

Santa Ana River Watershed 2014

Building Capacity & Resiliency by Working Together

Colonel Kim Colloton

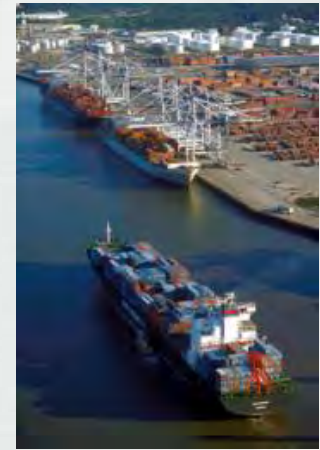
Los Angeles District Commander

14 October 2014



**US Army Corps of Engineers
BUILDING STRONG[®]**

Civil Works Value to the Nation



- **Over \$6 in flood damages prevented for every \$1 spent on Flood Risk Management**
 - Stewardship of 11.7 million acres of public lands
- 12,700 miles of Levees and 400 miles of shoreline protection
 - 694 Dams and 926 Harbors
- 13,000 miles of Commercial Inland Waterways
- Environmental Restoration and Emergency Responses
 - Generate \$18 B + 500 K jobs
 - 3% of Nation's Electricity: \$1.5 B plus in sales
 - 50% cost of Rail and 10% cost of Trucks

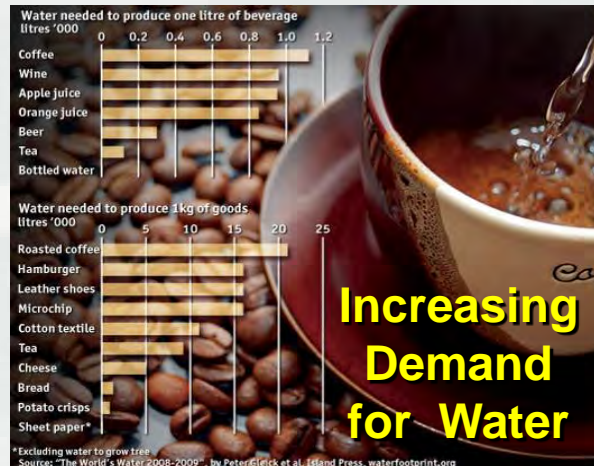
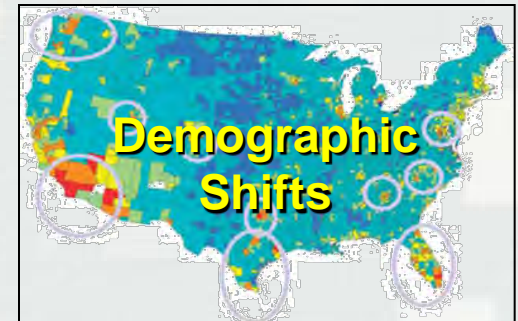
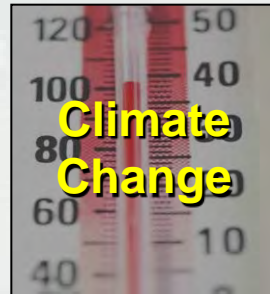


- ***U.S. Ports and Waterways convey >2B Tons of Commerce***
- ***Foreign Trade creates >\$160 B in Tax Revenues***

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National Water Resource Challenges

USACE Mission: Deliver vital engineering solutions, in collaboration with our partners, to secure our Nation, energize our economy, and reduce risk from disaster.



Santa Ana River Watershed

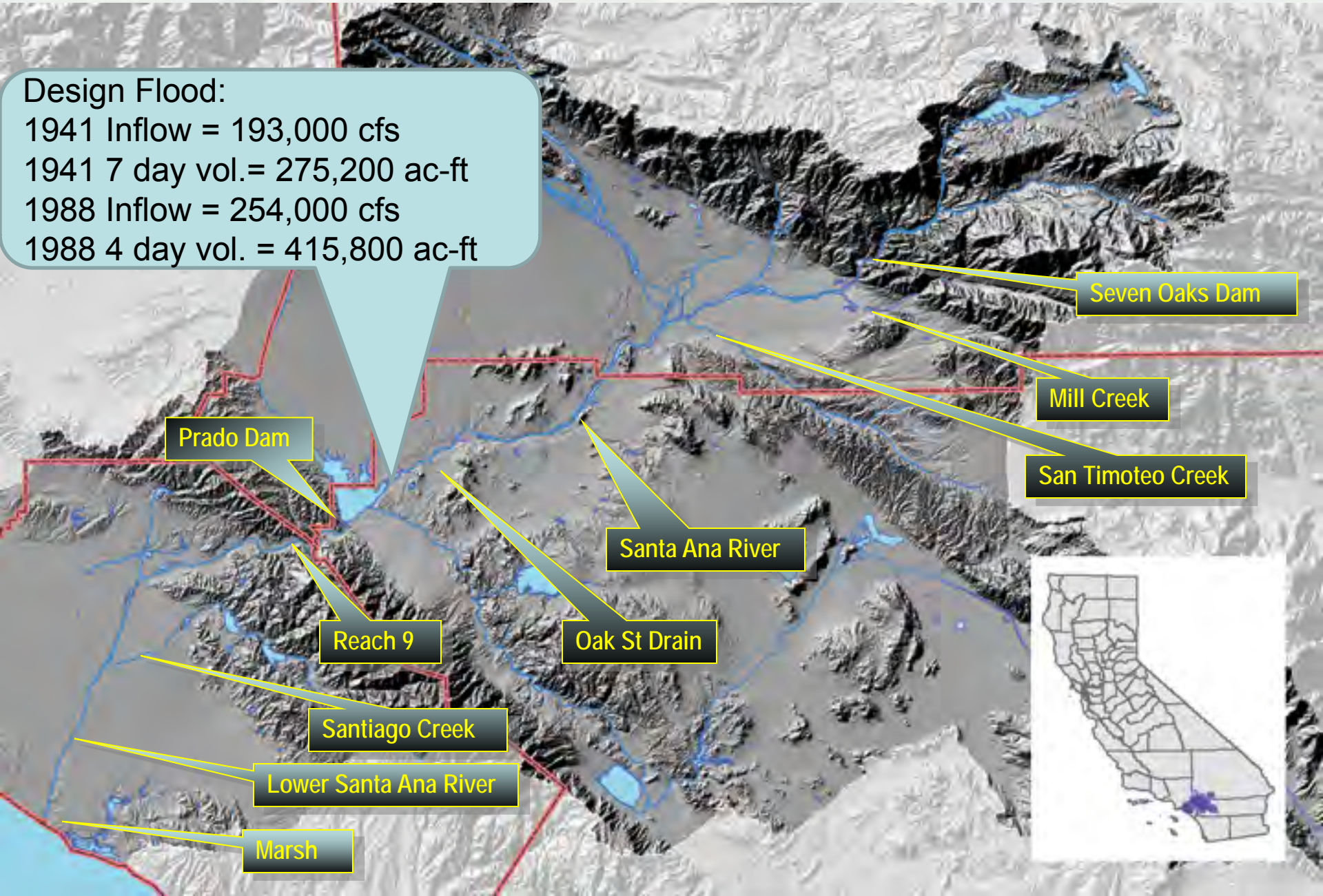
Design Flood:

1941 Inflow = 193,000 cfs

1941 7 day vol. = 275,200 ac-ft

1988 Inflow = 254,000 cfs

1988 4 day vol. = 415,800 ac-ft



Prado Dam

Reach 9

Santiago Creek

Lower Santa Ana River

Marsh

Oak St Drain

Santa Ana River

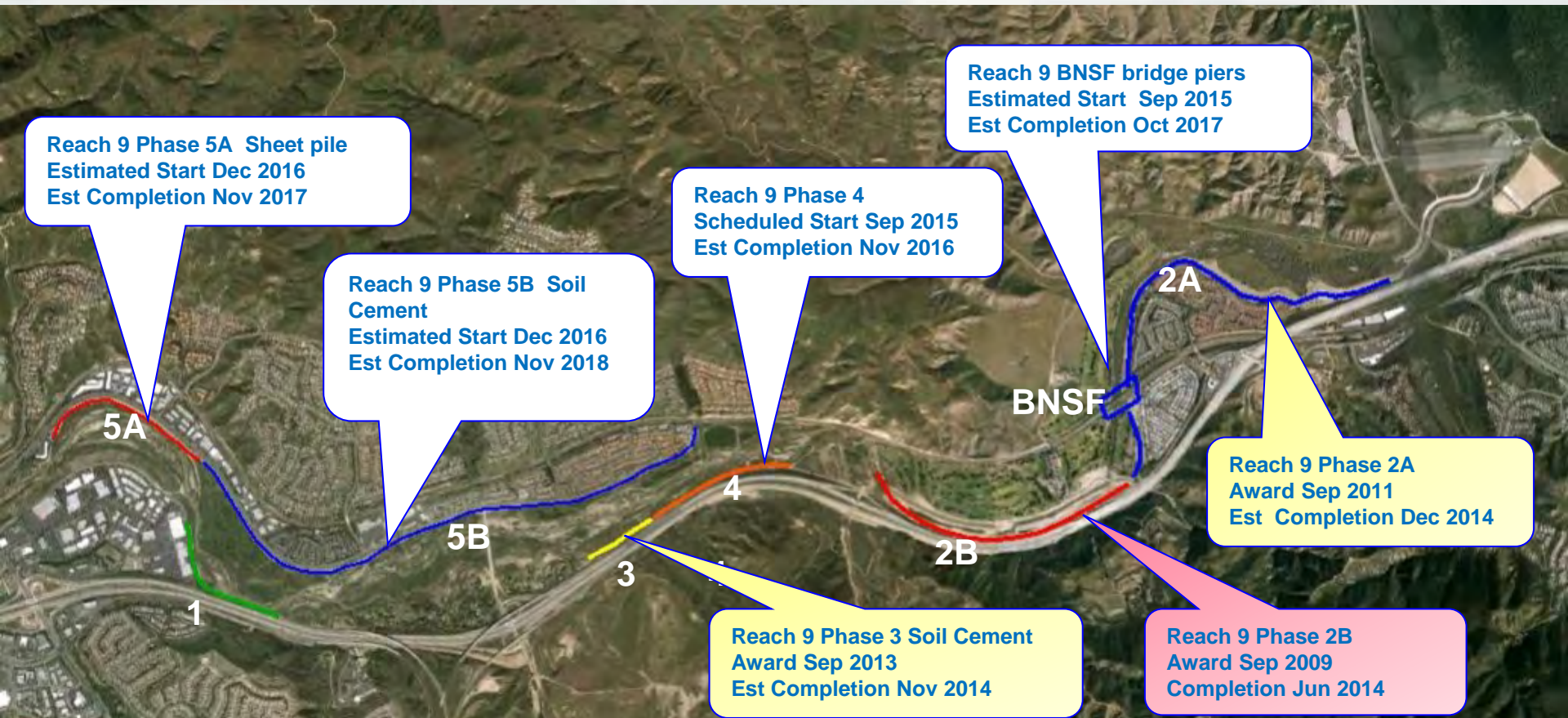
San Timoteo Creek

Mill Creek

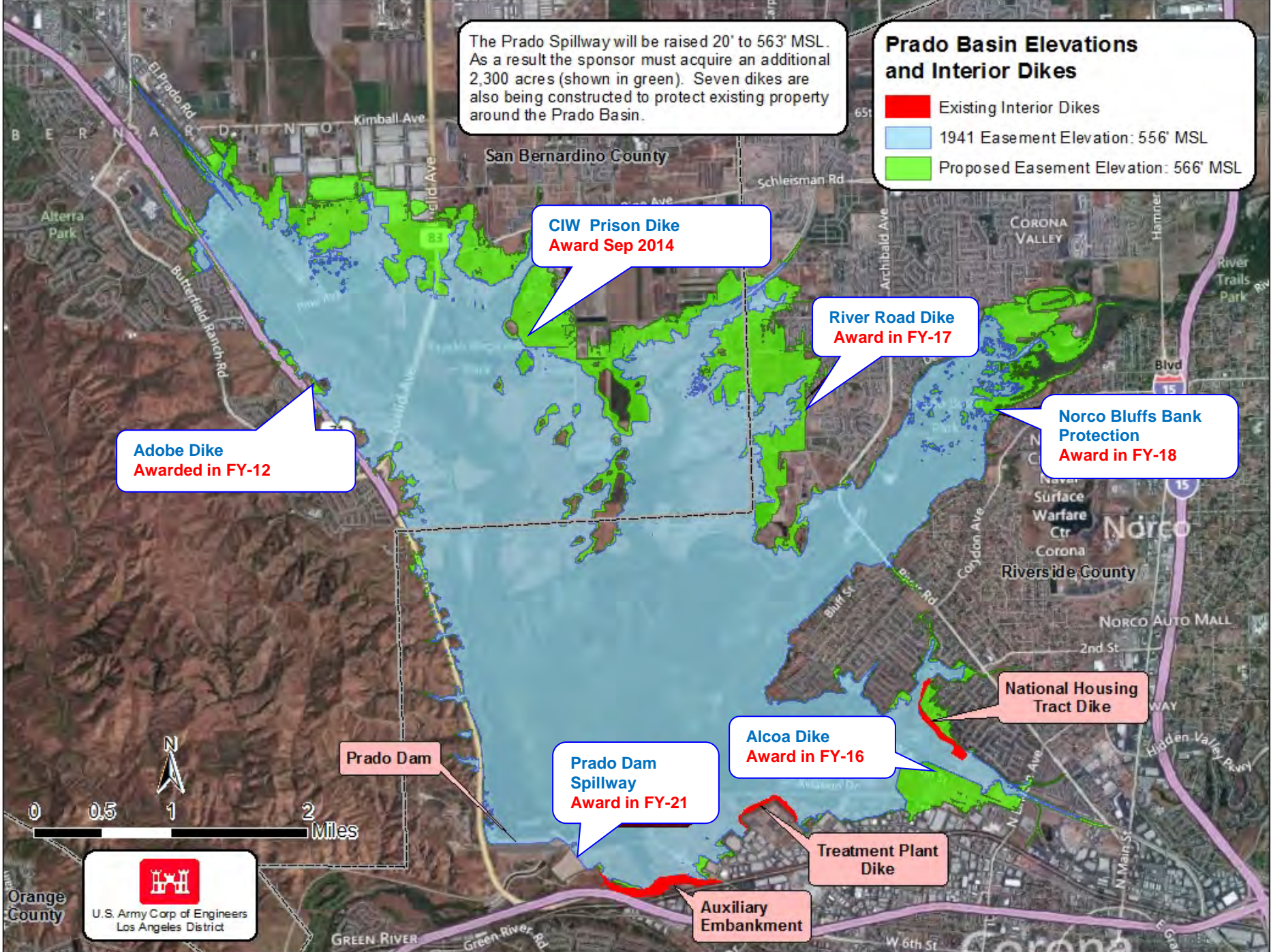
Seven Oaks Dam



Reach 9 Features



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The Prado Spillway will be raised 20' to 563' MSL. As a result the sponsor must acquire an additional 2,300 acres (shown in green). Seven dikes are also being constructed to protect existing property around the Prado Basin.

Prado Basin Elevations and Interior Dikes

- Existing Interior Dikes
- 1941 Easement Elevation: 556' MSL
- Proposed Easement Elevation: 566' MSL

CIW Prison Dike
Award Sep 2014

River Road Dike
Award in FY-17

Norco Bluffs Bank Protection
Award in FY-18

Adobe Dike
Awarded in FY-12

Alcoa Dike
Award in FY-16

Prado Dam Spillway
Award in FY-21

Treatment Plant Dike

Auxiliary Embankment

Prado Dam

U.S. Army Corp of Engineers
Los Angeles District

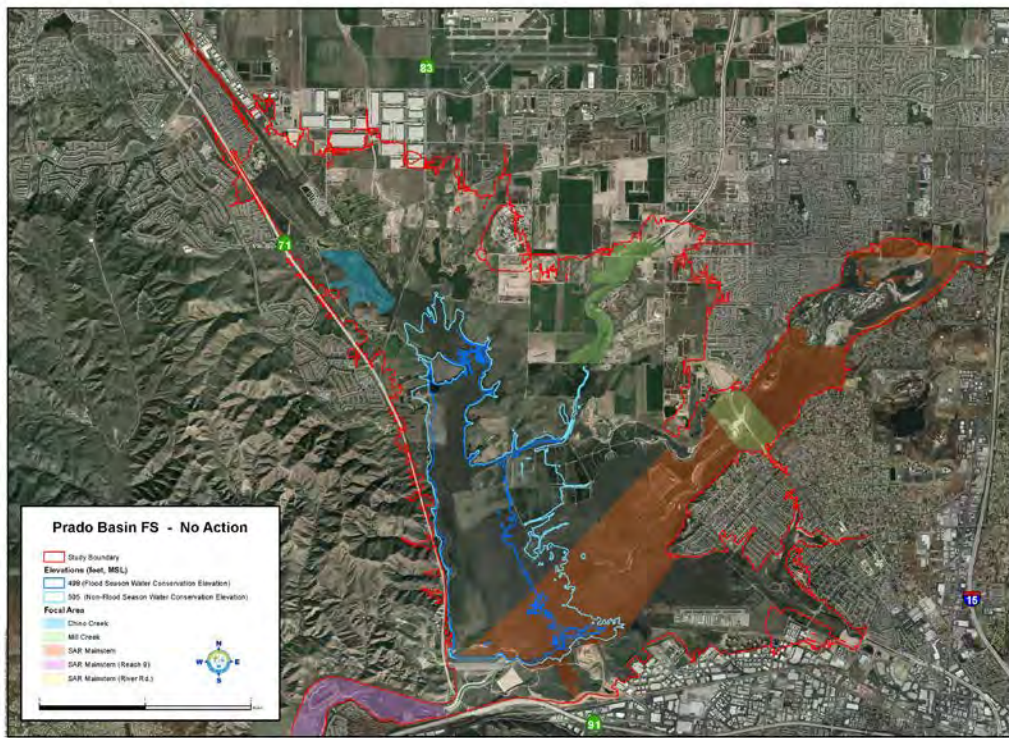
Spillway Graffiti-Mural




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Prado Basin, CA Study

Local Sponsor:
Orange County Water District



A Dual Purpose Feasibility Study Investigating:

- Ecosystem Restoration
-  Conservation



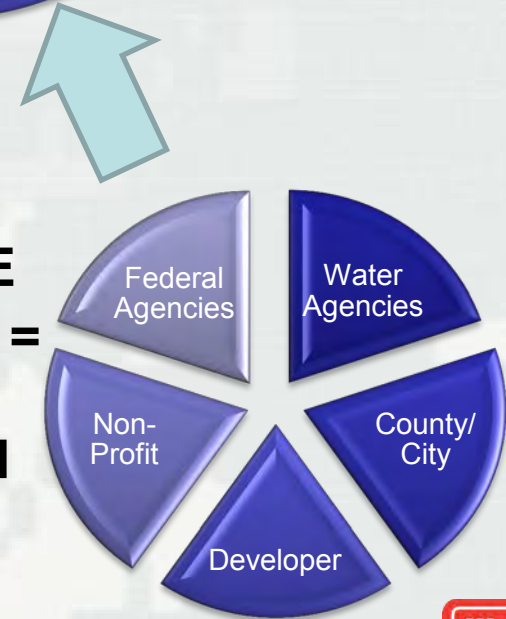
What Is Watershed Based Budgeting?

- Watershed Project's TOTAL VALUE => Sum of Individual Projects
- ID projects with highest VALUE TO THE NATION
- ***Achievable goal due to performance SYNERGIES of STRATEGIC investments at watershed scale***



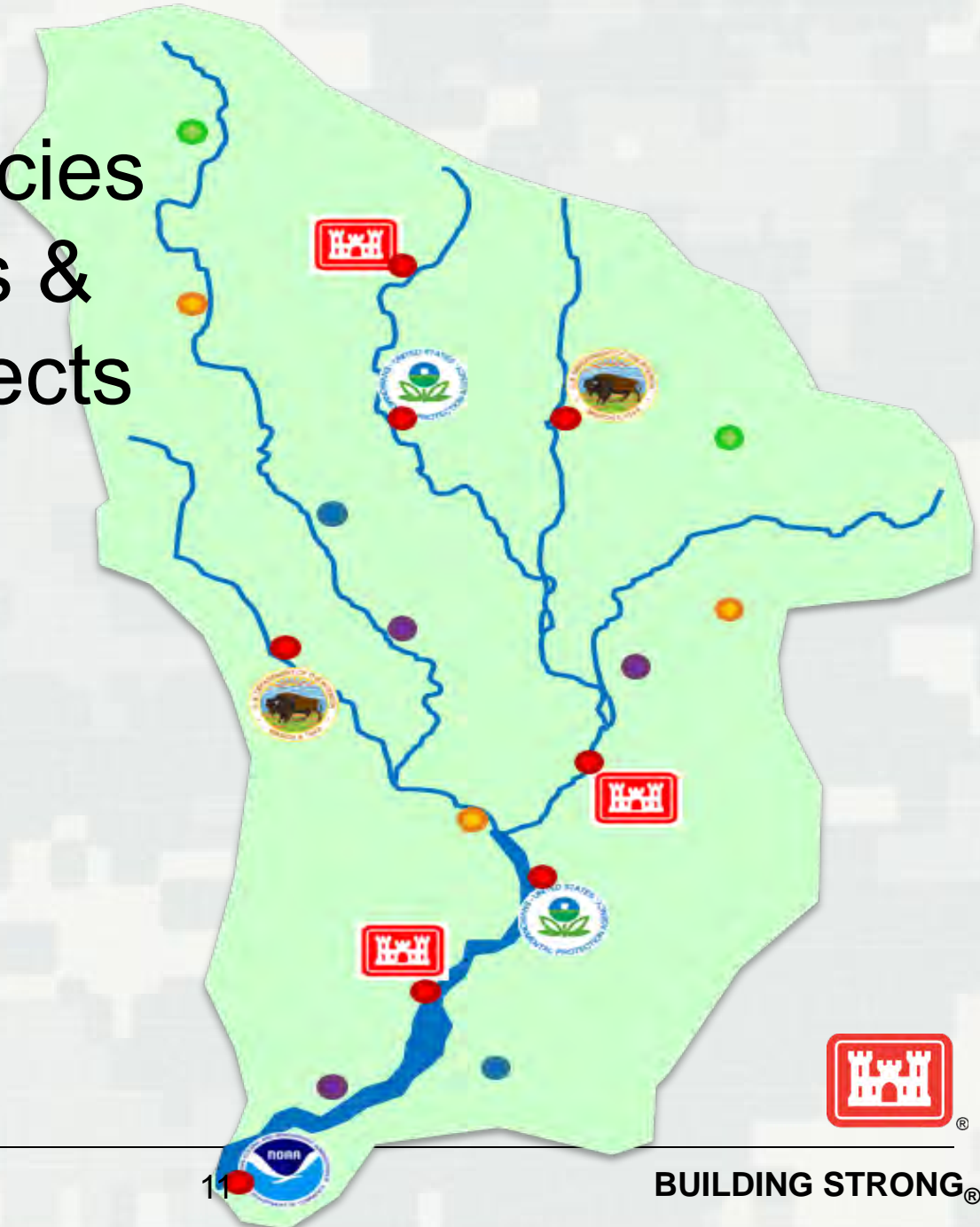
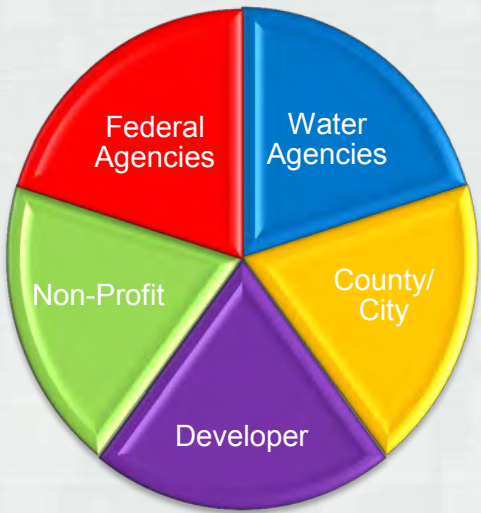
INTEGRATED PROJECTS = Optimum Watershed Function

SEPARATE PROJECTS = Reduced Watershed Function



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Inter-Dependencies Between Corps & Non-Corps Projects



Resilience Efforts

- Sustainable Solutions
 - ▶ O&M Budgets Decreasing = More Public – Private Partnering
- Drought – what are we doing to collaborate & minimize drought’s impact?
 - ▶ How we’re responding to the drought & communication
- Watershed-informed Budgeting
 - ▶ Leveraging resources
- Prado Study
 - ▶ Multi-purpose; Ecosystem Restoration/Water Conservation
 - ▶ Increased water supply = improved resilience





Building Strong – Together!



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