



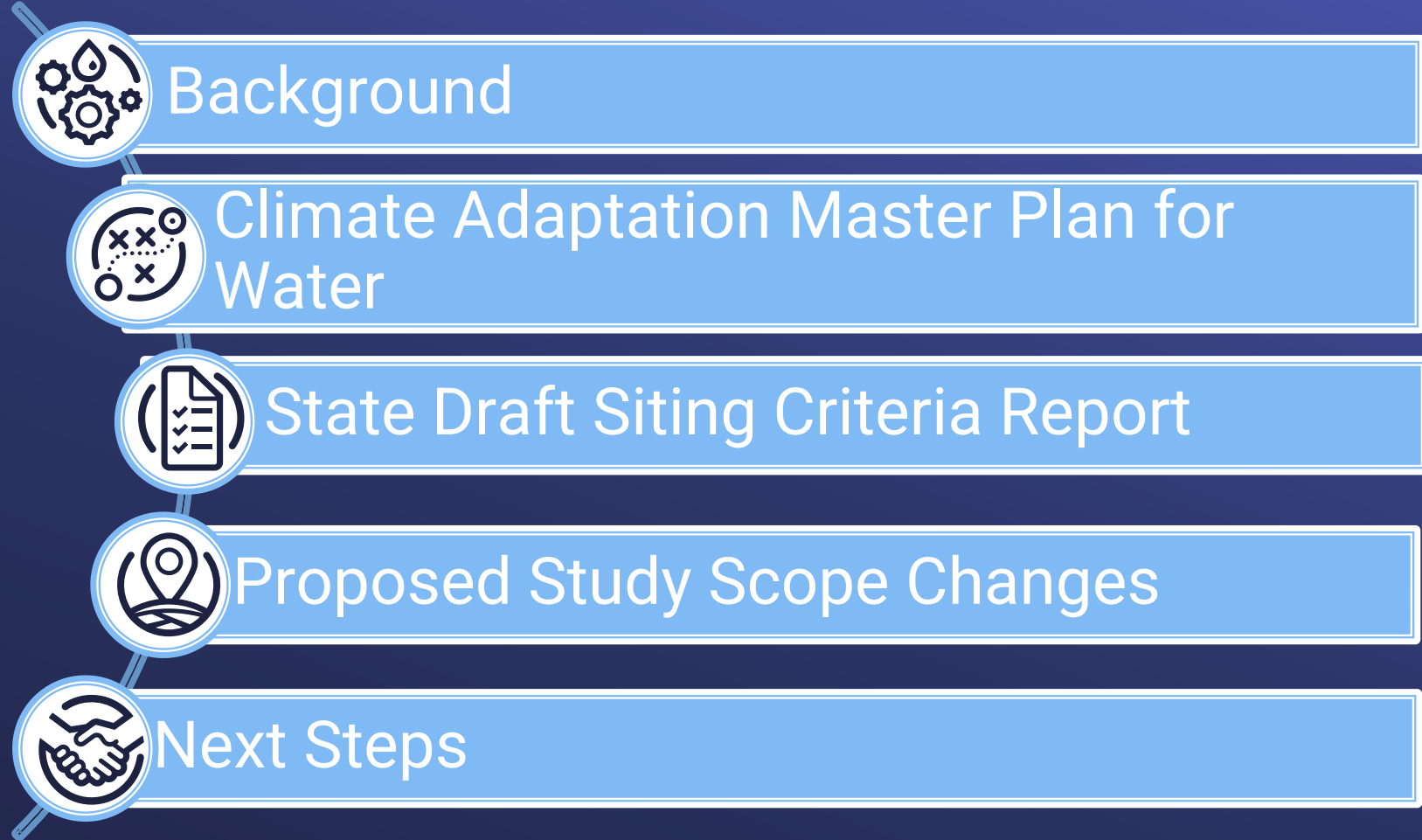
Engineering, Operations, & Technology Committee

Update on Review of Desalination Technologies for Potential Water Supply Augmentation

Item 9-3

October 9, 2023

Overview



Climate Adaptation Master Plan for Water (CAMP4W)

Under rapid climate change scenarios, Southern California would need up to 300 TAF of new core supplies by 2032

The Region Needs More Climate-Resilient Supplies

Core Supply Needs in 2032 (TAF)			
IRP Scenario	No Storage	182 TAF Storage	364 TAF Storage
A	0	0	0
B	50	30	30
C	15	15	15
D	300	200	200

Source: CAMP4W Working Memorandum #4

Competitively Selected Proposals

Background

- RFP 1327 –October 25, 2022
- June EOT Action Item Deferred
 - SWRCB Draft Siting Criteria Report
 - Environmental NGO input
- NTE amount – \$800,000 each

AECOM

Brackish Water
Resources
Inventory

CDM Smith

Seawater
Desalination Siting

Proposed Desalination Studies' Objectives

Brackish Desalination

- Inventory
- Siting
- Regulatory Requirements
- Brine reduction
- Schedule
- Cost

Seawater Desalination

- Siting
- 30-100 MGD
- Regulatory requirements
- Schedule
- Cost

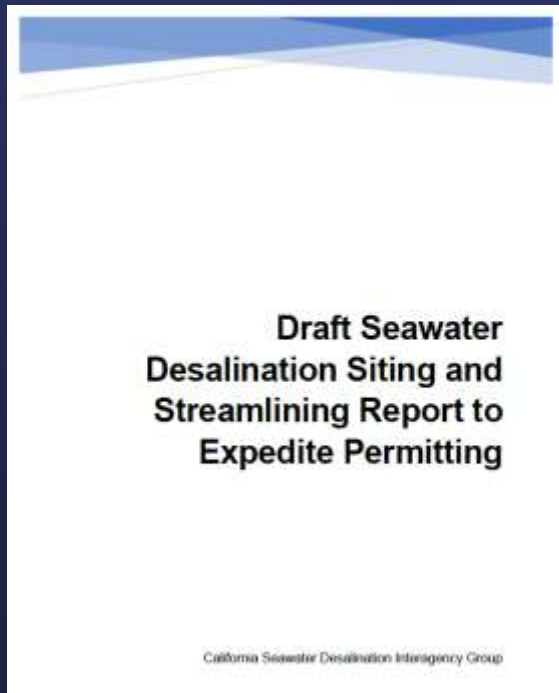
Project Implementation

- Partnership opportunities
- Project delivery
- Costs and revenues
- Integration and storage

Technology Scan

- Current state of technology
- Technology advances

Draft Siting Criteria



Released July 2023

Response to the Governor's 2022 Water Supply Strategy: Adapting to a Hotter, Drier Future

“The State will help streamline and expedite permitting to provide better clarity and certainty to further desalination projects”

Webinar was held July 21st

Seawater Desalination Interagency Group



Final Siting Criteria

Not Available

Subsurface Intake
Science Advisory Panel

January 2024

SWRCB Mitigation
Siting

June 2024

Draft Siting Criteria: Contents

- Regulatory process and each regulatory agency's role
- Creates two permitting paths:
 - Streamlined
 - Standard
- Recommendations for project applicants and agencies

Concurrent
Review

Identified
Need

Environmental
Justice

Tribal
Consultation

Hydro-geologic
Siting

Coastal
Hazards

Marine Life
Mortality

Brine
Discharges

Energy Use

Mitigation

Streamlined Track Requirements



Doheny Ocean Desalination Project

Concurrent review

Subsurface intakes

Comingled discharge

No impact on MPAs or SWQPAs

Coastal hazard prevention

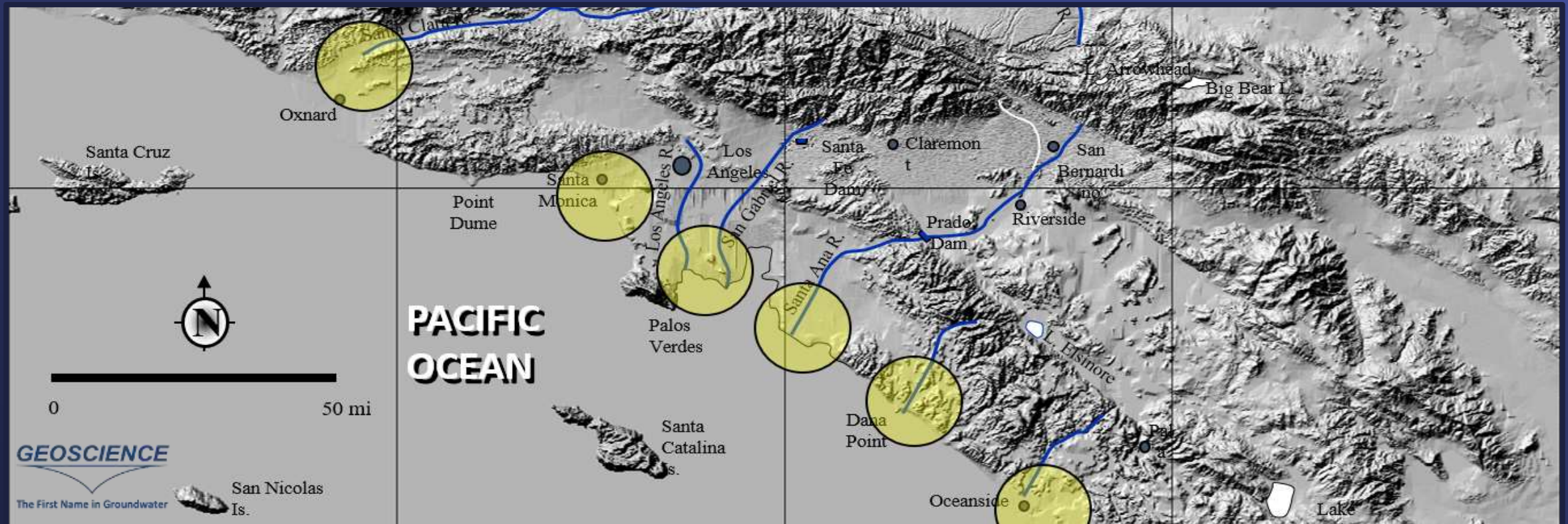
Mitigation by project completion

Loading order

Environmental justice

Potential Qualifying Sites within Metropolitan's Service Area

Paleochannel locations well suited for slant well



Source: Geoscience Presentation to CalDesal in 2020

Proposed Scope Changes

- Incorporate State Siting Criteria
- Support CAMP4W
- Imbed RCP 8.5

Brackish Groundwater

- Ensure consistency with CAMP4W and RCP 8.5

Seawater

- Prioritize sites that conform to the State's streamlined permitting track
- De-emphasize large-scale sites
- Include offshore desalination in site inventory

Project Implementation

- Emphasize potential partnerships

Technology Scan

- Add offshore desalination technologies

Opportunity to Innovate!



- Keppel Marina East Desalination Project
- Singapore
- 30 MGD
- Brackish and seawater



- MOU
- Pilot Study
- Submerged desalination technology



Next Steps

Incorporate Feedback



Refine Scope and Costs



November Board Action



Initiate Studies

