



A Sustainable City Plan: Building Local Water Resources

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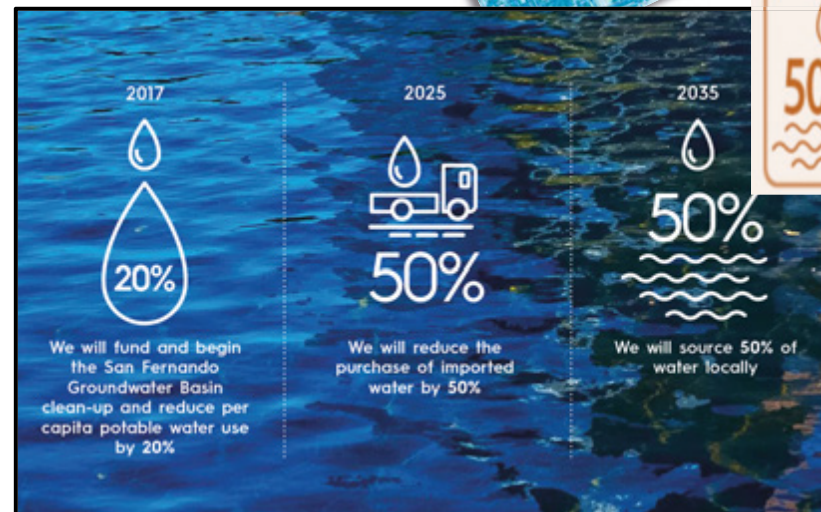
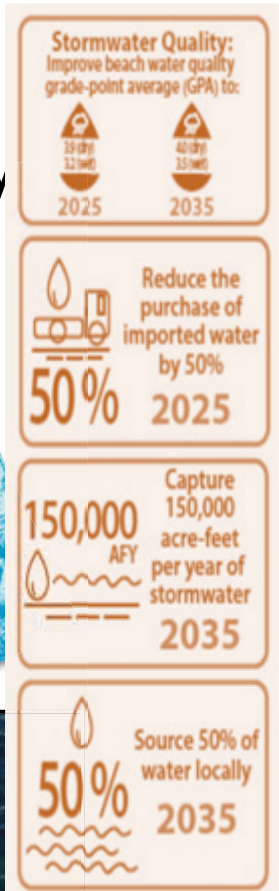


2018 AAEE West Coast Annual Conference
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Water Resource Goals

Mayor Garcetti – Setting our Sites:

- 2014 Executive Directive #5 – Creating a Water Wise City
 - Reduce per capita water use by 20%
 - Increase local water supplies
- 2015 Executive Directive #7 - Sustainable City Plan
 - Environment
 - Economy
 - Equity





Sustainable City Plan Goals

Recycled Water

Reduce purchase of imported water by 50% by 2025

Source 50% of water locally by 2035

Stormwater

Improve Beach Water Quality: 2025 and 2035 targets

Capture 150,000 AFY by 2035

Groundwater

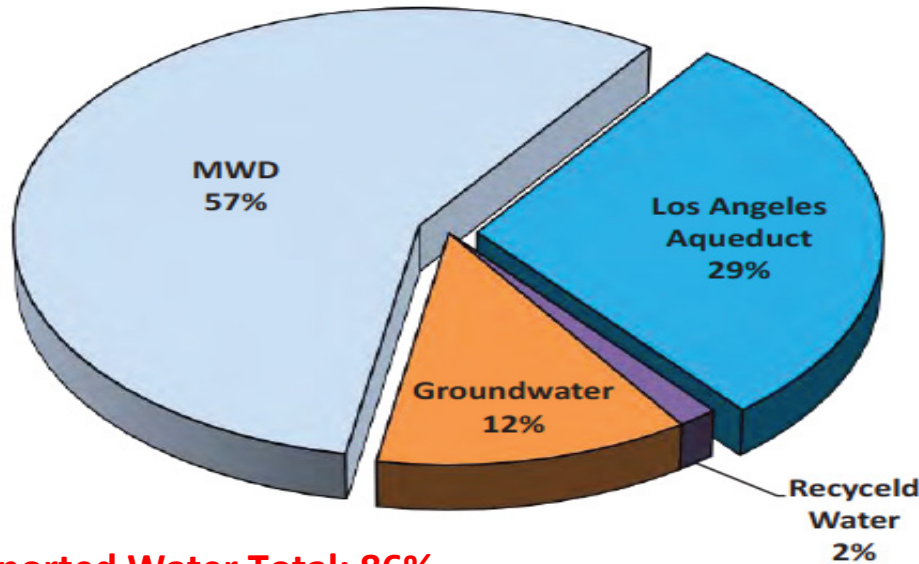
Clean the San Fernando GW Basin

Secure additional funding for GW cleanup

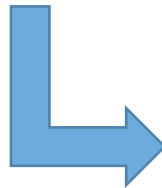


Reducing Our Dependence on Imported Water

2015 Conditions
Total Production: 490 MGD (550,130 AFY)



Imported Water Total: 86%



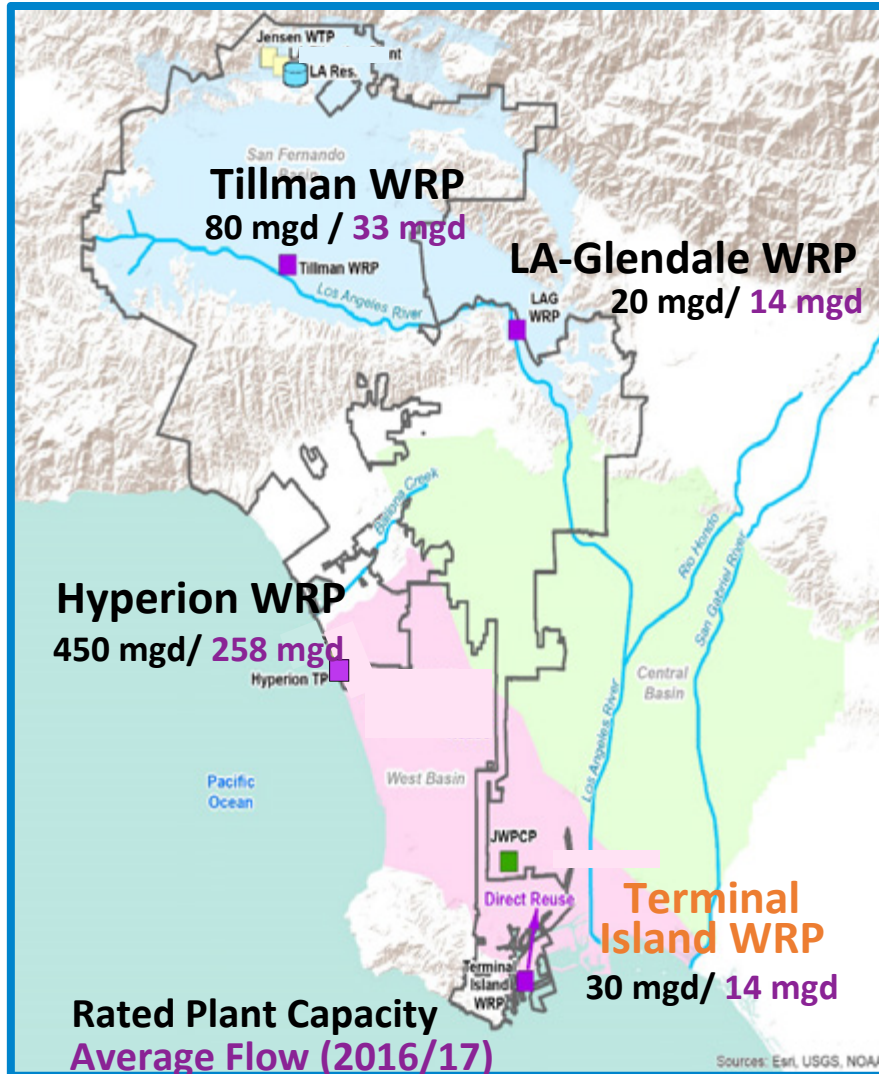
**Imported Water Reduction from 86% to 50%
± 120 MGD (135,000 AFY)
additional local supplies**



Terminal Island WRP

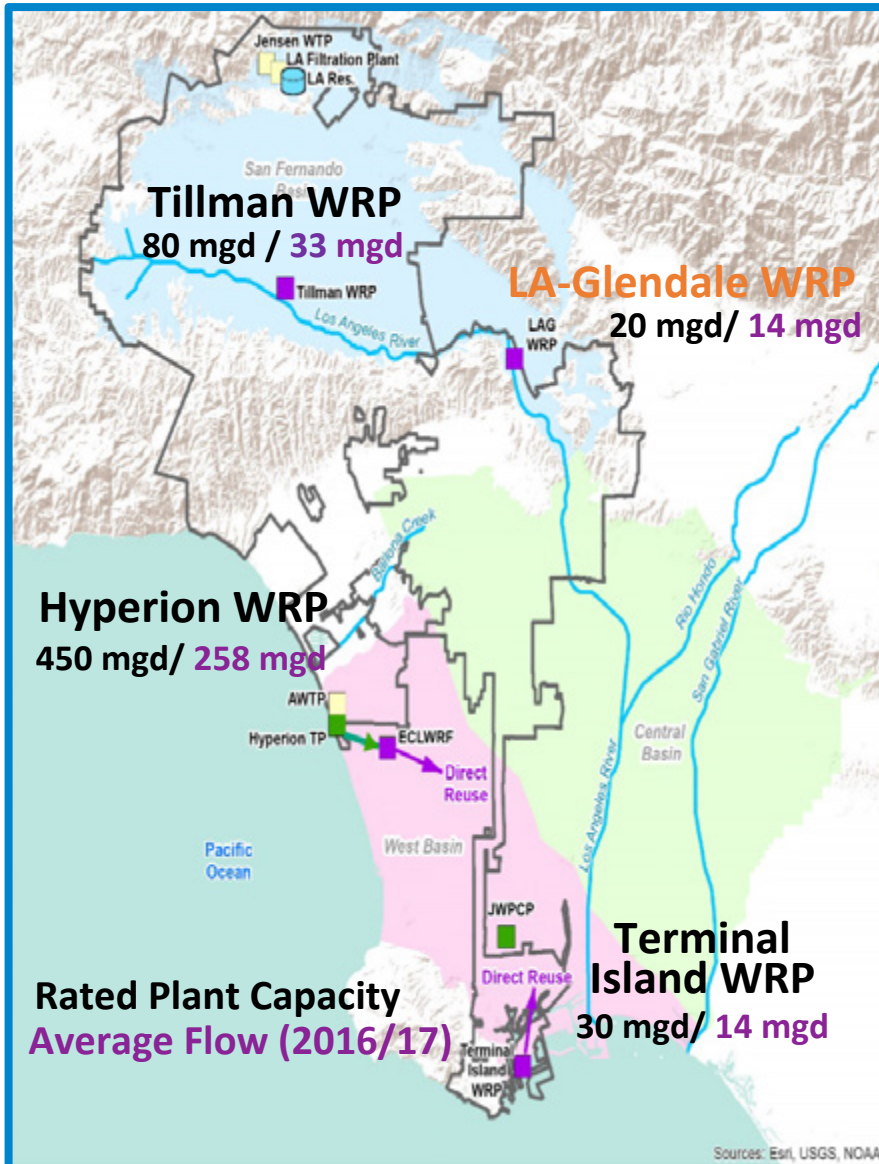
Terminal Island WRP AWWP Expansion

- 2016 treatment capacity doubled from 6 to 12 mgd – all influent flow
- Tertiary filtration followed by MFRO AOP
- Users: Dominguez Gap Barrier, refineries, other industrial





Los Angeles – Glendale WRP

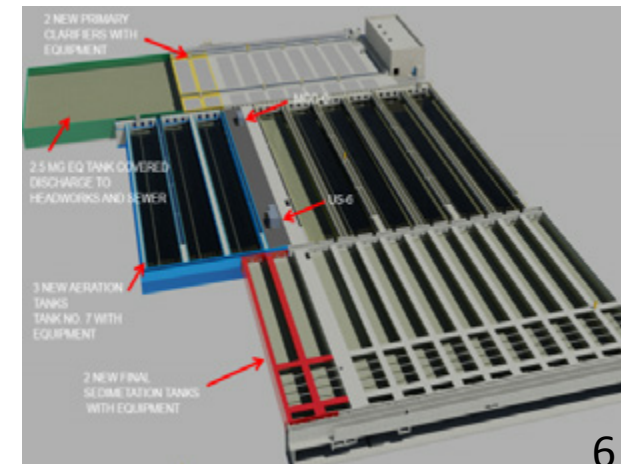


Flow Equalization

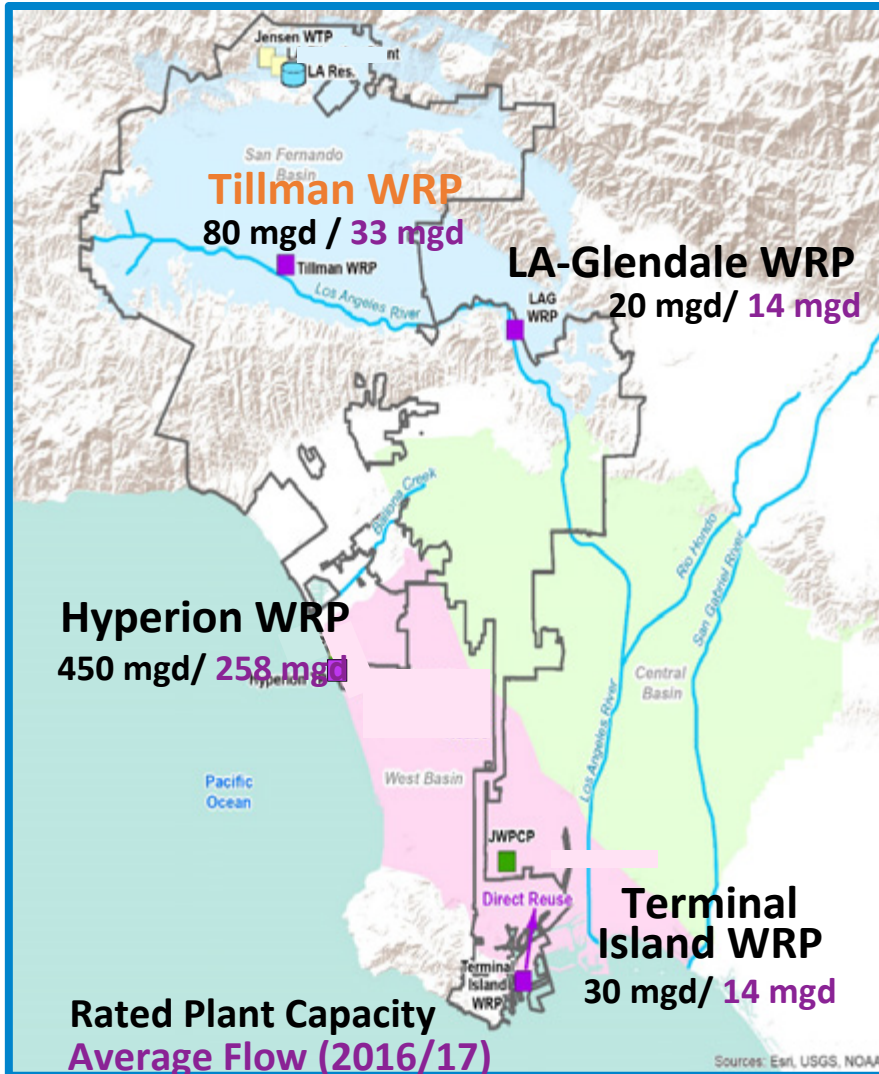
- 2.5 MG primary effluent EQ
- Two primary tanks
- Three aeration tanks
- Two secondary clarifiers (for treatment only)

Benefits

- Increase avg treatment capacity
- Increase recycled water usage
- Provide wet weather relief



Tillman WRP

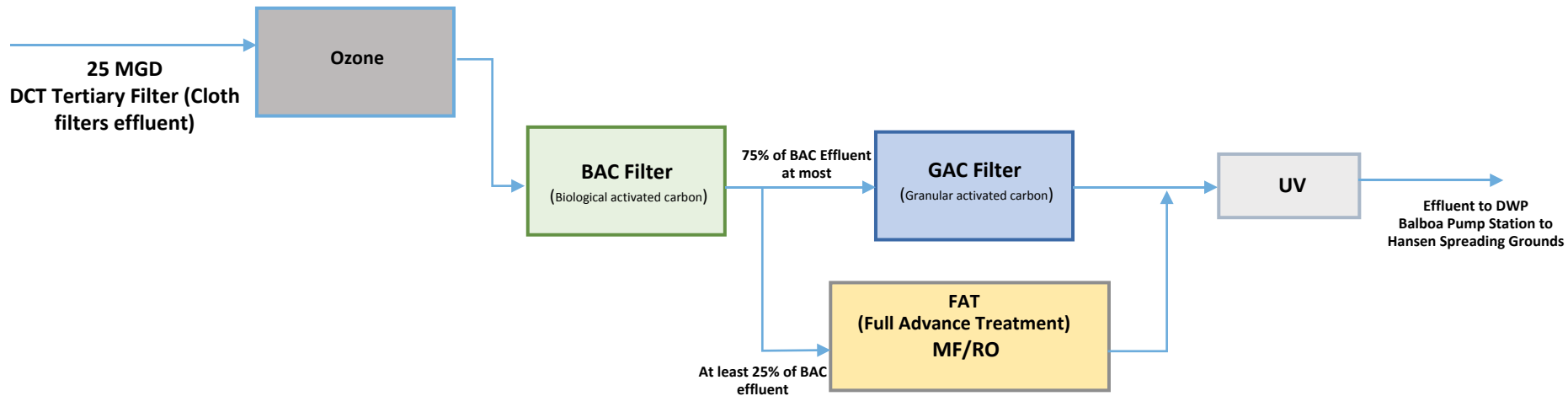


Groundwater Replenishment (GWR) Project

- 25 MGD advanced treated water from Tillman WRP to replenish the San Fernando Basin.
- Pilot testing on Ozone BAC
- Ozone Demonstration Facility 7 mgd, scheduled online 2019
- 9-10 MGD ww flow to be redirected via EW Valley Interceptor Sewer
- AWPf operational 2023

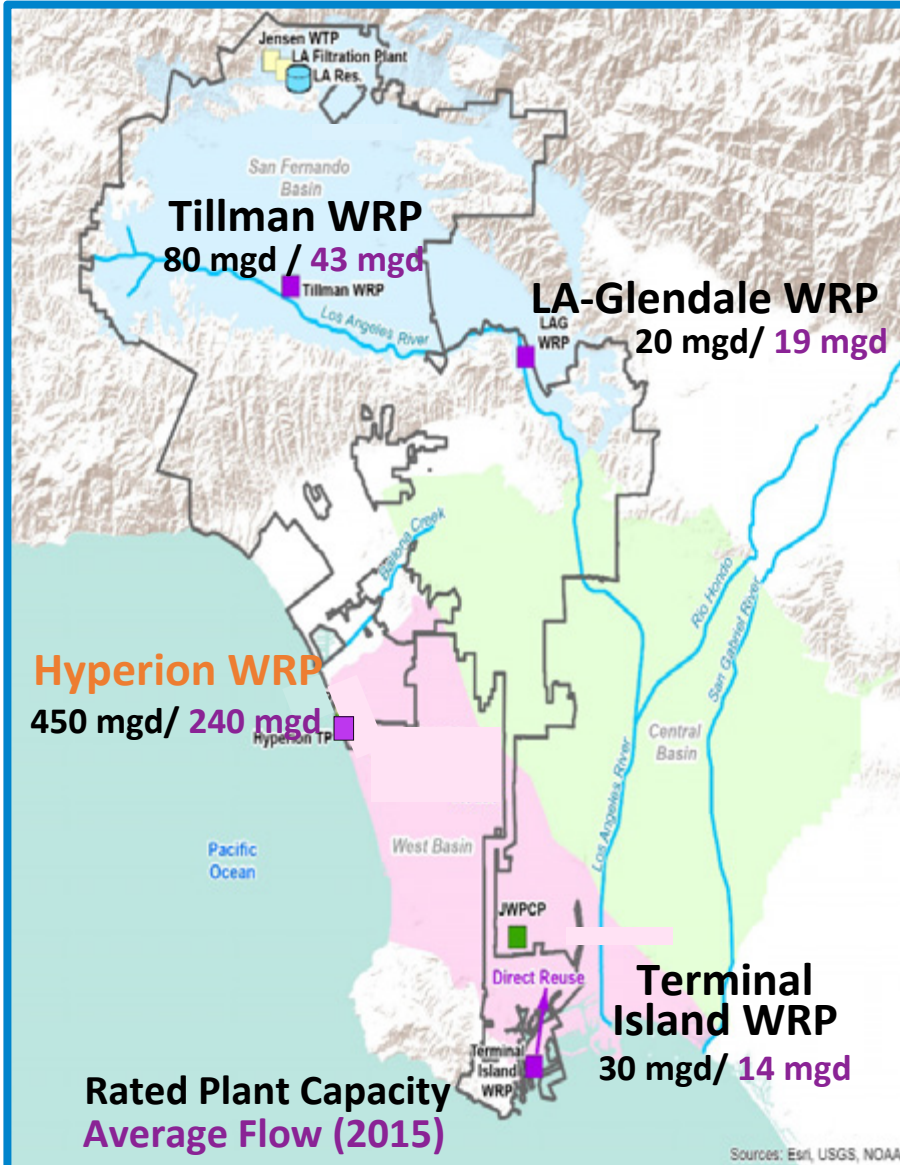


Process Flow Diagram – Full Scale AWPf



Soil Aquifer Treatment (SAT) naturally occurs in the GW aquifer

Hyperion WRP



Advanced Treated Recycled Water for LAWA

- 1.5 mgd advanced water purification facility at Hyperion, expandable to 5 mgd
- Online 2021

MBR Pilot

- Online end of 2019

Full Expansion

- >100 MGD



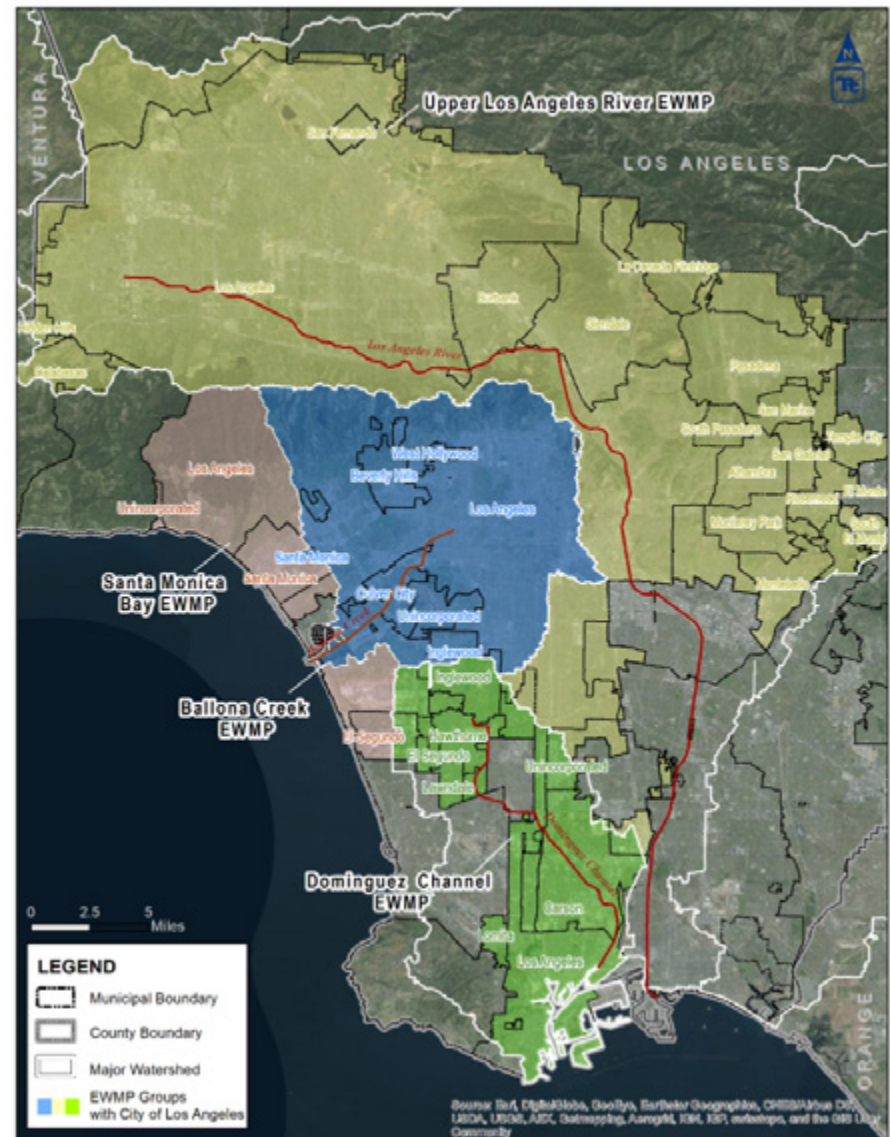
Enhanced Watershed Management Programs

- Upper LA River
- Ballona Creek
- Santa Monica Bay
- Dominguez Channel
- Marina del Rey

Multi-benefit goals

- Water quality: MS4 Permit, TMDLs
- Water supply: 90,000 acft/year
- Community enhancements

Developed with ~30 municipalities and stakeholders





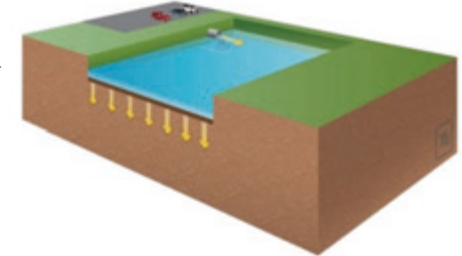
EWMPs: capture and retain stormwater



1. Rainwater capture on private parcels



2. Green streets & other distributed projects



3. Regional projects & diversions





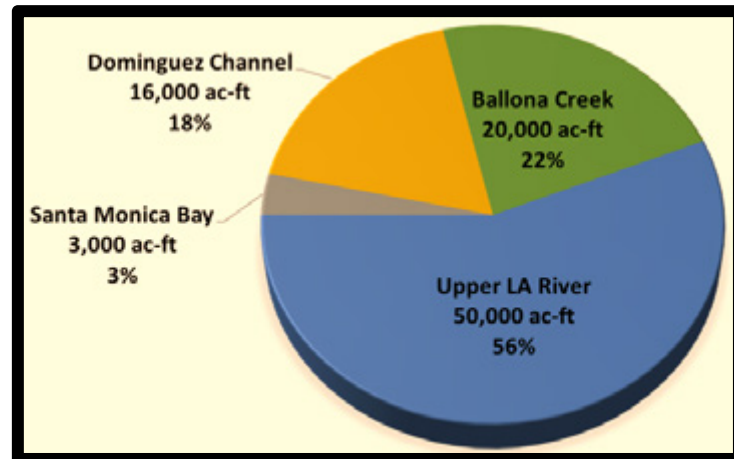
EWMPs: Cost and Benefits

Watershed	Capital Cost for LA
Marina del Rey	\$250 million
Santa Monica Bay	\$410 million
Dominguez Channel	\$530 million
Ballona Creek	\$2,280 million
Upper LA River	\$3,820 million
Total	\$7,300 million

Water Quality Compliance

- 22 TMDLs
- MS4 Permit

Water Supply: 90,000 acft/yr





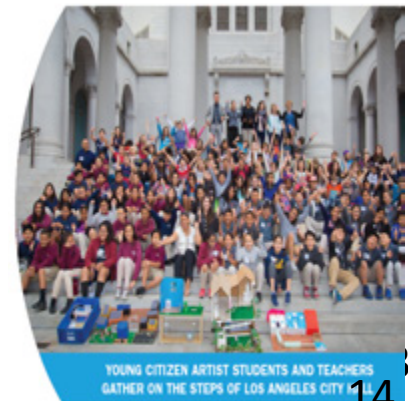
Benefits and Challenges

Benefits

- Local resource reliability
- Resilience and sustainability
- Community enhancement
- Multi-benefit projects
- Opportunities to partner and leverage resources

Challenges

- Funding
- Schedules
- Implementing emerging technologies
- Development of water recycling regulations
- Public outreach and acceptance





Conclusion



- Sustainable City Plan provides foundation
 - Identifies targets
 - Specifies actionable items
 - Requires annual updates with reported outcomes
- City of Los Angeles is moving forward on multiple fronts to secure local water resources
 - Recycled water at all water reclamation plants
 - Stormwater quality coupled with increased GW supply
 - Groundwater cleanup





Thank You

Traci Minamide

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