



Advancing Integrated Planning:

One Water LA 2040 Plan

August 13, 2019

LA Chapter WaterReuse



LA's 2015 Water Picture

Approximately **90%** of L.A. water supplies are imported



Challenges

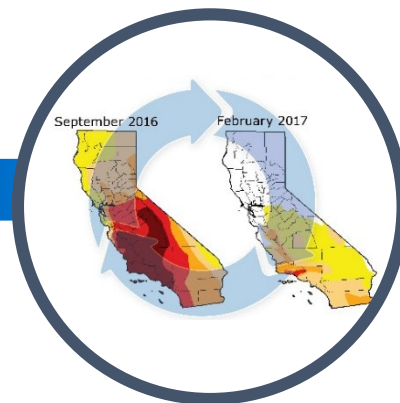
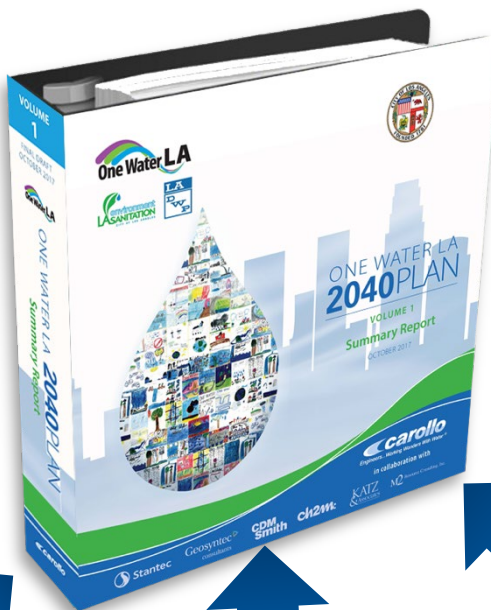
- Recurring Droughts
- Increasing demand
- Aging infrastructure
- More stringent regulations
- Limited funding
- Dependence on imported water
- Climate change



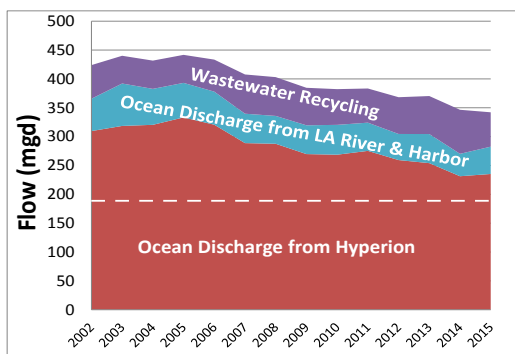
The Plan incorporates the drastic changes in the water landscape since 2006



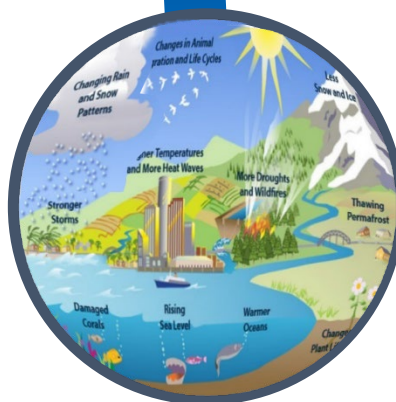
New Plans & Goals



Recurring Droughts



Declining Wastewater & Reduced Recycled Water Availability



Climate Change

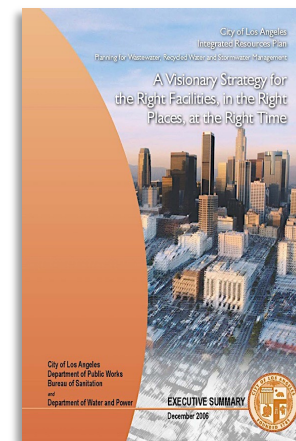
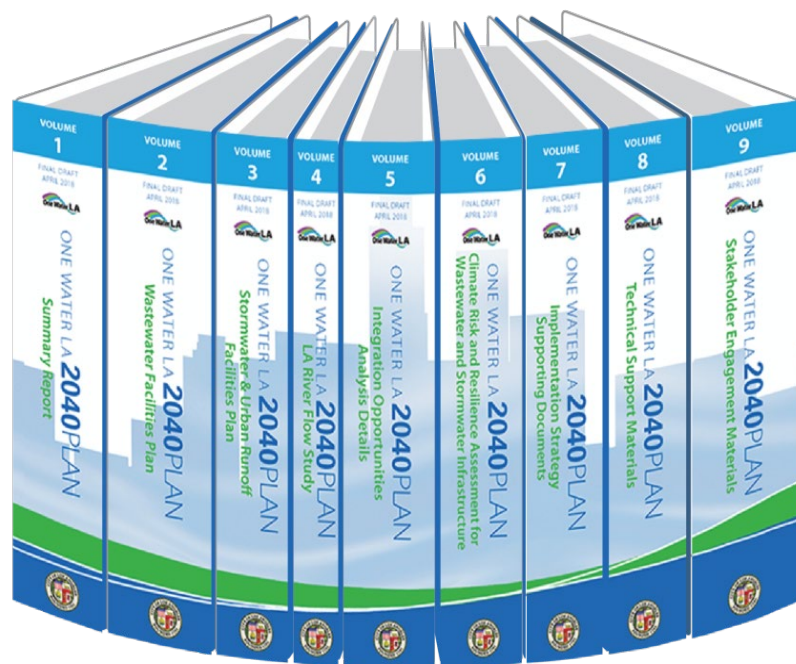


New Stormwater & Receiving Water Quality Regulations

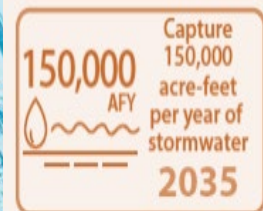


A collaborative approach to integrated water management

One Water LA 2040 Plan Planning Horizon: 2040



Updates the 2006 Water Integrated Resources Plan Planning Horizon: 2020



Supports LA's 2015
Sustainable City pLAN
Goals



One Water LA Vision

Collaborative approach to develop an integrated framework for managing the City's watersheds, water resources, and water facilities in an **environmentally**, **economically**, and **socially** beneficial manner.





Advancing Integrated Planning: One Water Cities

- (1) Holistic management of water resources**
- (2) Driven by directive of elected officials or top leadership from multiple utilities**
- (3) Goals or objectives inclusive of sustainability, environmental enhancement, climate resiliency, community benefits and economic revitalization.**

- One Water LA
- One Water SF
- Philadelphia Green City-Clean Waters Program
- Austin Integrated Water Resources
- Miami's Water Resilience Framework
- Seattle Public Utilities
- One Water Denver (very early development)
- Houston (very early development)
- Honolulu (very early development)



- **Phase 1:** Lay the groundwork

(Completed 2015)

- **Phase 2:** Develop One Water LA 2040 Plan

(Launched October 2018)

- **Phase 3:** Implementation and Next Steps

(to be completed by 2021)



Objectives

- Integrate **management of water resources** and policies
- Balance **environmental, economic, and societal** goals
- Improve health of local **watersheds**
- Improve local water **supply reliability**
- Implement, monitor, and maintain a **reliable wastewater** system
- Increase **climate resilience**
- Increase **community awareness** and advocacy for sustainable water





The Steering committee fostered integration

Steering Committee Members

- 14 City Departments
- 6 Regional Agencies

Key Accomplishments

- Developed Vision, Objectives, & Guiding Principles
- Identified existing integration opportunities
- Identified policies to streamline integration between departments & agencies
- Created awareness to integrate water elements in projects & programs





PRIORITIZING STAKEHOLDER ENGAGEMENT & PUBLIC EDUCATION

500+

STAKEHOLDERS

30

MEMBER STEERING COMMITTEE

300+

ORGANIZATIONS REPRESENTED

10

STAKEHOLDER ADVISORY
GROUP MEMBERS

30+

STAKEHOLDER AND ADVISORY
GROUP MEETINGS

5

SPECIAL TOPIC GROUPS:

Decentralized Treatment/Reuse
Stormwater & Runoff Management
Partnerships, Collaboration
& Innovation
Funding & Cost-Benefit Analysis
Outreach & Communication

65+

PRESENTATIONS AND DISCUSSIONS
AT NEIGHBORHOOD COUNCILS,
CONFERENCES/EVENTS AND WITH
EDUCATION PARTNERS

TEAMWORK

The One Water LA team dedicates countless hours to public and community outreach and engagement activities, inviting input and raising awareness about the program's purpose and needs.

Engagement and Education Goals

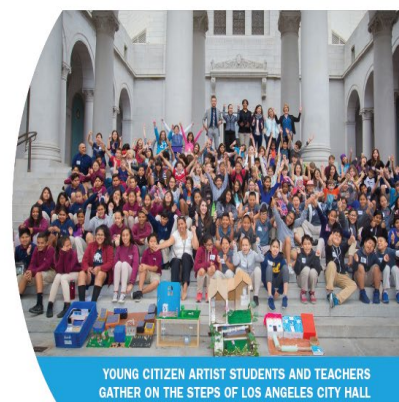
- » Increase community involvement, awareness and advocacy for sustainable water
- » Align expertise with subject matter discussions, maximizing stakeholder input
- » Increase number and diversity of stakeholders
- » Provide clear, consistent information to diverse communities



STAKEHOLDERS HELP IDENTIFY THE MOST IMPORTANT BENEFITS FOR ONE WATER LA TO ACHIEVE



COMMUNITY MEMBERS LEARN MORE ABOUT ONE WATER LA AT LA SANITATION'S EARTH DAY EVENT



YOUNG CITIZEN ARTIST STUDENTS AND TEACHERS GATHER ON THE STEPS OF LOS ANGELES CITY HALL



Advisory Group Dedicated Four Years To The Development Of The Plan



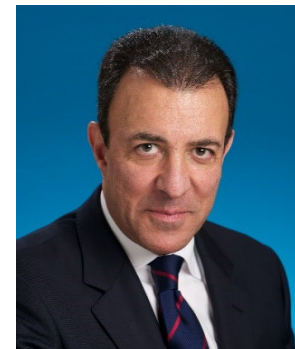
Carolyn Cassavan
Sherman Oaks
Neighborhood Council



Jack Humphreville
Greater Wilshire
Neighborhood Council



Ken Murray
Wilderness Corps



David Nahai
David Nahai Companies



Melanie Winter
The River Project



Brad Cox
Los Angeles Business
Council



Mike O'Gara
Sun Valley
Neighborhood Council



Veronica Padilla
Pacoima Beautiful



Kelly Sanders
University of Southern
California



Louise McCarthy
Community Clinic Association
of Los Angeles County

- Represent Diverse Points-of View
- Geographical Diversity
- Organizational Diversity



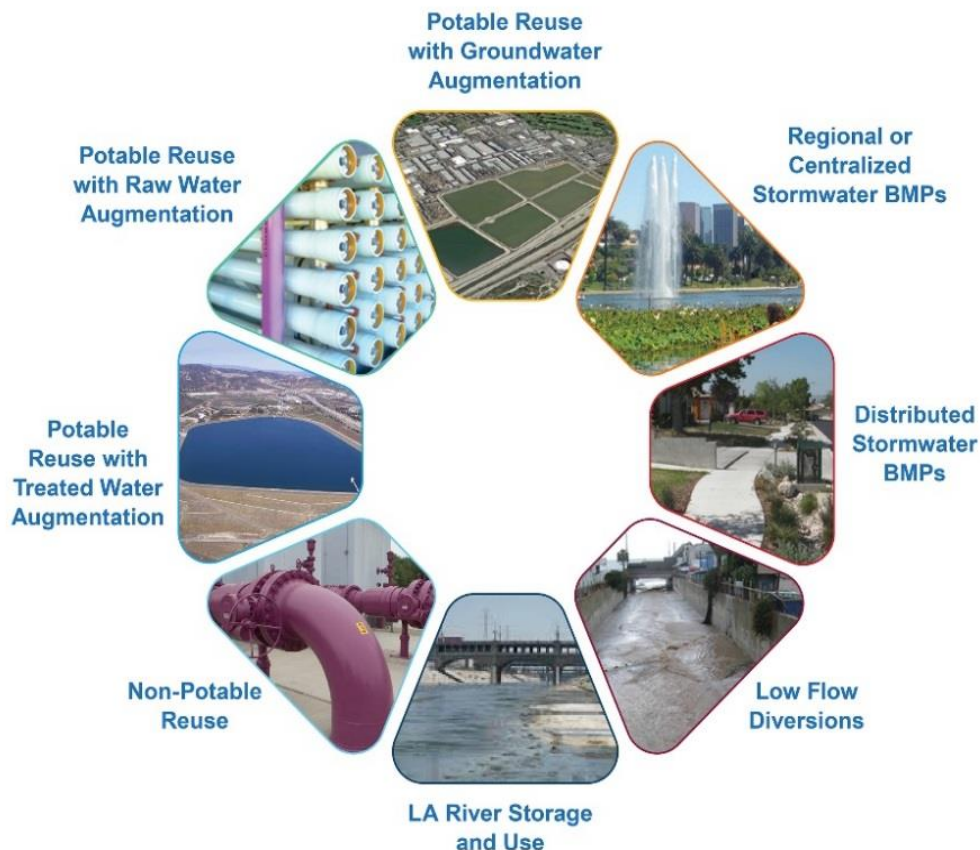
Plan Elements



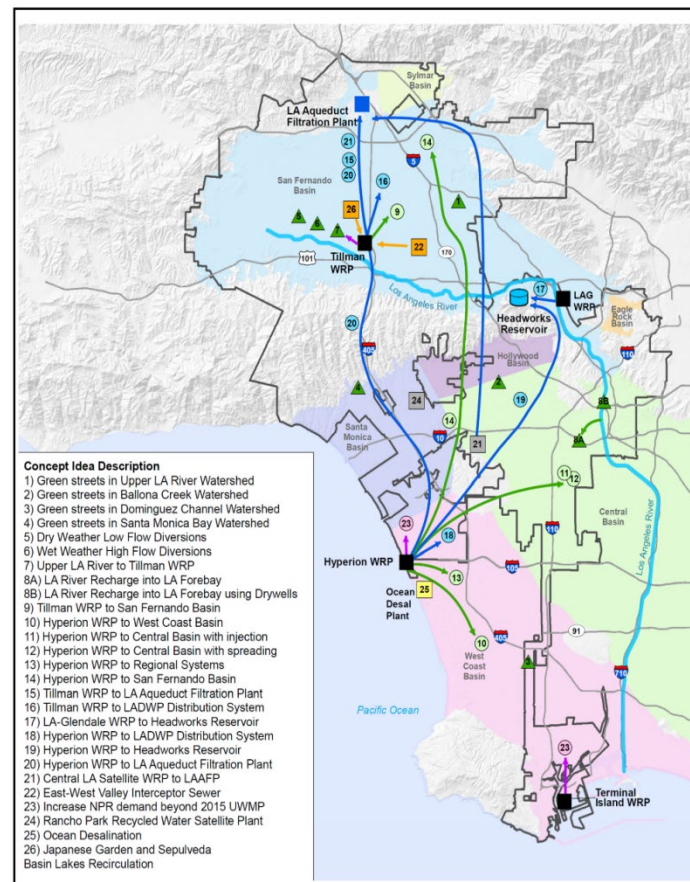


Future Integration Opportunities

8 Recommended Strategies



27 Concept Options





Comprehensive Evaluation Criteria & Metrics Were Used To Compare The Project Concepts

Economic Criteria

- Unit cost
- Financial benefits
- Funding mechanism
- Likelihood to obtain outside funding

Resiliency Criteria

- Drought resiliency
- Earthquake resiliency
- Flood risk mitigation
- Local supply benefit
- Energy Impact/Green-House Gas Emissions

Implementation Criteria

- Constructability
- Institutional collaboration
- Regulatory approval
- Public engagement
- Public and political support

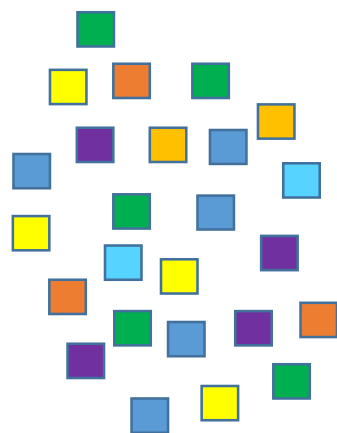
Environmental Criteria

- Environmental justice
- Open/natural space and recreational benefit
- Stormwater quality
- Ecological benefit



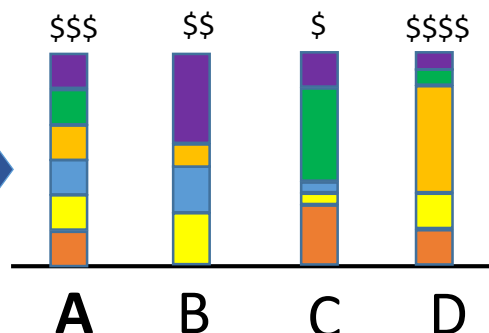
Long-term concept ideas were analyzed through a Portfolio Evaluation Process

Potential Projects or Programs



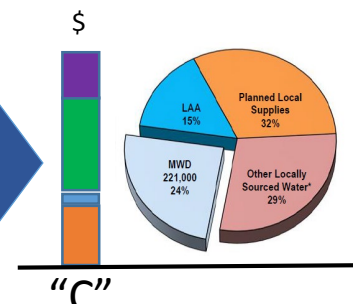
Project Screening & Evaluation Criteria

Themed Project Portfolios

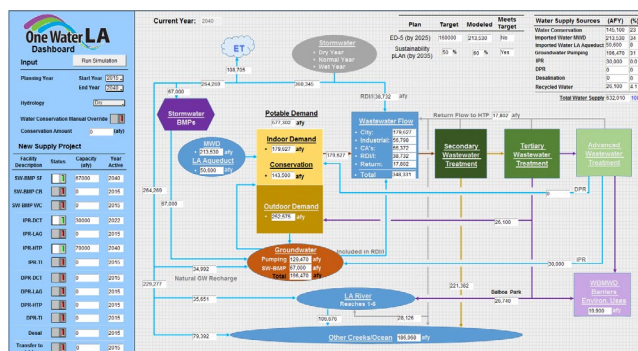


Portfolio Evaluation Criteria

Recommended Implementation Strategy

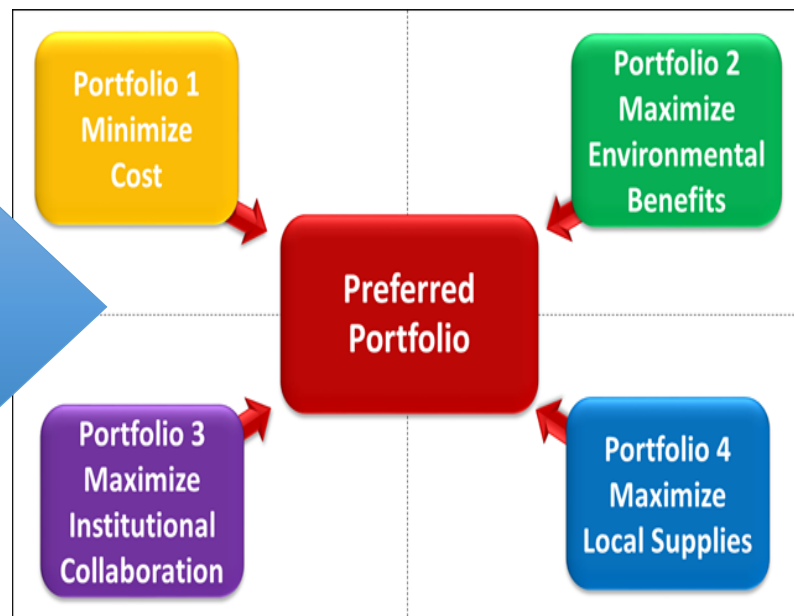
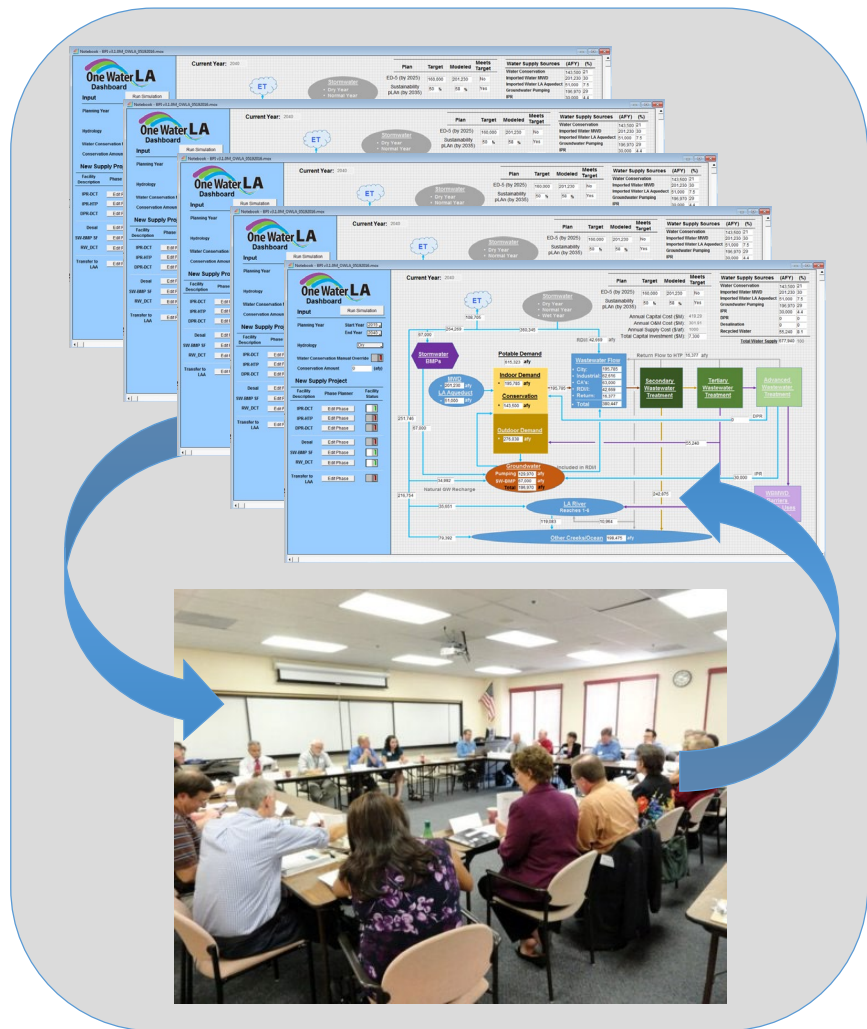


Mass Balance Model





The Preferred Portfolio was defined through an interactive process



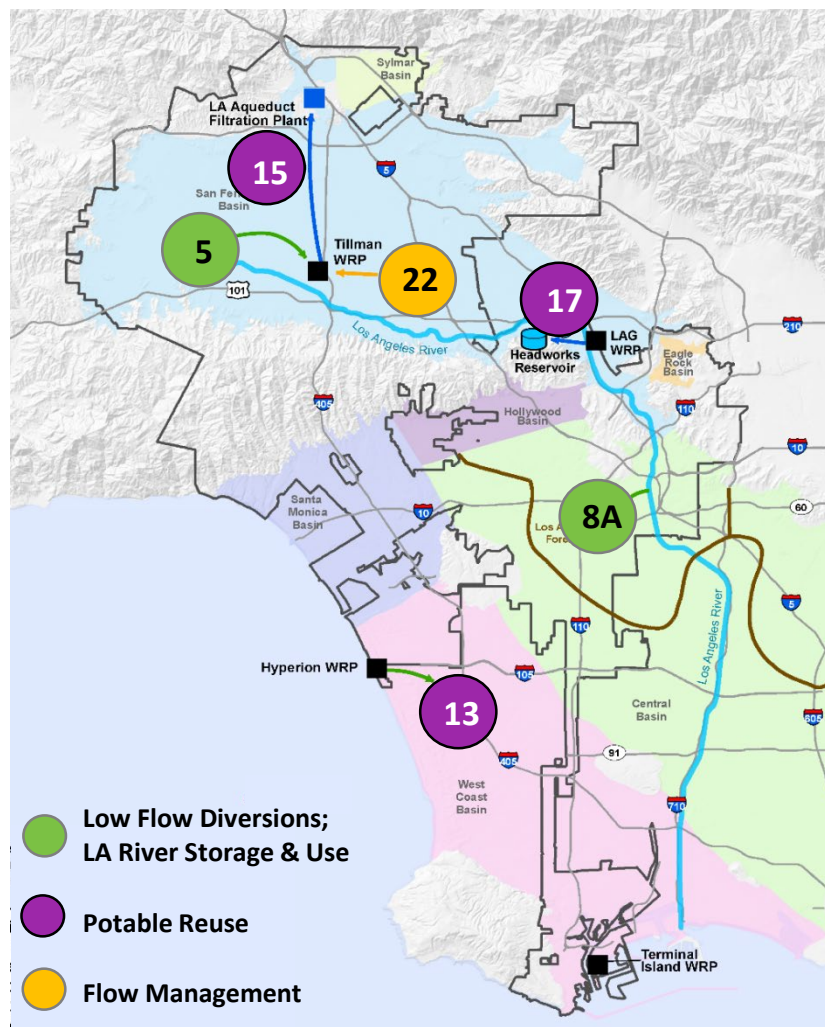


Integrated Planning Triggers





The Preferred Portfolio



#5: Dry Weather Low Flow Diversions

#8A: LA River recharge into LA Forebay with injection wells

#13: MBR at Hyperion WRP to Regional System

#15: Potable Reuse with raw water augmentation from Tillman to LAAFP

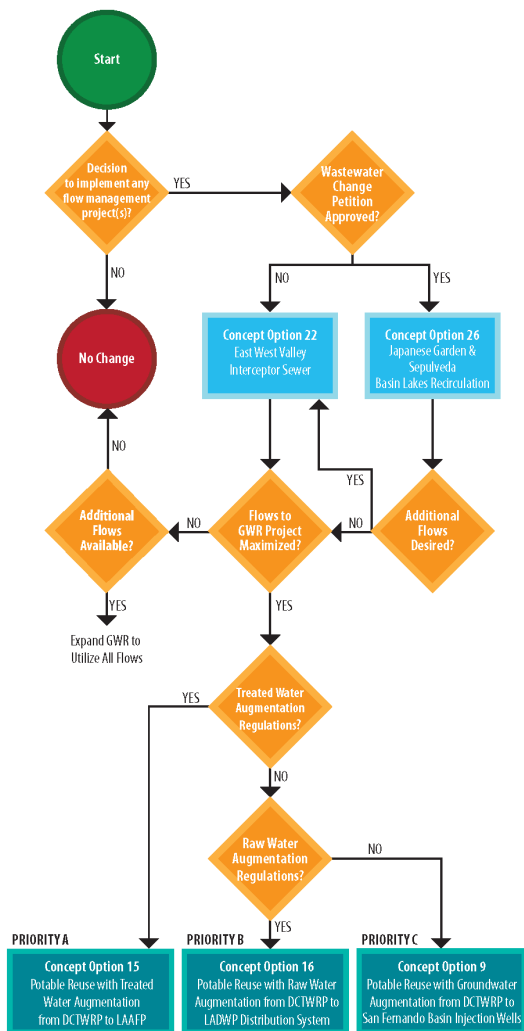
#17: Potable Reuse with treated water augmentation from LAG to Headworks Reservoir

#22: East-West Valley Interceptor Sewer

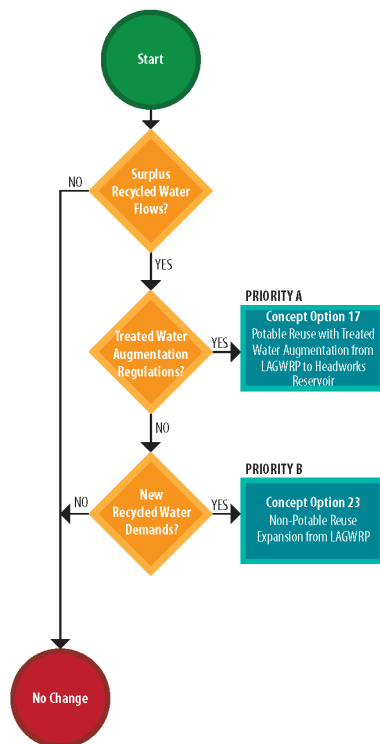


A Trigger-Based Implementation Strategy provides flexibility for future conditions

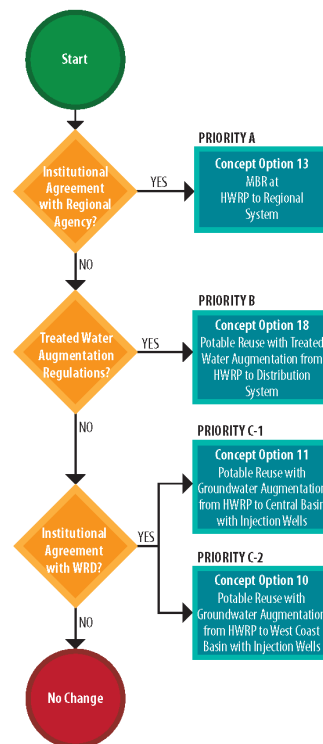
Donald C. Tillman Water Reclamation Plant



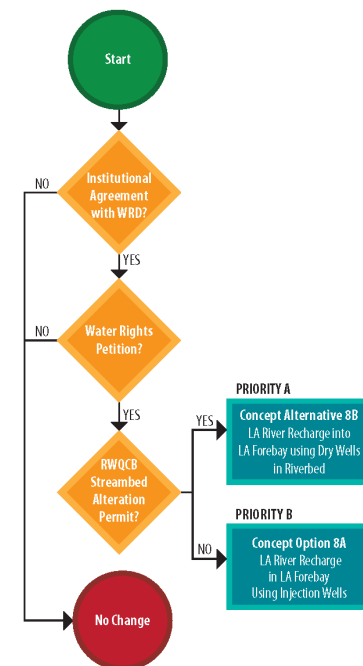
LA-Glendale Water Reclamation Plant



Hyperion Water Reclamation Plant



LA River Storage and Use

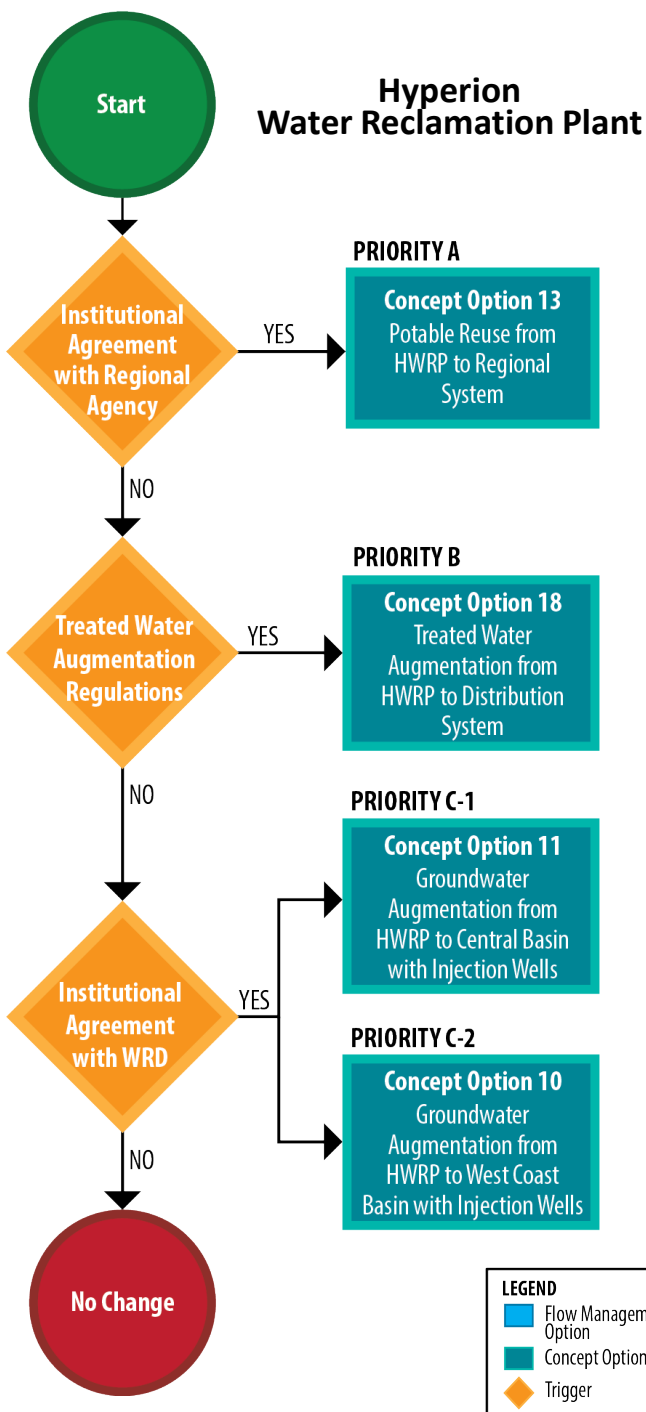


LEGEND

Trigger

Concept Option

Flow Management Option



Recommended Project Concepts for Hyperion WRP

Priority A = Concept Option #13 Potable Reuse to Regional System Agency

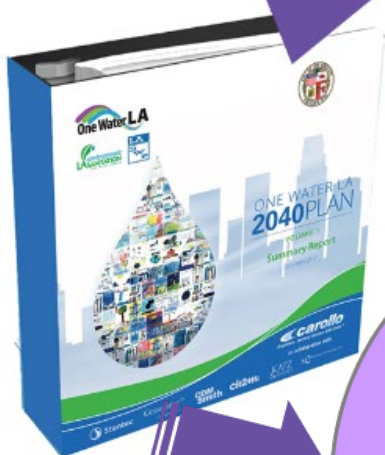
Annual Yield :	95,000 afy
Capital Cost :	\$900 M
Unit Cost :	\$1,500/acre-ft

Priority B = Concept Option #18 Treated Water Augmentation to LADWP Distribution System

Annual Yield :	95,000 afy
Capital Cost :	\$2,700 M
Unit Cost :	\$2,000/acre-ft

Priority C = Concept Options #10 & 11 Groundwater Augmentation to West Coast & Central Basin

	<u>Concept #10</u>	<u>Concept #11</u>
Annual Yield :	20,000 afy	75,000 afy
Capital Cost :	\$860 M	\$3,300 M
Unit Cost :	\$3,200/acre-ft	\$2,700/acre-ft





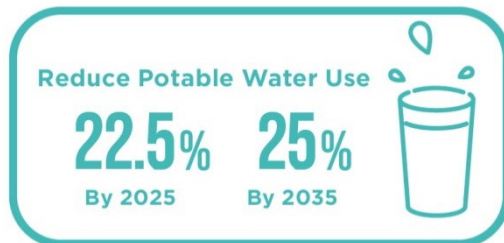
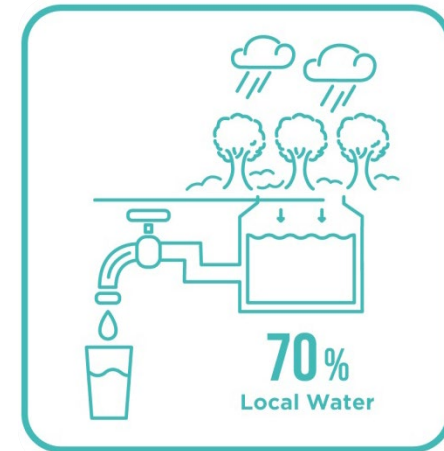
Integrated Planning Effect

L.A.'s Green New Deal accelerates the targets from the Mayor's Sustainability pLAN:



Recycle 100% of all wastewater for beneficial reuse by 2035

Source 70% of L.A.'s water locally and capture 150,000 acre ft/yr (AFY) of stormwater by 2035



Reduce potable water use per capita by 22.5% by 2025; 25% by 2035; and maintain or reduce 2035 per capita water use through 2050



Plan Elements



Vol 1 – Summary Report

Vol 2 – Wastewater Facilities Plan

Vol 3 – Stormwater & Urban Runoff
Facilities Plan

Vol 4 – LA River Study

Vol 5 – Integration Opportunities

Vol 6 – Climate Risk Assessment

Vol 7 – Implementation Strategy

Vol 8 – Technical Support

Vol 9 – Stakeholder Engagement
Materials



One Water LA Awards

2019

CWEA - Community Engagement & Outreach Program of the Year (LA Basin Section and CA)

AAEES - Environmental Communications Awards

SCAG - Sustainability Award- Green Region Initiative: Resource Conservation & Climate Action

2018

WaterReuse – Award in Excellence (RW w/LA Zoo)

AAEES – E3S Planning Grand Prize

NACWA – NEAA Public Information & Education: Educational Program

2016

CASA – Excellence in Public Outreach and Education



Thank you!

Questions?

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onewaterla@lacity.org**

July 18, 2019