



San Diego Region Stormwater Capture & Use Feasibility Study (SWCFS)

Southern California Water Committee
**Stormwater Workshop: Innovative Solutions to
Stormwater Capture**

September 27, 2019

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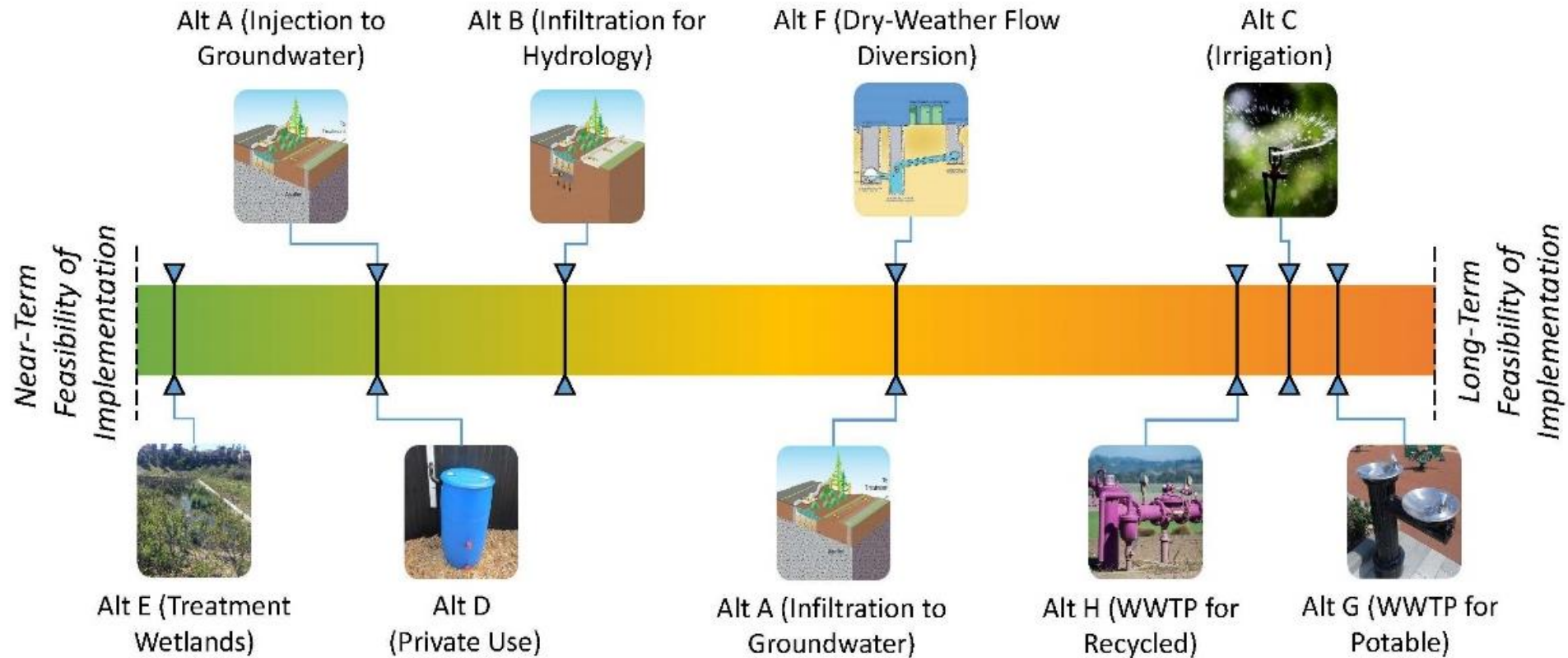
Study Purpose & Goals



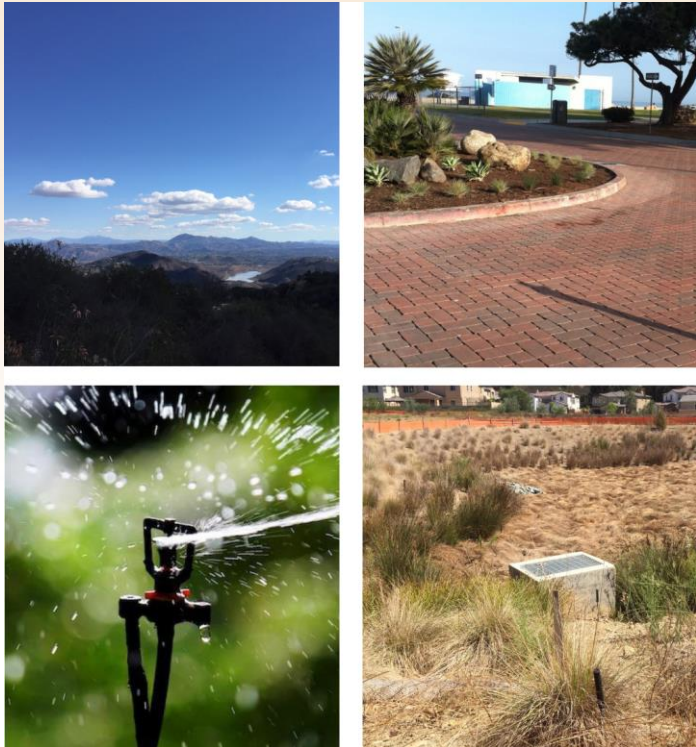
Provide a regional analysis to determine the feasibility of implementing stormwater capture & use facilities

- Quantify stormwater capture & use potential on public lands
- Identify the opportunities & constraints for stormwater capture strategies
- Prioritize the potential stormwater use strategies
- Consistency with grant programs to maximize opportunities

Feasibility of Implementation



Regional Conclusions SWCFS



- San Diego Region is different
- Storage is the biggest issue
- Capture & use alternatives already implemented
- Stormwater as supply is costly
 - Multiple-benefits offset costs
 - Includes dry-weather flow volumes
- A useful management tool

Regional Conclusions SWCFS



Low End



~ .5% of
regional need

High End

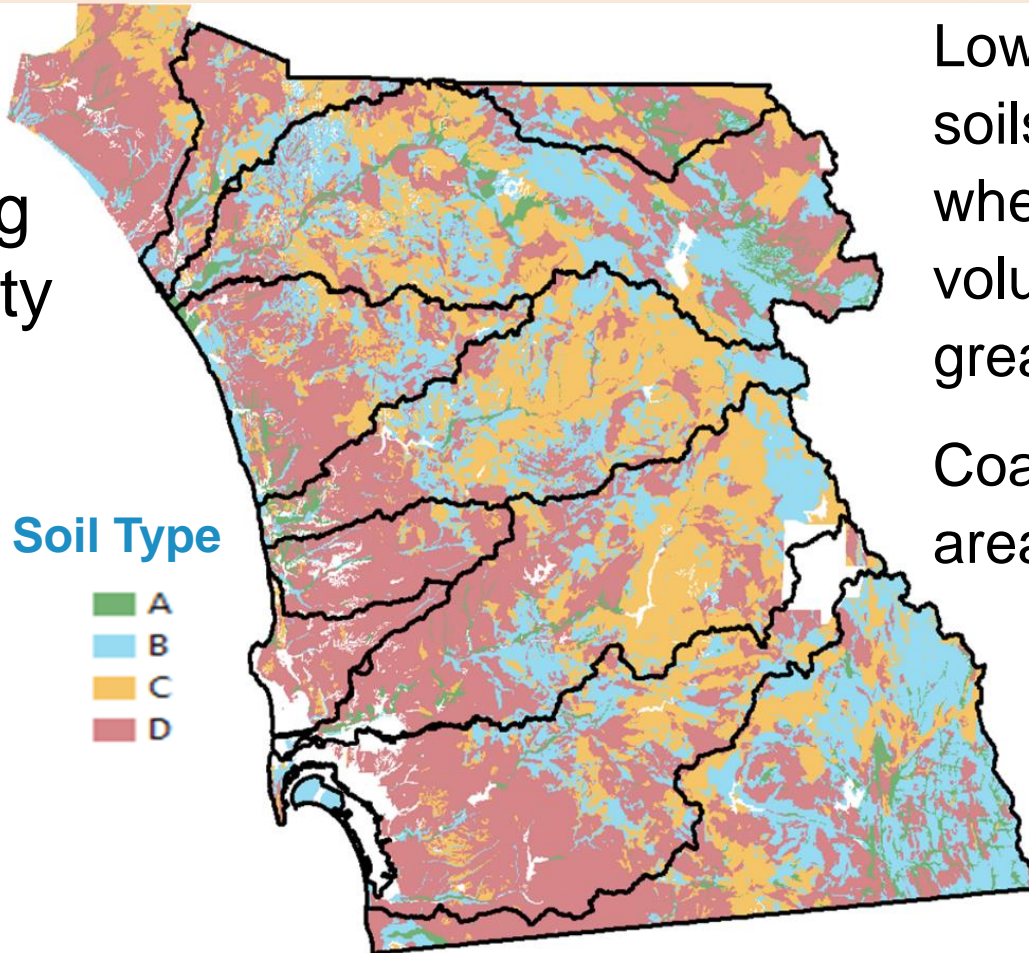
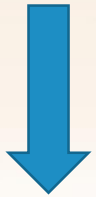


~ 4.5% of
regional need

Regional Water Need

What makes San Diego Different?

Decreasing permeability



Low permeability soils limit infiltration where Urban runoff volumes are greatest:

Coastal Urbanized areas

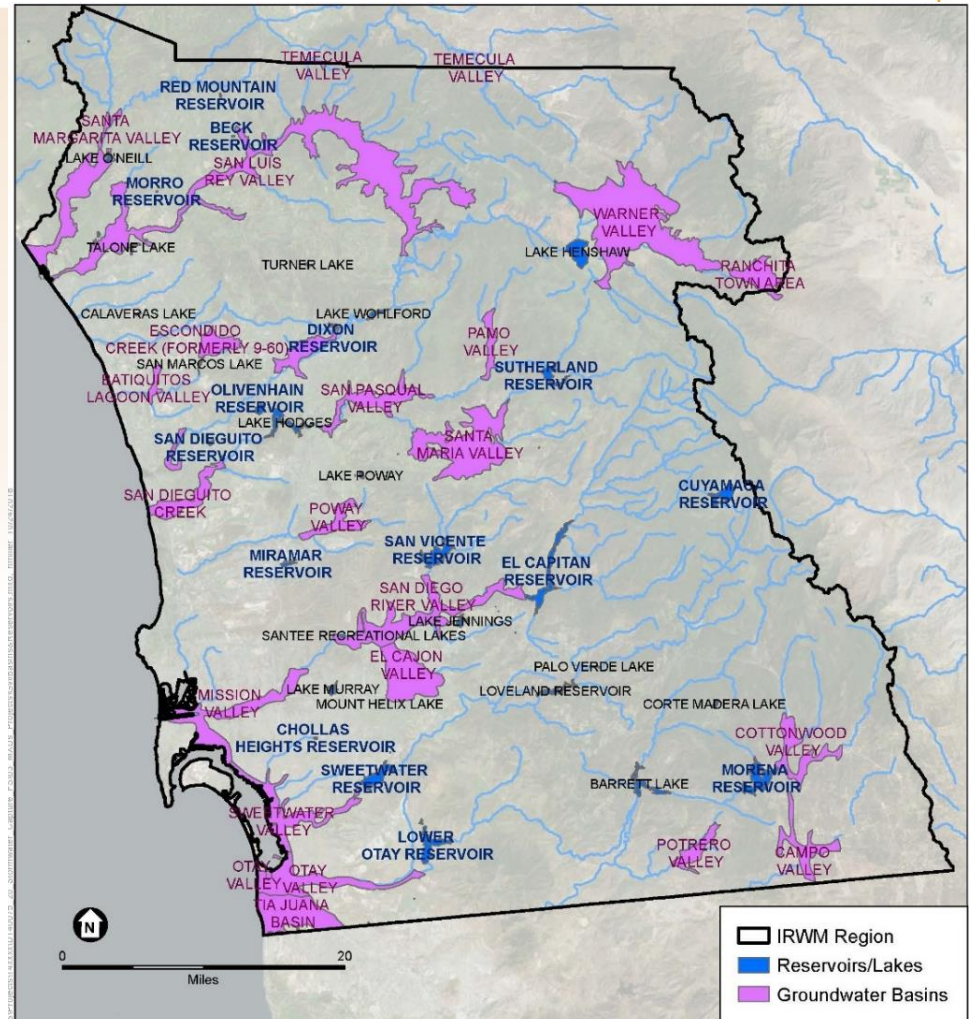
What makes San Diego Different?

Dispersed & limited

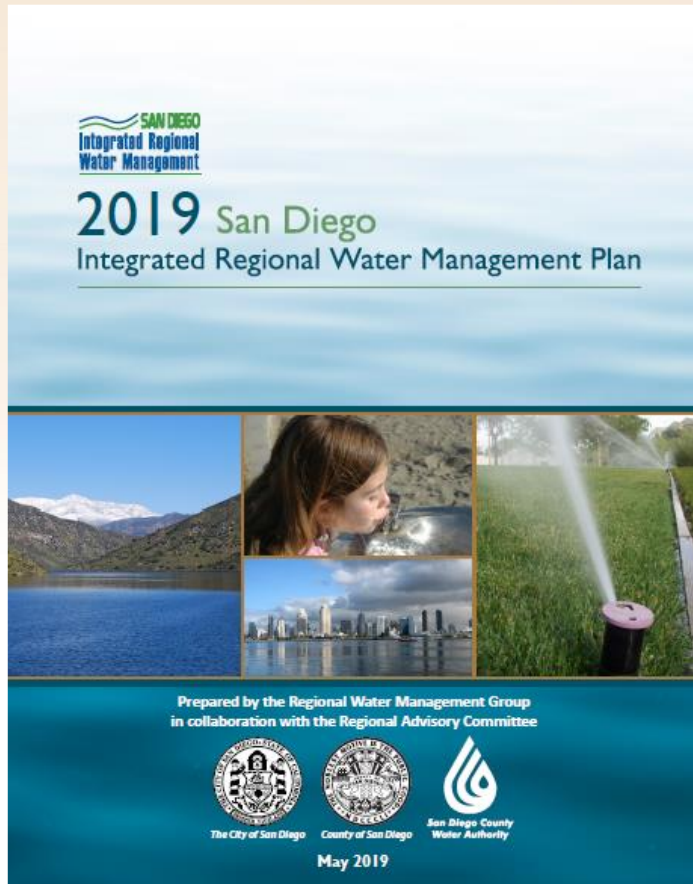
- Reservoirs
- Groundwater basins

Storage not located where most needed:

- Urbanized areas



San Diego Region IRWM



San Diego Integrated Regional Water Management (IRWM) Program

- Project List – online database
- Stormwater Resource Plan (SWRP)

Stormwater Treatment for Recycled Water

Olivenhain Municipal Water District ***Conceptual Project***



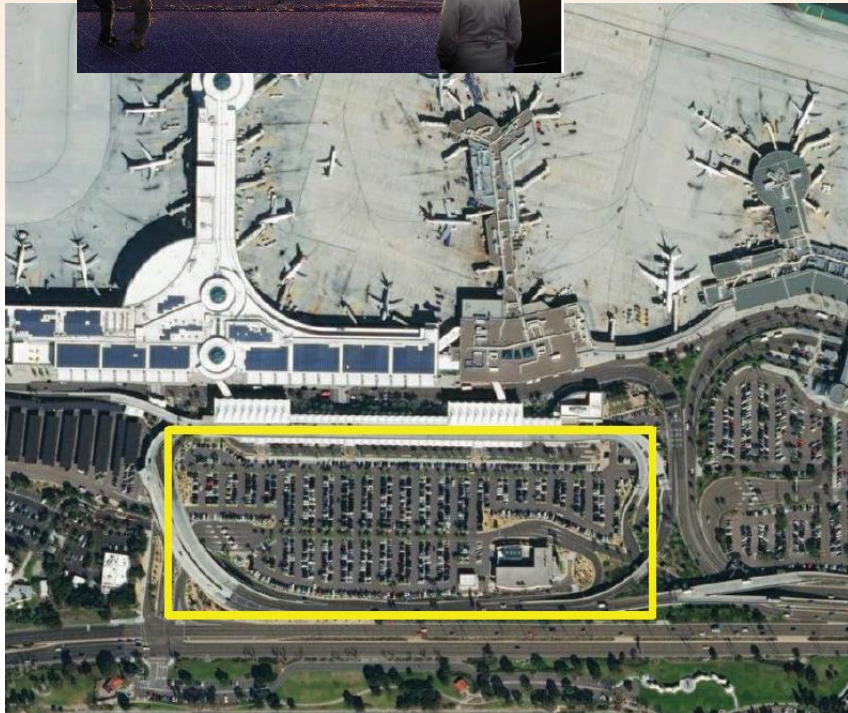
- Expand production of recycled water using stormwater
- New 2.0 MGD treatment facility
- Stormwater collected from MS4 & stored on public land
- Diverted at a controlled flow as a separate inflow from the wastewater

Dry-weather Flow Diversion Los Coches Creek

- Ray Stoyer Water Reclamation Facility investigating feasibility & benefits of augmenting flow
- Divert dry-weather flows from storm drain outfall
- Increase flows to the facility by 2.6 M gallons / year
- Reduce polluted discharge to Los Coches Creek



San Diego International Airport Terminal 2 Parking Plaza



- Capture & store stormwater beneath Terminal 2 Parking Plaza
- Roof runoff stored in 36" dia pipes then treated before use for cooling
- Estimated to capture & reuse 6.1 AF annually
- Use for airport's Central Utilities Plant cooling towers

San Diego Zoo Safari Park

Green Parking Lot

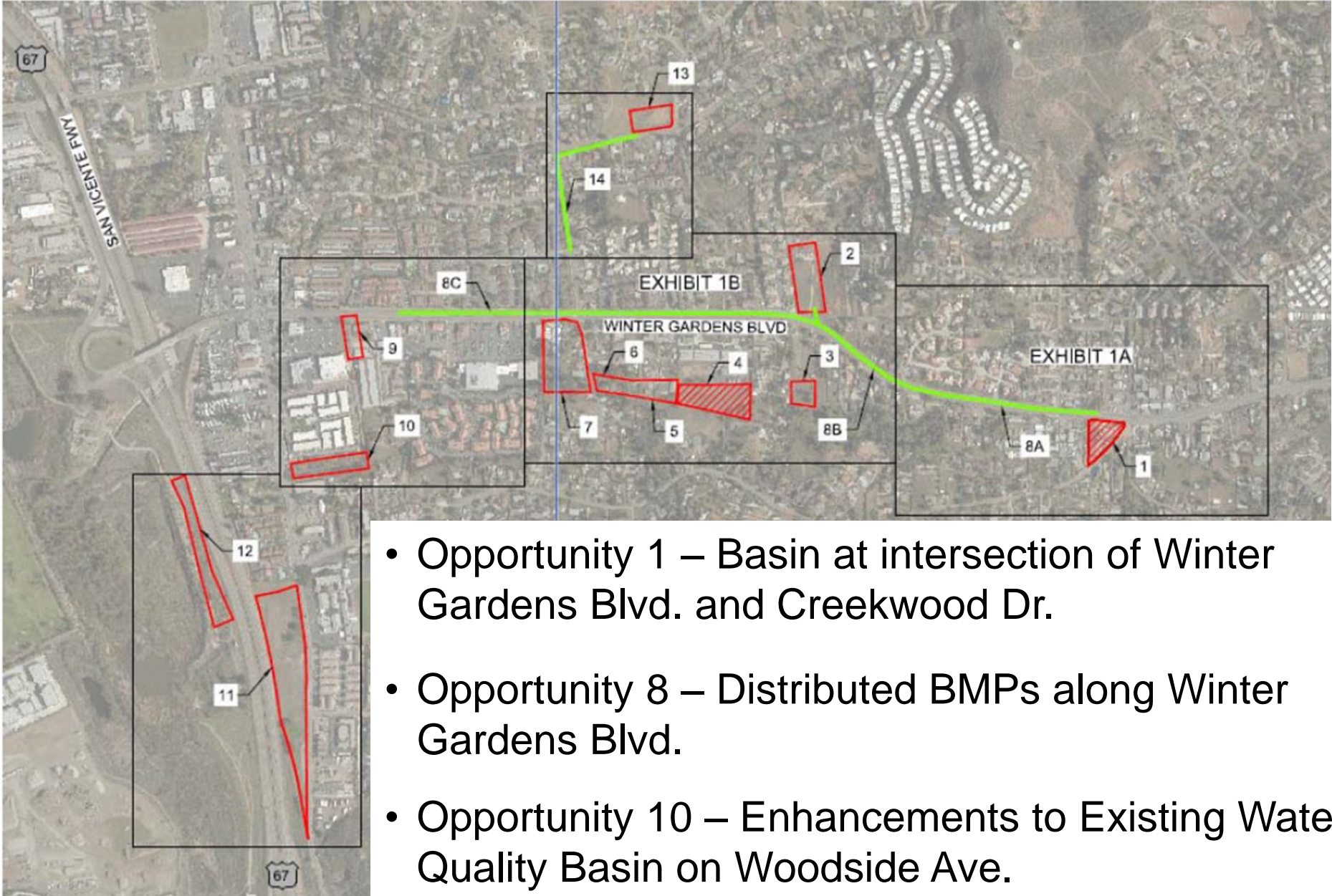
- 52 AC concept project to capture, treat & reuse stormwater from two parking lots
- Capture ~ 5.1 AF of stormwater annually
- Parking lot runoff will infiltrate through porous surface to storage
- Stormwater to be treated & used for irrigation



Memorial Park Underground Capture & Infiltration



- Completed project diverts stormwater from MS4
- Stormwater stored in below-ground vault, infiltrates to groundwater
- New ball field constructed over stormwater vault



- Opportunity 1 – Basin at intersection of Winter Gardens Blvd. and Creekwood Dr.
- Opportunity 8 – Distributed BMPs along Winter Gardens Blvd.
- Opportunity 10 – Enhancements to Existing Water Quality Basin on Woodside Ave.
- Opportunity 11 – Infiltration Basin Prior to Discharge to San Diego River

Thank you!



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Watershed Protection Program

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