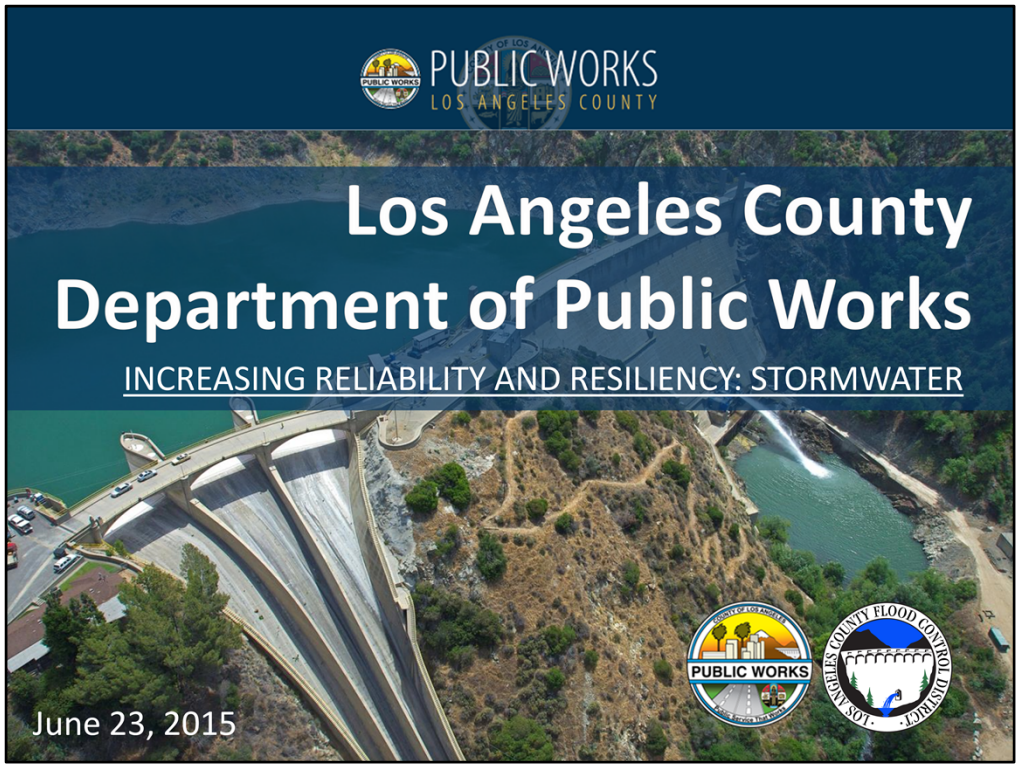
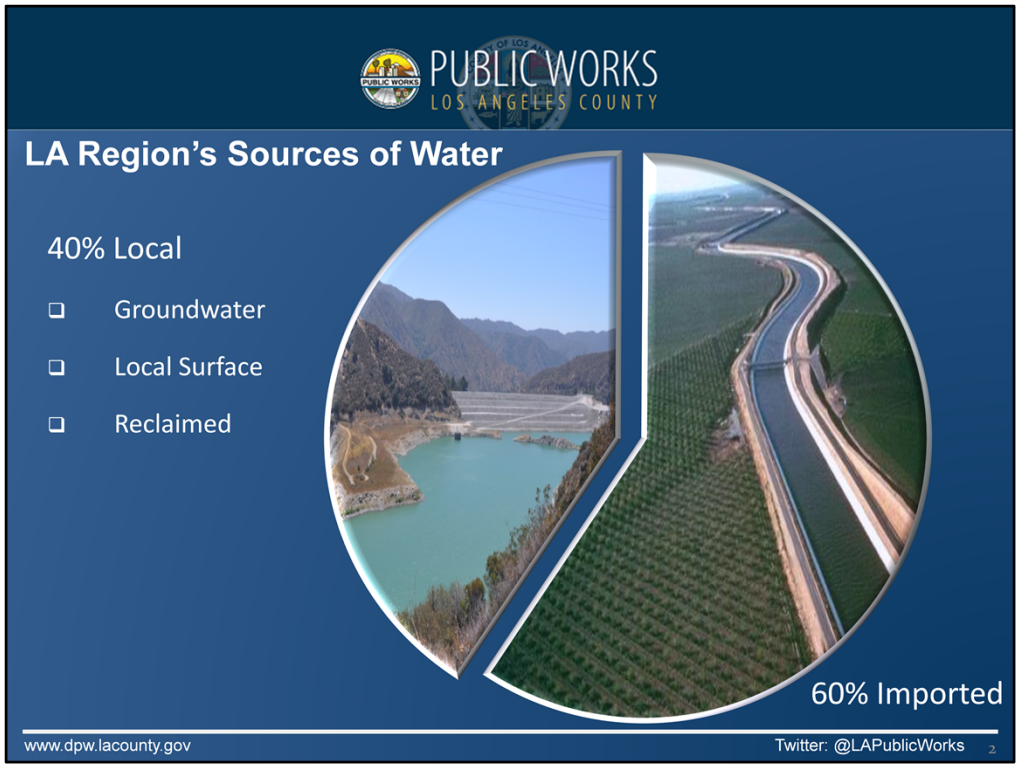


Drought

- Unprecedented
- Water supply in jeopardy
- Governor's mandated 25% cuts
- We need to act, look into local supplies



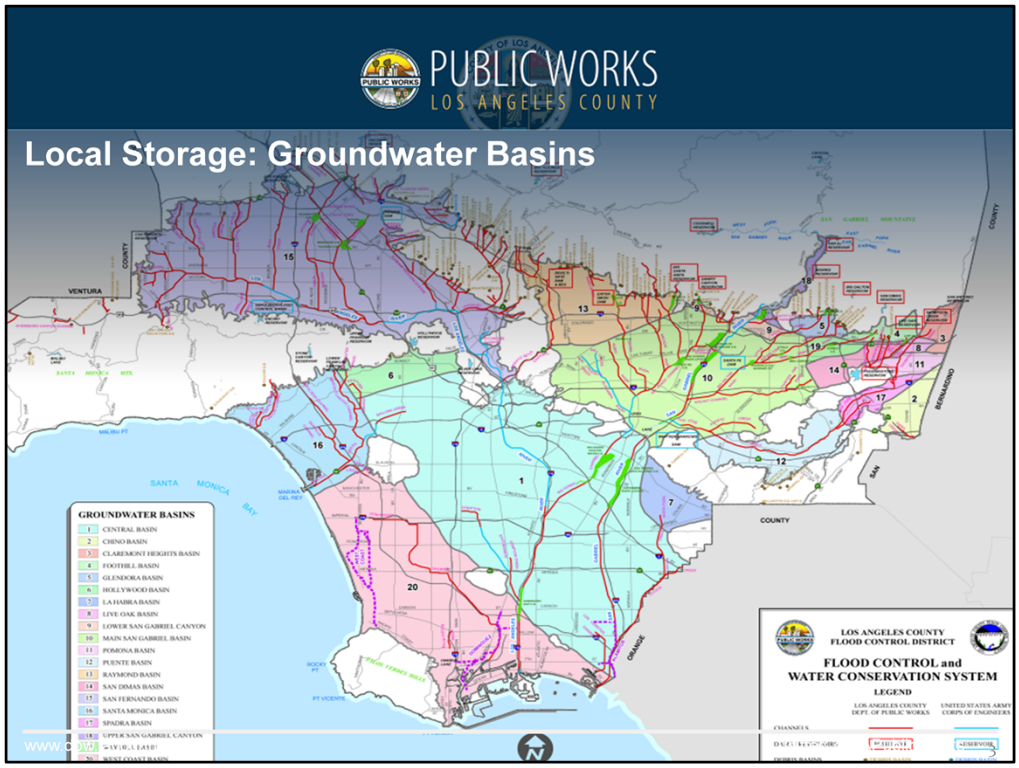
Imported water is an important piece

However, we need to develop more robust local supplies

- Will make regional supplies more resilient
- Can help reduce Greenhouse Gas

State Water Project: 1 AF = 3,000 kwh

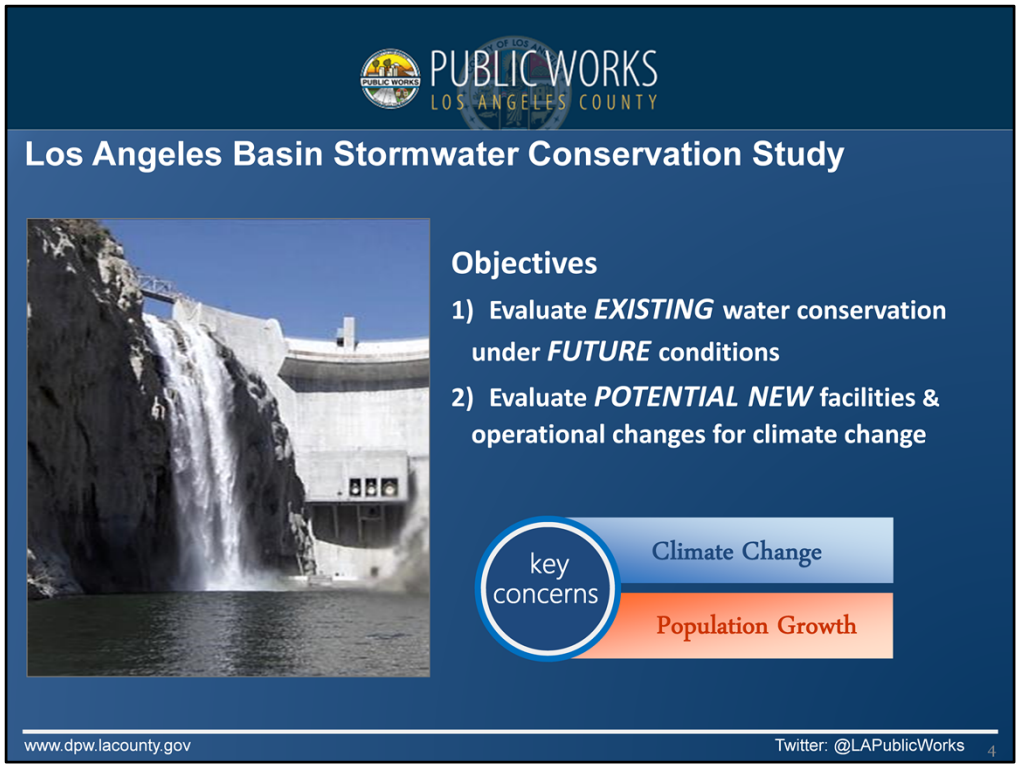
Colorado River: 1 AF = 2,000 kwh



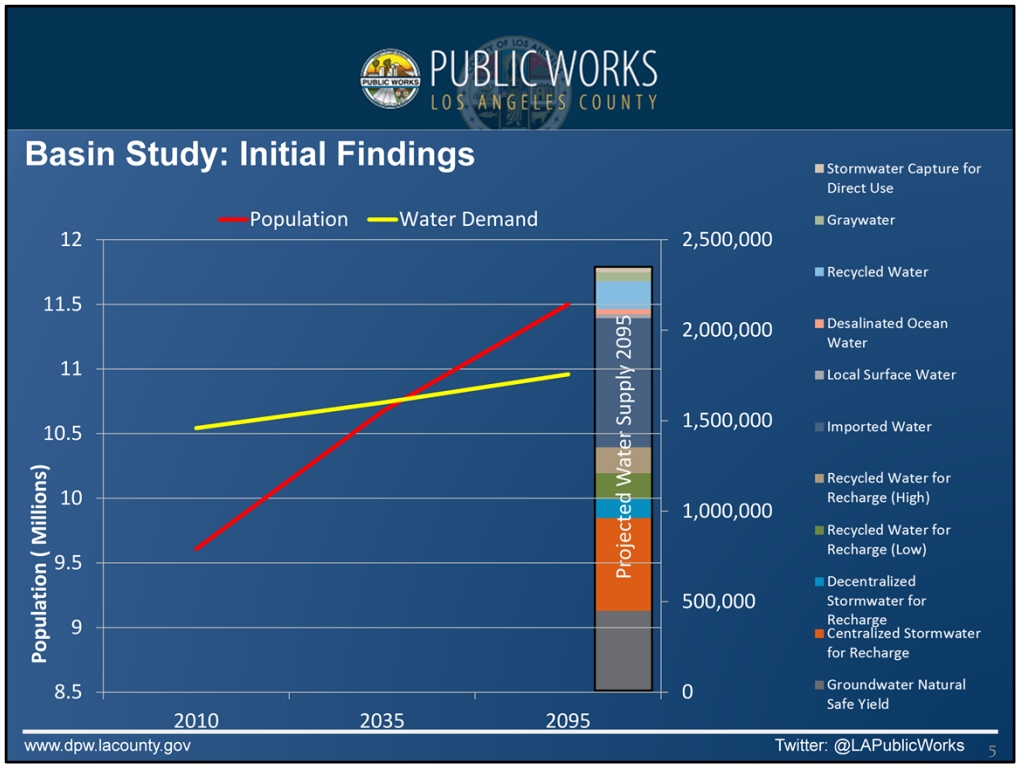
- Built-in “savings account” under our feet.
    - Approx 1.5 Million AF Unused storage available (Preliminary 2013 reporting from MWD)

- Need to make “deposits”

- What can we add?
    - Stormwater



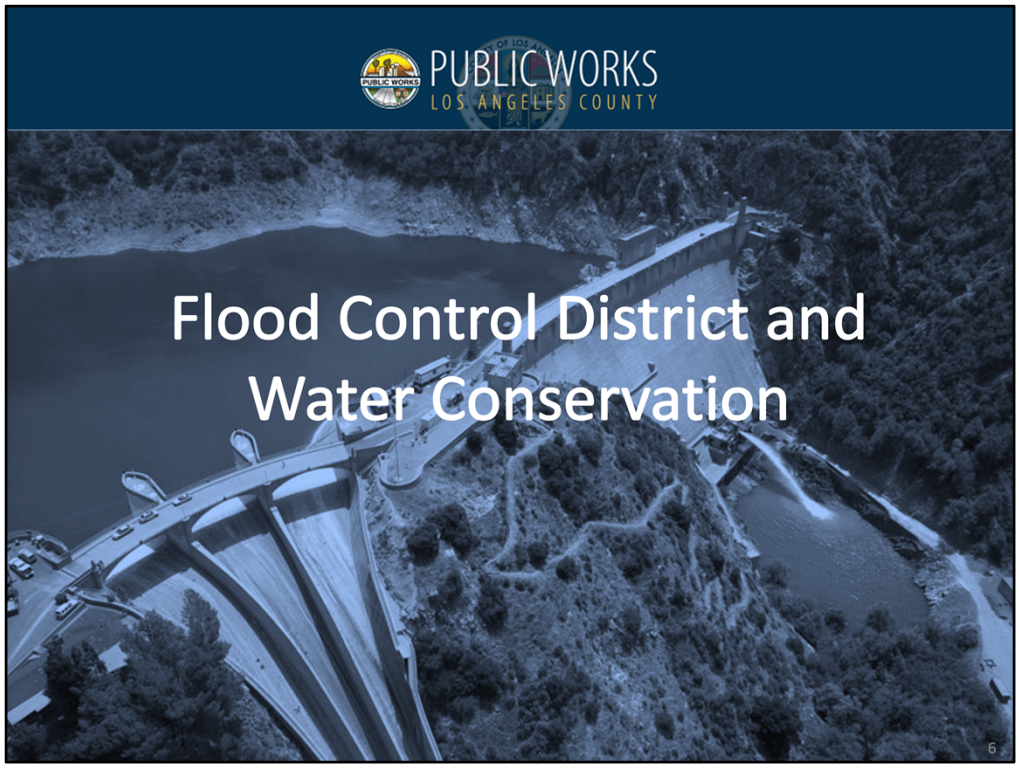
- LACFCD partnered with US Bureau of Reclamation
- Reached out to water agencies, looked at Urban Water Management Plans (UWMPs)
- Studied ***existing*** water conservation under ***future*** conditions
    - Future conditions
        - Climate change
        - Population growth



- Precipitation projections are anticipated to remain similar to present-day conditions
    - high interannual variability in total wet-season precipitation.

- ***Enough potential supply***
- Can meet demands with a diversified portfolio
- Stormwater is an integral part
    - Existing infrastructure to store it
    - Less energy intensive than other sources

- ***contingent upon developing*** the necessary facilities, programs, and/or policies to fully utilize it

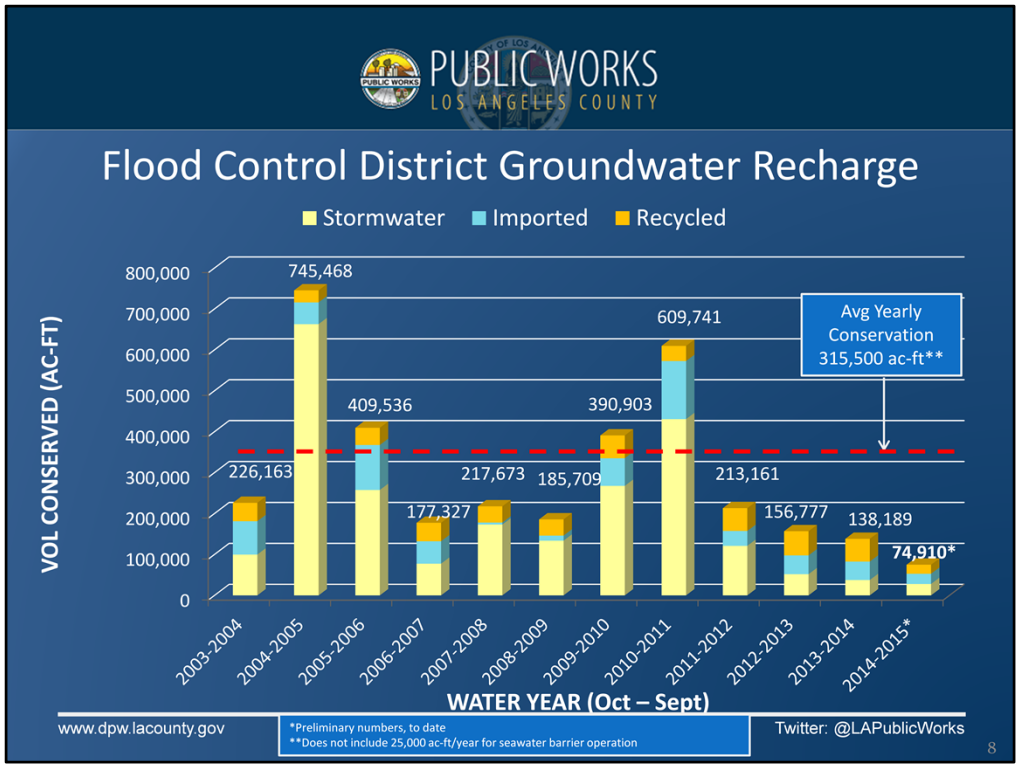


LACFCD plays a critical role in stormwater management with respect to the region's water supply

Flood Control Act established 2 main responsibilities for LACFCD:

1. Flood Risk Management
2. Water Conservation

Over 10 million people = 28% of CA population
Over 2,200 square miles = 92 cities & communities
14 Major Dams and Reservoirs,
26 Spreading Grounds
480 miles of Open Channels
3,073 miles of Underground Storm Drains

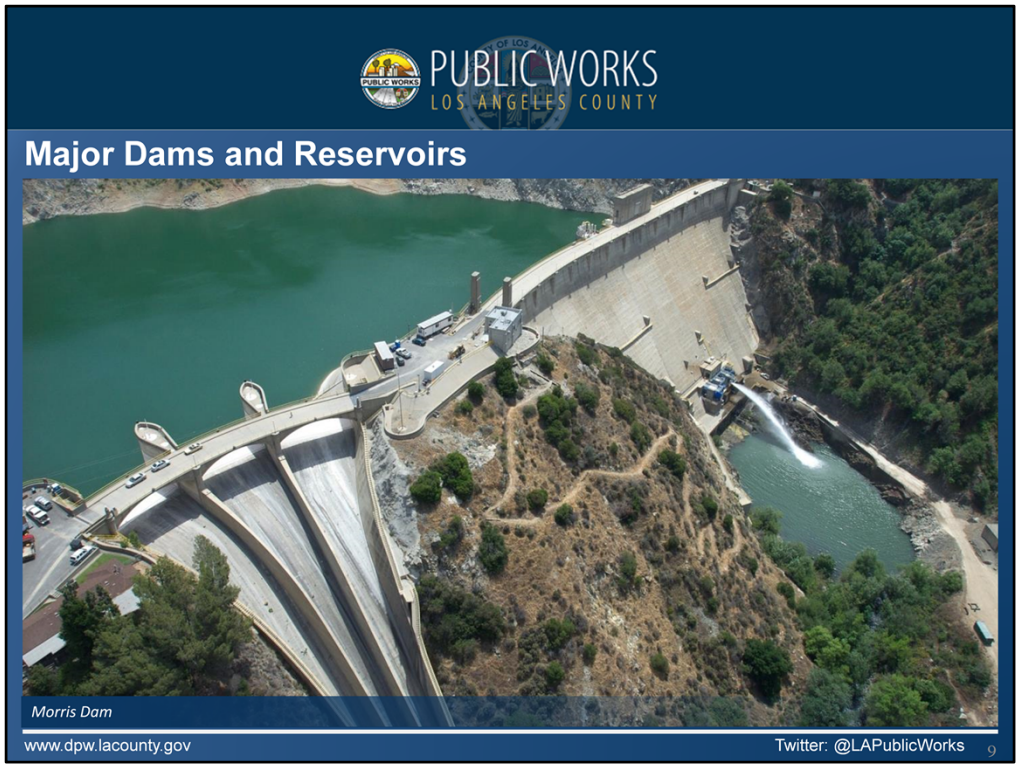


Avg yearly conservation = 315,000 AFY

Stormwater average = 210,000 AFY
Recycled water average = 46,000 AFY
Imported water average = 59,000 AFY

Wet years

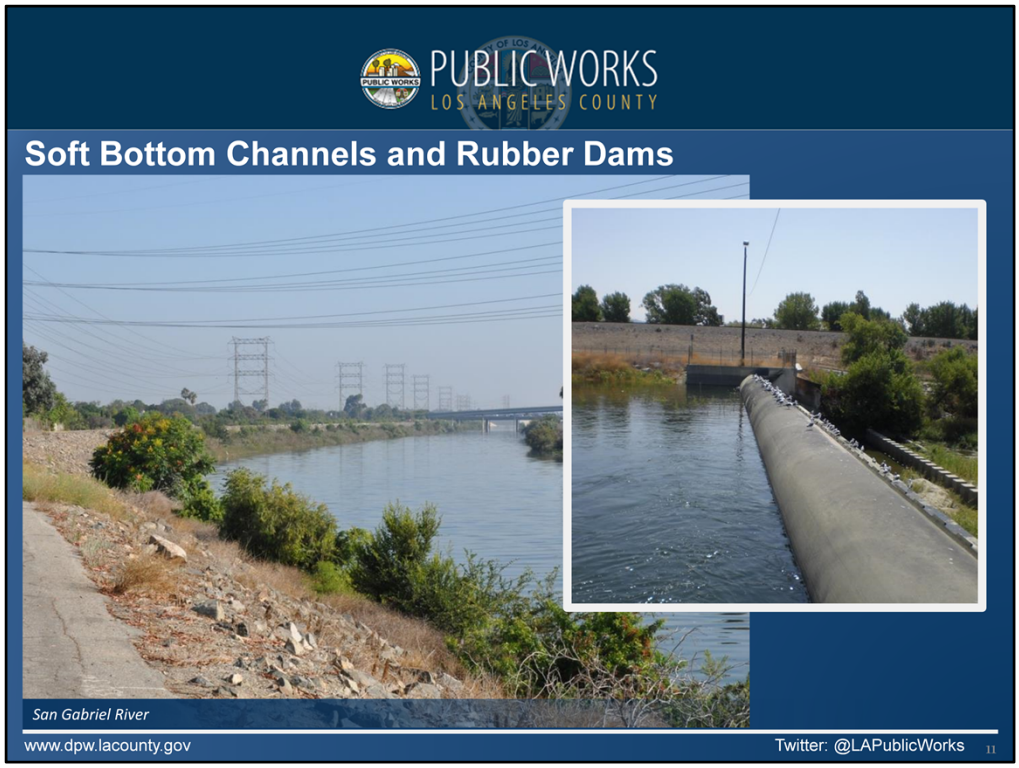
- Between 400-600,000 AF of stormwater conserved



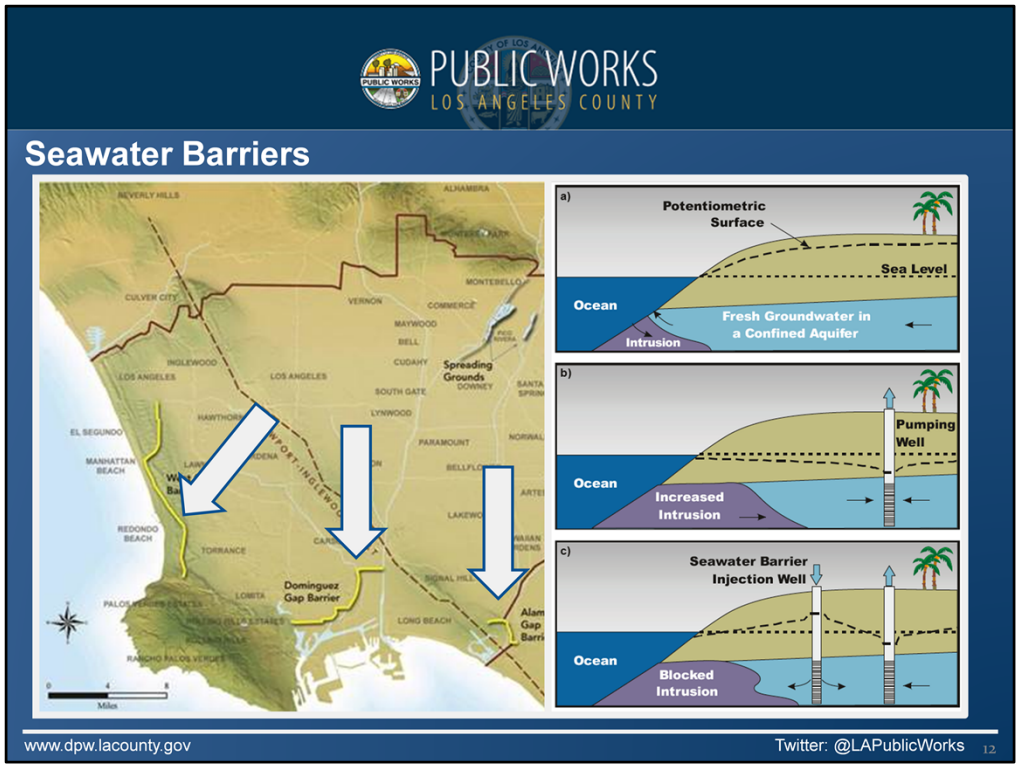
Store water behind dams

Water discharged from dams and reservoirs goes to Spreading Grounds

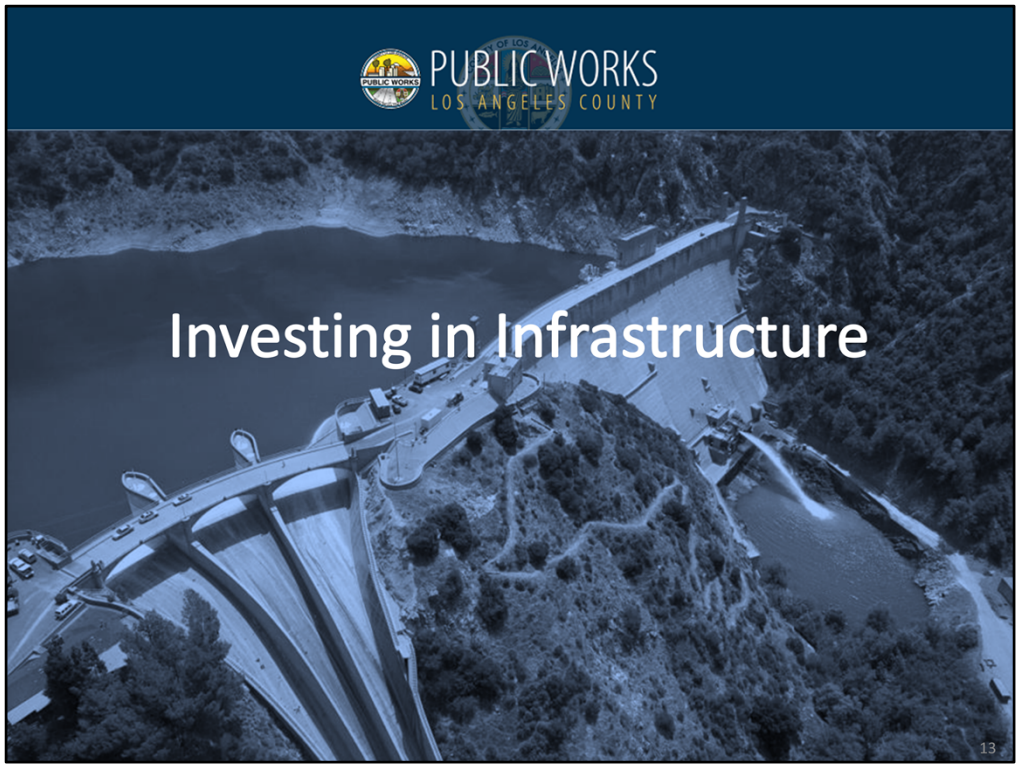
Also recharge recycled and imported water



Recharge in soft bottom channels with the help of 14 rubber dams



Prevent salt water intrusion to groundwater


PUBLIC WORKS
LOS ANGELES COUNTY
Investing in Infrastructure
13

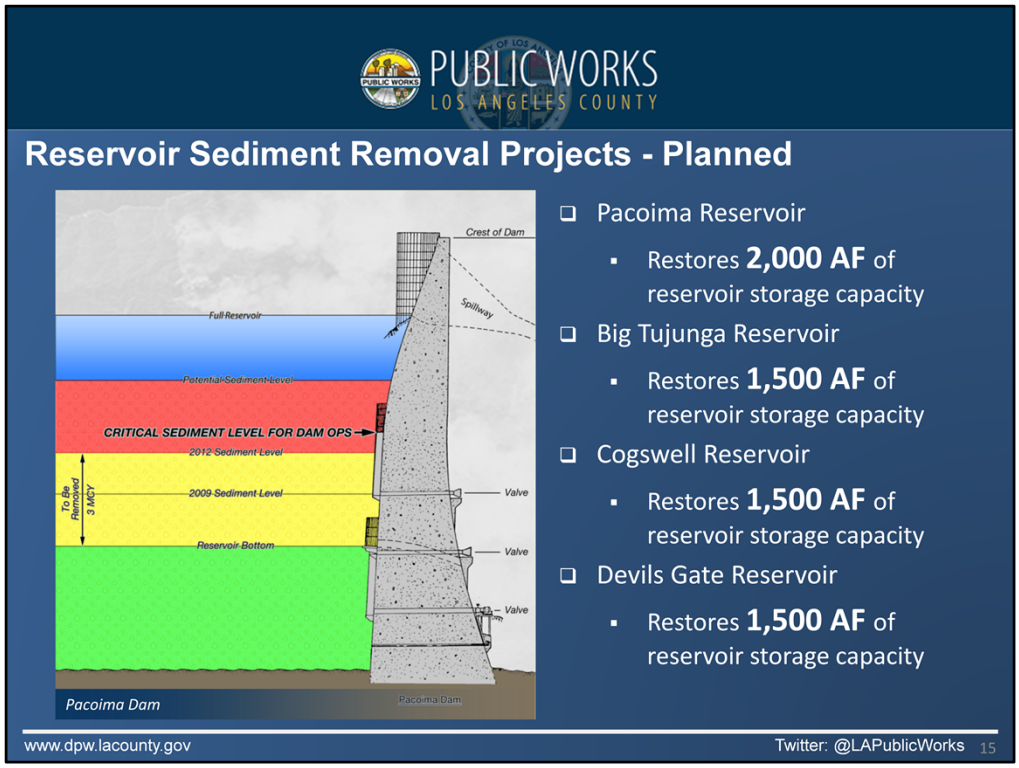
Climate of alternating wet and dry periods

Agencies aware of impacts due to long periods of drought.

<u>Completed Projects</u>

Since 2007

- 22 stormwater capture projects
- increased storage capacity by 2,190 ac-ft
- increased the average annual water conserved by 19,770 ac-ft



Looking Ahead

Sediment removal projects planned

- 4 projects
- Reservoirs were impacted by the Station Fire
- 6,500 AF capacity to be restored

Spreading Grounds
- numerous improvement projects planned
- 33,740 AF/Y benefit

For many:
- formed cost sharing partnerships with local water agencies or
- obtained grant money through IRWMP

Collaborative Planning has been Key

- Successful partnerships
- Completed projects
- Planned projects

Sun Valley Watershed Project

Developed integrated water management plan to address a regional drainage problem

Collaboration with:

- government agencies
- non-profit organizations
- Sun Valley Watershed stakeholders

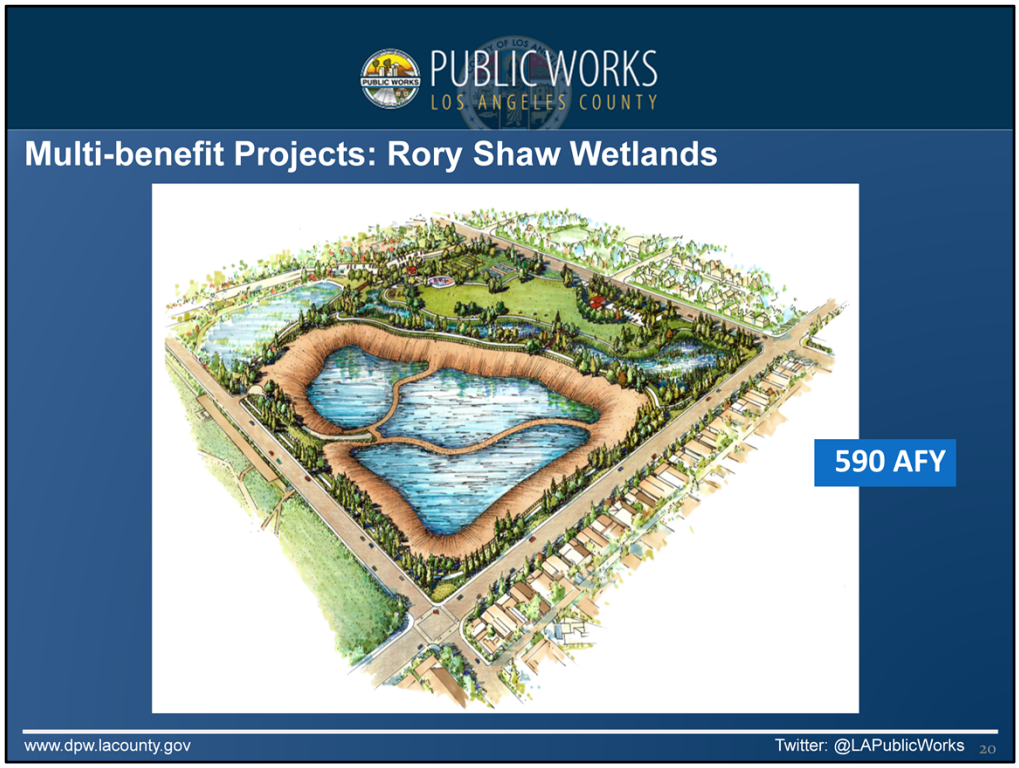
Success Story: Sun Valley Park

- Groundwater recharge
  - The water conservation benefit of treated runoff is estimated to be **30 acre-feet per year**.
  - 2 underground infiltration basins

- Flood Protection
  - Localized flooding is alleviated
  - 21-acre drainage area is collected through a storm drain system constructed for the project

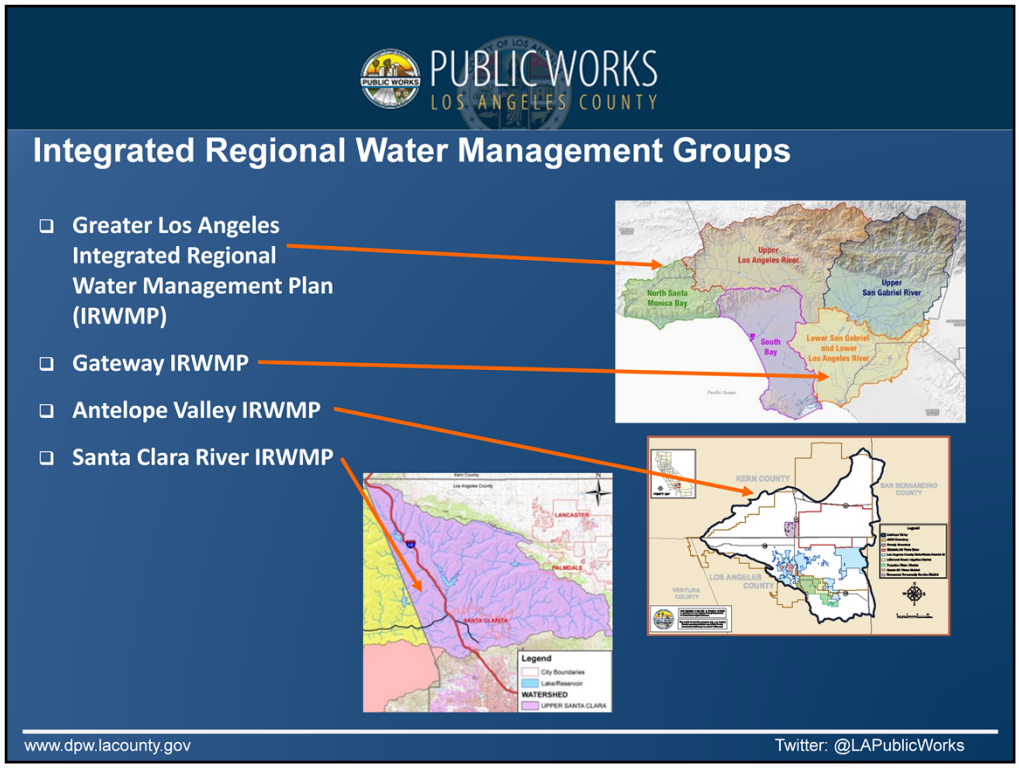
- Controls Water Pollution
  - Water quality treatment system removes suspended solids and heavy metals.

- Outdoor Recreation
  - new soccer and baseball fields, bleachers, sports lighting, and interpretive signage.



Future Sun Valley Project: Rory Shaw Wetlands

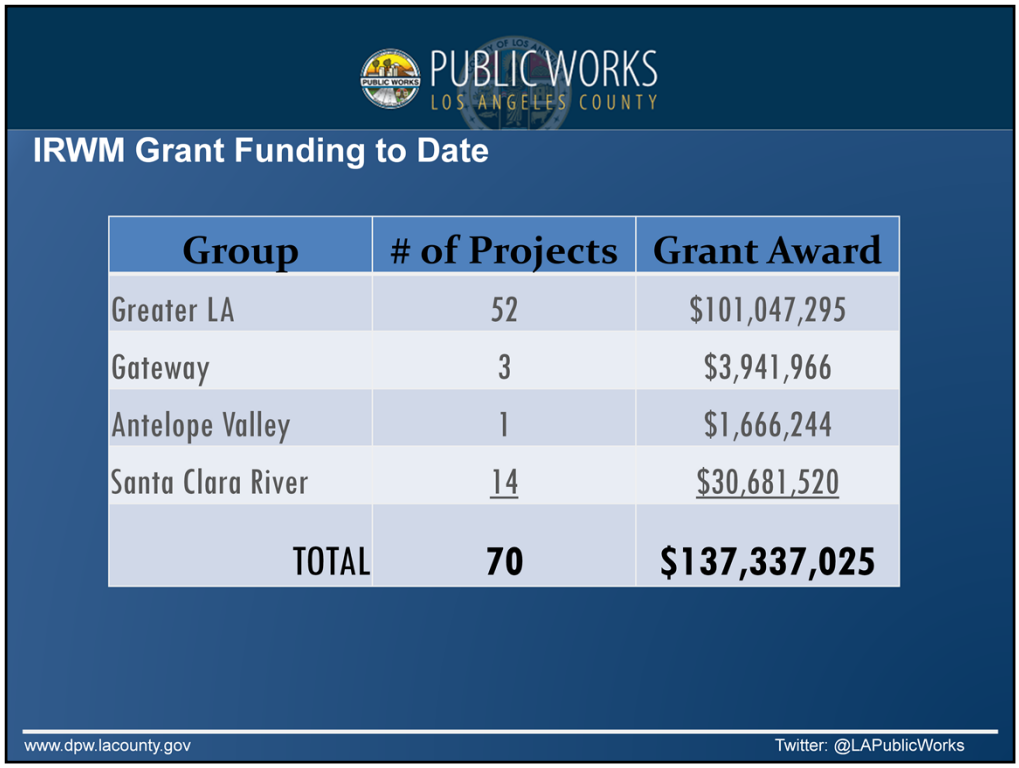
- convert a 46-acre, engineered, inert landfill
- stormwater runoff from a 929-acre drainage area
- Project Components
    - Construct storm drain system
    - Construct detention ponds and wetlands to
        - capture and treat stormwater runoff
        - provide water quality enhancement.
    - Treated flows will be pumped to the adjacent Sun Valley Park for infiltration through existing infiltration basins
- water conservation benefit is expected to be **590 acre-feet per year**.



Collaboration through IRWM

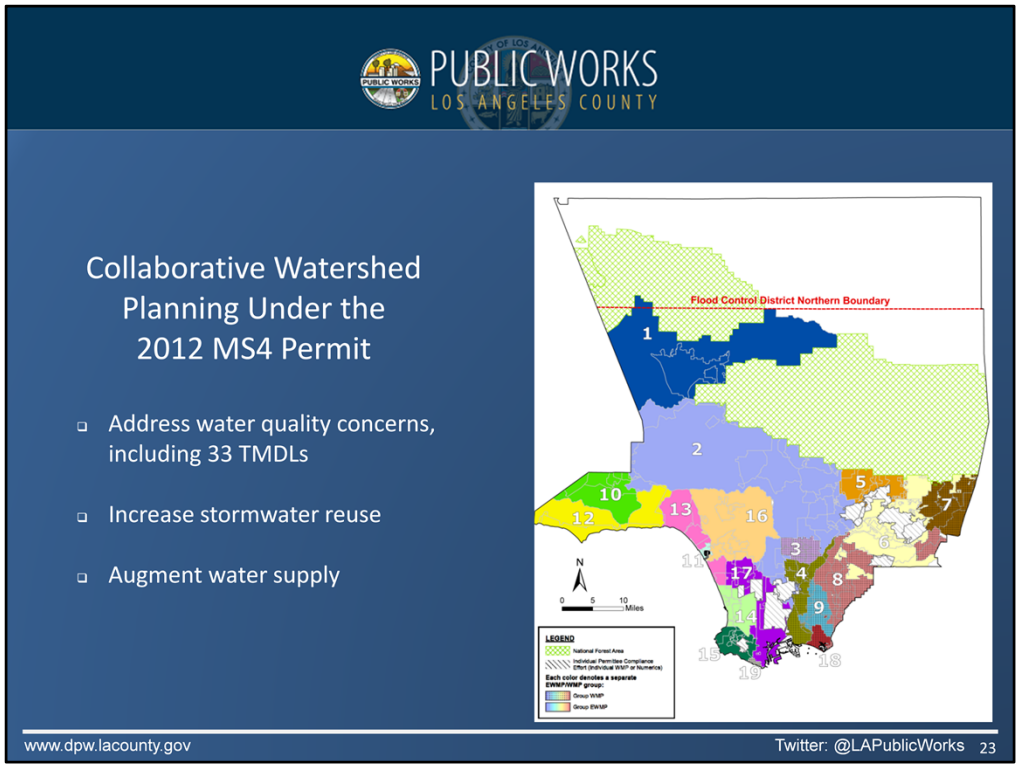
4 IRWM groups in LA Region

LACFCD chair of GLAC



Grant Funding to Date

- $137 Million in grant funds
- 70 projects



Next chapter in Water Resource Management influenced by MS4 permit

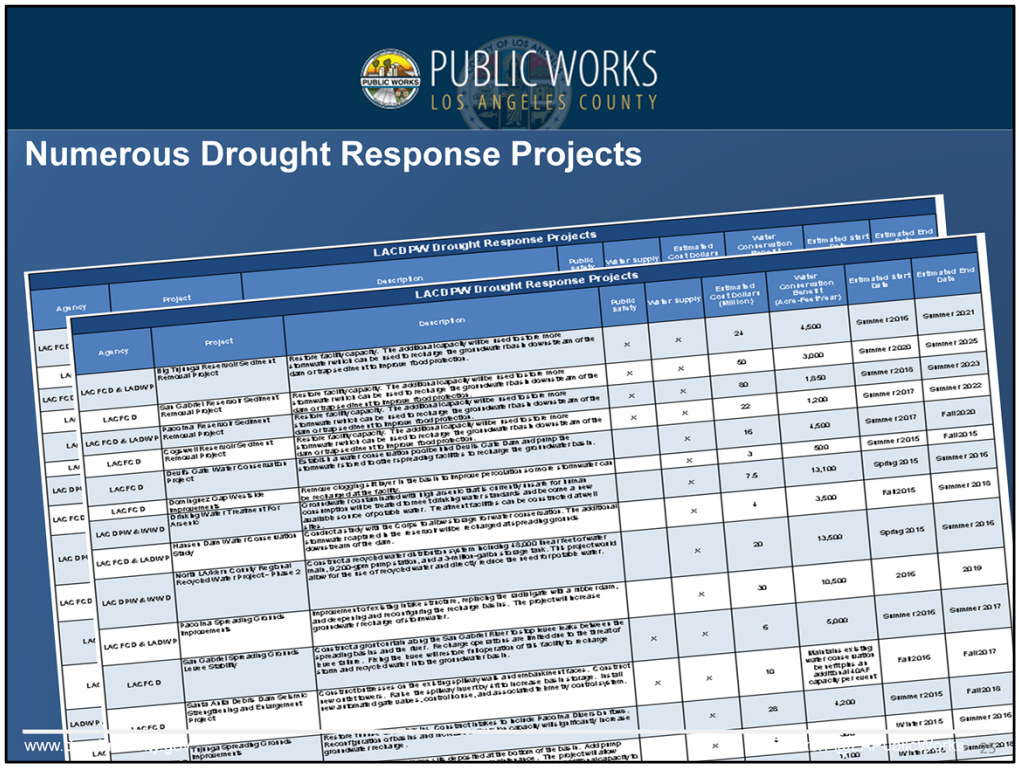
- Avg **540,000 AFY** stormwater runoff lost to ocean
- Goal is to treat, capture and infiltrate it to augment water supply

- Partner: County of Los Angeles Dept. of Parks and Recreation

Project Elements
- underground water retention and infiltration system under the Park's open space
- drainage area of 190.5 acres is located within a **DAC**

- Although water quality is the primary benefit:
    - Captures 8.39 AF of stormwater
    - BMP is expected to remove about 82% of metals associated with the first flush
    - Will also remove other pollutants of concern in this area including trash, bacteria, and nutrients.
    - Sits over an unconfined aquifer.

- Estimated to augment the Central Basin by **127 acre-feet per year** through the Los Angeles Forebay.
    - enough for 255 households in a year.



LACFCD
IRWM
EWMP

- Many projects ready and being further developed
    - Potential for 10s if not 100s of thousands of AFY in water conservation
- Benefit to the consumer and water agencies
- Need funding and partnerships with agencies
- Need MET's participation

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Summary

- Investing in Stormwater for Local Sustainability
- Integrated, Collaborative Planning