DEVIL'S GATE TO EATON WATER CONSERVATION PROJECT



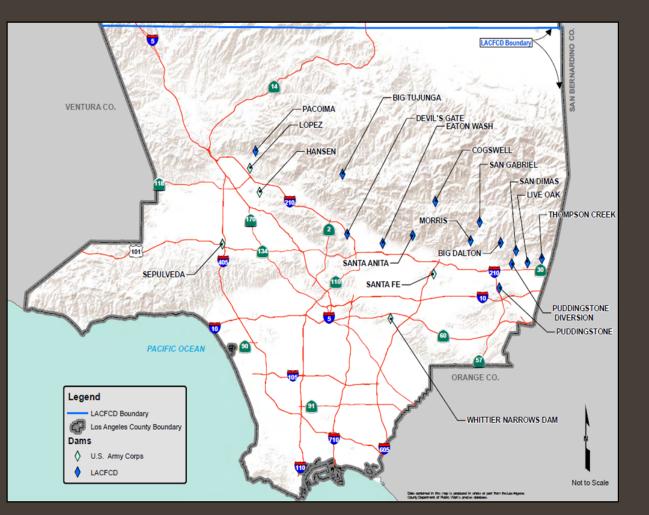


Presented by: Keith Lilley, PE

Flood Control District





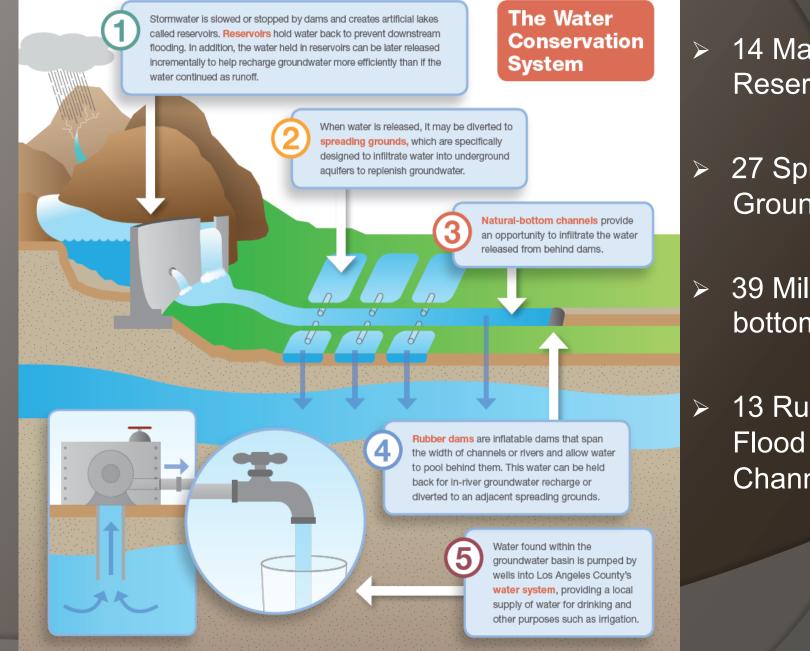


Formed in 1915 with Dual Mission

Reduce Flood
 Risk by Providing
 Flood Control
 Protection

Conserve Water for Local Supply

Flood Control District: Water Conservation and Storage



14 Major Dams and Reservoirs

27 Spreading Grounds

39 Miles of Softbottom Channels

13 Rubber Dams on **Flood Control** Channels

Local Water Supply Sustainability

Two Thirds of Los Angeles County's Water is Imported from Outside the Region

Increasing Stormwater Capture and Groundwater Recharge is Critical to Local Water Supply Sustainability

Average Water Conservation from Groundwater Recharge (2000 thru 2015)

Storm Water	200,000 acre-feet
Imported Water	70,000 acre-feet
Recycled Water	40,000 acre-feet

Flood Control District Drought Preparation

- 2005 FCD started aggressive groundwater recharge improvement program.
- > 22 Projects Completed at a cost of \$37M providing an additional 19,700 AF of expected annual recharge.
- \$7.5M in co-funding from benefiting agencies.



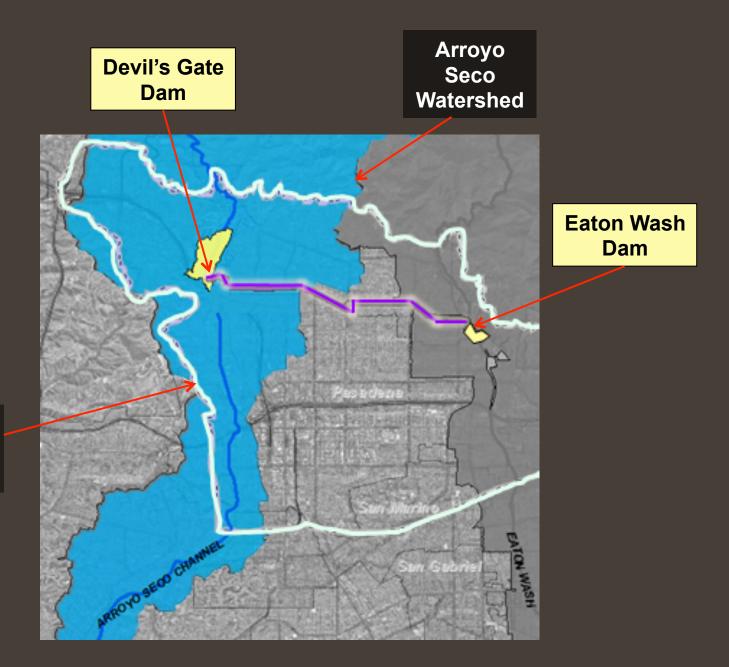


Flood Control District Next Steps

Continuing focused groundwater recharge program

- Competing for grant funds
- Continuing Partnerships with Benefiting Agencies
- 15 proposed construction projects at a cost of \$123 M with an increased average annual potential of recharge over 13,000 AF
- \$50M in co-funding from benefiting agencies and grant funding
- Planned removal of 10 MCY of Sediment in FCD Reservoirs to restore capacity.

Devil's Gate to Eaton Water Conservation Project

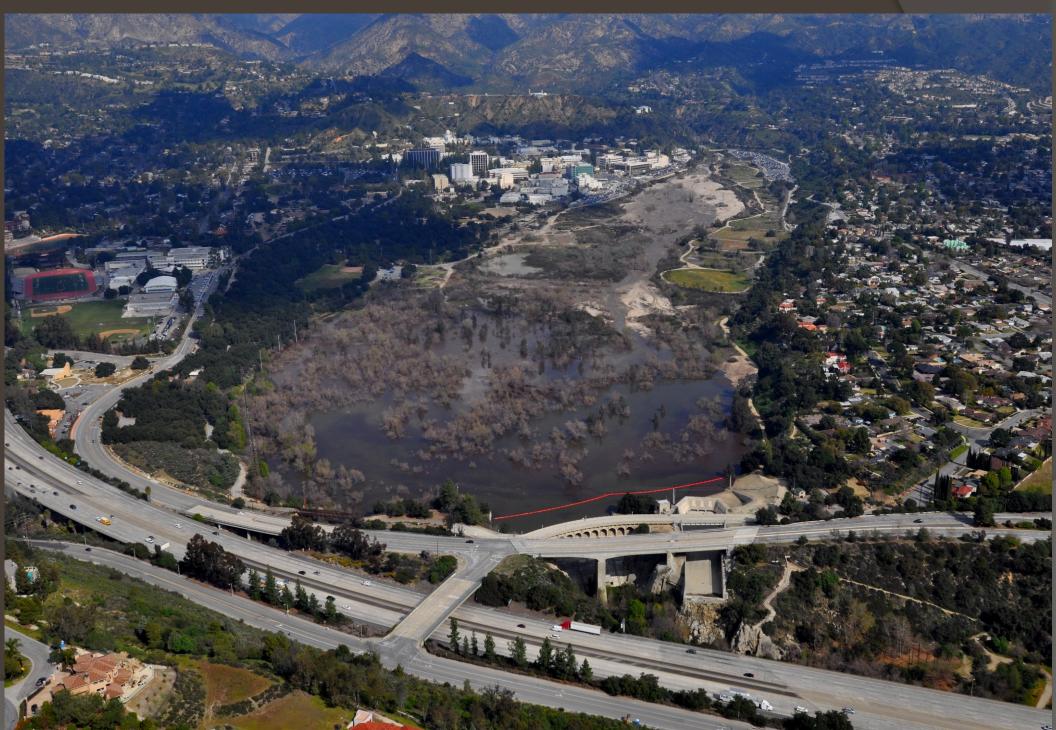


Raymond Groundwater Basin

Arroyo Seco Wash Looking Downstream from Mountains



Arroyo Seco Spreading Grounds

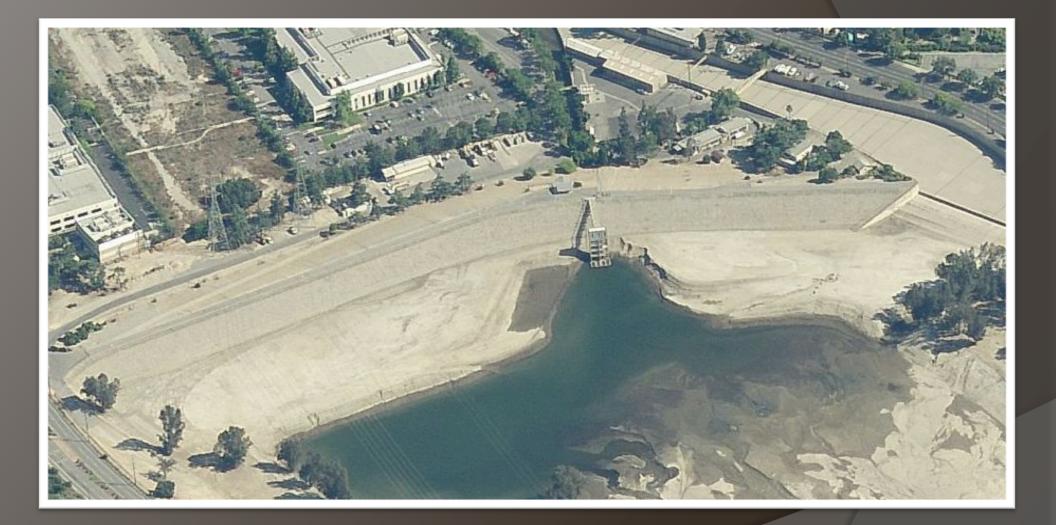


Eaton Dam and Spreading Grounds

EATON WASH PROJECT OVERVIEW



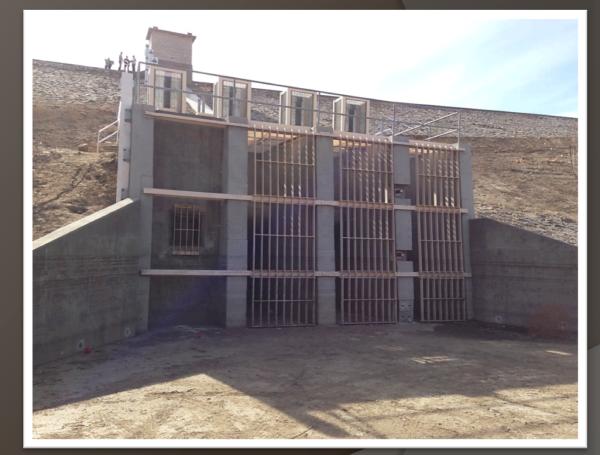
Eaton Dam Seismic Upgrade



Eaton Dam Seismic Upgrade





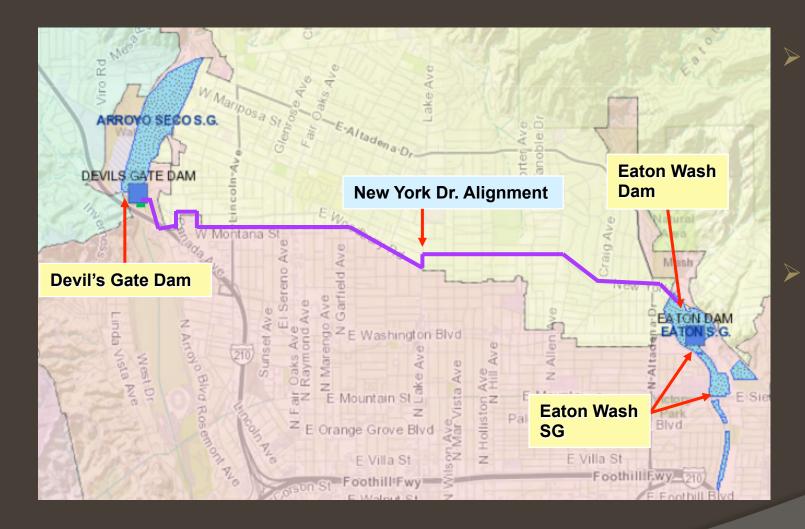


Eaton Wash Spreading Grounds



- Capacity: increased from
 525 AF to 575 AF
 - Intake Capacity: increased from 40 CFS to 125 CFS
- Water Conservation:
 Average = 230 AF/yr
 Wet Year = 1,130 AF

Pipeline Alignment



Approximately 5 miles of pipeline alignment

Split valve at pump for future diversion of water to Arroyo Seco SG

Pump Station



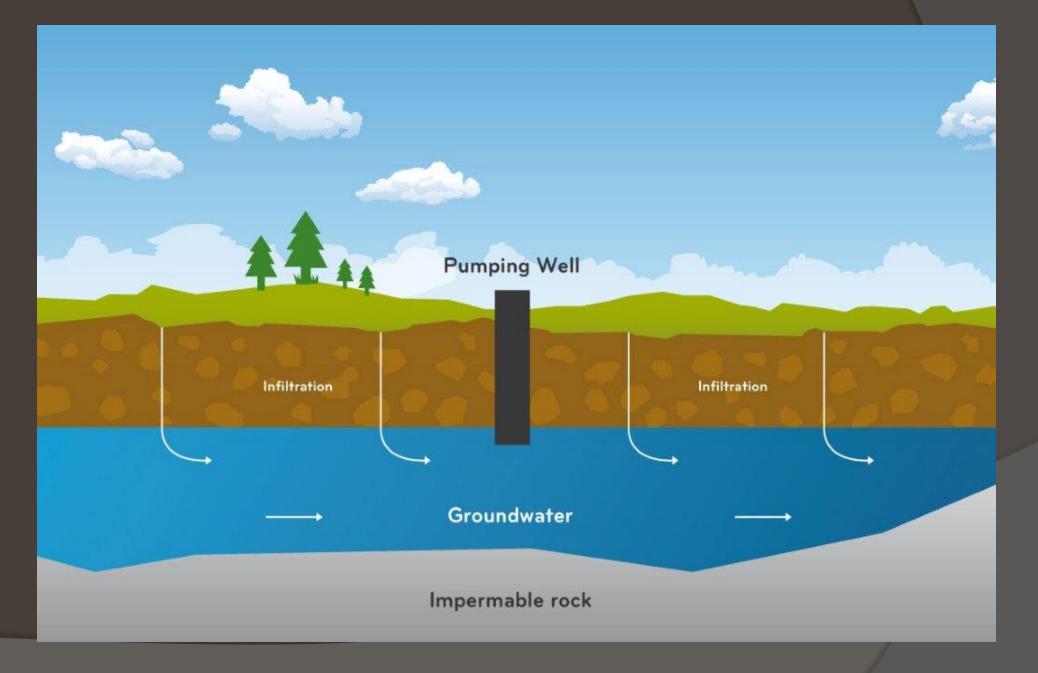
Design Capacity: 12,000 gpm or 25 cfs

Enclosed in pump station structure

Pipeline Construction and Pumps



Groundwater Recharge



Water Conservation Benefits



- Outflow records: 6,900 AF/yr bypassed
- Preliminary Study Results:
- Project total conserve:
 ~ 2,400 AF/yr
- Eaton Wash Dam/ SG conserve: ~ 1,400 AF/yr

Arroyo Seco SG Conserve: ~ 1,000 AF/yr

Project Cost/ Schedule

- Estimated project cost: ~\$16 million
- Partial Reimbursement from State Proposition 1E Grant:

Preliminary Schedule	
Phase	Anticipated Start Date
Planning/ Analysis	Ongoing
Outreach/ CEQA Process	Fall/ Winter 2016
Construction	Late 2018 or early 2019

QUESTIONS