

The Metropolitan Water District of Southern California

Agenda

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.

PWSCRC Committee

M. Camacho, Chair
J. Morris, Vice Chair
D. Alvarez
A. Chacon
A. Fellow
L. Fong-Sakai
R. Lefevre
M. Luna
J. McMillan
G. Peterson
K. Seckel
T. Smith

Subcommittee on Pure Water Southern California and Regional Conveyance - Final

Meeting with Board of Directors *

June 27, 2023

3:45 p.m.

Agendas, live streaming, meeting schedules, and other materials are available here: <https://mwdh2o.legistar.com/Calendar.aspx>. A listen-only phone line is available at 1-877-853-5257; enter meeting ID: 873 4767 0235. Members of the public may present their comments to the Committee on matters within their jurisdiction via in-person or teleconference. To participate via teleconference 833-548-0276 and enter meeting ID: 876 9484 9772 <https://us06web.zoom.us/j/87694849772?pwd=V3dGZGRYUjJ3allqdUxXTIJRM044Zz09>.

Tuesday, June 27, 2023 Meeting Schedule

08:30 a.m. BOD Wksp - EOP
11:00 a.m. BOD Wksp - LTRPPBM
01:45 p.m. Exec
03:45 p.m. PWSCRC
03:45 p.m. Audits

MWD Headquarters Building • 700 N. Alameda Street • Los Angeles, CA 90012

Teleconference Locations:

3008 W. 82nd Place • Inglewood, CA 90305

13 Pumphouse Rd. • Garden Valley, ID 83622

8700 Beverly Boulevard, Ste M313 • Los Angeles, CA 90048

1370 North Brea Boulevard, Ste 235 • Fullerton, CA 92835

* The Metropolitan Water District's meeting of this Committee is noticed as a joint committee meeting with the Board of Directors for the purpose of compliance with the Brown Act. Members of the Board who are not assigned to this Committee may participate as members of the Board, whether or not a quorum of the Board is present. In order to preserve the function of the committee as advisory to the Board, members of the Board who are not assigned to this Committee will not vote on matters before this Committee.

- 1. Opportunity for members of the public to address the committee on matters within the committee's jurisdiction (As required by Gov. Code Section 54954.3(a))**

**** CONSENT CALENDAR ITEMS -- ACTION ****

- 2. CONSENT CALENDAR OTHER ITEMS - ACTION**

- a. Approval of the Minutes of the Subcommittee on Pure Water Southern California and Regional Conveyance for March 28, 2023 (Copies have been submitted to each Director, Any additions, corrections, or omissions) [21-2297](#)

Attachments: [06272023 PWSCRC \(03282023\) Minutes](#)

**** END OF CONSENT CALENDAR ITEMS****

3. SUBCOMMITTEE ITEMS

- a. Pure Water Southern California Quarterly Update [21-2448](#)

Attachments: [06272023 PWSCRC 3a Presentation](#)

- b. Update on Nitrogen Management Studies for Pure Water Southern California – Presenters Robert Ferrante and Ray Tremblay from Los Angeles County Sanitation Districts [21-2447](#)

Attachments: [06272023 PWSCRC 3b Presentation \(Revised\)](#)

- c. Drought Mitigation Actions Quarterly Update [21-2449](#)

Attachments: [06272023 PWSCRC 3c Presentation](#)

4. FOLLOW-UP ITEMS

NONE

5. FUTURE AGENDA ITEMS

6. ADJOURNMENT

NOTE: This committee reviews items and makes a recommendation for final action to the full Board of Directors. Final action will be taken by the Board of Directors. Committee agendas may be obtained on Metropolitan's Web site <https://mwdh2o.legistar.com/Calendar.aspx>. This committee will not take any final action that is binding on the Board, even when a quorum of the Board is present.

Writings relating to open session agenda items distributed to Directors less than 72 hours prior to a regular meeting are available for public inspection at Metropolitan's Headquarters Building and on Metropolitan's Web site <https://mwdh2o.legistar.com/Calendar.aspx>.

Requests for a disability-related modification or accommodation, including auxiliary aids or services, in order to attend or participate in a meeting should be made to the Board Executive Secretary in advance of the meeting to ensure availability of the requested service or accommodation.

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

MINUTES

SUBCOMMITTEE ON PURE WATER SOUTHERN CALIFORNIA AND REGIONAL CONVEYANCE

March 28, 2023

Vice Chair Morris called the hybrid teleconference and in-person meeting to order at 9:00 a.m.

Members present: Directors Alvarez, Camacho, Fellow, Fong-Sakai, Lefevre (entered after roll call), McMillan, Morris, Peterson (entered after roll call), and Seckel.

Members absent: Directors Chacon and Luna.

Other Board members present: Directors Abdo, Ackerman, Armstrong, Cordero, Erdman, Garza, Goldberg, Kurtz, Miller, Ortega, and Smith.

Committee staff present: Bednarski, Chaudhuri, Hagekhalil, Lahouti, Schlotterbeck, and Upadhyay

1. OPPORTUNITY FOR MEMBERS OF THE PUBLIC TO ADDRESS THE COMMITTEE ON MATTERS WITHIN THE COMMITTEE'S JURISDICTION

None

CONSENT CALENDAR ITEMS ACTION-

2. CONSENT CALENDAR OTHER ITEMS ACTION

None

** END OF CONSENT CALENDAR ITEMS **

3. SUBCOMMITTEE ITEMS

- a. Subject: State Water Project Dependent Areas Drought Mitigation Actions
Presented by: John Shamma, Section Manager, Engineering Services Group

Mr. Shamma reported on the following:

- Actions taken after 2014-2015 drought
- Key actions impacting SWP-Dependent Areas
- Commitment to water system conveyance flexibility
- Potential supply and storage improvements
- Plan to develop a portfolio of actions to improve the flexibility of the MWD conveyance system to deliver water to the SWP-Dependent areas

- Actions are intended to address and mitigate future droughts and climate change

The following Directors provided comments or asked questions

1. Fong-Sakai
2. Seckel
3. McMillan
4. Peterson
5. Smith
6. Fellow

Staff responded to the Directors' questions and comments.

- b. Subject: Pure Water Southern California Quarterly Report
- Presented by: Heather Collins, Assistant Group Manager, Water System Operations Group

Ms. Collins reported on the following:

- Program overview and recent activities
- Research activities at the Pure Water demonstration plant
- DPR regulatory development and testing approach
- Public outreach activities
- Environmental review and updated schedule
- Funding opportunities and accepted use of \$80M state funds
- Recent Board authorizations for consulting agreements on program management support, and preliminary design of first two pipeline reaches
- Current schedule for Program's Phase 1 – Environmental Planning in progress, Design and Construction planned for 2024-2031 and Start-Up and Operations in 2032

The following Directors provided comments or asked questions

1. Seckel
2. Ortega
3. Peterson
4. Smith
5. Alvarez

Staff responded to the Directors' questions and comments.

4. FOLLOW-UP ITEMS

None

5. FUTURE AGENDA ITEMS

None

The next meeting will be June 27, 2023.

Meeting adjourned at 10:38 am.

John Morris
Vice Chair



Subcommittee on Pure Water Southern California
and Regional Conveyance

Pure Water Southern California Quarterly Report

Item 3a
June 27, 2023

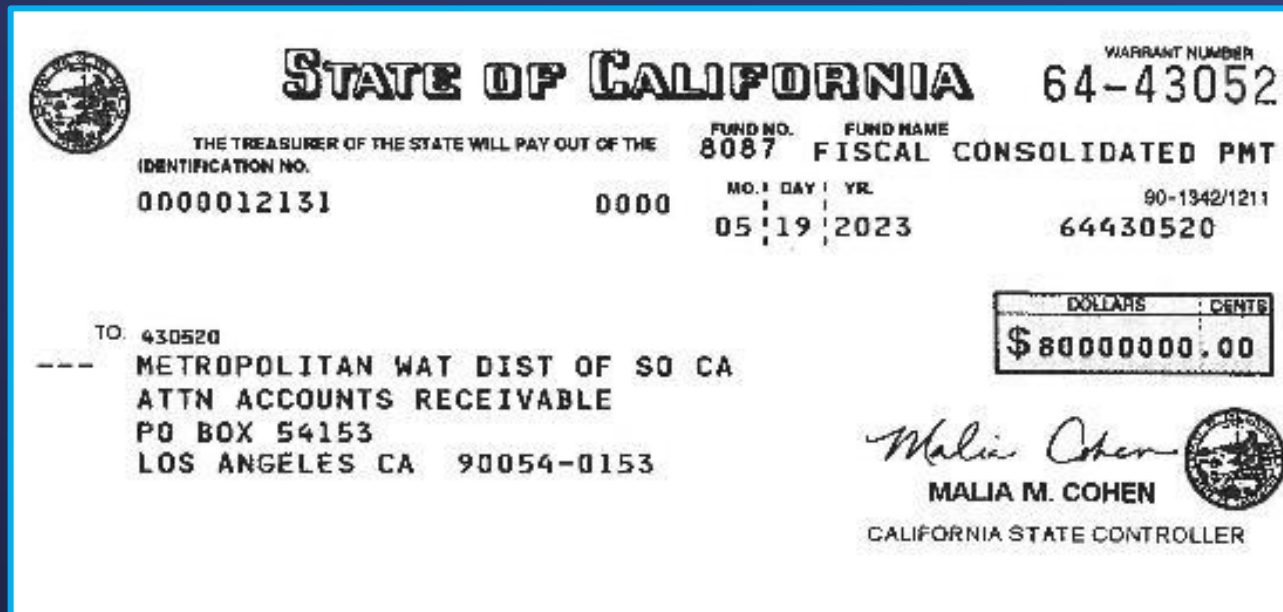
Pure Water
Southern California
Program Outline



- Program Funding
- Recent Project Team Activities
- Agency Collaboration/Reuse Collaborative
- Demonstration Plant & Regulatory Activities
- Outreach and Sustainability Activities
- Environmental Planning Activities
- Schedule
- Next Steps

Pure Water
Southern California
Program Funding

- Received \$80M State funds on May 24, 2023
- Funds allow for commencement of work authorized by Board in December 2022
- USBR Title XVI WaterSMART grant
- LSWR Infrastructure grant



A State of California Warrant for payment of \$80,000,000.00. The warrant is issued by the State Controller, Malia M. Cohen, on May 19, 2023. The funds are for the Fiscal Consolidated PMT fund. The warrant number is 64-430520. The payment is made to the Metropolitan Water District of Southern California, Attention: Accounts Receivable, PO Box 54153, Los Angeles, CA 90054-0153.

STATE OF CALIFORNIA WARRANT NUMBER **64-430520**

THE TREASURER OF THE STATE WILL PAY OUT OF THE
IDENTIFICATION NO. **0000012131** FUND NO. **8087** FUND NAME **FISCAL CONSOLIDATED PMT**

0000 MO. DAY YR. **05 19 2023** 90-1342/1211 **64430520**

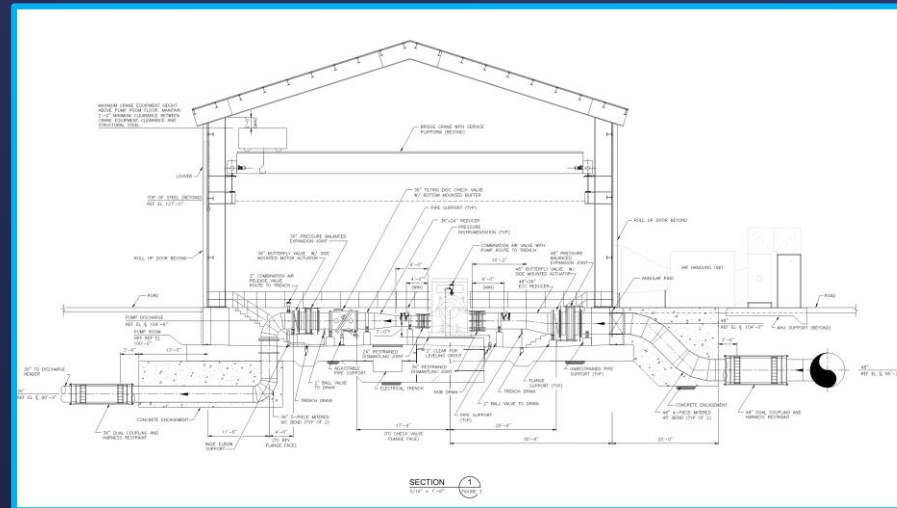
TO: **430520**
--- **METROPOLITAN WAT DIST OF SO CA**
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PO BOX 54153
LOS ANGELES CA 90054-0153

\$80000000.00

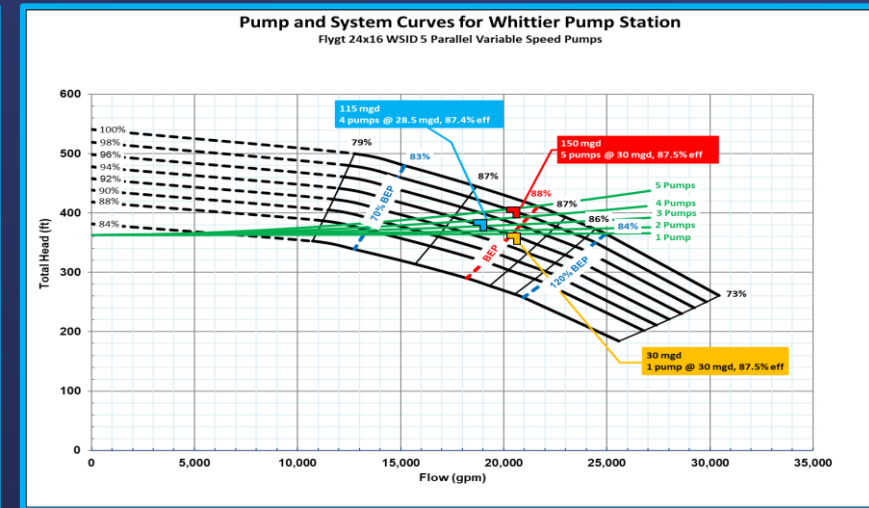
Malia Cohen
MALIA M. COHEN
CALIFORNIA STATE CONTROLLER

Pure Water Southern California Recent Program Team Activities

- Coordinating with SCE on power supply, right-of-way and facility co-location
- Confirming pipeline alignment with cities and agencies
- Investigating pumping requirements/standards
- On-boarding consultant support
- Planning for DPR investigations and testing
- Continued discussions of agency contributions



Typical Cross Section of Pump Station



Examples of Pumping Curves

Pure Water Southern California Agency Coordination



Program Partners

- LACSD
- LADWP/Operation NEXT
- USACE
- SCE
- Cities, agencies and businesses along the backbone pipeline alignment
- Water Reuse Collaborative

Pure Water Southern California Water Reuse Collaborative

Purpose

We believe that working together will help us construct a more sustainable, equitable and resilient future for our region.

- Collaborating to support:
 - Interagency coordination and support
 - Regional water supply resilience
 - Maximizing regional benefits of multiple programs
 - Water affordability goals
 - Increasing access to outside funding
 - Environmental and water quality objectives
 - Workforce development



Reuse Collaborative
Initial Meeting
September 19, 2022

Pure Water Southern California Demo Plant & Regulatory Activities



Replacement of membranes

- Tertiary MBR testing is complete, and the Summary Report is being finalized
- Finishing sMBR demo plant testing in July
- Planning for tMBR optimization phase testing
- Developing the DPR pilot testing plan with design to start in the Fall
- Draft DPR Regulations expected this Summer
- Coordinate DPR comments with partners

Pure Water Southern California Public Outreach Activities

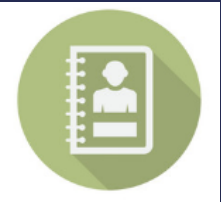


Tours

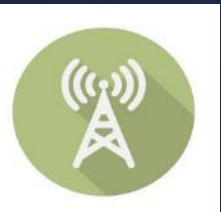
Briefings/
Presentations

Community
Events

Pure Water Southern California Environmental Planning Activities



Notice of
Preparation
Completed 9/22



Public Meetings
Completed 10/22

- Continuing preparation of technical studies and EIR sections
- Coordinating AQ/GHG and Health Risk Assessments with LACSD
- Tribal Cultural resource consultations
- Identifying community benefits and mitigation measures
- Finalizing objectives and developing alternatives

PEIR/EIR

Draft EIR
1st Quarter 2024

Comment Period
2nd Quarter 2024

Final EIR/Board
Certification
Fall 2024



Pure Water
Southern
California
General
Alternative
Requirements

- EIRs must present alternatives necessary to permit a reasoned choice (not every possible option)
- Alternatives must:
 - Feasibly attain most of the basic objectives of the project
 - Avoid or substantially lessen any of the significant effects of the project
 - Include a “No Project” alternative

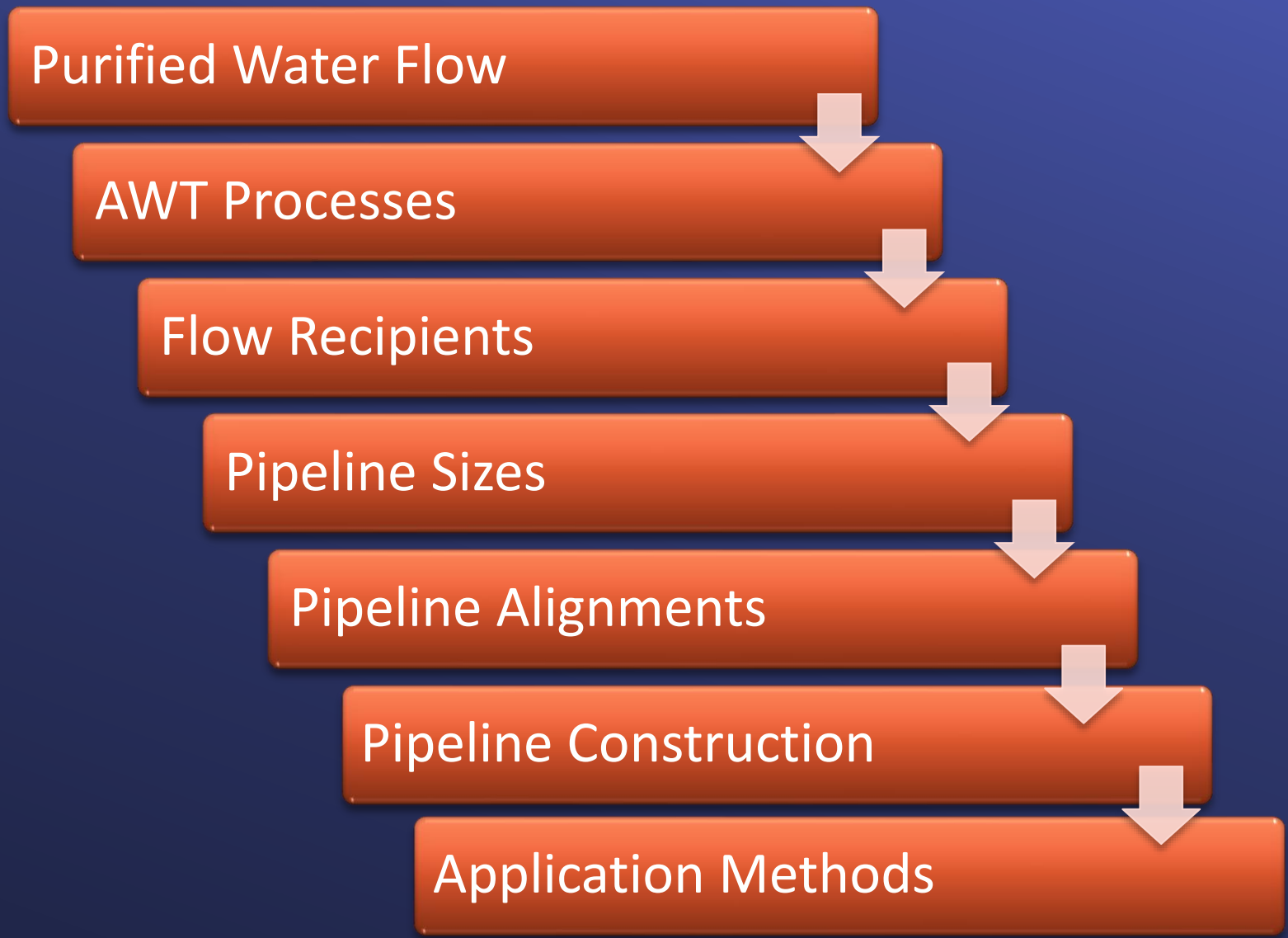
Pure Water
Southern
California
Summary of
Project
Objectives

- Help meet regional water supply demands
- Create a new, reliable, cost-effective local water source
- Diversify water supply portfolio and increase regional operational flexibility
- Reduce reliance on imported water
- Contribute to local groundwater basins
- Maximize beneficial reuse of wastewater
- Improve coordination and future integration with other water supply and distribution systems

Pure Water
Southern
California
PEIR/EIR
Alternatives
Identification
Process

- Identify various project components
- Develop a range of options for those components
- Screen out components or options that are not feasible (Alternatives Considered but Rejected)
- Develop a combination of components/options to form alternatives to include in the EIR

Pure Water
Southern
California
PEIR/EIR
Alternatives
Development



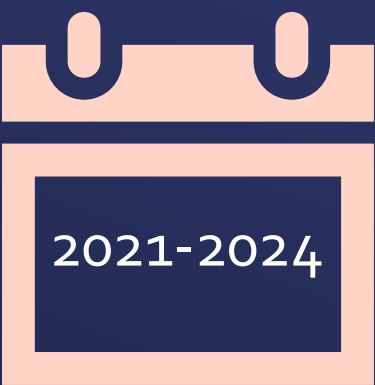
Pure Water Southern California Opportunities for Future Integration

- Operation NEXT
- East/West Conveyance
- Additional projects/programs



Potential Future Integration of Reuse Programs
with Drought Mitigation Projects

Phase 1 - Program Schedule



Environmental
Planning

IN PROGRESS



Early Delivery
Projects

IN PROGRESS



Design and
Construction

FUTURE



Start-up and
Operations

FUTURE

Pure Water
Southern California
Next Steps

- Begin pipeline preliminary design
- Submit 'Method of Service' application to SCE
- Prepare sequencing and implementation schedule
- Continue outreach & prepare draft PEIR
- Implement nitrogen management/tMBR optimization at demo plant
- Discuss potential for treated water augmentation





LOS ANGELES COUNTY
SANITATION DISTRICTS

A Century of Service

Nitrogen Management Studies To Support PWSC project

Metropolitan Water District Subcommittee on Pure
Water Southern California and Regional Conveyance

Item 3b

June 27, 2023



N

110

Sepulveda Blvd.

Main St.

Figueroa St.

Lomita Blvd.

Demo Plant Site

Full-Scale AWT Site

bing

Service Layer Credits: Image courtesy of USGS; Image courtesy of NASA; Aerial Imagery courtesy of Microsoft Corporation
 Project: Water Reuse, Purified WWSW for WPCP Property, 2017/05.mxd | Photograph: 2016-2017 | Prepared by: Indigo Chan (Coastal & Mapping Team) | Checked by: Kimberly Wain | Date: 01/10/2020

Largest untapped source of treated wastewater

Recent Sanitation Districts' Led Technical Studies

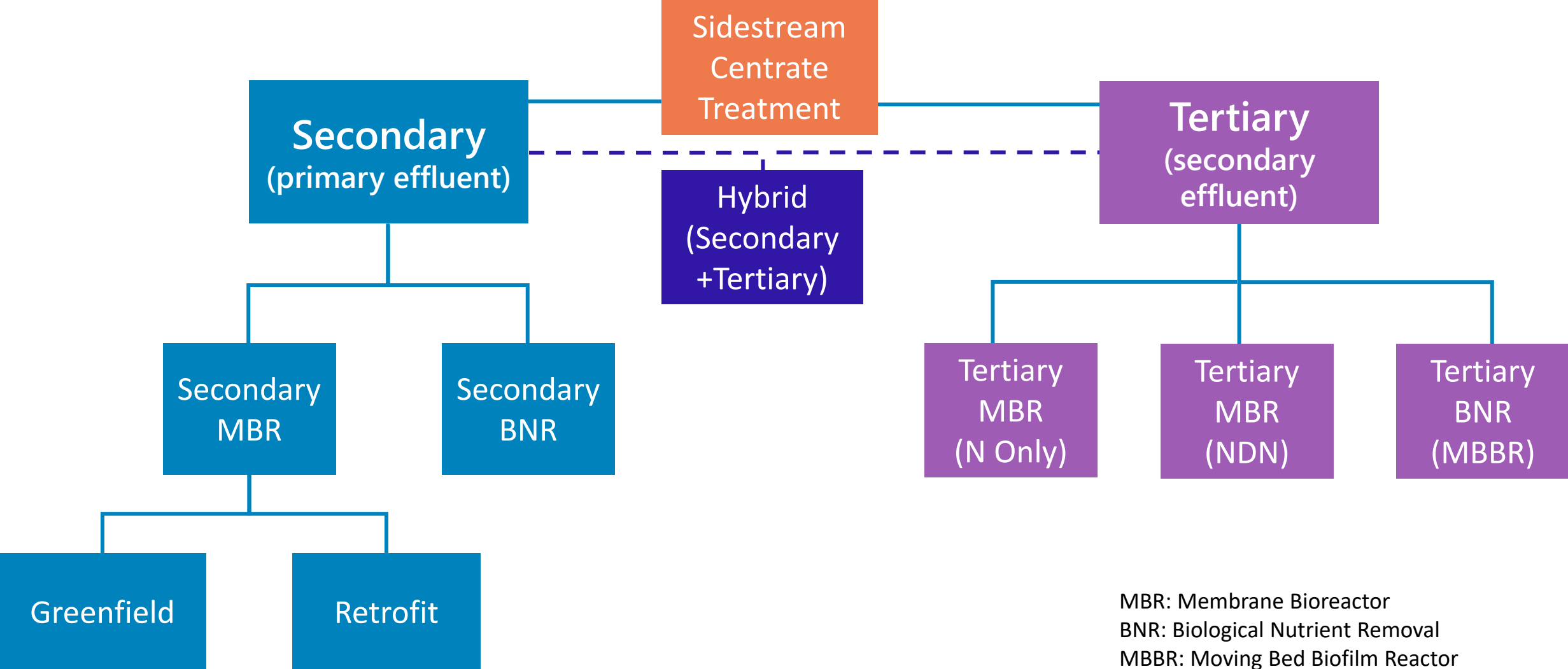
Nitrogen Management Studies

- Side stream centrate treatment for Nitrogen reduction
- Retrofit existing reactors for Nitrogen reduction
- Pilot scale studies of various treatment approaches
- Development of alternative treatment trains and facilities planning

Source Control

Residuals Management

Nitrogen Management Options Considered



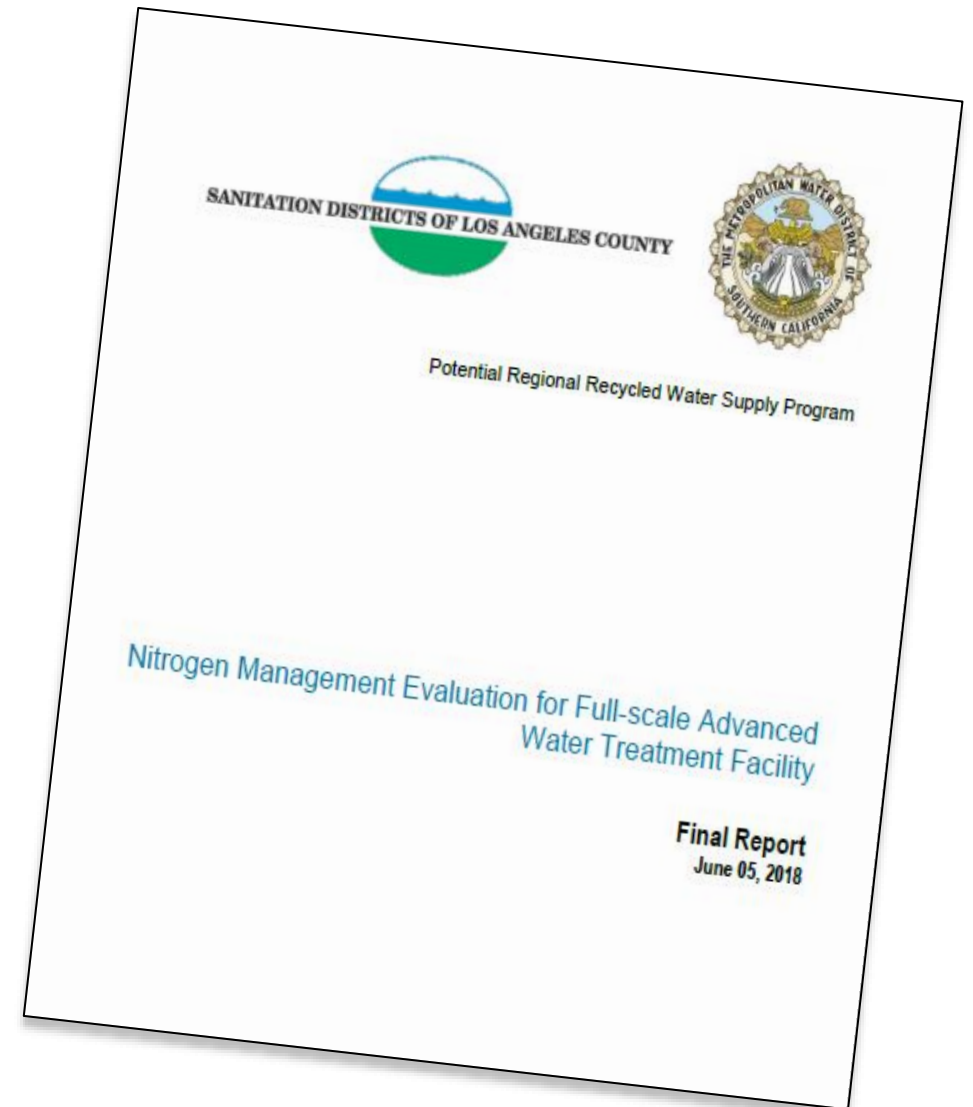
Nitrogen Management Studies

Nitrogen management committee (2017-2019)

- LACSD and Metropolitan joint effort
- Comprehensively evaluated approaches to meet nitrogen targets
- Recommended treatment process trains for further evaluation

JWPCP technical analysis (2020-Present)

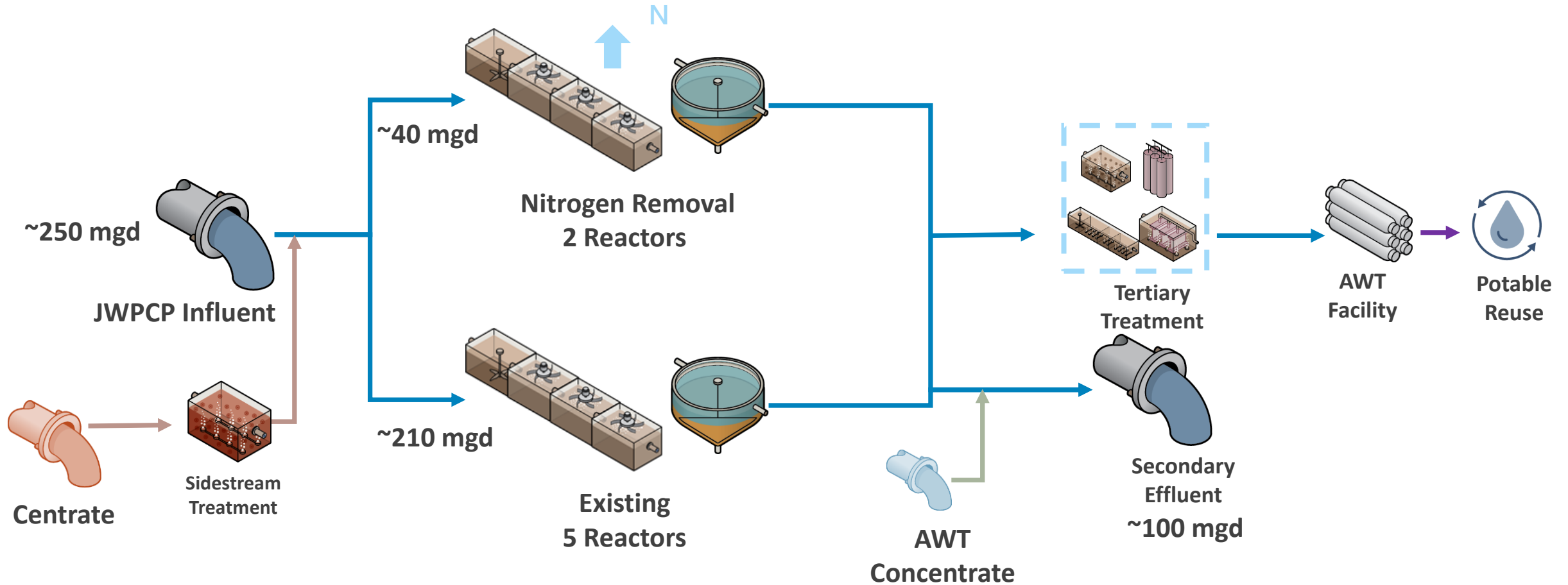
- LACSD nutrient removal study to refine potential alternatives
- Treatment options include tertiary and secondary MBR, and BNR (non-MBR)



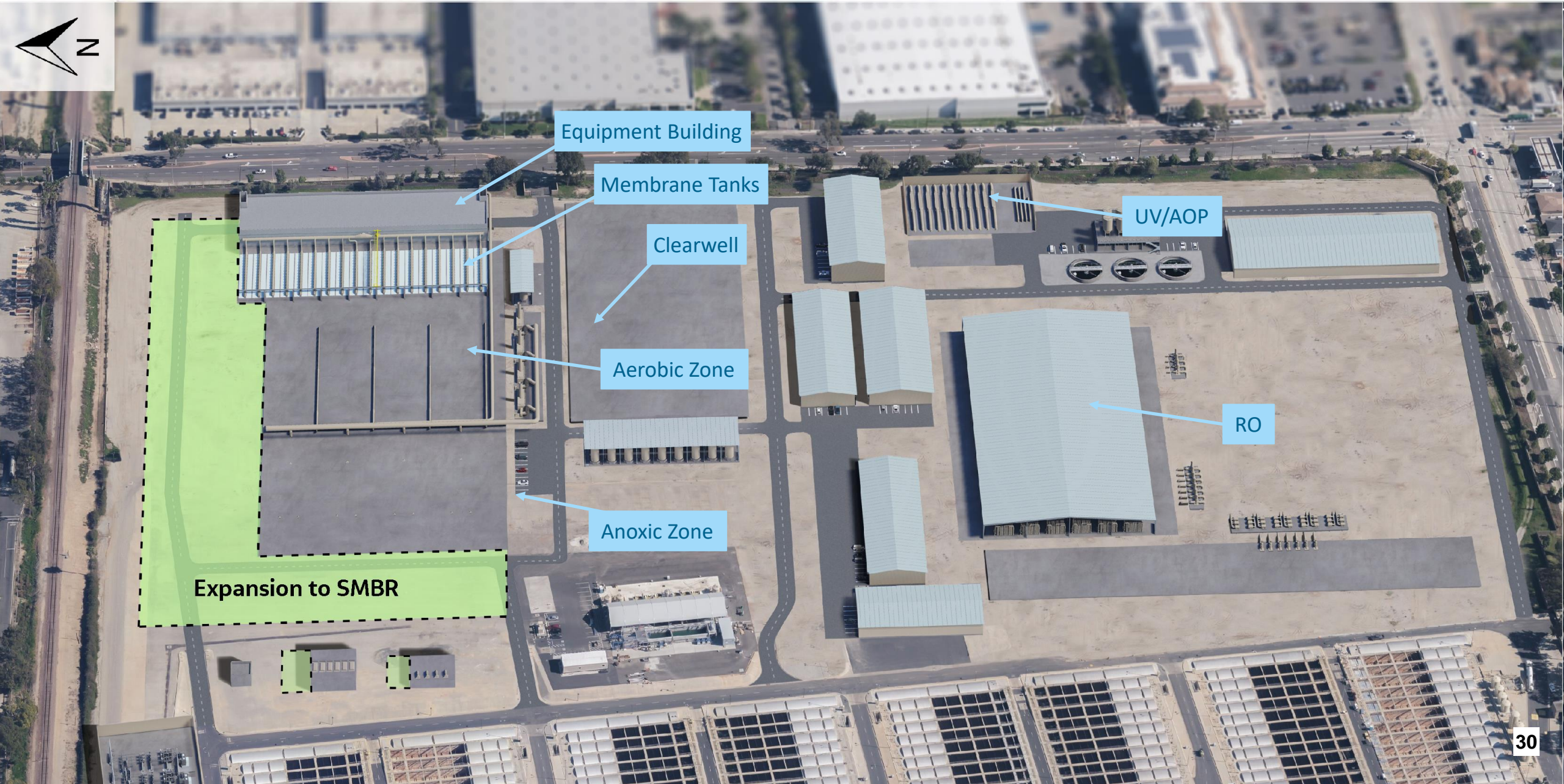
Tertiary MBR Pilot



Possible Process Flow



Flex MBR



Factors in Nitrogen Management Approach Selection

Objective – Identify optimal nitrogen management practice based on:

- JWPCP treats a high percentage of industrial waste streams
- Wet Weather Compliance
- Operational Complexity
- Operational Reliability and Redundancy
- Technology Maturity
- Cost
- Environmental Impact
- Constructability
- Flexibility to Adapt to Changes

Next Steps

July 2023

- Complete draft Facilities Plan

2023-2024

- Additional APC testing
- Compile and compare all APC data
- Include in Conceptual Facilities Plan

Late 2024

- Project approval



LOS ANGELES COUNTY
SANITATION DISTRICTS

A Century of Service

QUESTIONS

Ray Tremblay

Facilities Planning Department Head

rtremblay@lacsds.org





Subcommittee on Pure Water Southern
California and Regional Conveyance

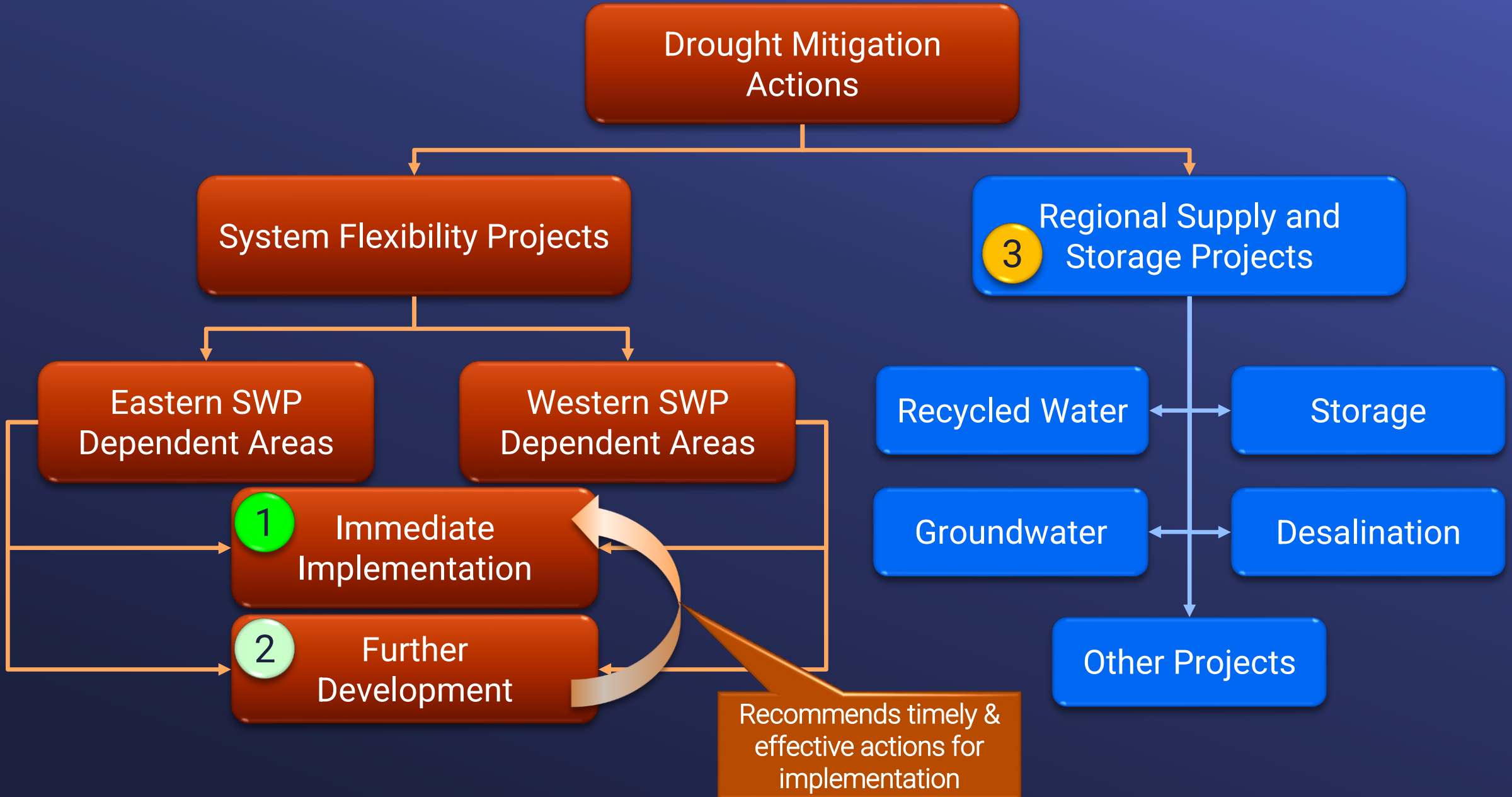
State Water Project Dependent Areas Drought Mitigation Update

Item 3c
June 27, 2023

State Water Project Dependent Areas Drought Mitigation Workshops



Current Approach to Drought Mitigation Actions



1 System-Flexibility Projects for Immediate Implementation



1 System-Flexibility Projects for Immediate Implementation

Project	Capacity	Estimated Cost	Planned Board Action	Anticipated Completion	Status
Wadsworth Bypass	Up to 120 cfs 87 TAF	\$23 M	N/A	2024/2025	In Construction
Inland Feeder-Rialto Pipeline Intertie		\$17 M	Mid 2023	2024/2025	In bidding process
Badlands Tunnel Surge Tank		\$18 M	Mid 2023	2024/2025	In final design
Foothill Pump Station Intertie		\$26 M	Fall 2023	2024/2025	In final design
Sepulveda Feeder Pumping Project -Phase 1	Up to 60 cfs* 42 TAF	\$120 M	Fall 2023	2026	Reviewing RFQ statements for design-build contract
Shift of Burbank B-5 Supply to B-5A	Up to 7 cfs 5 TAF	\$7 M	Winter 2023	2026	Feasibility study completed
TVMWD Miramar Pumpback Upgrade	Up to 30 cfs 21 TAF	\$5M	TBD	TBD	Feasibility study completed

*Capacity includes 30 cfs pump station capacity and 30 cfs water savings that would otherwise be delivered into the common pool to maintain water quality

System Flexibility Projects for Further Development East-West Conveyance System Study

Goals & Objectives

- Develop feasible **East-West Conveyance** alternatives
- Improve access to supplies and storage for delivery to the **West Side SWP Dependent Area**
 - Consider treated water and raw water conveyance lines and facilities
 - Integrate with new & potential water supplies (i.e., Pure Water Southern California, LA Operation NEXT)
- Study completion in December 2023

East-West Conveyance Study - Collaborative Process

Focus Group Meetings

Calleguas
LADWP
Las Virgenes
Metropolitan

1



Meeting 1
Goals/expectations

2



Meeting 2
Initial alternatives
Screening criteria

29 initial
alternatives

3



Meeting 3
Screening result
Assessment criteria

7 alternatives for
further assessment

4



Meeting 4
Assessment result
Refinements

5



Meeting 5
Recommendation

Drought Mitigation Planning Workshops

All member agencies

Workshop
No. 8

Workshop
No. 9

Workshop
No. 10

2 East-West Conveyance Study – Evaluation Criteria



Initial Screening Criteria

Equity
Supply Sources
Permitting Challenges
Optimization of Existing Facilities
Operational Flexibility



Proposed Assessment Criteria

Conveyance Capacity
Supply Reliability
Cost Effectiveness
Right-of-Way Acquisition
Constructability
Operation Constraints
Environmental Mitigation

Timeliness
Sustainability

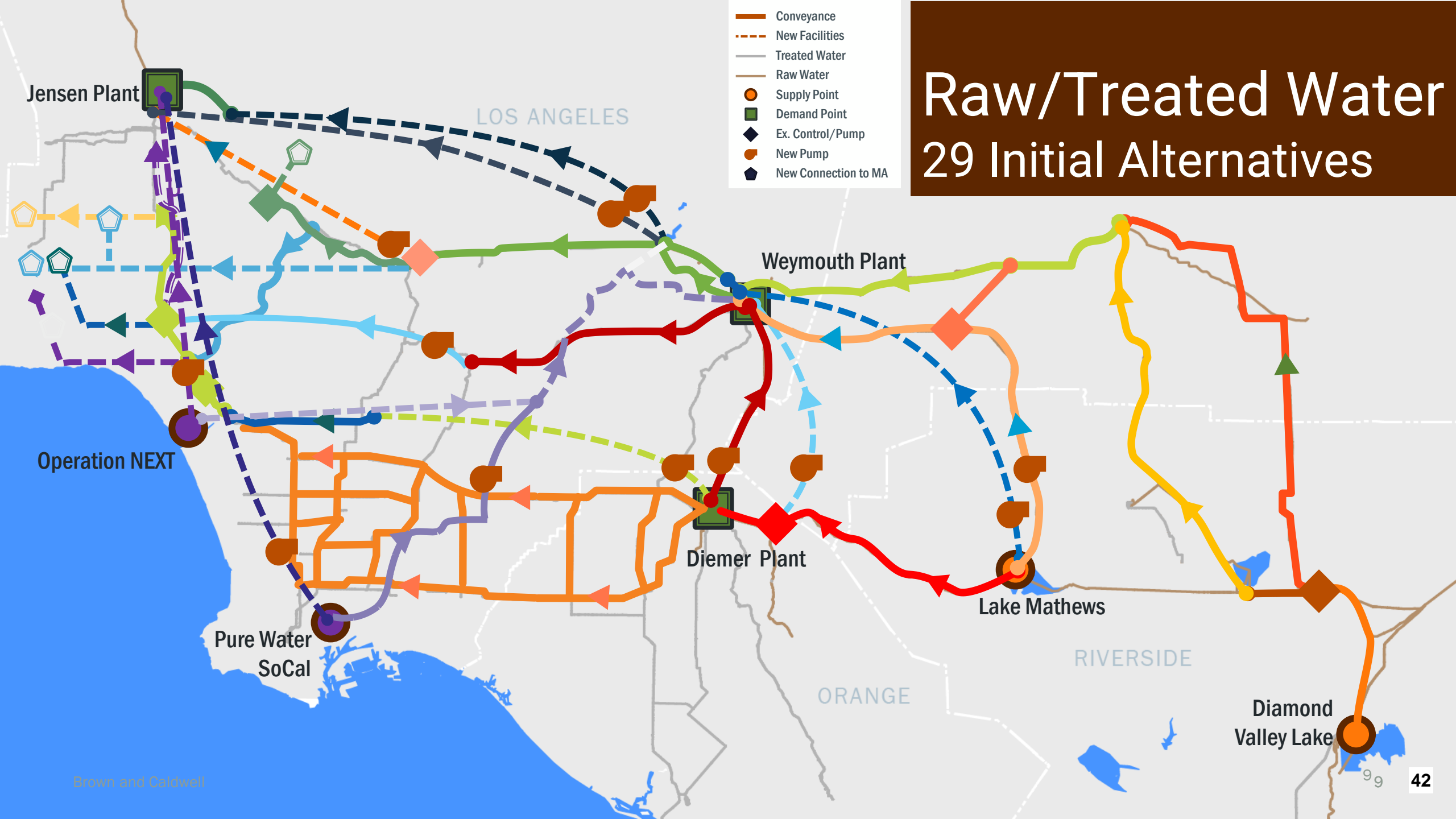
Initial Alternatives
(29)

Screened Alternatives
(7)

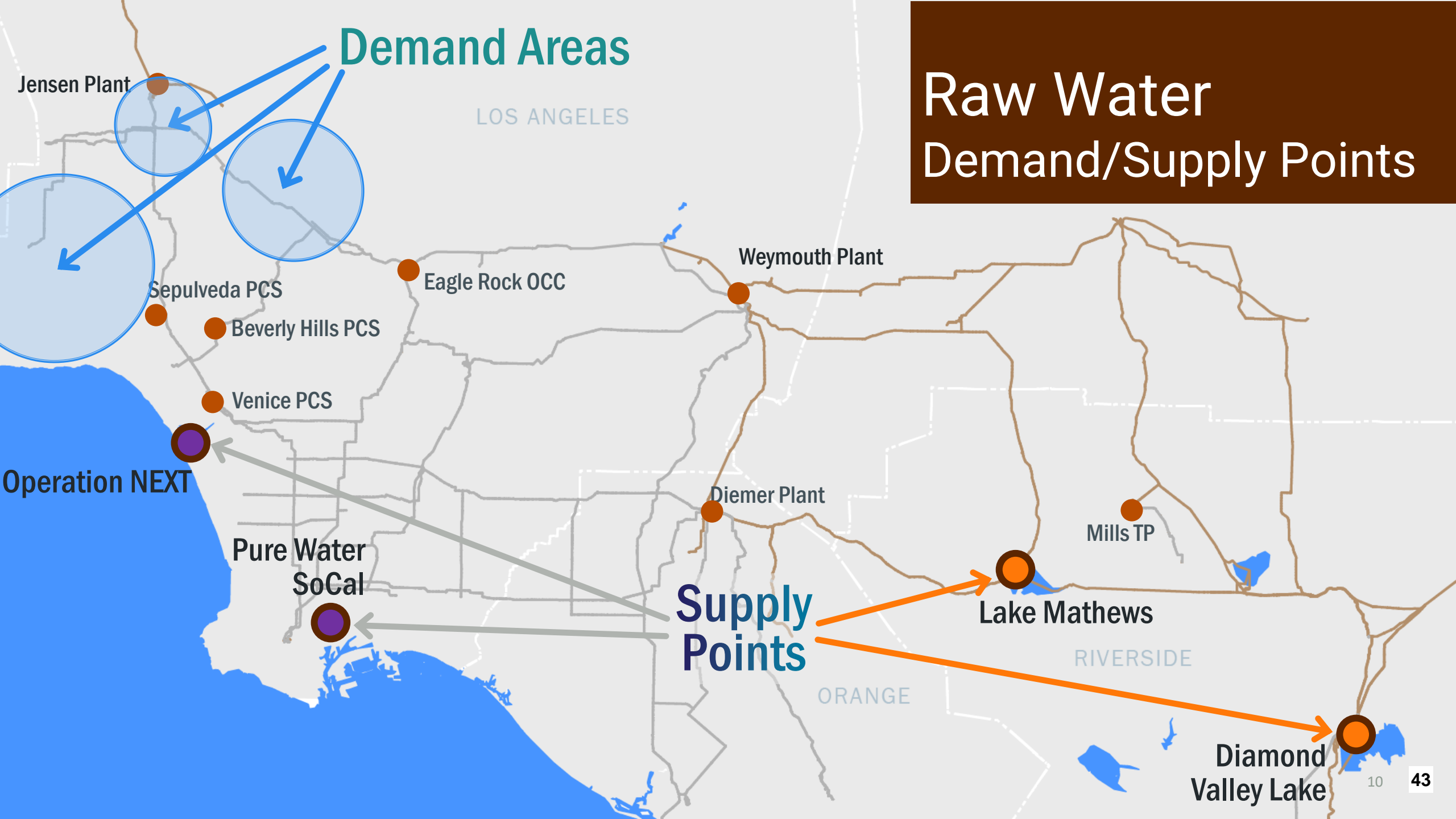
Recommended Alternatives
(TBD)



Raw/Treated Water 29 Initial Alternatives

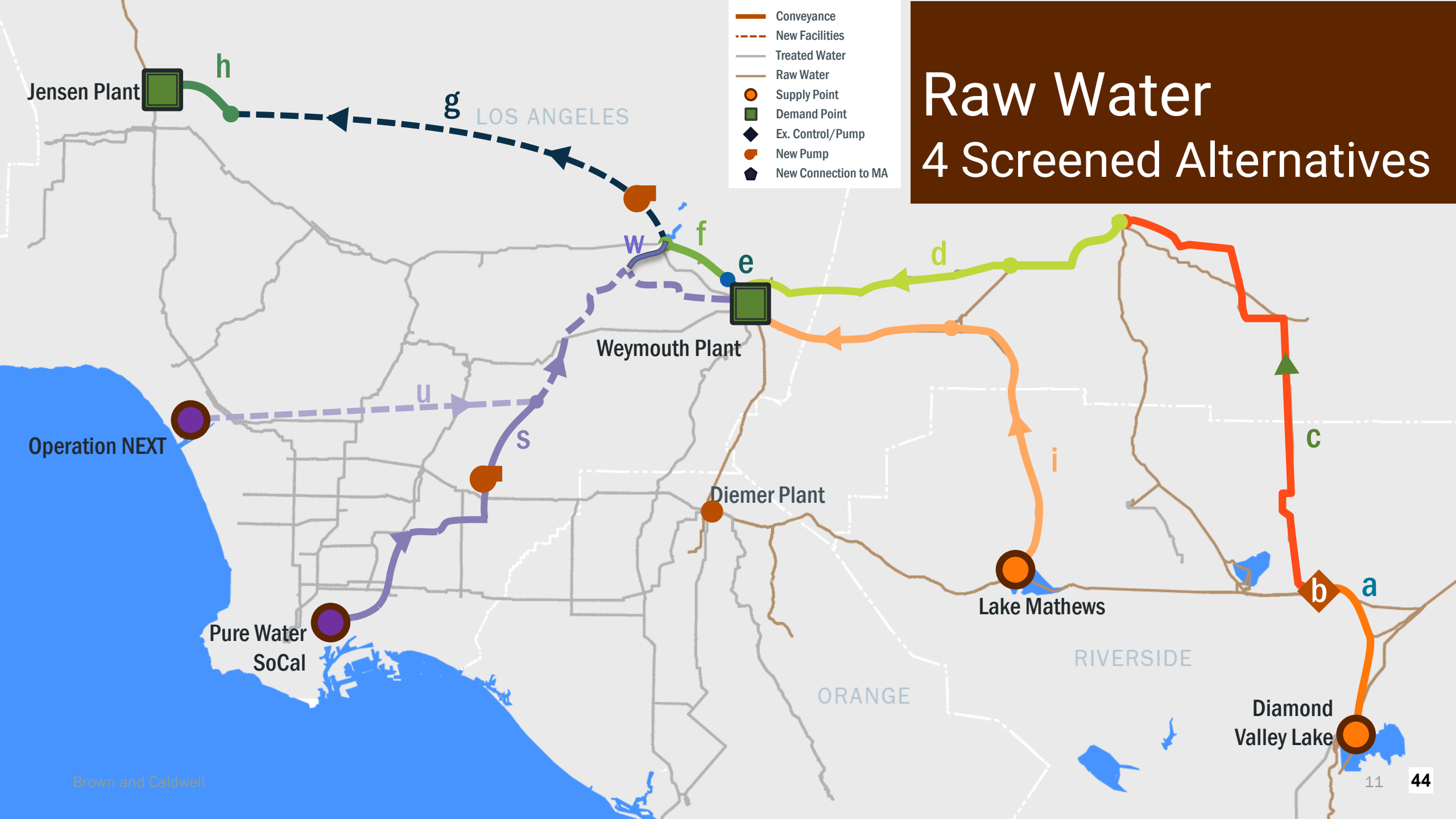


Raw Water Demand/Supply Points



Raw Water

4 Screened Alternatives



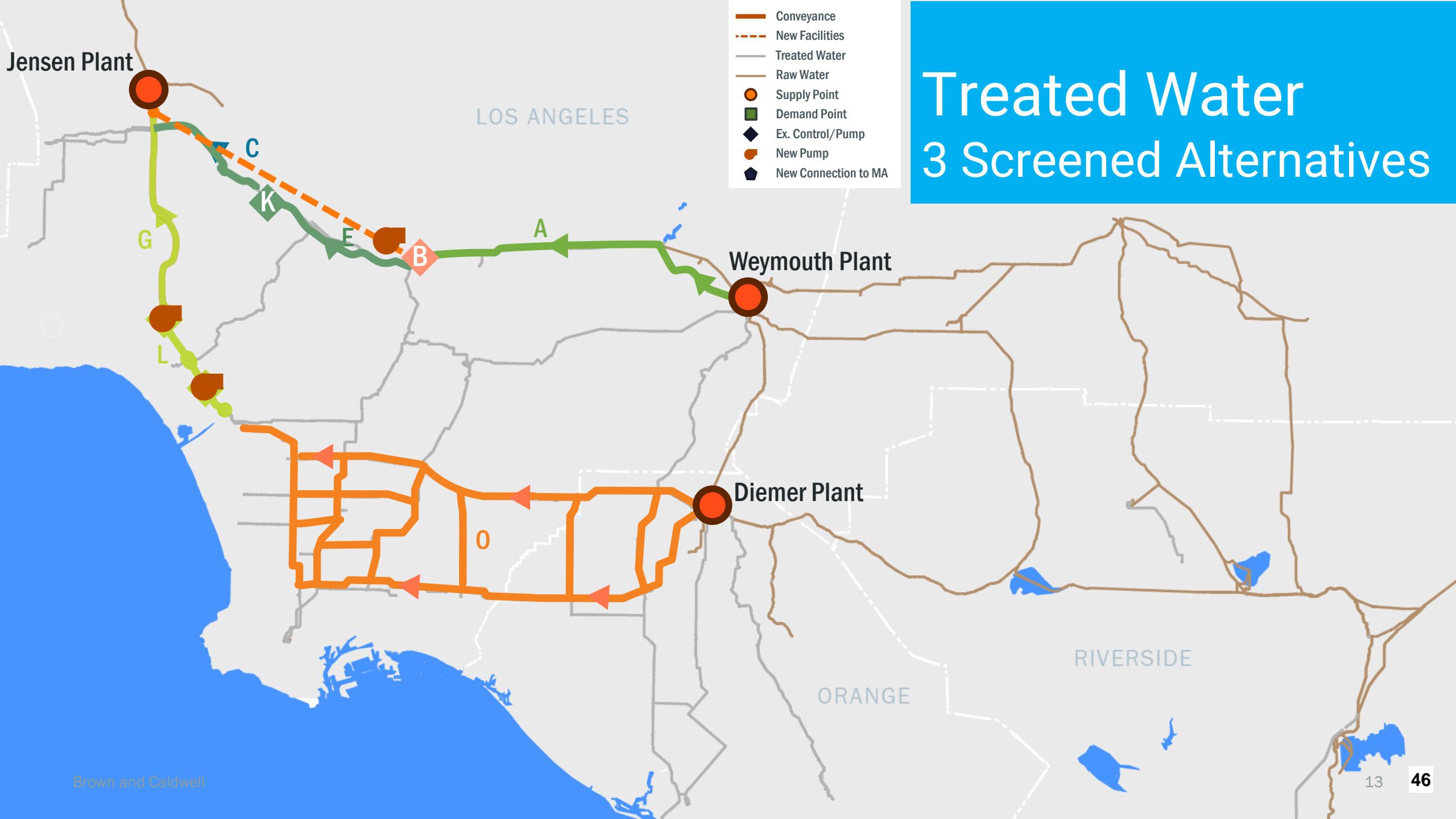
Demand Areas

Treated Water Demand/Supply Points



Treated Water

3 Screened Alternatives



Proposed Development Process for E-W Conveyance System

- Add recommended alternative(s) to Drought Mitigation Actions Portfolio – **December 2023**
- Evaluate recommended alternative(s) for inclusion in Climate Adaptation Master Plan
- Include selected alternative(s) in 10-year CIP
- Commence conceptual design

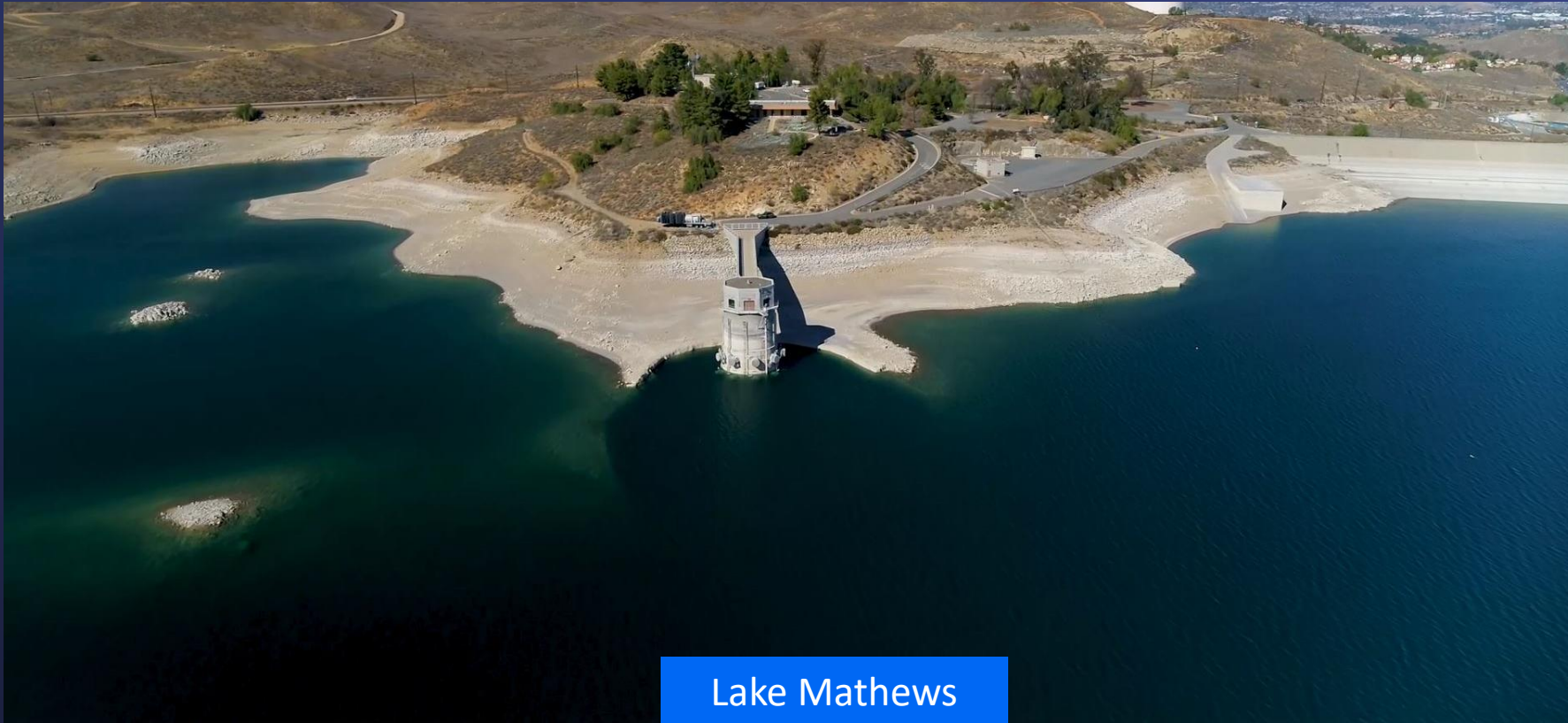


3

Storage and Supply Development Surface Storage Study

Purposes of Surface Storage Options Study:

Phase 1: Develop an inventory of potential surface storage options for further consideration & propose evaluation criteria



Lake Mathews

Study Areas

- South of Bay-Delta



- West San Joaquin Valley (WSJV)
 - Consider adjacency to the existing system along the California Aqueduct
- Southern California
 - Leverage the network in Southern California to improve the water resilience for the SWP Dependent Area

Consideration for Site Evaluation

- Evaluation criteria:
 - **Location**
 - **Geological/Geotechnical**
 - **Institutional** (potential partnerships and agency coordination)
 - **Environmental** (considered to be a verification criterion)
 - **Cost** (not used for the current initial screening)
- Four levels of potential for each criterion:
 - No Go
 - Low Potential
 - Medium Potential
 - High Potential

Evaluation Protocols and Criteria for Surface Water Storage Options

The study is a result of multiple task orders/contracts with evolving needs from identifying options for near-term implementation as a drought measure to identifying an inventory of options for long-term implementation. The original focus on the SWP-dependent area was carried through the entire study including the design of evaluation criteria. The criteria present a framework that can be used, with underlying data and information, for evaluating identified options to meet other purposes.

Objectives for the Surface Water Storage Option Identification:

- Develop surface storage options to improve regulatory capacity of existing water supplies to Metropolitan Water District of Southern California (MWDSC) and its member agencies.
- Improve the water supply reliability to the State Water Project (SWP) dependent areas, which are especially vulnerable to extended drought conditions due to reliance on single sources.

Study Principles and Constraints:

- The targeted increase for overall storage volumes is 800 thousand acre-feet (TAF), which can be contributed to by one or more surface storage options.
- There are preferences over reservoir sites with a potential early implementation due to the heightened awareness of ongoing drought conditions.
- Reservoir site ratings and supporting evaluations should be done in qualitative categorization only because of the following reasons. Certain quantified parameters may be used to support the qualitative categorization, but they are not evaluated separately.
 - All evaluations of each reservoir site were conducted for their maximum storage development only. Each reservoir site may have multiple possible dam locations, resulting in different storage volumes; these variances were not evaluated separately.
 - All evaluations were based on current, available information. There were no field surveys or special exploration conducted for the study.
 - Facility planning and associated cost estimates were based on preliminary identification of facility needs with highly generalized parameters with undefined uncertainty and disruption.
- The surface storage options are one of the many drought response measures considered by Metropolitan. Other measures include the improvement of system redundancy and exchange. These measures are potentially integrated with surface storage options for further improved performance; however, they are not evaluated in the current study.

Overall Evaluation for a Reservoir Site based on Category Ratings:

No Go	Low Potential	Medium Potential
At least one evaluation metric with a No Go rating.	See general rules below.	See general rules below.

General rules for overall rating:

- The overall rating cannot be higher than the highest rating of any category.
- The overall rating cannot be lower than the lowest rating of any category.
- If there are more than two levels of difference (inclusive) between the highest rating of any category and the lowest rating of any category, the highest overall rating for this category is Low Potential.
- Use professional judgment with past experiences for the rest, with more emphasis on location/operation category (for this level of analysis and intent for benefiting SWP dependent areas).

Category Evaluation for a Reservoir Site:

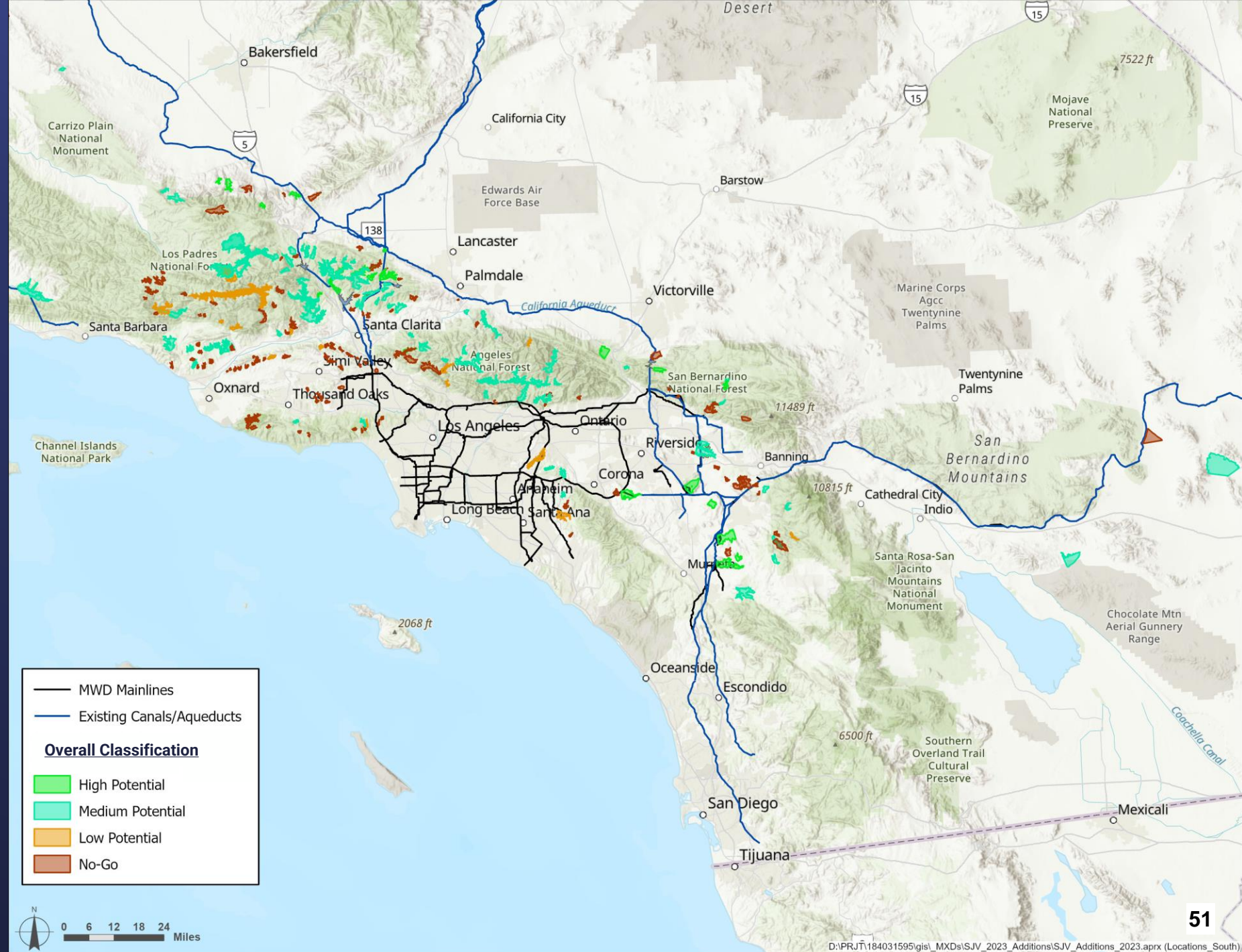
Low Potential	Medium Potential
See general rules below.	See general rules below.

SoCal Results

298 SITES

132 No Go
28 Low Potential
110 Medium Potential
28 High Potential

Based on the initial
screening criteria

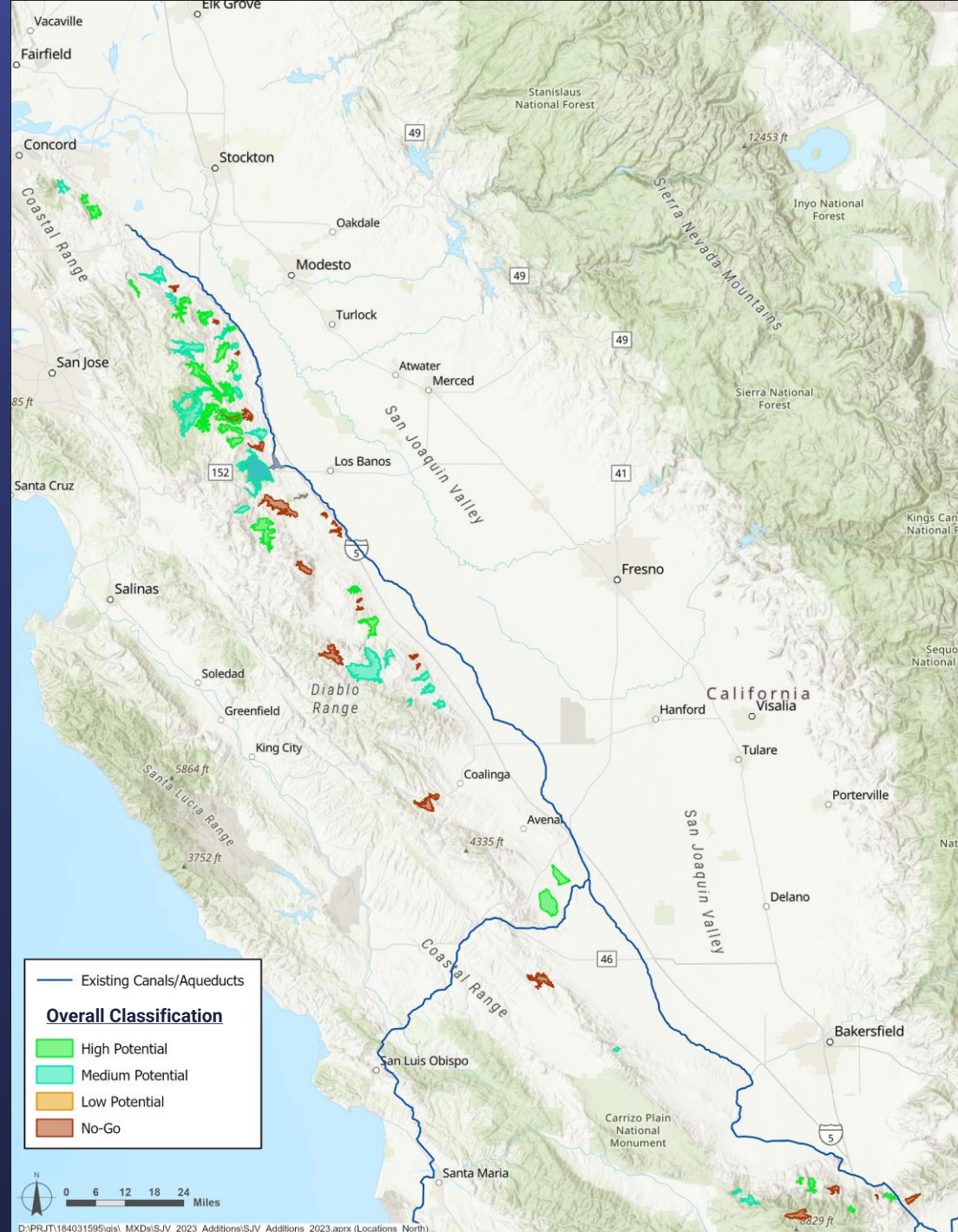


WSJV Results

70 SITES

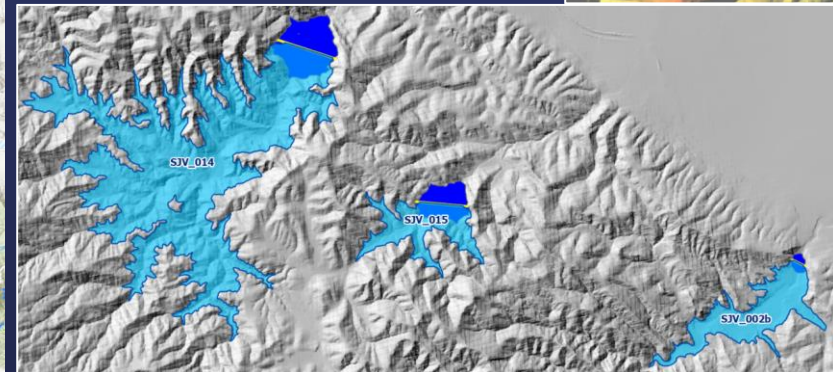
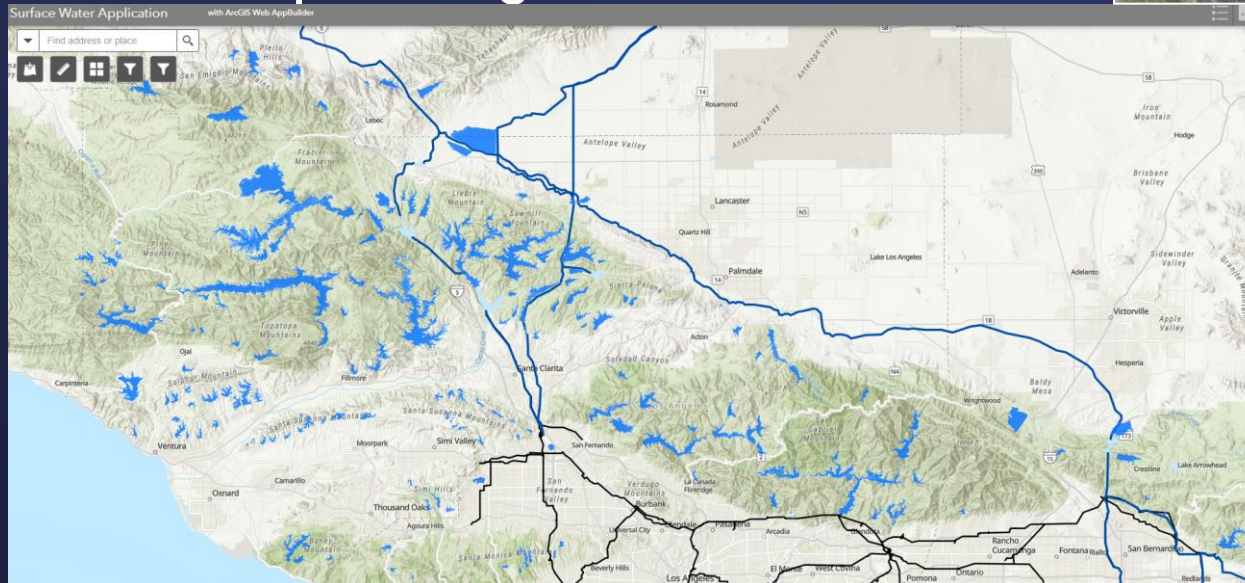
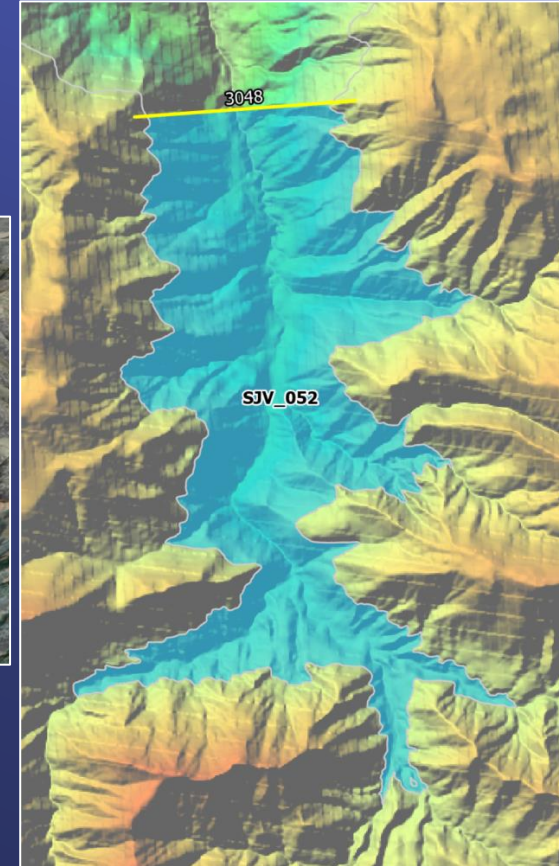
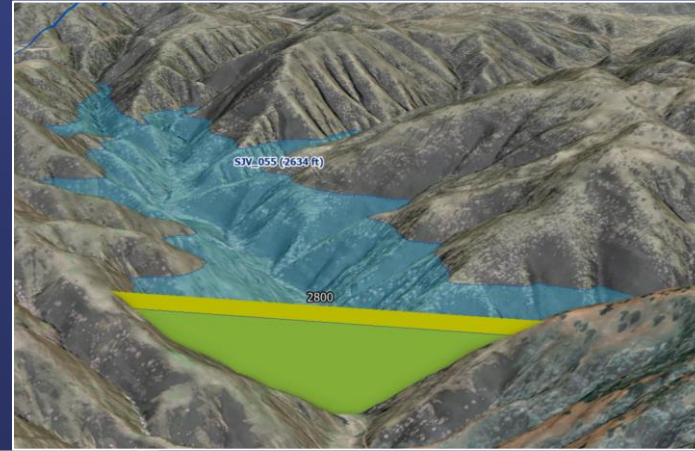
25 No Go
0 Low Potential
22 Medium Potential
23 High Potential

Based on the initial
screening criteria



Future Applications

- Data in Metropolitan ArcGIS w/ interactive features
- Tools for future regional studies
 - Water Resources Analyses
 - Emergency Storage Analysis
 - Climate Adaptation Master Plan
 - Pump Storage Potential



Next Steps

- MA Workshop #9: Friday, July 28, 2023
- Continue to pursue State funding/grants
- Drought actions follow-up
 - System flexibility ①
 - Implement Metropolitan CIP projects
 - Secure funding for MA projects (CIP & grants)
 - System flexibility ②
 - Complete study and recommends feasible options
 - Assess impacts of feasible options in the Climate Adaptation Master Plan
 - Supply & storage ③
 - Provide feasible options to be considered in the Climate Adaptation Master Plan

