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

Flood Managers Association Annual Conference
Stormwater Capture/Use Feasibility Study Update
September 4, 2019

Presented by County of San Diego
Background

- SB 985
- Compliant - StormWater Resource Plan (SWRP) Guidelines
- Included - 2019 Integrated Regional Water Management (IRWM) Plan Update

Purpose

- Provide a County-wide analysis to determine the feasibility of planning, constructing, operating and managing facilities that capture and use stormwater beneficially
Technical Advisory Committee (TAC)
Feasibility Study Tasks

1. Existing Conditions Analysis
2. Technical Feasibility Analysis (modeling)
3. Cost Analysis
4. Prioritization
San Diego Region Surface Water (Runoff)

40% evapotranspiration
10% runoff
25% shallow infiltration
25% deep infiltration
Natural Ground Cover

30% evapotranspiration
55% runoff
10% shallow infiltration
5% deep infiltration
75%-100% Impervious Cover
What makes San Diego Different?

Soil Type

Decreasing permeability
What makes San Diego Different?

Dispersed & limited reservoirs & groundwater basins

Storage not located where most needed: Urbanized areas
What Makes San Diego Different?

Storage!
Los Angeles Basins
Alternative Use Assessment Criteria

- Cost per Volume ($/acre-foot)
- Potential Volume of Stormwater Use (acre-ft./year)
- Constraints and Opportunities
- Additional Benefit

Alternative Use Implementation Feasibility/Prioritization
Feasibility of Implementation

Alt A (Injection to Groundwater)
Alt B (Infiltration for Hydrology)
Alt F (Dry-Weather Flow Diversion)
Alt C (Irrigation)

Alt E (Treatment Wetlands)
Alt D (Private Use)
Alt A (Infiltration to Groundwater)
Alt H (WWTP for Recycled)
Alt G (WWTP for Potable)
Opportunities

- Inter-Agency Partnerships / Agreements
- Technology Advancement
- Cost Sharing Multi-Benefits
- Additional Funding
- Public-Private Partnerships
- Regulatory Clarity / Flexibility

STORMWATER USE OPPORTUNITIES
Regional Conclusions

- San Diego region is unique
- Capture & use alternatives already implemented
- Stormwater as a supply can be costly
- Including dry-weather flow volumes reduces unit costs
Regional Conclusions

~ 4.5% of regional need

Low End

470,400 ac-ft/yr

High End

2,200 ac-ft/yr

22,000+ ac-ft/yr
Next Steps

- 2019 IRWM Plan Update
- Useful Management Tool
- Phase II:
  - Opportunities within Unincorporated County
  - Industrial Site Analysis
  - STORMS / SCWC
Thank you!