quality improvement projects

REGIONAL EWMP PROJECTS

Regional EWMP Project

- Design storm: 85th percentile, 24-hour
- Design storm must be fully retained
- Size of drainage area not limited
- Identified prior to RAA
- No RAA required

Regional BMP

- Design storm: not specified
- Design storm not required to be retained (treat and release ok)
- Typically defined by tributary area ≥ 5 acres
- Identified via RAA

APPROACH

- Input from NSMBCW Group
- Previous Studies to Identify Projects
 - Greater LA County Integrated Regional Water Management Plan (GLAC IRWMP)
 - North Santa Monica Bay Beaches J1/4 Bacteria TMDL Implementation Plan (IP)
 - Santa Monica Bay Beaches Bacteria TMDL J1/4 Site Evaluations Technical Report
 - Additional work conducted by the City of Malibu
- Desktop-level Screening
 - Drainage area ≥ 5 acres
 - Can the 85th percentile storm be retained?
 - Environmental and construction feasibility

GLAC IRWMP PRIORITIZATION

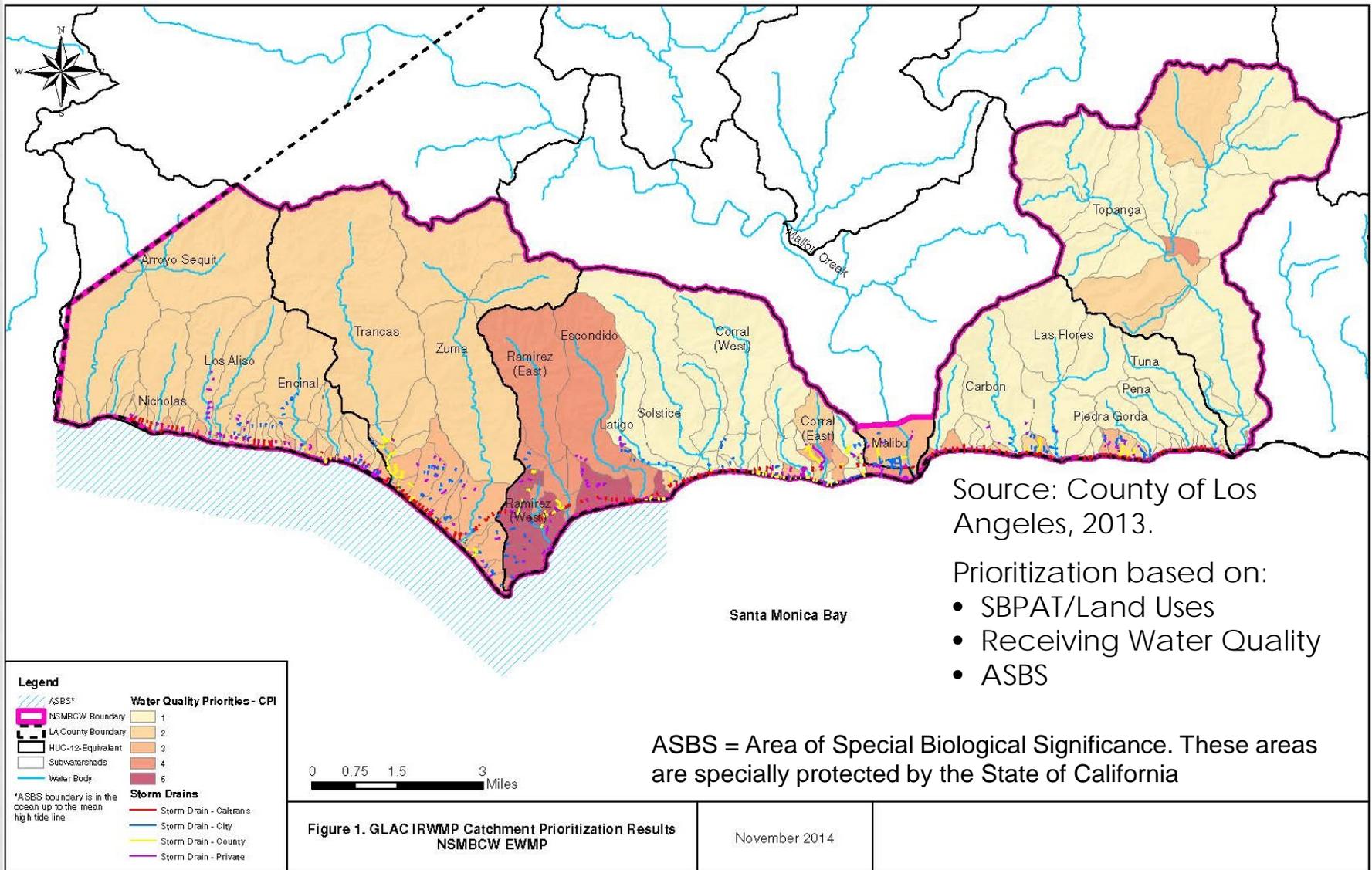
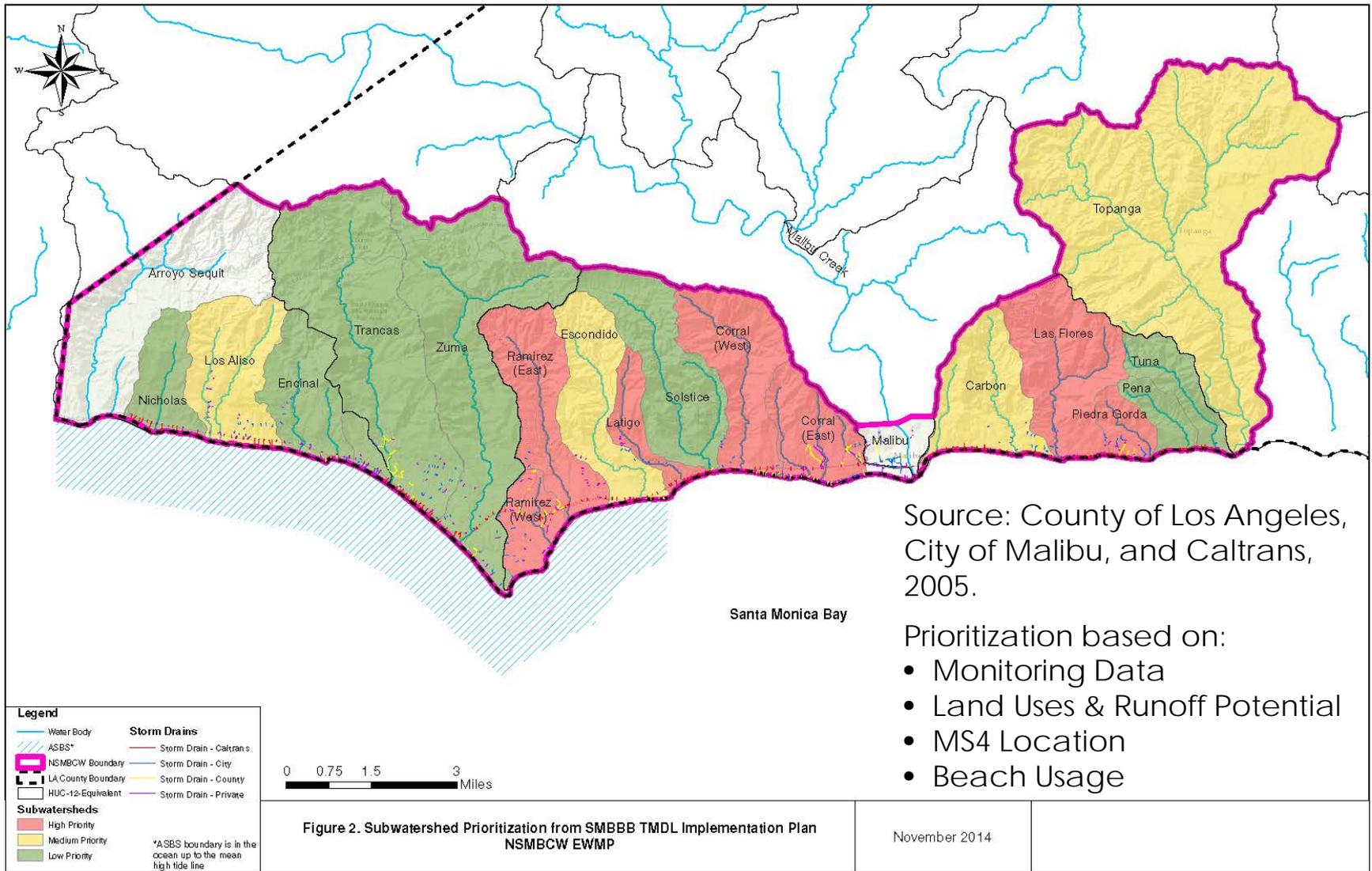


Figure 1. GLAC IRWMP Catchment Prioritization Results NSMBCW EWMP

November 2014

J1/4 BACTERIA TMDL IP PRIORITIZATION

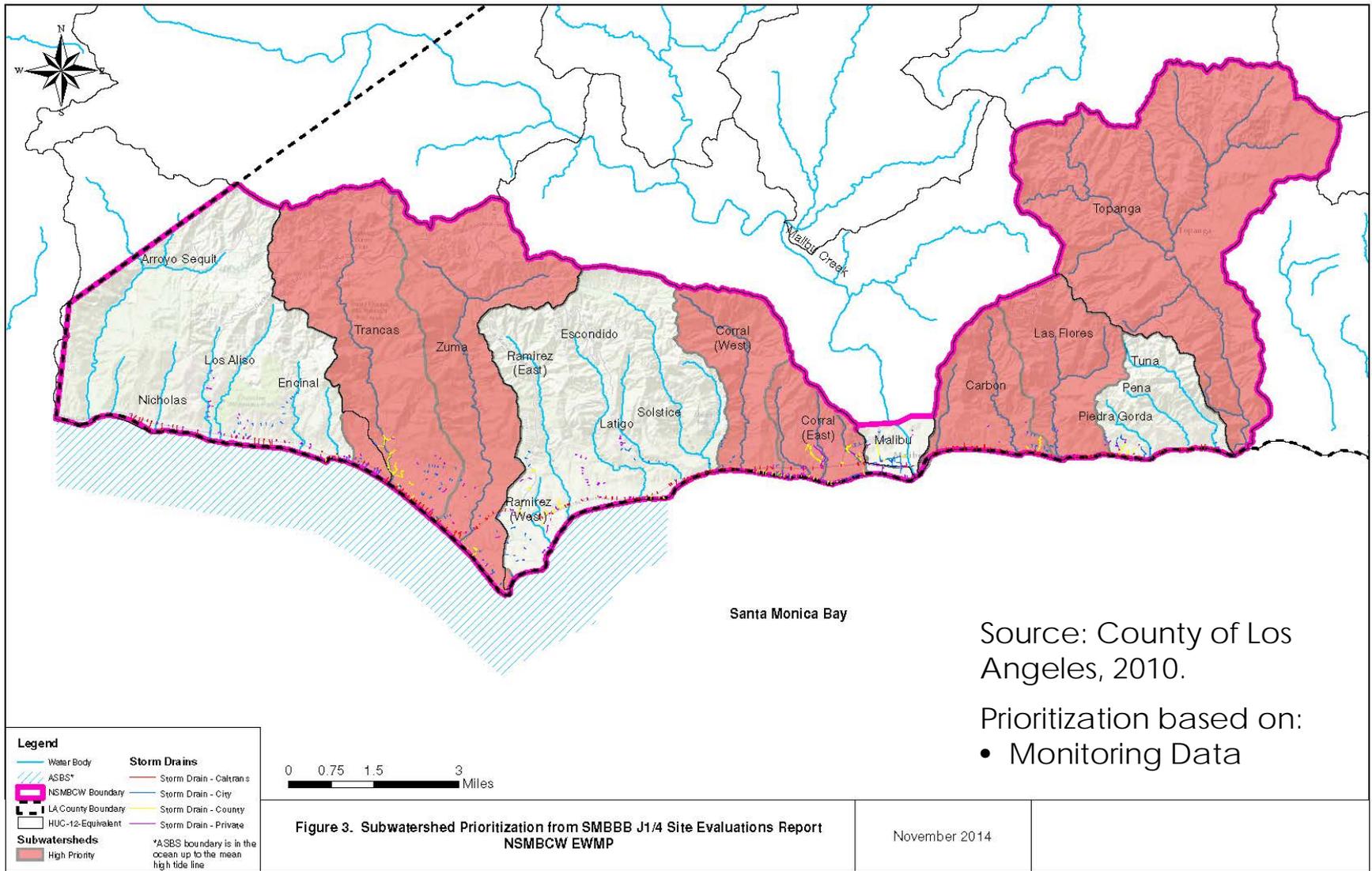


Source: County of Los Angeles, City of Malibu, and Caltrans, 2005.

Prioritization based on:

- Monitoring Data
- Land Uses & Runoff Potential
- MS4 Location
- Beach Usage

J1/4 SITE EVALUATION PRIORITIZATION

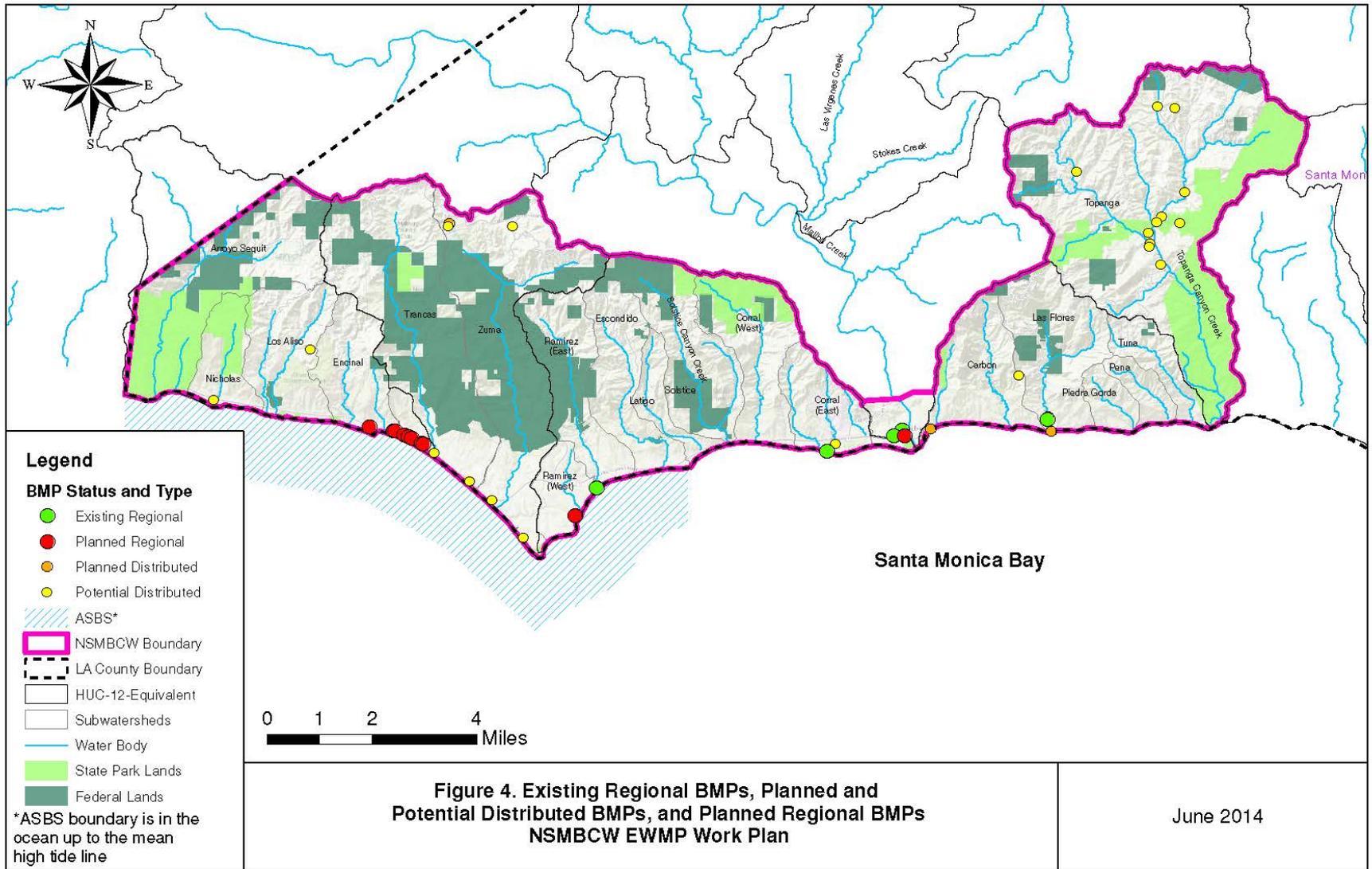


Source: County of Los Angeles, 2010.

Prioritization based on:

- Monitoring Data

PREVIOUSLY IDENTIFIED BMPS



SAMPLE OF SCREENING ANALYSIS

Subwatershed	Agency	Project Name	BMP Category	Siting Notes
Los Aliso	Malibu/ SMMC	Charmlee Nature Center Public Rec Area	Infiltration	Minimal benefit based on tributary land use (limited development) ; Ownership being transferred No
Trancas	County	Trancas-2	Infiltration Trench	Minimal benefit based on tributary land use (limited development) No
		Trancas-3	Infiltration Trench	Minimal benefit based on tributary land use (limited development) No
Trancas/Zuma	County	Zuma-3	Bioretention	Not capable of retaining the design storm No
	LACDBH	Zuma County Beach Parking Lots	Infiltration	Potential Yes

EXAMPLE PROJECTS

TRANCAS CANYON, ZUMA BEACH,
TOPANGA CANYON

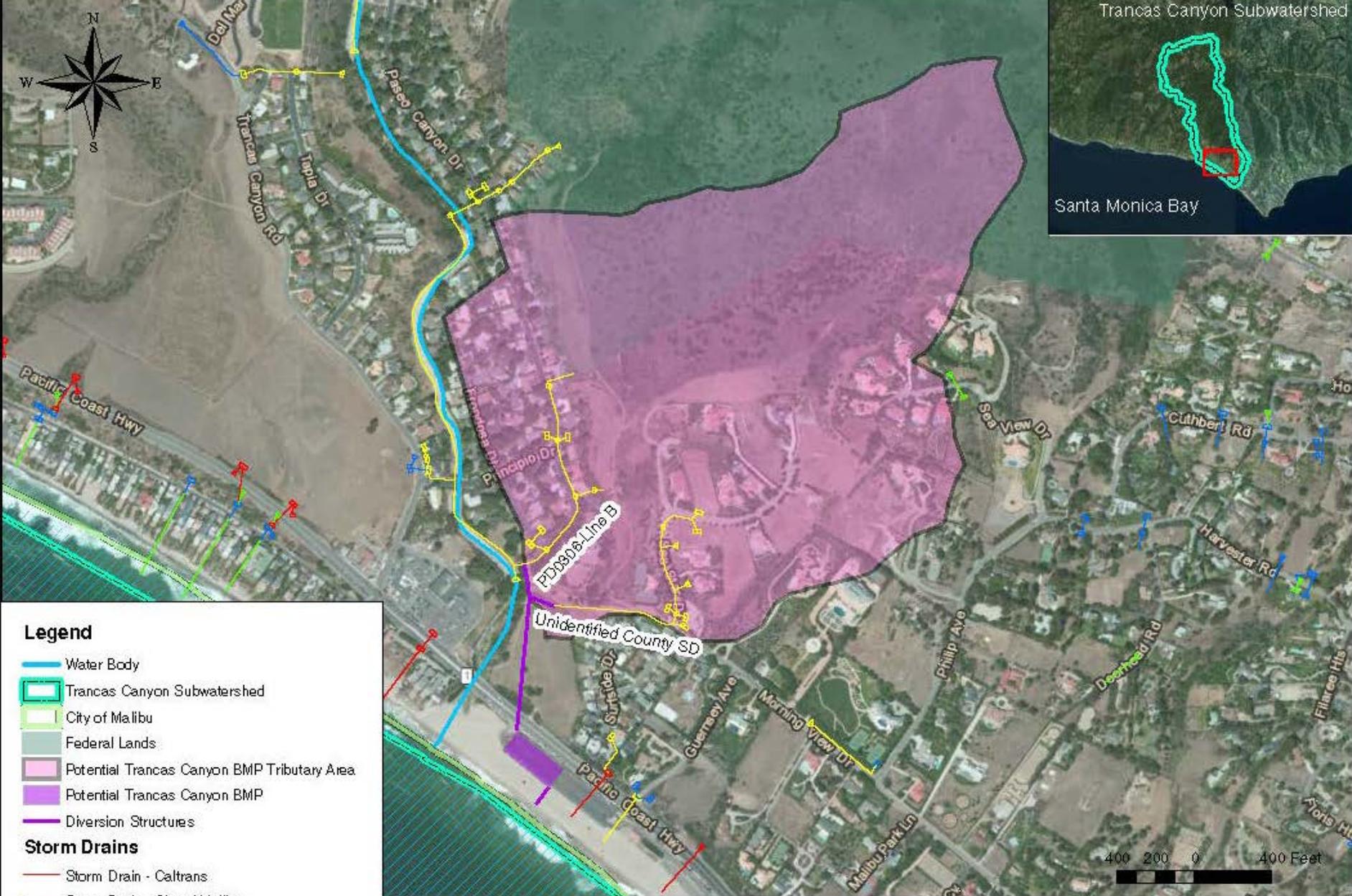
12

TRANCAS CANYON CREEK

POTENTIAL REGIONAL EWMP PROJECT



AERIAL PHOTO OF TRANCAS CANYON WATERSHED, FACING NORTH



- Legend**
- Water Body
 - Trancas Canyon Subwatershed
 - City of Malibu
 - Federal Lands
 - Potential Trancas Canyon BMP Tributary Area
 - Potential Trancas Canyon BMP
 - Diversion Structures
- Storm Drains**
- Storm Drain - Caltrans
 - Storm Drain - City of Malibu
 - Storm Drain - County of Los Angeles
 - Storm Drain - Private
 - ASBS* *ASBS boundary is in the ocean up to the mean high tide line

**Trancas Canyon Subwatershed
Potential Regional EWMP Project
Underground Infiltration Vault
NSMBCW EWMP**

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TRANCAS CANYON CREEK POTENTIAL REGIONAL EWMP PROJECT

- Underground infiltration gallery at Zuma Beach
- Pretreatment via a large solids separator (e.g., "CDS unit")
- Diversion of two County-owned storm drain lines draining approximately 130 acres
- Designed to retain 85th percentile, 24-hr storm event
- Treating runoff from single family residences and undeveloped land



Legend

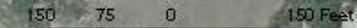
- Water Body
- Potential Trancas Canyon BMP Tributary Area
- Potential Trancas Canyon BMP
- Potential Pretreatment
- Diversion Structures

Storm Drains

- Storm Drain - Caltrans
- Storm Drain - City of Malibu
- Storm Drain - County of Los Angeles
- Storm Drain - Private
- ASBS* *ASBS boundary is in the ocean up to the mean high tide line

Potential Project Partners:

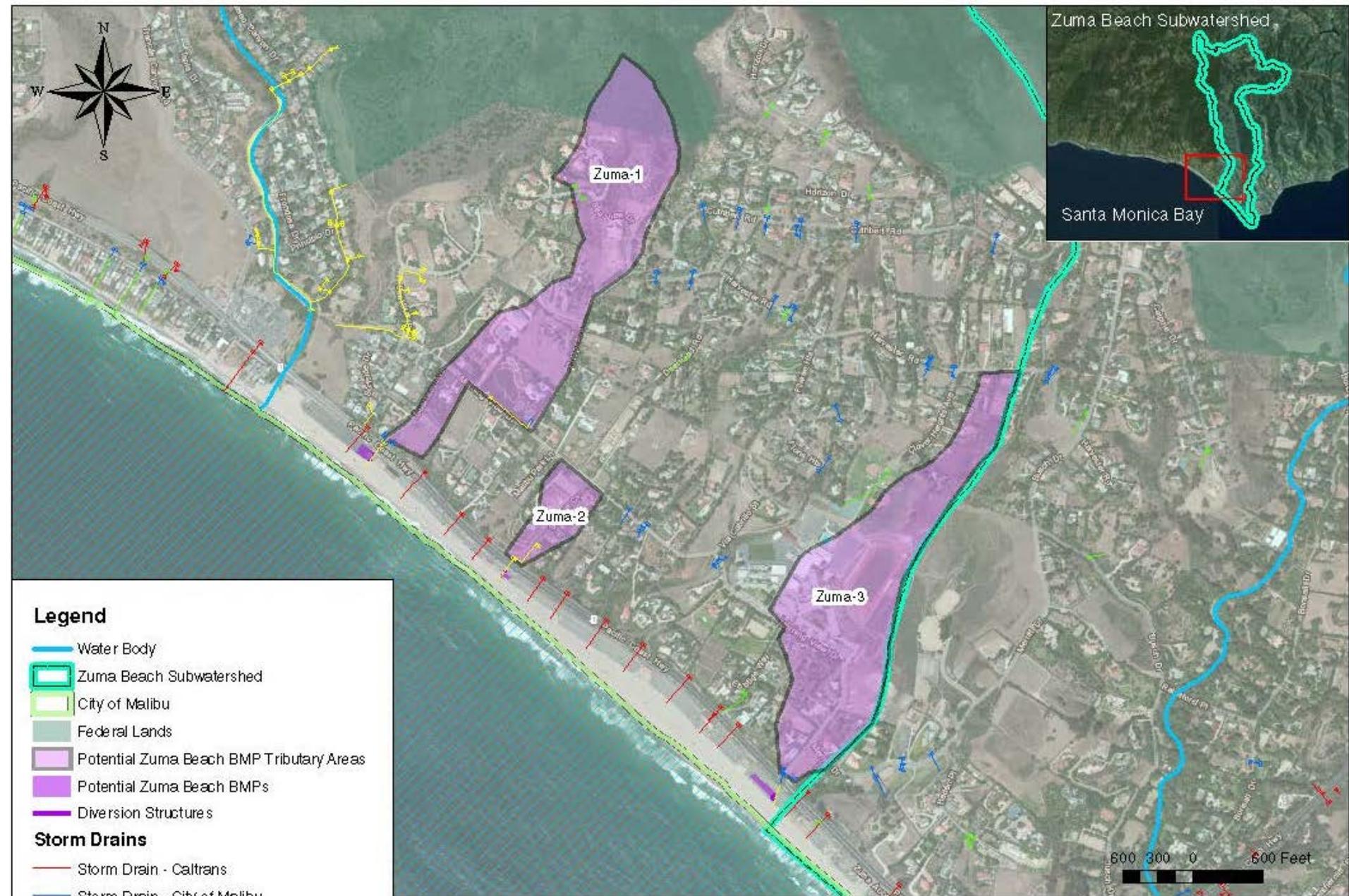
- LA County FCD
- LA County Beaches and Harbors
- Private R/W Access (PPP)



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ZUMA BEACH

POTENTIAL REGIONAL EWMP PROJECTS



Legend

- Water Body
- Zuma Beach Subwatershed
- City of Malibu
- Federal Lands
- Potential Zuma Beach BMP Tributary Areas
- Potential Zuma Beach BMPs
- Diversion Structures

Storm Drains

- Storm Drain - Caltrans
- Storm Drain - City of Malibu
- Storm Drain - County of Los Angeles
- Storm Drain - Private
- - - ASBS* *ASBS boundary is in the ocean up to the mean high tide line

**Zuma Beach Subwatershed
Potential Regional EWMP Project
Underground Infiltration Vaults
NSMBCW EWMP**

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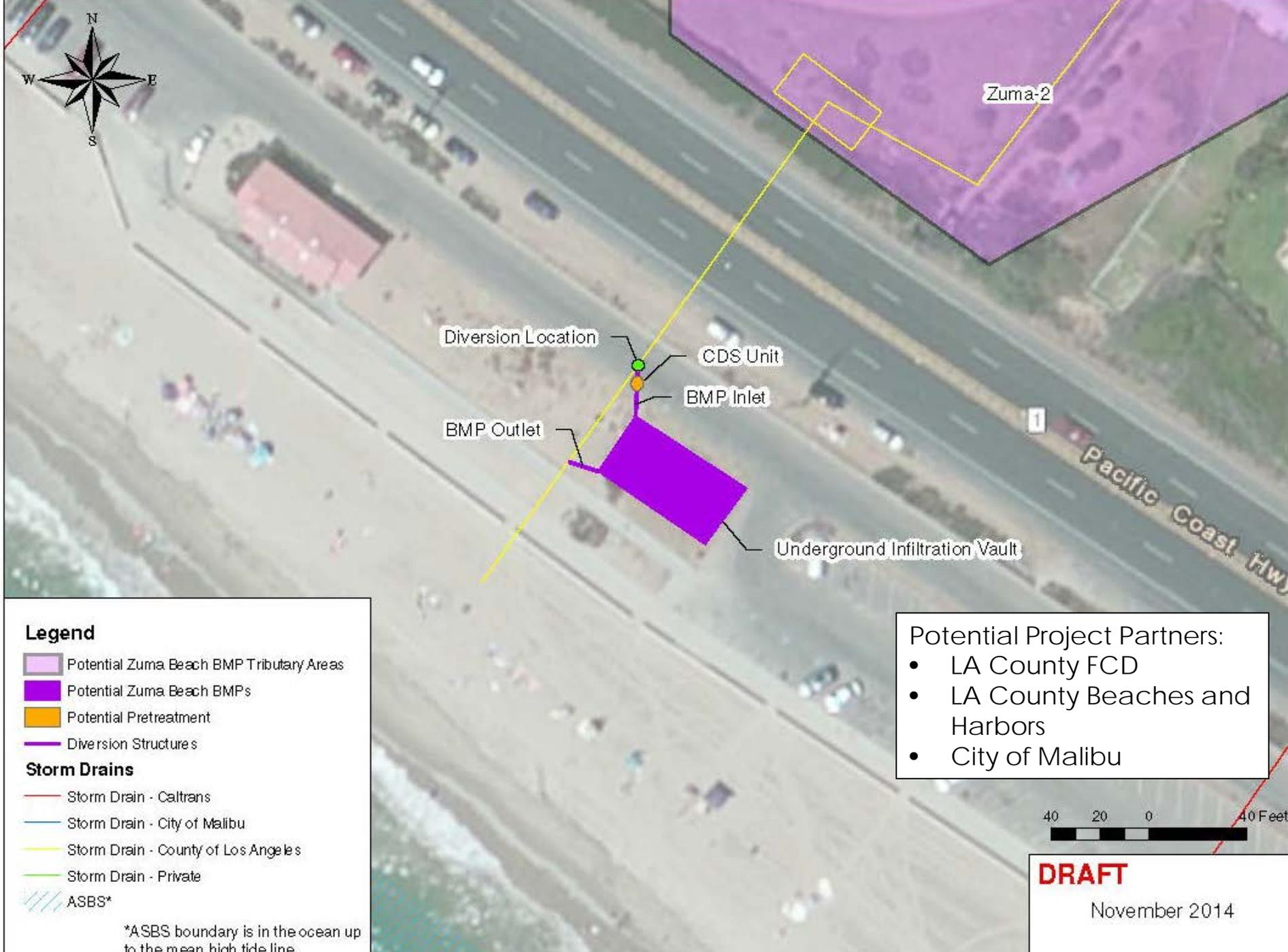


POTENTIAL LOCATION OF ZUMA-01, FACING NORTHEAST, SHOWING
GUERNSEY AVE MEETING PACIFIC COAST HIGHWAY

ZUMA BEACH

POTENTIAL REGIONAL EWMP PROJECTS

- Underground infiltration galleries
- Pretreatment via large solids separators (e.g., “CDS units”)
- Located at the terminus of the Agency-owned storm drains at Zuma Beach, under parking lots
- Collectively, designed to retain 85th percentile, 24-hr storm event from 111 acres of single family residential neighborhood



Legend

- Potential Zuma Beach BMP Tributary Areas
- Potential Zuma Beach BMPs
- Potential Pretreatment
- Diversion Structures

Storm Drains

- Storm Drain - Caltrans
- Storm Drain - City of Malibu
- Storm Drain - County of Los Angeles
- Storm Drain - Private
- ASBS*

*ASBS boundary is in the ocean up to the mean high tide line

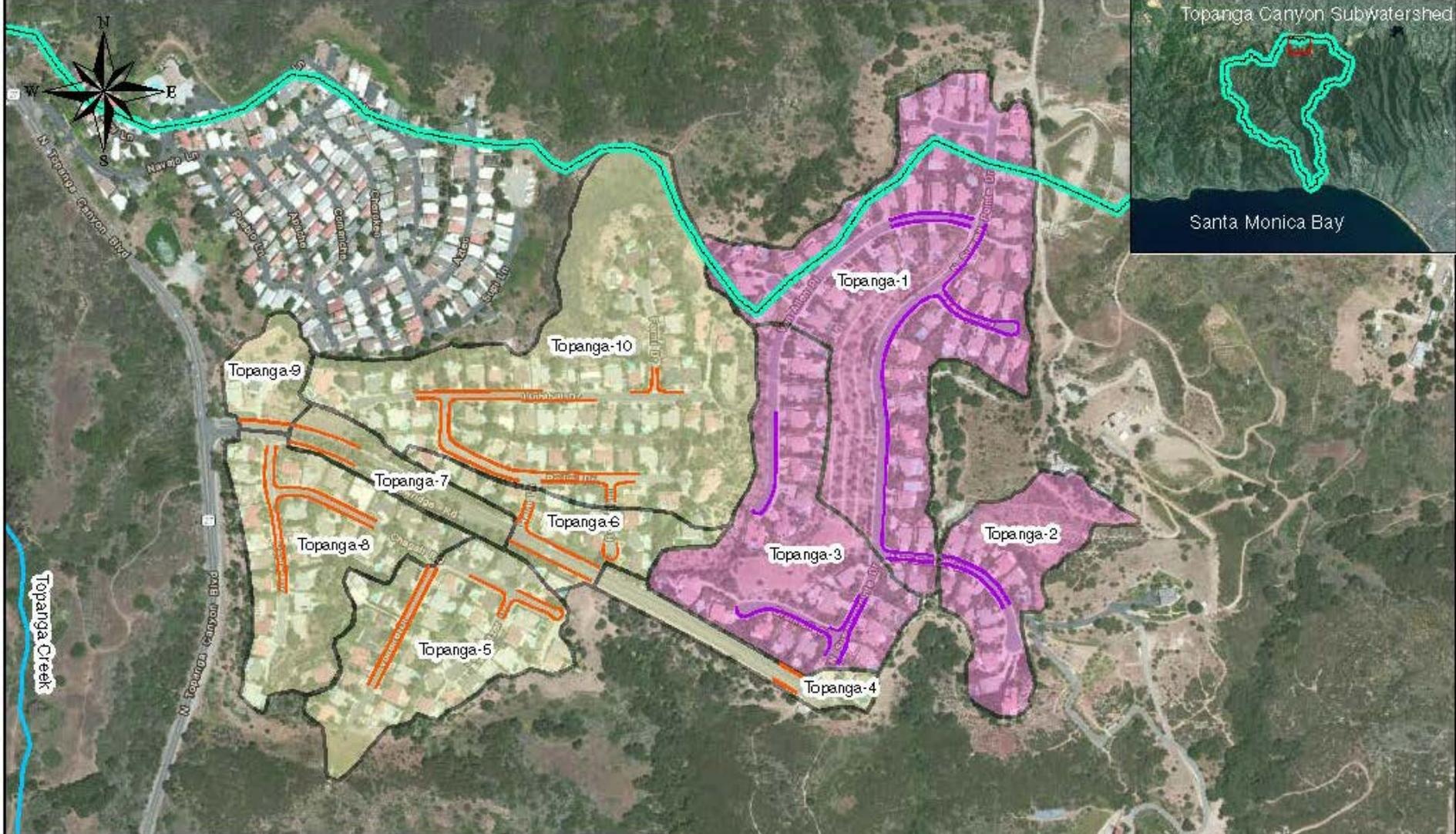
- Potential Project Partners:
- LA County FCD
 - LA County Beaches and Harbors
 - City of Malibu



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TOPANGA CANYON CREEK

POTENTIAL REGIONAL EWMP PROJECTS



Legend

Water Body

Topanga Canyon Subwatershed

Storm Drains

- Storm Drain - Caltrans
- Storm Drain - City of Malibu
- Storm Drain - County of Los Angeles
- Storm Drain - Private

Potential Topanga BMP Tributary Areas

- Drainage to Public Roads
- Drainage to Private Roads

Potential Topanga BMPs

- Public Roads
- Private Roads



**Topanga Canyon Subwatershed
Potential Regional EWMP Projects
Permeable Pavement and Infiltration Trench
NSMBCW EWMP**

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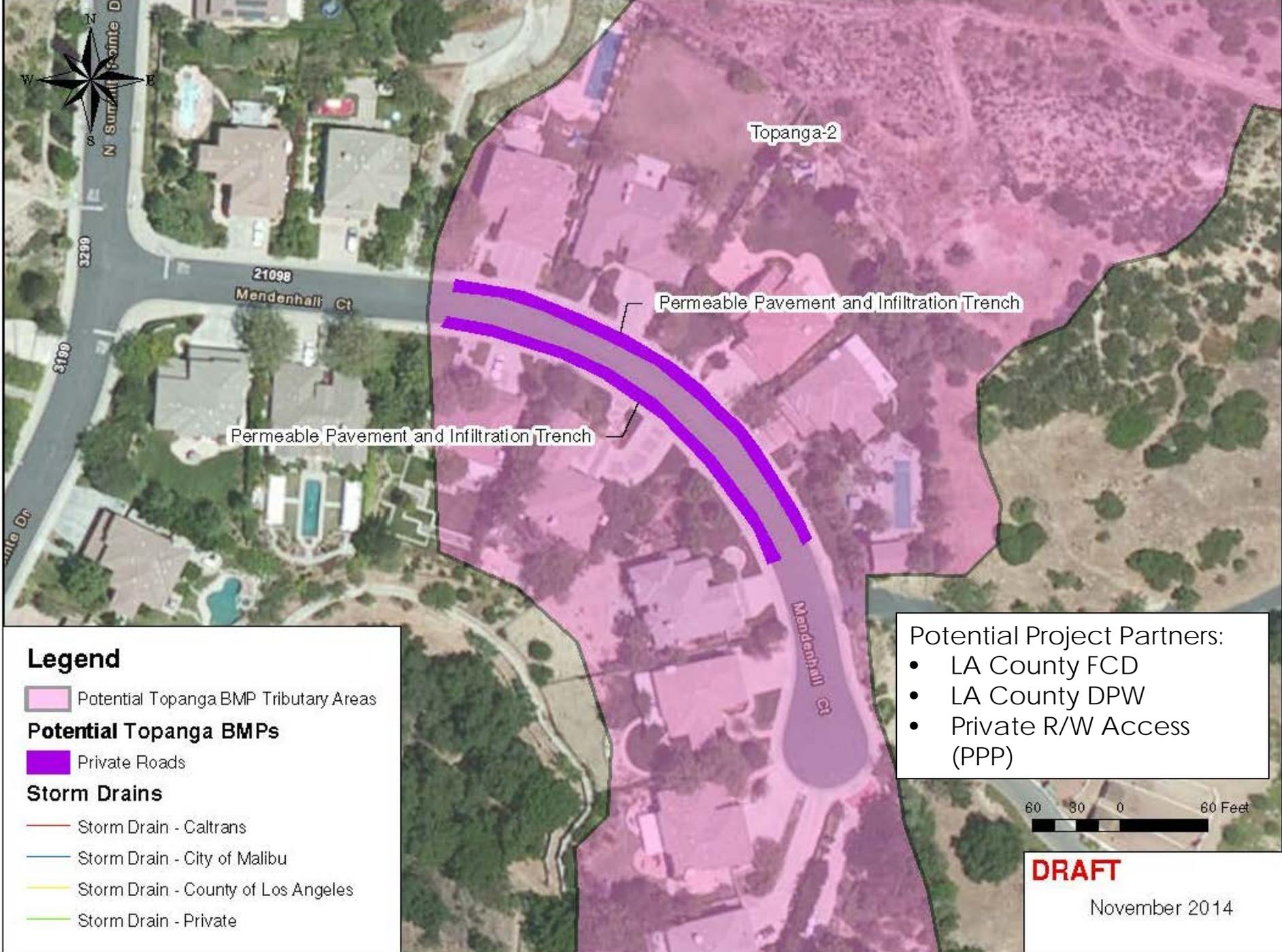
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POTENTIAL LOCATION OF TRANCAS-06, FACING WEST ALONG
VIEWRIDGE ROAD

TOPANGA CANYON CREEK POTENTIAL REGIONAL EWMP PROJECTS

- Green Street BMPs: permeable pavement and underground infiltration trenches
- Located in the neighborhood near the intersection of Viewridge Rd and Topanga Canyon Blvd.
- Designed to retain 85th percentile, 24-hr storm event from 103 acres of single family residential property



Legend

 Potential Topanga BMP Tributary Areas

Potential Topanga BMPs

 Private Roads

Storm Drains

 Storm Drain - Caltrans

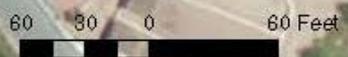
 Storm Drain - City of Malibu

 Storm Drain - County of Los Angeles

 Storm Drain - Private

Potential Project Partners:

- LA County FCD
- LA County DPW
- Private R/W Access (PPP)



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POTENTIAL CONSTRAINTS

- Environmental Screening
 - CA Environmental Quality Act (CEQA)¹: Clearance is likely Mitigated Negative Declaration
 - National Environmental Policy Act (NEPA)²: Not anticipated to be required
- Proximity to septic systems
- Private ownership and/or access
- Geotechnical Issues
 - Landslide and liquefaction potential , based on desktop-level screening
 - Depth to groundwater (> 10 ft) at beach (climate change impacts)
 - Geotechnical investigation planned

1. CEQA is a statute that requires state and local agencies to identify the significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible.
2. NEPA is similar to CEQA, but for federal projects.

PERMITTING

- Los Angeles County Flood Control District
 - Redirected flows from MS4
- Los Angeles County Beaches and Harbors
- Los Angeles County DPW
 - Grading
 - Building and Safety
- City of Malibu
 - Building and Safety
- Regional Water Quality Control Board
- Private Community Agreements (as needed)

NEXT STEPS

- Geotechnical Investigation and Feasibility Analysis for Potential Projects
- Evaluation of Minimum Control Measures
- RAA
 - Establish Target Load Reductions
 - Estimate non-structural BMP benefit
 - Conduct RAA on all portions of NSMBCW that do not drain to a Regional EWMP Project, in order to identify additional BMPs
- Project Cost Opinions
- Develop EWMP

SCHEDULE

- Draft EWMP – February 2015
- Public Workshop #3 – TBD (May 2015?)
- Draft Final EWMP – June 2015
- Receive and Address Comments from Regional Board
- Final EWMP

QUESTIONS/COMMENTS

Comments can be included on the provided comment cards

City of Malibu contact:

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www.malibucity.org/ewmp