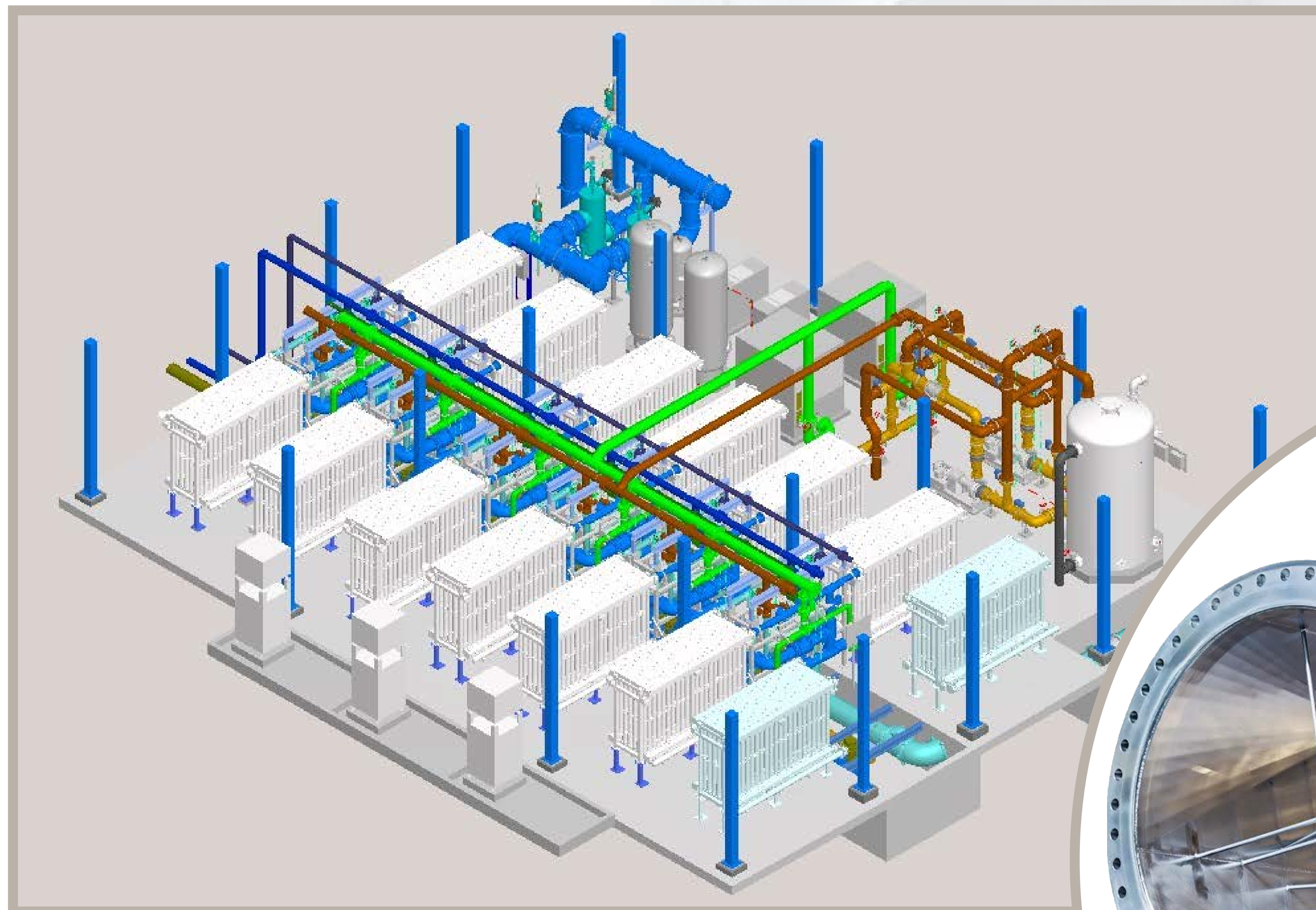
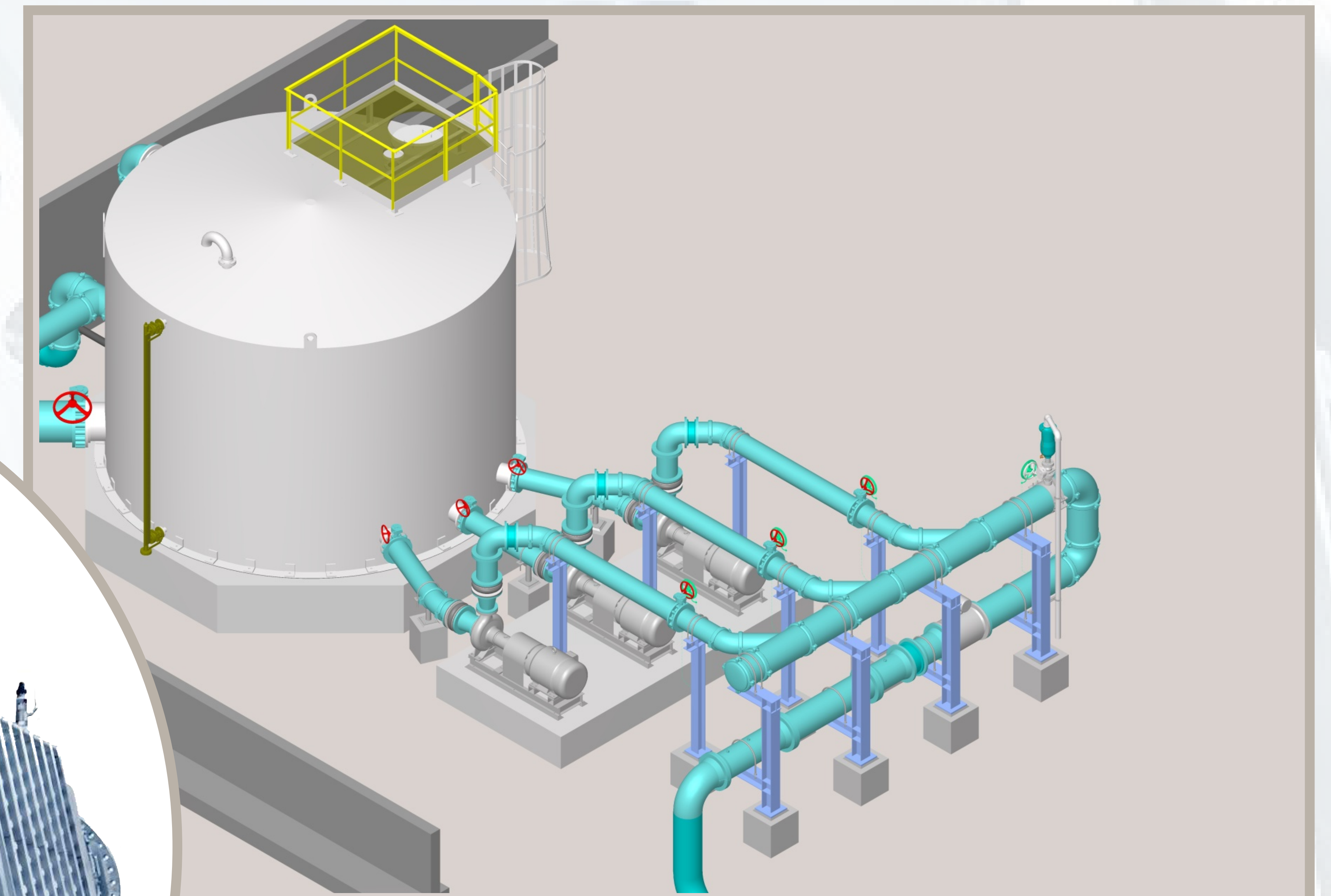


## TERMINAL ISLAND WATER RECLAMATION

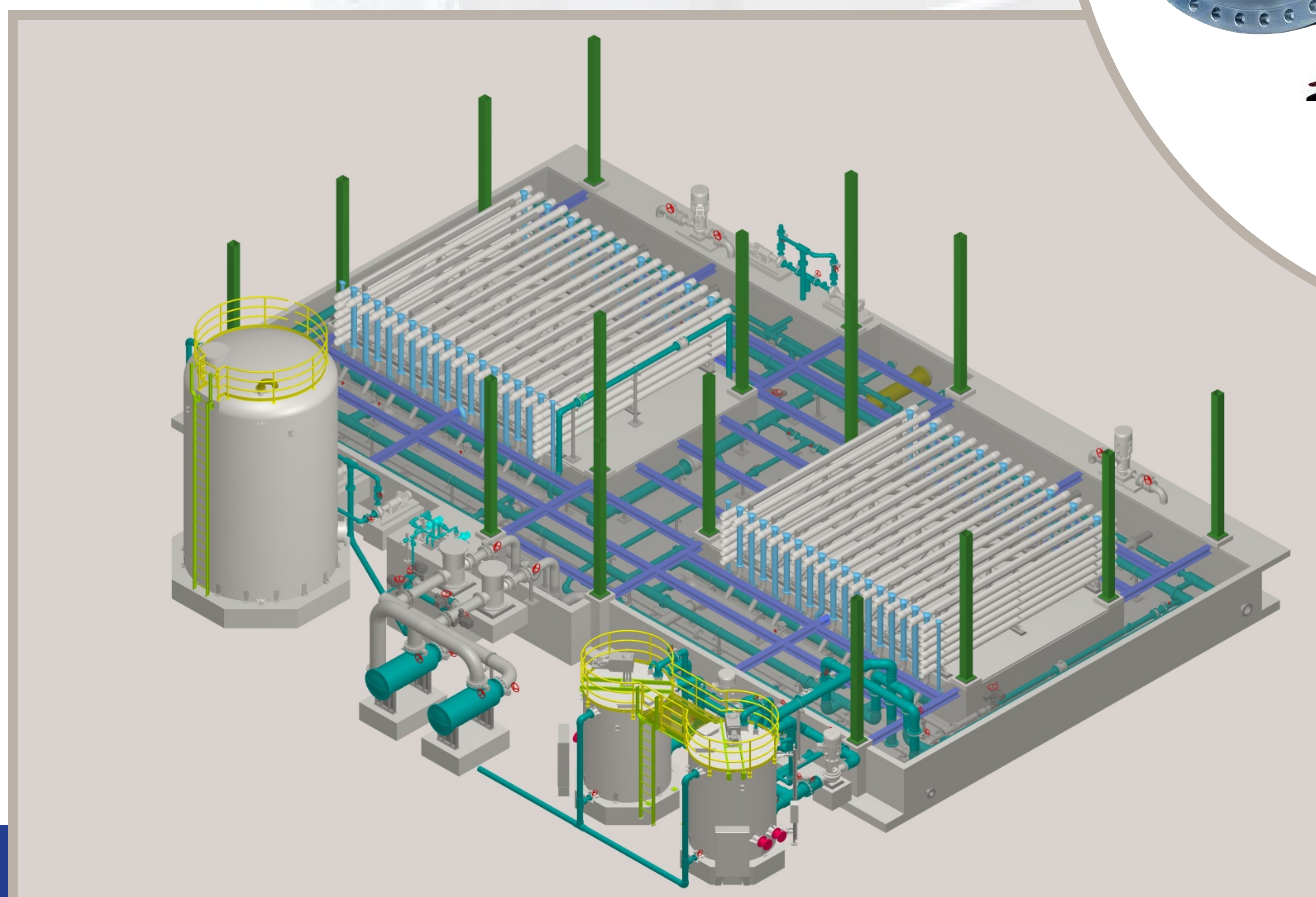
MICROFILTRATION SYSTEM



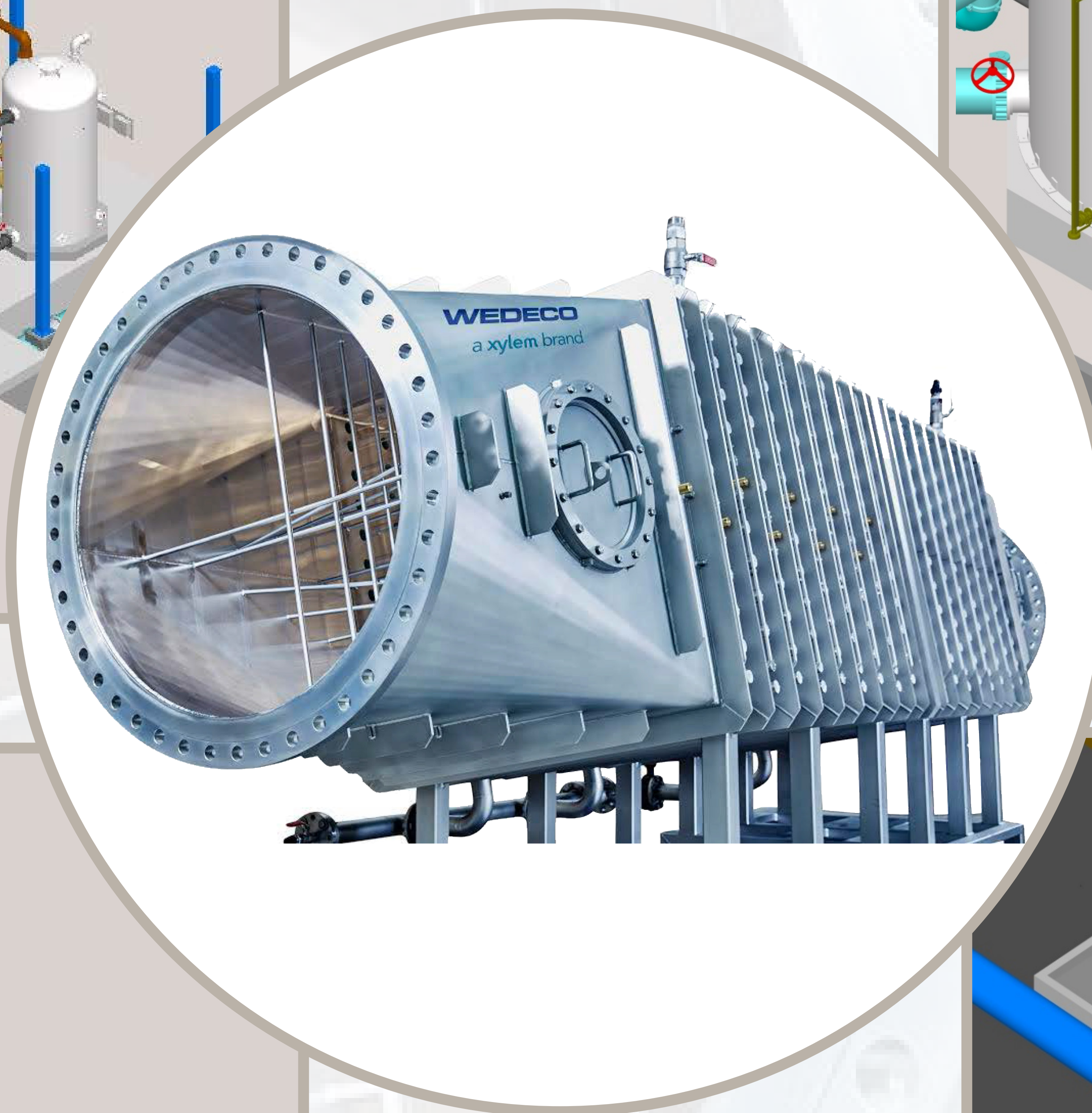
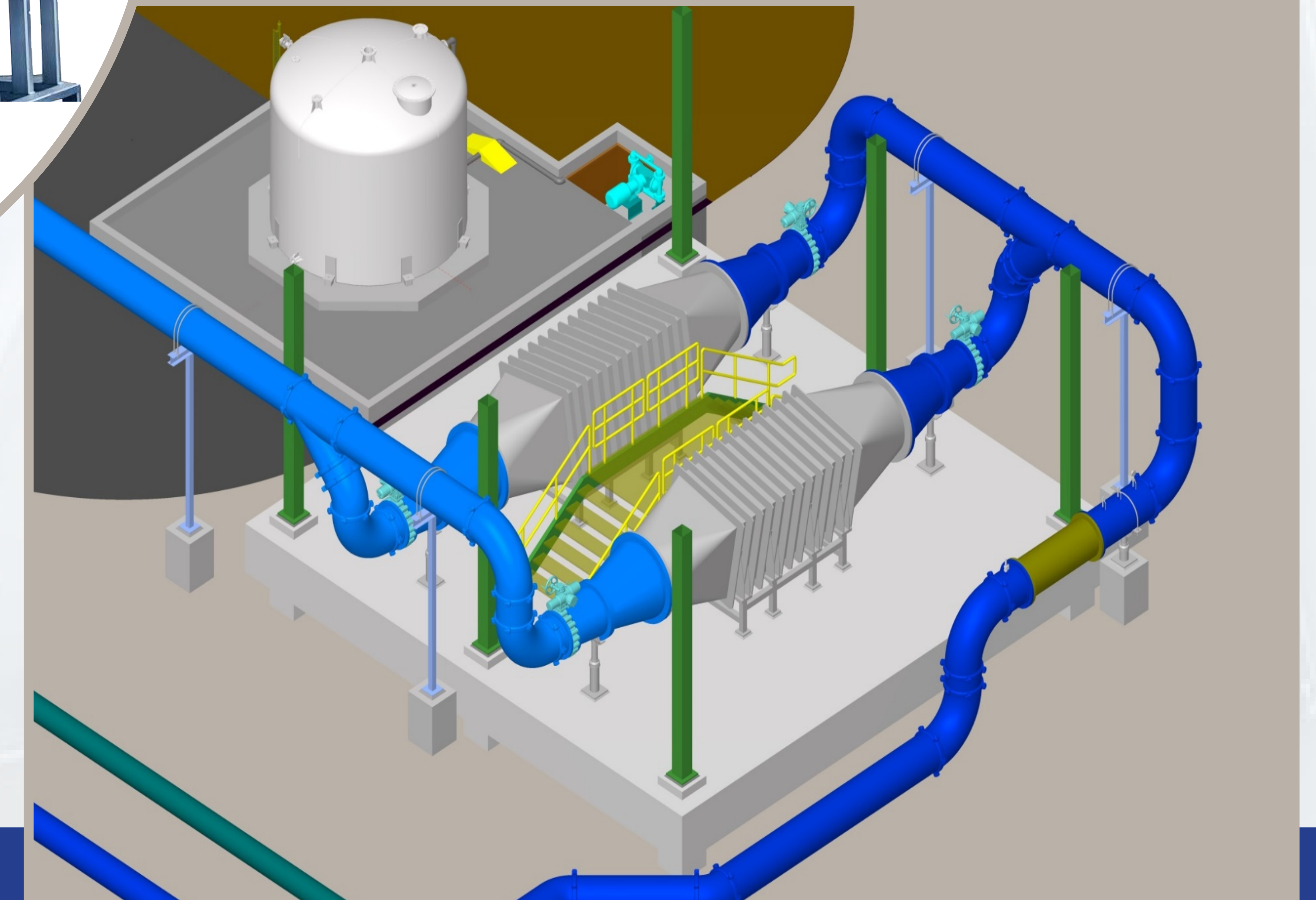
RO FEEDWATER TANK AND TRANSFER PUMPS



REVERSE OSMOSIS SYSTEM



ADVANCED OXIDATION PROCESS





# METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

## JOINT PROJECT OF METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA & LOS ANGELES COUNTY SANITATION DISTRICTS



SANITATION DISTRICTS OF LOS ANGELES COUNTY

### REGIONAL RECYCLED WATER SUPPLY PROGRAM

The Metropolitan Water District of Southern California is exploring the potential of a water purification project to beneficially reuse water currently discharged to the Pacific Ocean for recharge of regional groundwater basins. Under a partnership with the Sanitation Districts of Los Angeles County, Metropolitan would build a new purification plant and distribution lines to groundwater basins in Los Angeles and Orange counties. The program would represent the first in-region production of water by Metropolitan. Diversifying the region's water supply sources, advancing conservation and maintaining imported supplies are all part of Metropolitan's long-term Integrated Water Resources Plan.

#### Program at a Glance

Metropolitan would purify water in a multi-phased program at the Sanitation Districts' Joint Water Pollution Control Plant in Carson. The initial program activities call for construction of a 1 million-gallon-per-day demonstration project at the plant site and feasibility studies. The first operational phase will produce about 67,000 acre-feet of recycled water per year and the construction of about 30 miles of distribution lines to replenish groundwater basins in Los Angeles and Orange counties. Additional operational phases could produce up to 168,000 acre-feet per year of purified water for groundwater replenishment.

#### Key Milestones

##### November 2015

- Metropolitan and Sanitation Districts boards approve agreement for demonstration project and feasibility studies.
- Metropolitan board authorizes \$15 million for demonstration-scale recycled water treatment plant and studies.

##### 2016-2017

- Both boards review feasibility studies and consider approval of first phase of full-scale project.



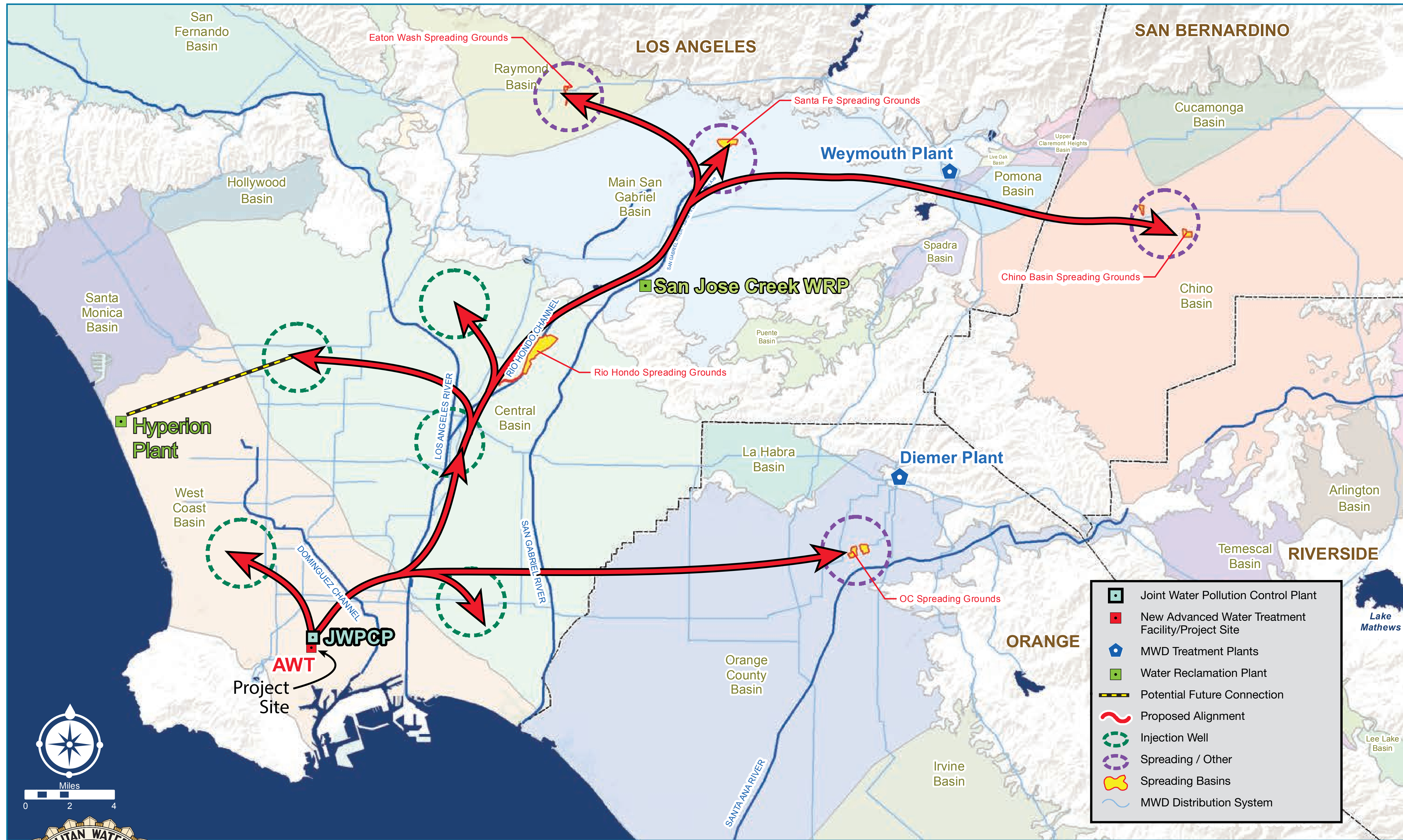
Sanitation Districts' Joint Water Pollution Control Plant in Carson

#### Proven Safe Techniques

The project involves use of established technologies to purify secondary-treated effluent and turn it into a supply that is suitable for indirect potable reuse through groundwater replenishment. These technologies include reverse osmosis membrane treatment followed by ultraviolet light and other processes. The water would be purified, injected or spread onto groundwater basins as another "barrier" of safety, pumped out and re-treated as necessary before entering the drinking water system.

#### Groundwater Basins: Dependent on Metropolitan

Groundwater basins produce about a third of Southern California's overall water needs thanks in part to replenishment supplies via Metropolitan. Along with Metropolitan's imported supplies, this purified water would represent a new, drought-proof supply for groundwater replenishment.



The mission of the Metropolitan Water District of Southern California is to provide its service area with adequate and reliable supplies of high-quality water to meet present and future needs in an environmentally and economically responsible way.

The Metropolitan Water District of Southern California: 700 N. Alameda St., Los Angeles, CA 90012 P.O. Box 54153, Los Angeles, CA 90054-0153 (213) 217-6000/(800) call-mwd (255-5693)



## A NEW ZONING CODE FOR A 21ST CENTURY LOS ANGELES

**PLAN**  
**re:code**

A New Zoning Code for a 21<sup>st</sup> Century Los Angeles

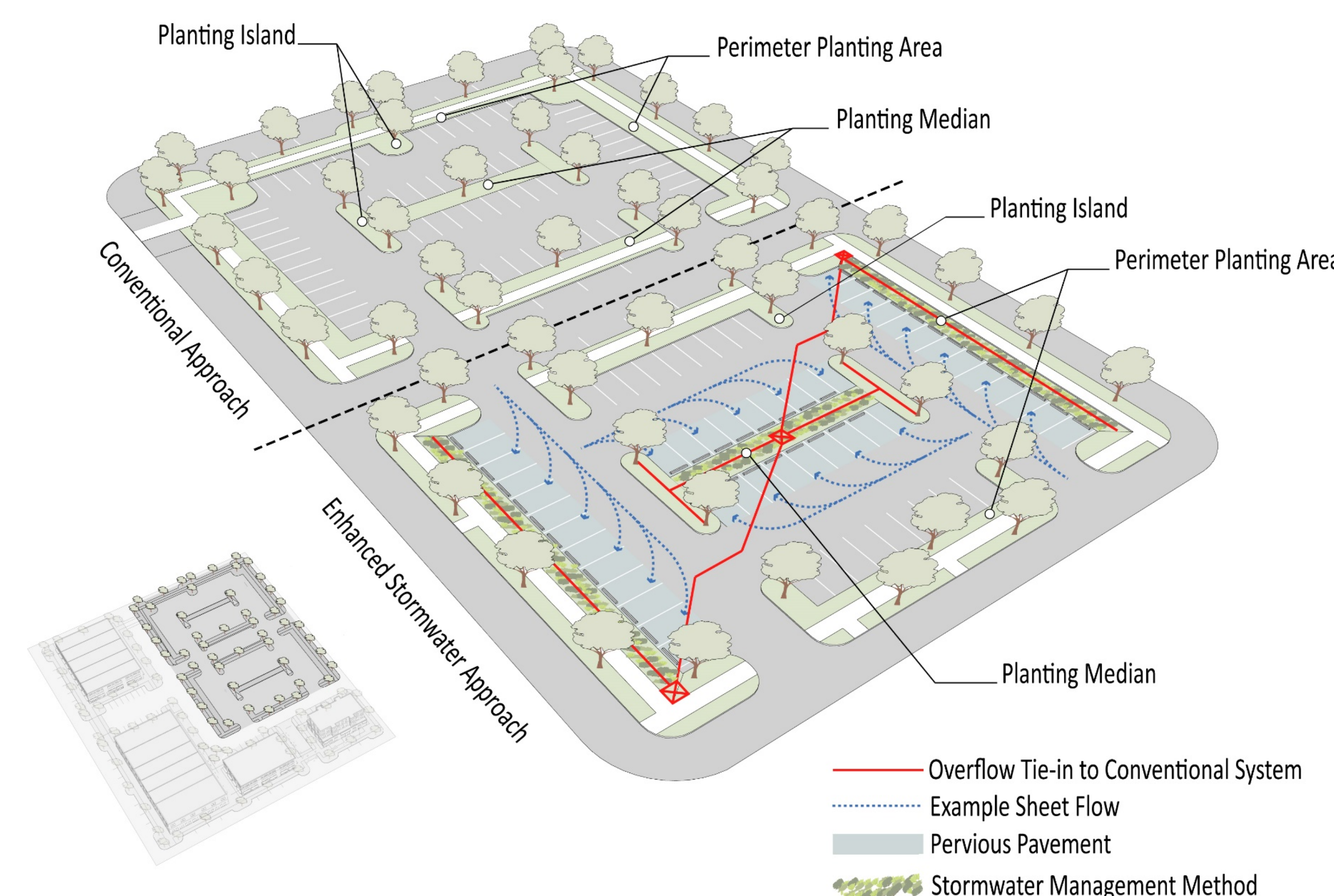
Shape your Los Angeles by shaping your future Zoning Code

Water Conservation & re:code LA  
One Water LA Stakeholder Workshop  
June 29, 2016

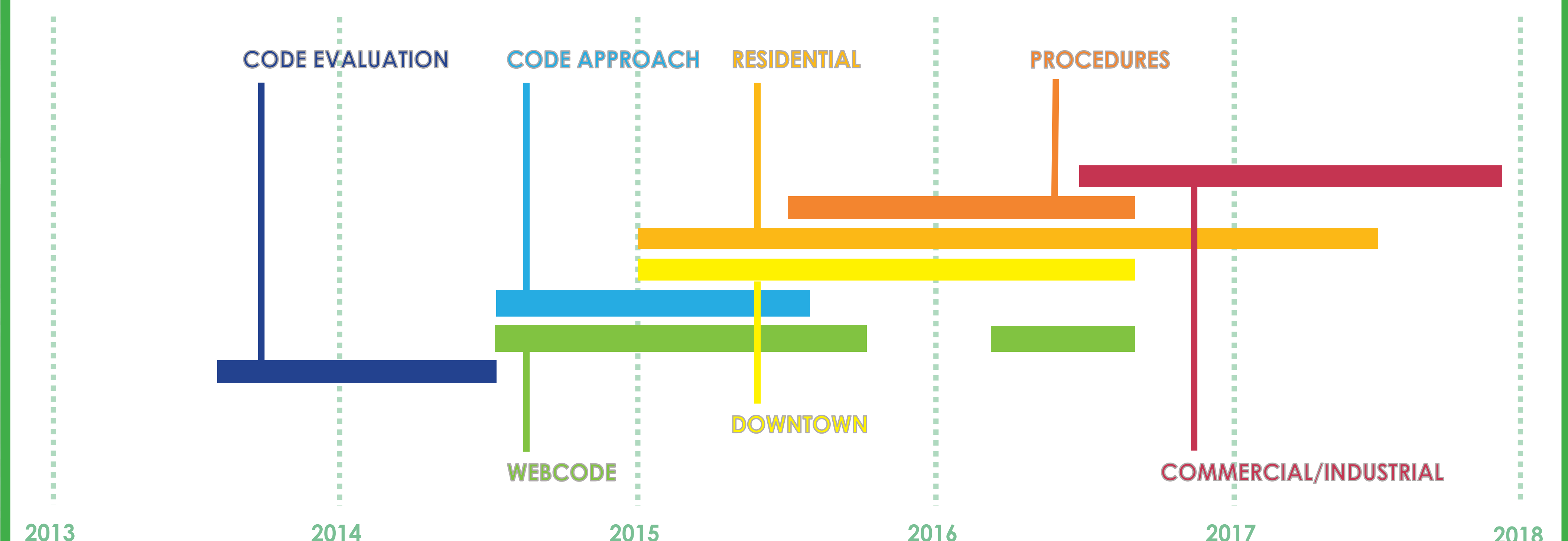
### re:code LA WATER CONSERVATION OBJECTIVES

- Process Improvements:
  - Encourage developers to consider Low Impact Development (LID) requirements at an early stage of the project design
    - Possibly require pre-consultation with Bureau of Sanitation
- Explore new zoning options to promote sustainability:
  - Include development standards that promote enhanced storm water capture, including within parking lots/structures
- Update Landscape Ordinance to:
  - Further incorporate storm water capture, grey water reuse, and drought tolerant landscaping
  - Facilitate the implementation of LID standards
  - Expand upon State's Model Water Efficient Landscape Ordinance (AB 1881)

### PARKING-ENHANCED STORMWATER APPROACH



### Our **PLAN** moving forward





# LOS ANGELES DEPARTMENT OF TRANSPORTATION



## GREENER & GREATER STREETS FOR LOS ANGELES



### Greener & Greater Streets for Los Angeles

City of Los Angeles Interdepartmental Forum on Multi-Benefit Projects 2016

June 14, 2016 10:30 am -12:00 pm  
Caltrans District 7 Building



LADOT



LA SANITATION

Pacoima Beautiful

THE TRUST FOR PUBLIC LAND

Greener & Greater Streets for Los Angeles City of Los Angeles Interdepartmental Forum on Multi-Benefit Projects 2016



### Agenda

10:30 AM – 10:45 AM

INTRODUCTION TO MULTI-BENEFITS PROJECTS

Sign-in, refreshments, & informational presentation

Karina Macias, LADOT Transportation Planning & Policy

10:45 AM – 11:15 AM

MODERATED PANEL DISCUSSION

Panelists will describe how individual roles and expertise can contribute to successful multi-benefit project delivery

Moderator

Heather Repenning, Board of Public Works

Panelists

Adel H. Hagekhalil, P.E., BCEE, LA Sanitation

Carlos Rios, P.E., LADOT Complete Streets Division

Max Podemski, Pacoima Beautiful

Natalia Gaerlan, LEED AP, The Trust for Public Land Los Angeles

11:15 AM – 11:45 AM

MULTI-BENEFITS PROJECT DESIGN CHARRETTE

Collaborative session to develop Cesar Chavez Avenue Streetscape project concept and identify critical roles

All attendees

11:45 PM – 12:00 PM

Q & A SESSION

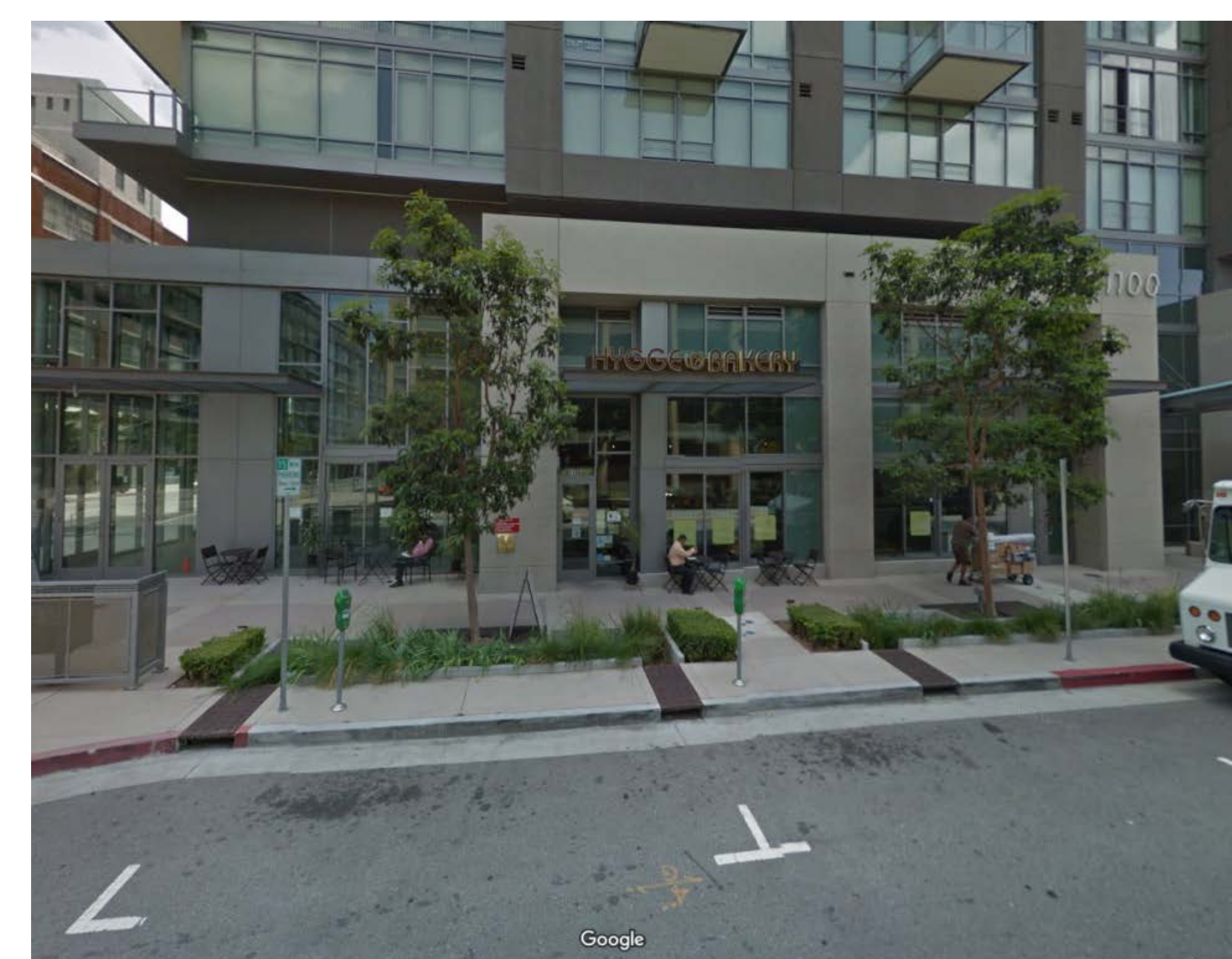
All attendees

Greener & Greater Streets for Los Angeles City of Los Angeles Interdepartmental Forum on Multi-Benefit Projects 2016



### Why should the City deliver multi-benefit projects?

- City departments have different policies and procedures guiding work to achieve similar vision
- Greater coordination, communication, and collaboration can save dollars
- Sustainable street components can make safer streets



Hope Street Bioswale in South Park

Greener & Greater Streets for Los Angeles City of Los Angeles Interdepartmental Forum on Multi-Benefit Projects 2016



### City Staff Participation

**Greener & Greater Streets for Los Angeles**  
City of Los Angeles Interdepartmental Forum on Multi-Benefit Projects 2016

**INVITATION TO REGISTER & ATTEND**  
Tuesday, June 14, 2016  
10:30 am – 12:00 pm  
Caltrans Building, Room 01.037  
100 S. Main Street Los Angeles, CA 90012  
Light refreshments will be provided  
Registration is free and open to all  
Registration link: [goo.gl/NeuXz2](http://goo.gl/NeuXz2)

**Moderator**  
HEATHER REPENNING  
Commissioner,  
City of Los Angeles Board of Public Works

**PANELISTS**  
ADEL H. HAGEKHALIL, P.E., BCEE  
Assistant Director,  
Department of Public Works, LA Sanitation

CARLOS RIOS, P.E.  
Senior Transportation Engineer,  
LADOT Complete Streets Division

MAX PODEMSKI  
Planning Director,  
Pacoima Beautiful

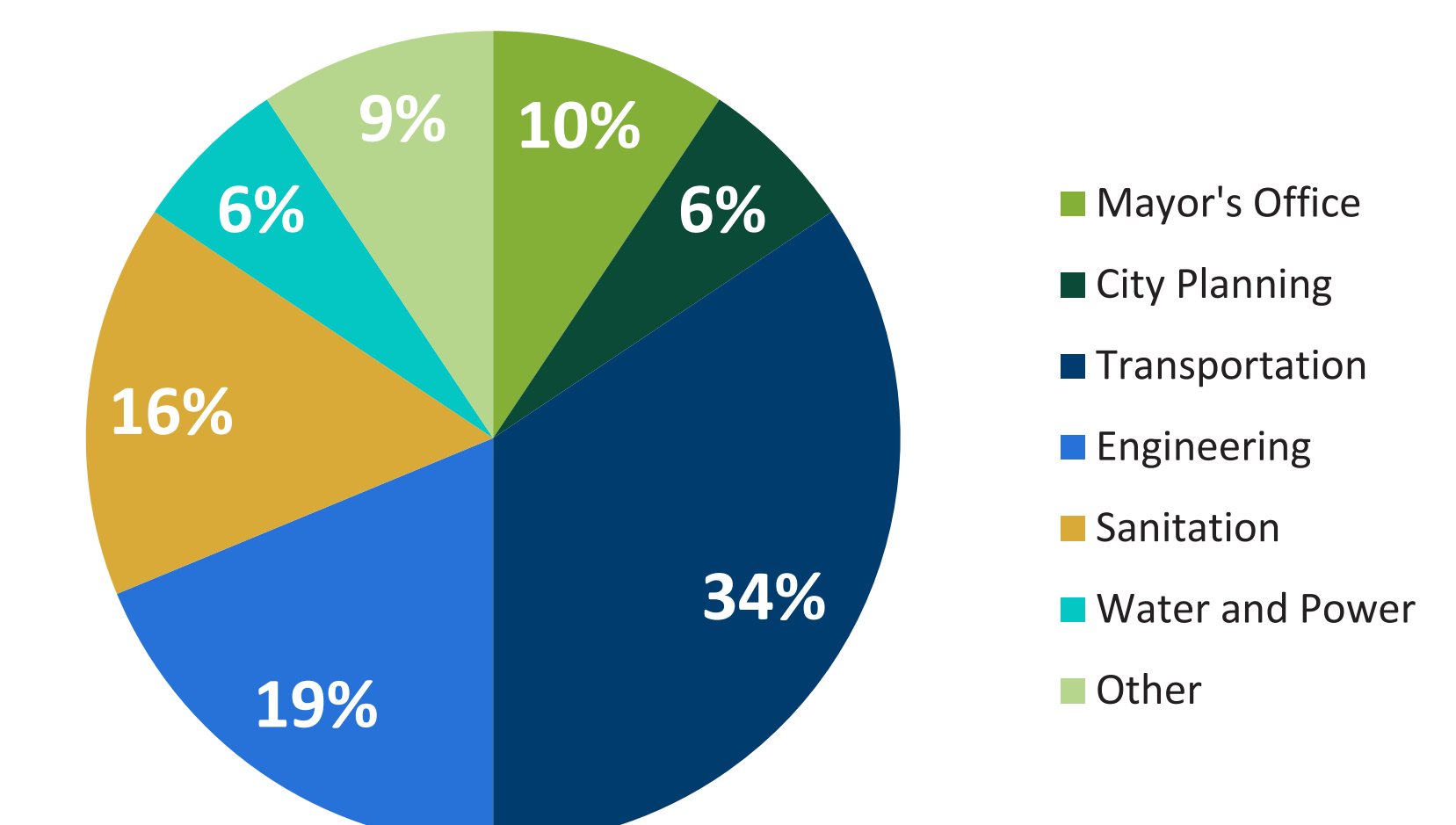
NATALIA GAERLAN, LEED AP  
Project Manager,  
The Trust for Public Land Los Angeles

Multi-benefit projects can retrofit the existing street network to balance safety, mobility, community, and environmental goals to create sustainable streets and public spaces.

The City of Los Angeles Department of Transportation, Board of Public Works, and LA Sanitation in partnership with Pacoima Beautiful & Trust for Public Land invite City staff to join a panel of professionals in a discussion about how our City departments, communities, and experts can collaborate to plan, engineer, conduct outreach for, and construct multi-benefit projects in Los Angeles.

**LADOT** **LA SANITATION** **PACOIMA BEAUTIFUL** **THE TRUST FOR PUBLIC LAND**

What City Departments/Agencies participated?



What topic were staff most interested in discussing or learning more about?

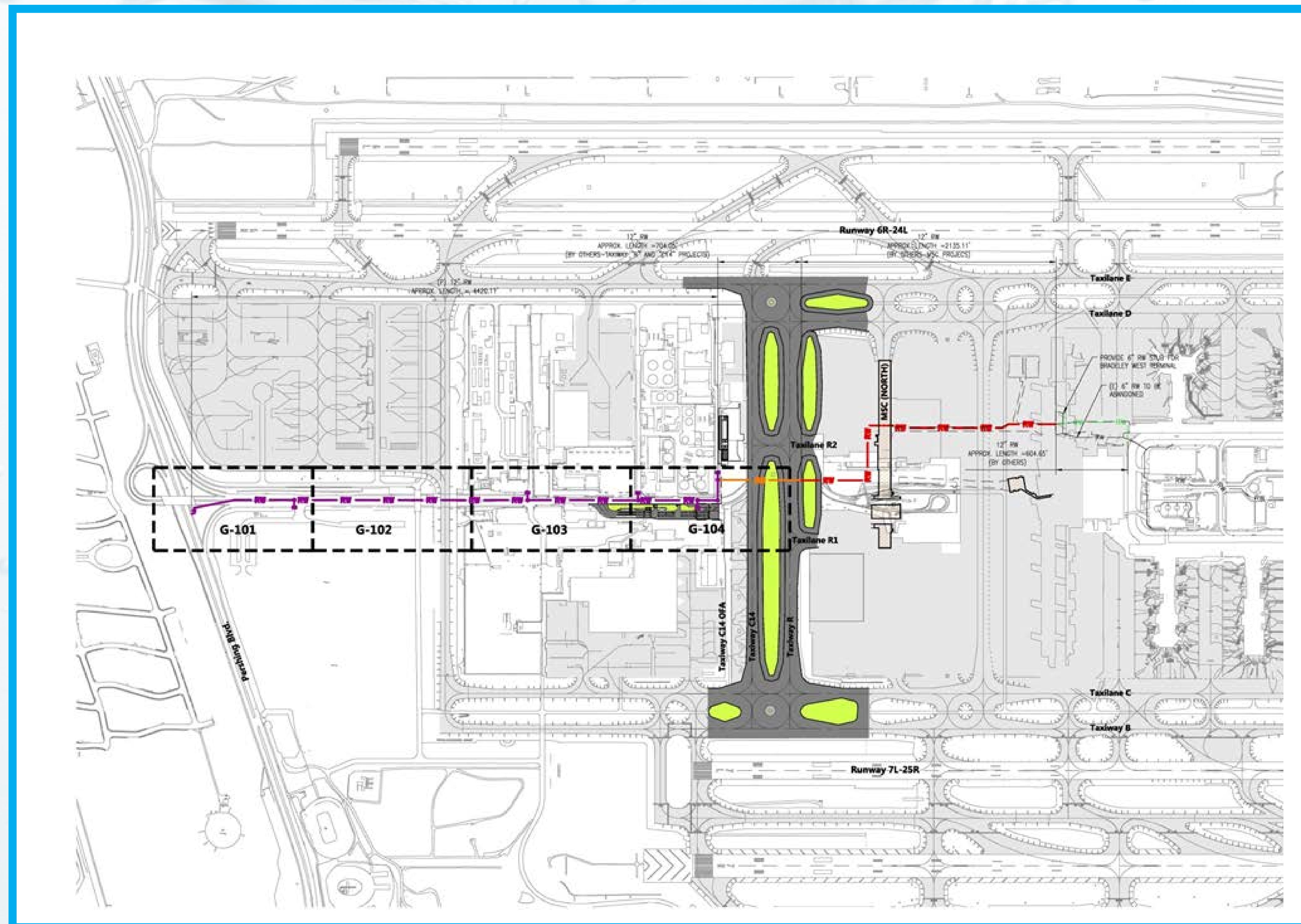




# LOS ANGELES WORLD AIRPORTS

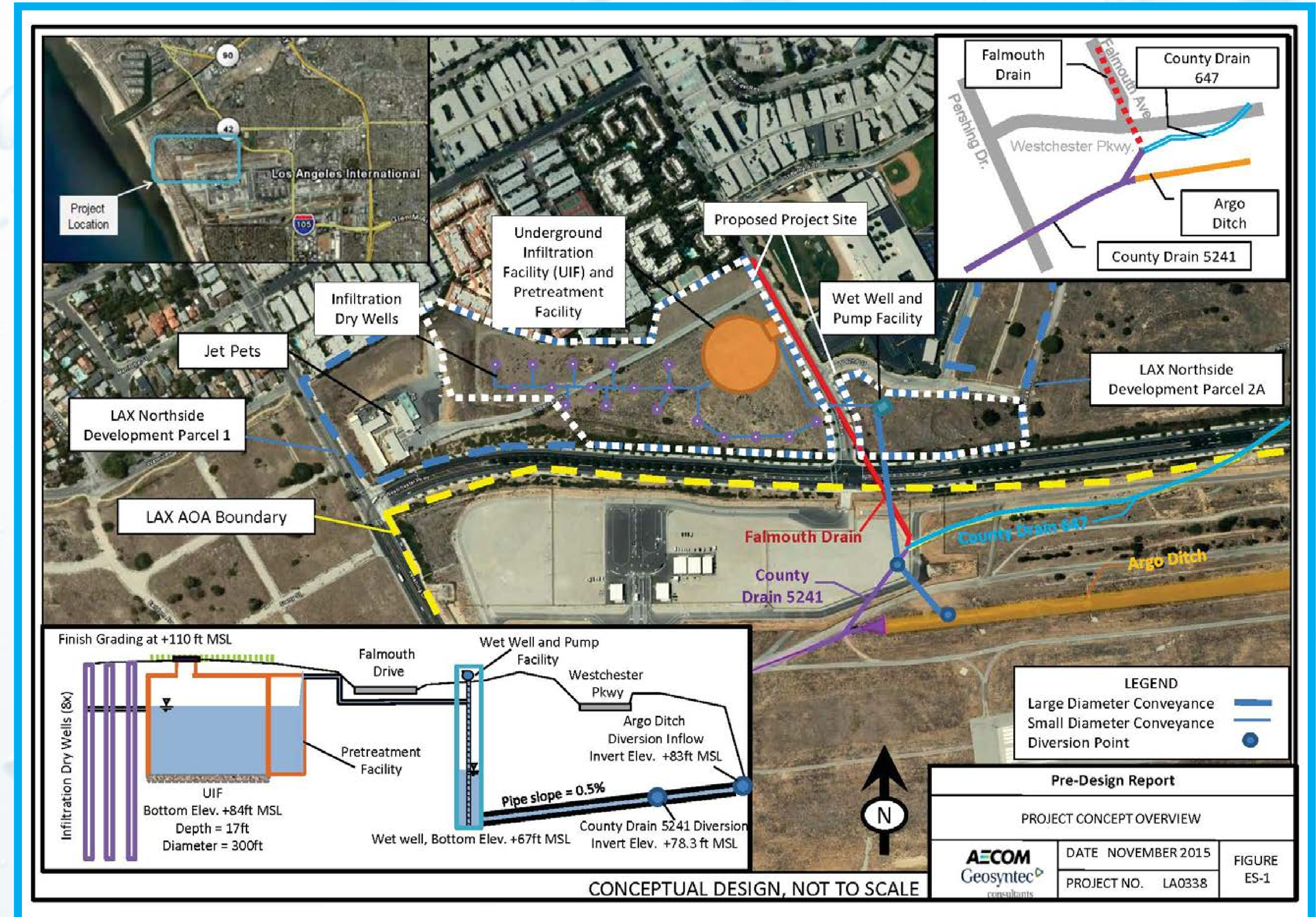
## WATER SUSTAINABILITY EFFORTS

### PLANNED RECYCLED WATER ALIGNMENT TO PERSHING



The Recycled Water Connection project will install a 12 inch recycled water line that will allow the Central Utility Plant (CUP) to receive advanced recycled water provided by LADWP from a new plant at the Hyperion Treatment Plant. A length of 10,500 feet of pipe will be routed through the airfield from Tom Bradley International Terminal to a point of connection at Pershing Drive and World Way West. This advanced recycled water will meet the quality requirements established for use at the CUP, as well as establish an economical and beneficial recycled water point of connection for all **OneWaterLA** agencies.

### ARGO DRAIN PROJECT



Los Angeles  
World Airports