Engineering & Operations Committee

Regional Recycled Water Program Update

Item 6a

June 13, 2022

Regional Recycled Water Program Quarterly Update

Outline

- Treatment activities/technical memorandums
- Conveyance activities
- CEQA activities
- Continuing coordination activities
- Next steps

RRWP
Environmental Planning Phase

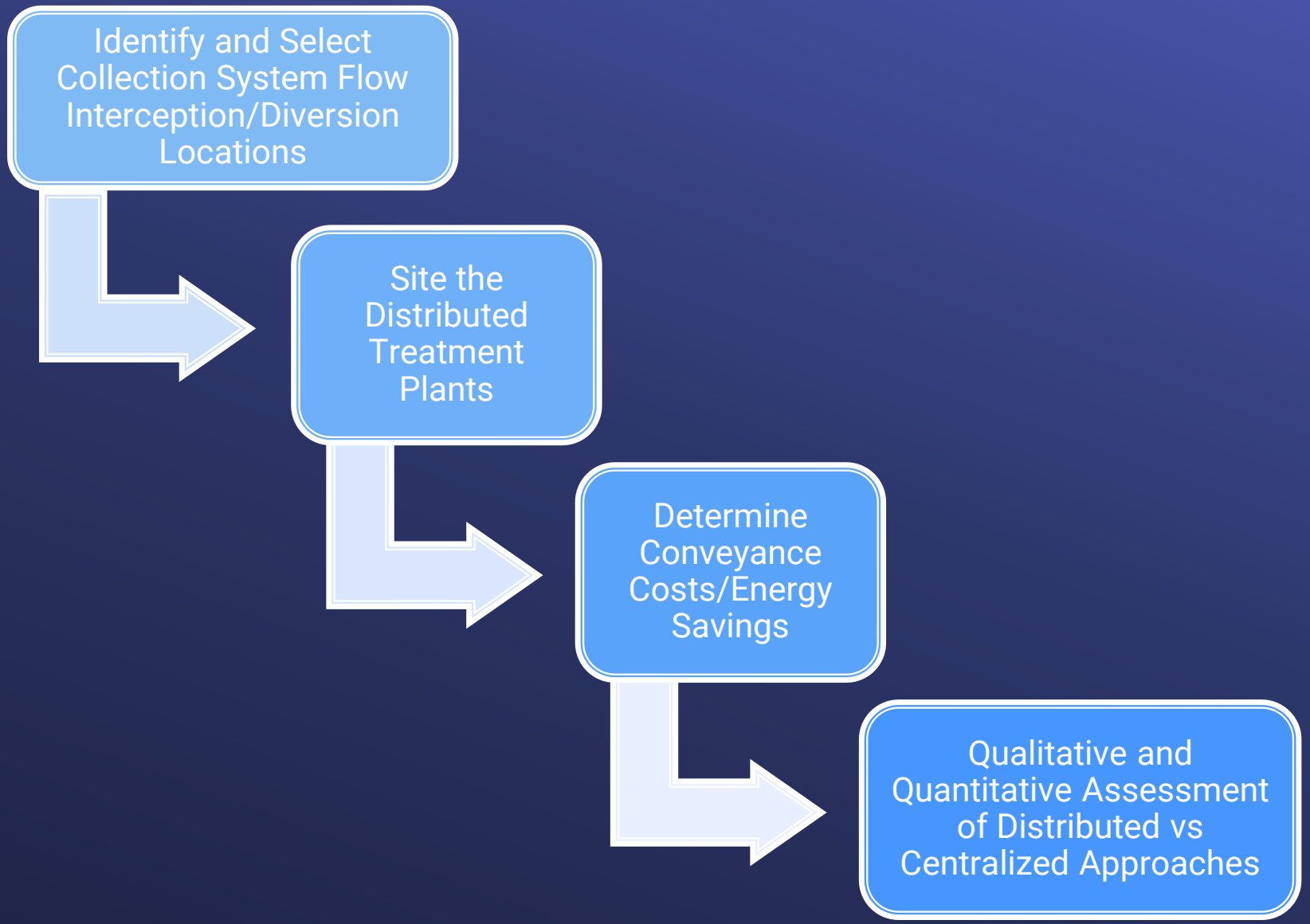
Advanced Water Treatment Activities

- Provided AWT data for CEQA technical analyses
- Continued direct potable reuse (DPR) efforts:
  - Approach to generate CEQA data for DPR facilities
  - Roadmap to address DPR research needs
- Assessed distributed recycled water treatment plants sites (wastewater/AWT processes)
- Evaluated alternative sites for centralized treatment plant

Distributed Treatment Technical Memo

Considerations

- Energy savings/reduced pumping
- Reliability with multiple/independent plants



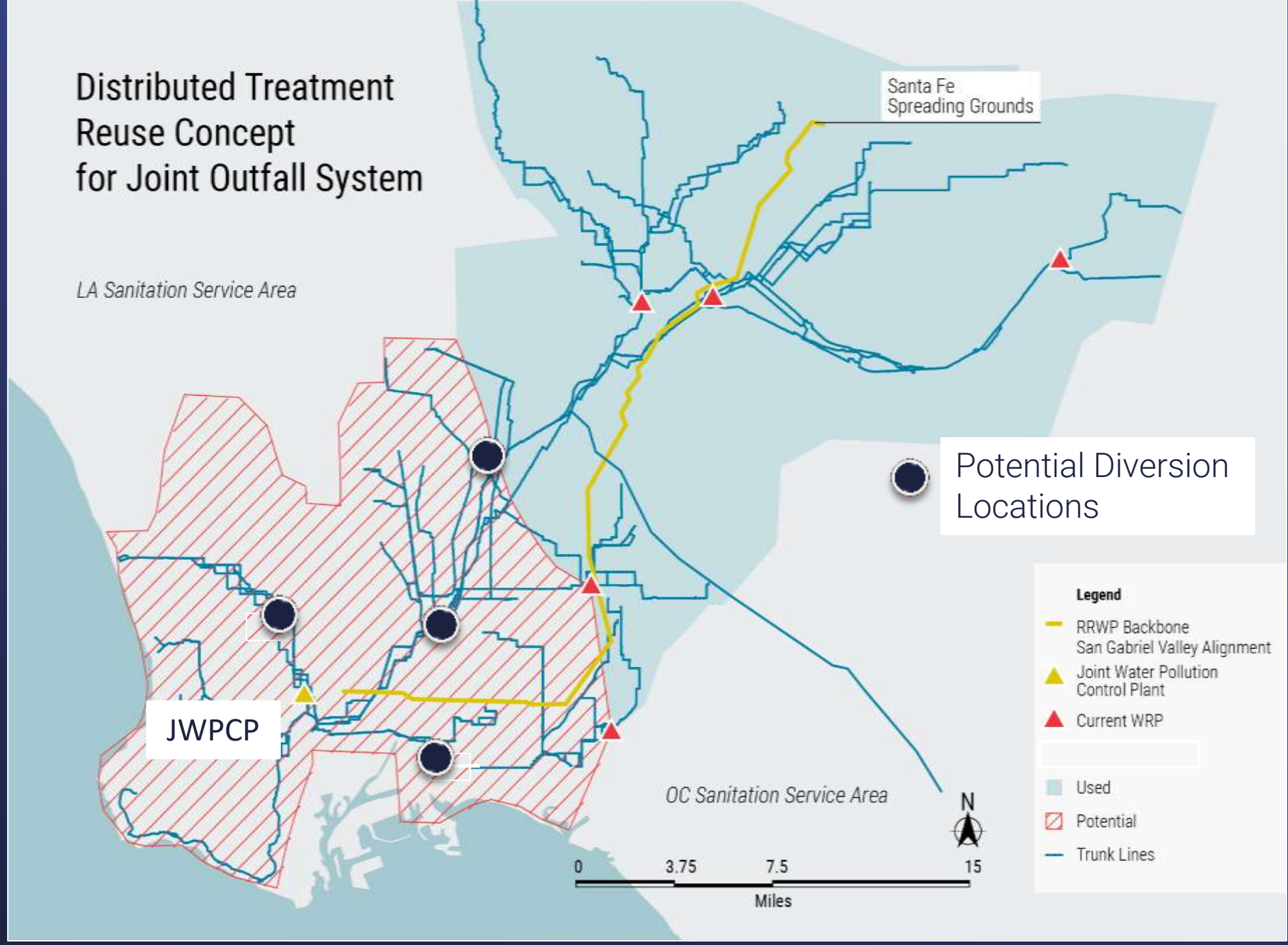
Distributed Treatment Technical Memo

Siting Criteria for Max. Benefits

- Large flows
- Close to reuse application (RRWP backbone system)

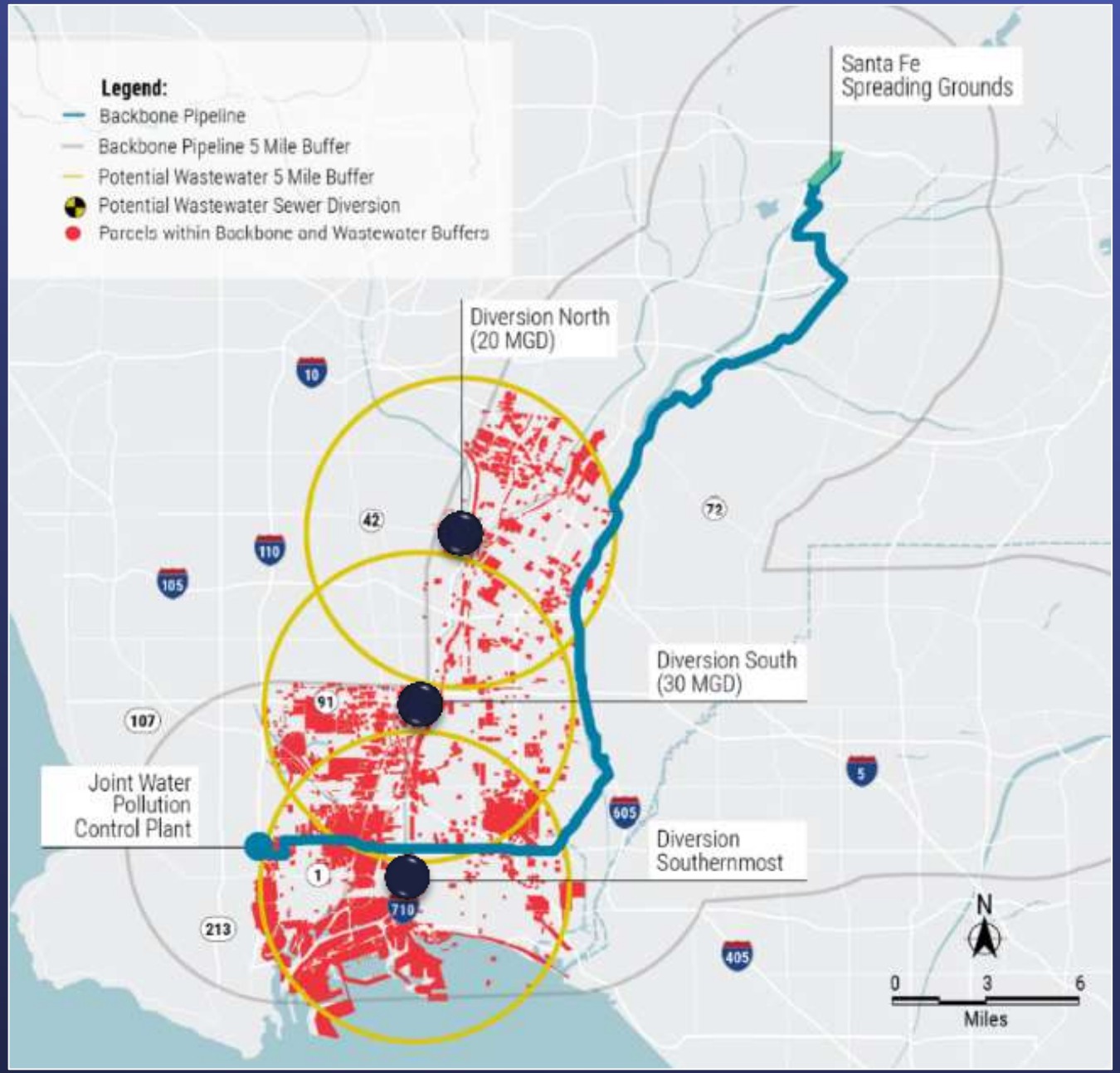
Reality

- Available flows are limited
- Diversion locations are close to the JWPCP



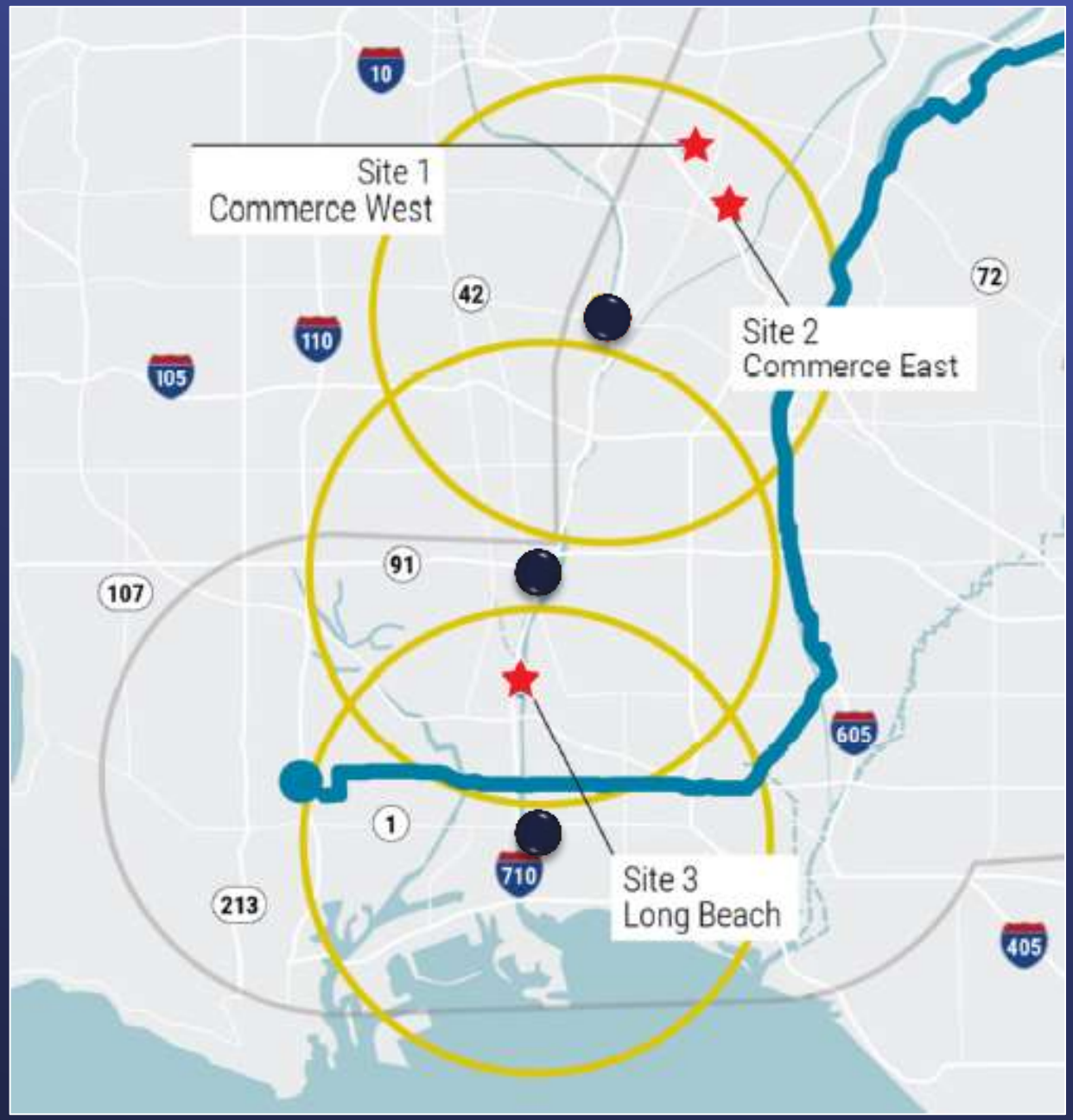
Distributed Treatment Technical Memo

Potential Diversion Sites



Distributed Treatment Technical Memo

Short-Listed Plant Sites



Distributed Treatment Technical Memo
Overall Cost Summary

Parameter	Centralized Treatment Facility	Distributed Treatment Alternatives		
		Site 1 Diversion: North Commerce: West	Site 2 Diversion: North Commerce: East	Site 3 Diversion: South Long Beach
Influent Flow (MGD)	186	20	13	30
Net Increase of Capital Cost ($)	$1,871M	+ $540M	+ $380M	+ $490M
Incremental Pumping Energy Increase (+) or Savings (-)	-	- 2.5%	-1.9%	+1.1%
Net O&M Cost ($/year)	$108M	+ $1.9M	+ $2.1M	+ $2.4M
Unit Treatment Cost ($/AF)	$957	$2,552	$2,757	$1,912

Distributed Treatment Technical Memo

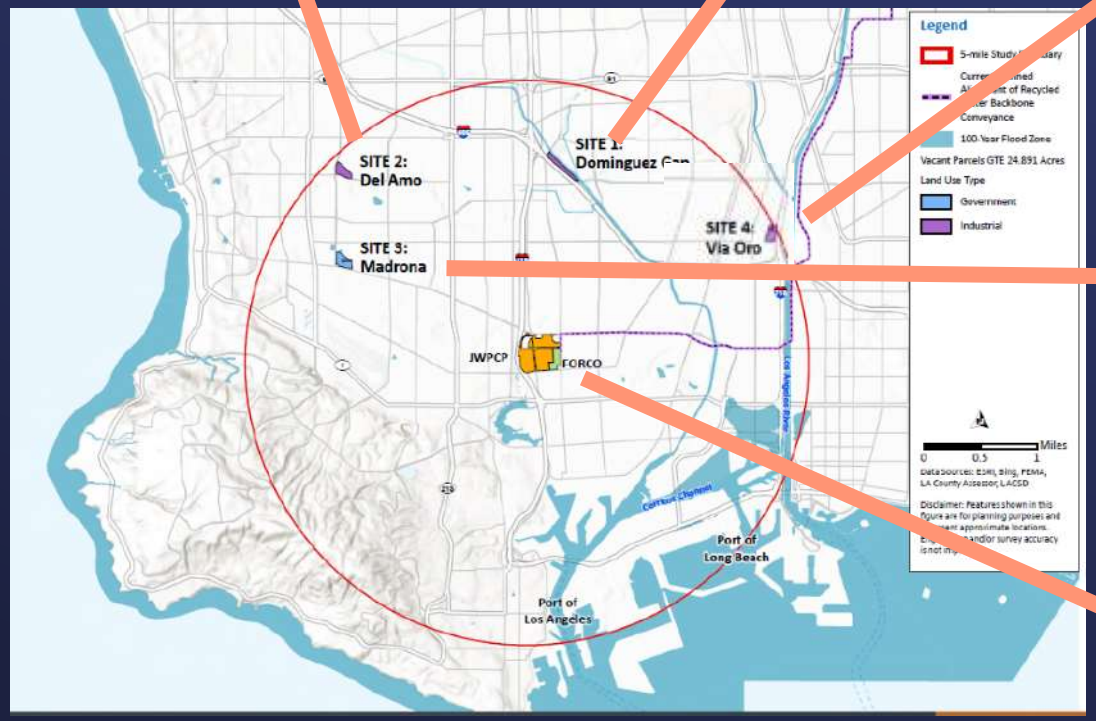
Findings & Recommendations

- Management and operation of multiple plants at different sites increases complexity
- Reduction in energy usage for distributed plants is minimal compared to centralized plant
- The centralized approach is significantly more cost-effective
- Centralized plant could provide sufficient redundancy with appropriate design
- Uncertainty exists in additional property procurement, permitting, and schedule impact
- Centralized treatment is recommended

Alternative AWT Site Evaluation Technical Memo

Siting Evaluation

- Identify and evaluate alternative AWT sites
  - Further reduce potential health/safety concerns
- Site criteria considered
  - LACSD-owned and other sites
  - Minimum site area: approximately 25 acres
  - Proximity: within 5 miles of the JWPCP
- Technical criteria: proximity to wastewater sources, conveyance facilities, and residuals management facilities
- Other criteria: community impact, zoning, access, flooding, and availability



Alternative AWT Site Evaluation Technical Memo

No sites were considered viable because:

- Environmental cleanup concerns
- Distance from backbone conveyance facilities
- Within 100-yr flood zone
- Distance from wastewater source

Findings and Recommendations

Alternative AWT Site Evaluation Technical Memo

- There are no viable alternative properties within a 5-mile radius of the JWPCP
  - Alternative sites require significant additional studies to fully assess the overall suitability and potential environmental concerns
  - Environmental clean-up would delay project
  - Property acquisition may not be possible/cause delay
  - Significant conveyance infrastructure would be required to establish an alternative site
  - Extensive community outreach potentially necessary to build support for new site

Alternative AWT Site Evaluation Technical Memo

Findings and Recommendations (continued)

- The JWPCP/FORCO site is recommended
  - Human health risk assessment is complete
  - Mitigation strategies to reduce potential health risks have been established
  - Proximity to the source water and residual disposal
  - Site is buffered from residential neighborhoods
  - The property is owned by a program partner (LACSD)

Site Plan to be Used for CEQA Analysis

RRWP Environmental Planning Phase - AWT Site Planning

BIM Computer Model created to estimate earthwork quantities for CEQA

RRWP
Environmental Planning Phase

Conveyance Activities Summary

- Provided CEQA data needs to Environmental Team
- Discussed pipeline alignment with City of Carson
- Identified potential early start projects
- Continued outreach & discussions with cities
- Continued to evaluate & refine conveyance pipeline alignment

CEQA Activities

- Environmental Documentation
  - Current Technical Studies:
    - Biological Resources
    - Cultural Resources
    - Geology and Soils
    - Hazards and Hazardous Materials
    - Noise
  - Other technical studies scheduled to start in two weeks following receipt of additional data
- Tentative Schedule
  - **Notice of Preparation:** Fall 2022
  - **Draft Program EIR Public Review:** Mid-2023
  - **Final Program EIR Public Review:** January 2024
  - **Board Certification of Program EIR:** March 2024

Regional Recycled Water Program

Addressing the Needs of Small Businesses During Construction

The Regional Recycled Water Program would involve construction of a new, large-diameter pipeline to deliver purified recycled water to the region. The Metropolitan Water District of Southern California and the Los Angeles County Sanitation Districts are developing strategies to address construction impacts to businesses and residences. The list below describes approaches to manage impacts to small businesses.

RRWP Environmental Planning Phase

Continuing Coordination Activities

- Cities and agencies
  - Cities and communities along pipeline route
  - West Coast Basin agencies
  - Central Basin agencies
- Discussion topics
  - Potential demands for and use of purified water
  - Pipeline alignment analyses
  - Community/business impacts

Next Steps

- Continue technical and environmental studies
- Continue public outreach efforts
- Continue pursuit of State and Federal grants
- Investigate early start/delivery projects
- Begin Demo Plant sMBR baseline testing
- Program name change
  - Program re-naming process
  - Short-list evaluation/external focus group
  - Pure Water Southern California
  - Formal roll-out this summer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SOUTHERN CALIFORNIA
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