National Alliance
for Water Innovation

Regional Water System Planning: Funding Opportunity to Develop New Methods and New Collaborations

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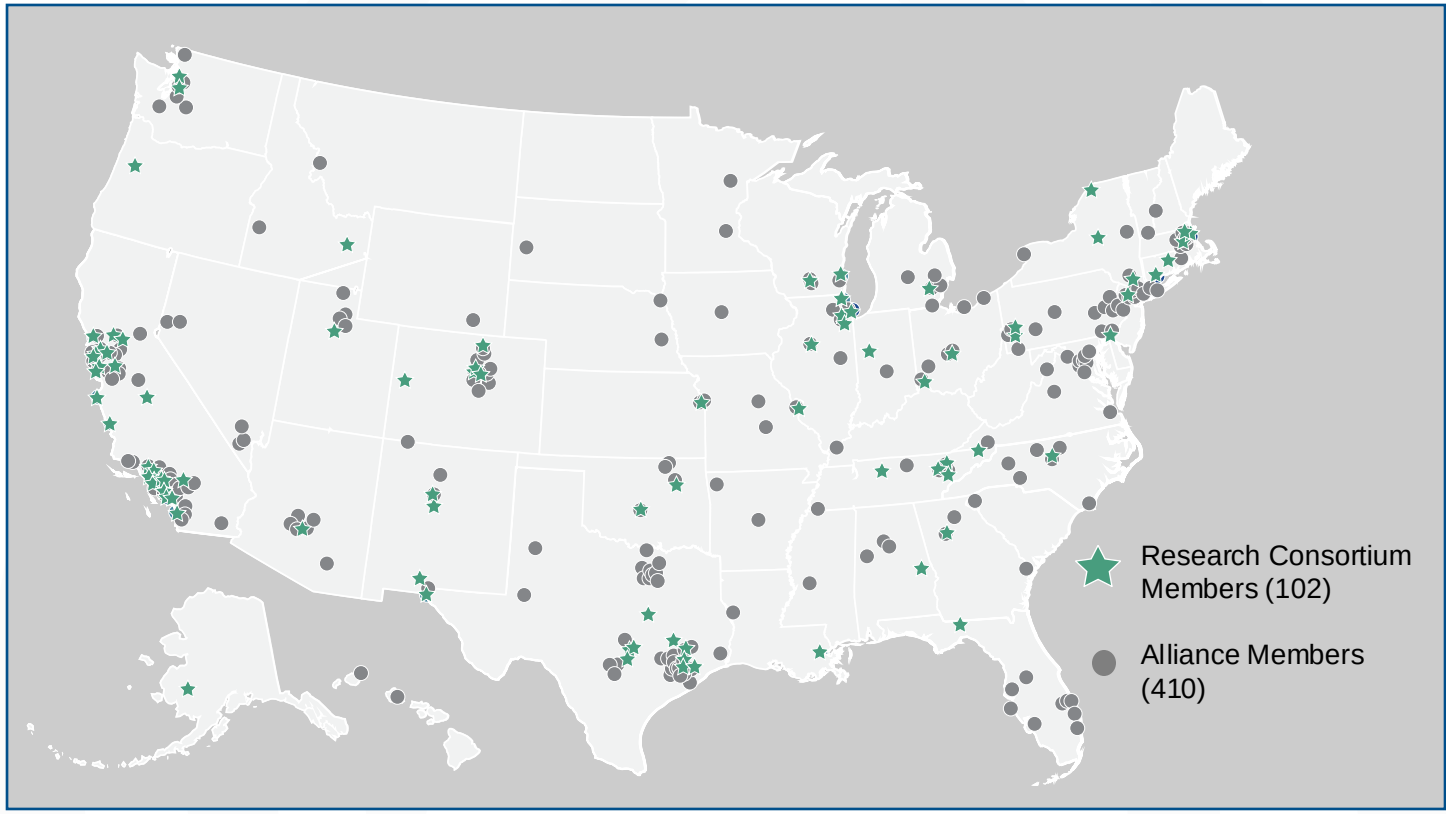
February 27, 2025

NAWI Hub – At A Glance

- 2020 – 2024:
  - 5-Year, $110M+ early-stage applied research
  - Focus: small-scale desalination and resource recovery
- 2025 – 2029
  - 5-Year, $75M+ TRL 4-7 applied research pilots
  - Demonstrate novel water treatment and reuse systems in operating environments
  - Partner with regional planning teams to develop BETTER tools for the planning process



NAWI

NAWI One-Pagers on the Public Website

NAWI

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Projects

Home > Research > Projects

- Research
- Process innovation and intensification
- Materials and manufacturing
- Data modeling and analysis
- Projects

NAWI's projects aim to accelerate promising early-stage research and development that can help achieve pipe parity. The projects are competitively selected and funded through requests for proposals (RFPs) that focus on A-PRIME. NAWI has funded 6 seeding projects and 6 research projects across A-PRIME. NAWI has also invested in Water-DAMS, WaterTAP3, Proteus High Fidelity, and ProteusLib. These projects provide data storage/management, modeling, and analysis capabilities to in-house projects and to the broader research community.

ProteusLib Integrated Computational Capability for Optimizing Advanced Water Treatment Systems

A Novel Electro-Dialytic Crystallizer (EDC) for Energy Efficient Zero-liquid Discharge

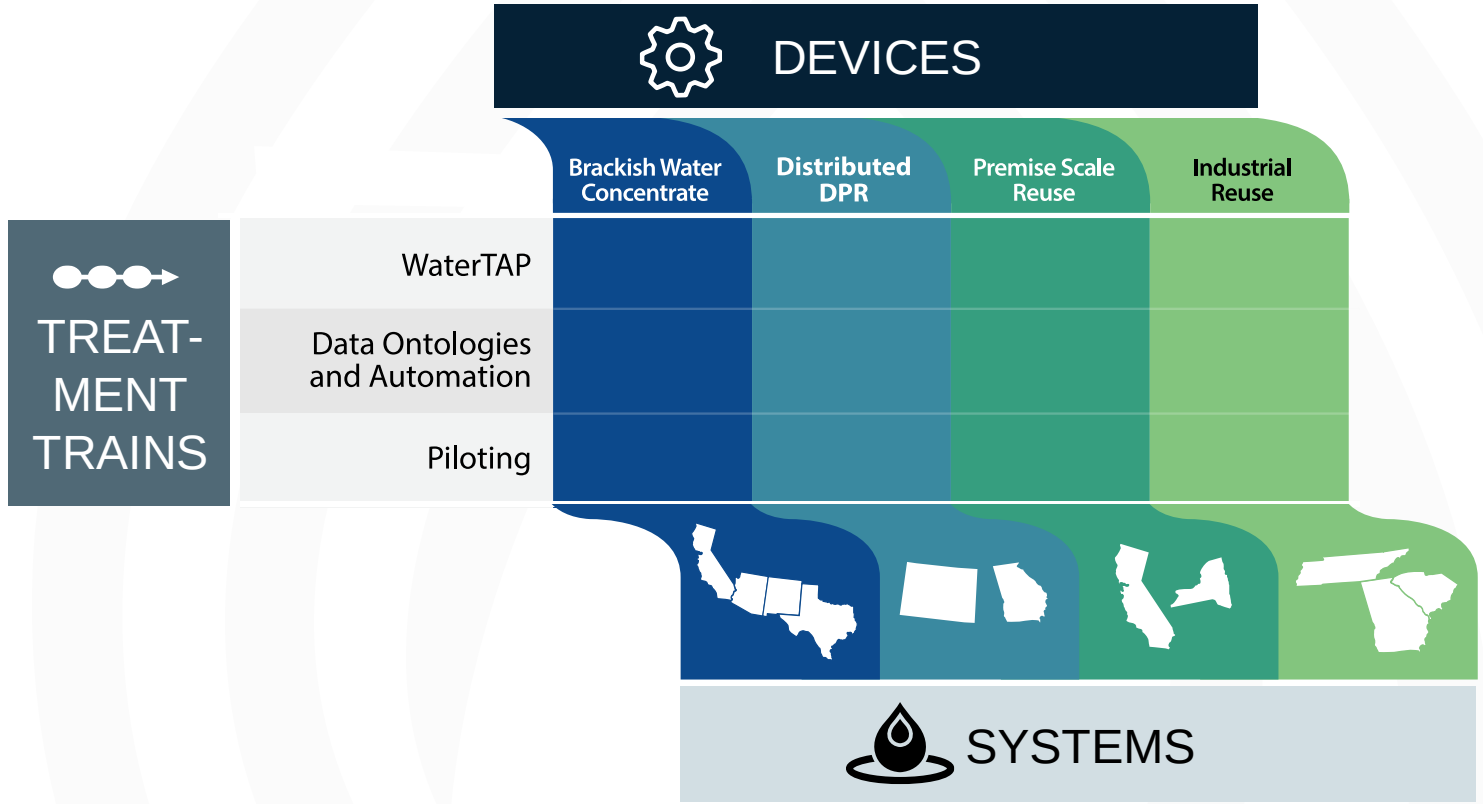
Omics Platform for in-operando Biological Characterization Systems Design

NAWI 2.0: Three Integrated Topic Areas

Devices: New unit processes that broaden the range of nontraditional waters that can be cost-effectively desalinated and reused.

Treatment Trains: Interoperable digital platforms for designing and operating efficient and autonomous nontraditional water facilities.

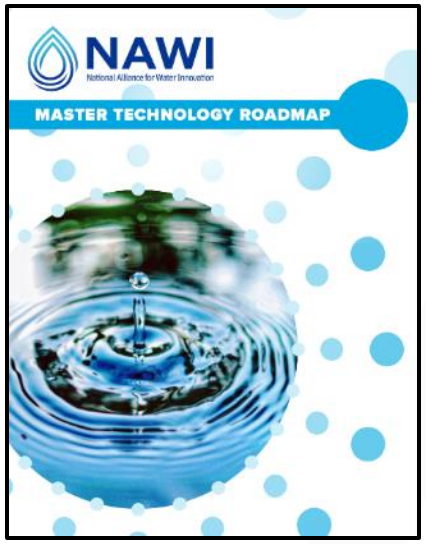
Systems: Resilient, affordable, and decarbonized regional water systems that adaptively incorporate non-traditional and decentralized sources.



RFPs for Pilots in Q2, Q3 2025

Why is NAWI concerning itself with Regional Water Systems???

Baseline and Roadmapping Products

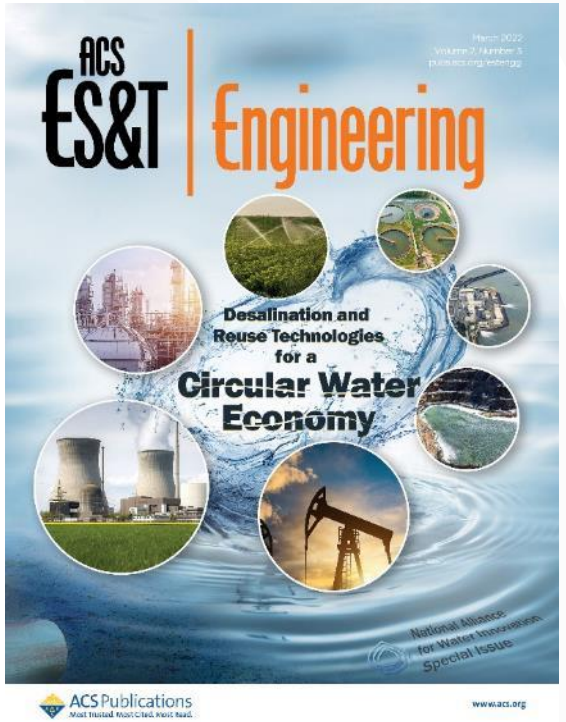


6 Technology Roadmaps

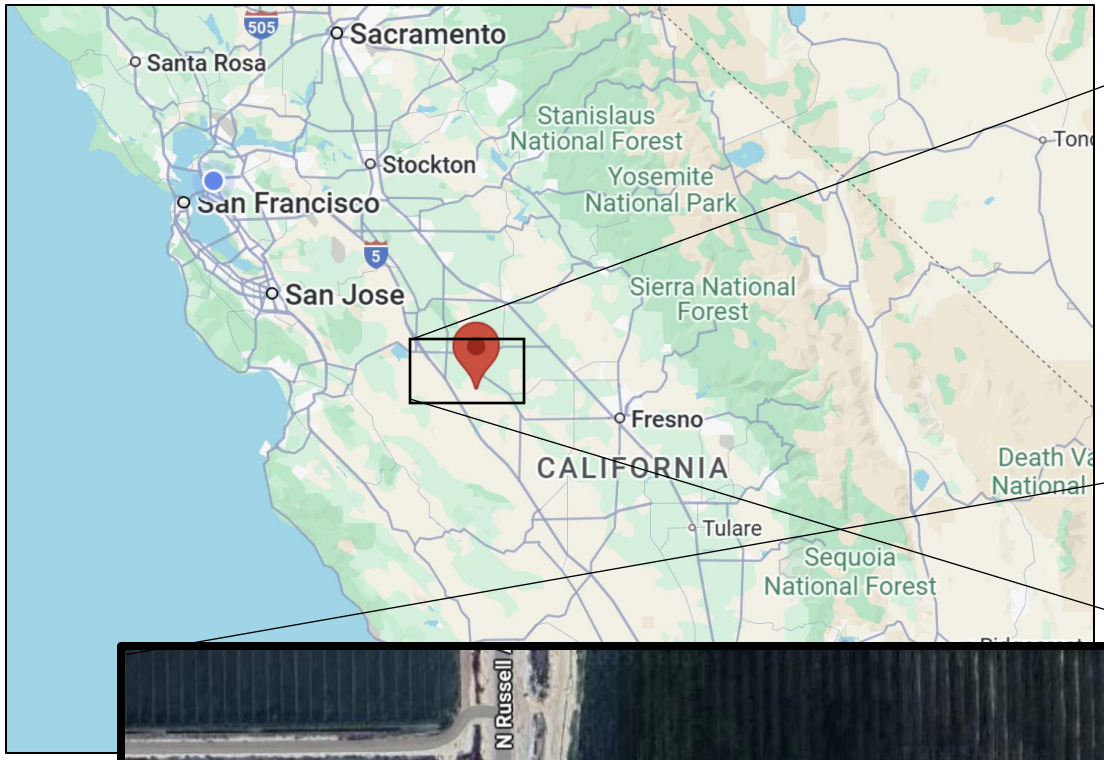
- Power
- Resource Extraction
- Industrial
- Municipal
- Agricultural
- **Master**

8 Baseline Studies Published

- Agricultural
- Industrial
- Municipal
- Brackish Groundwater
- Seawater
- Power
- Mining
- Produced Water



https://www.nawihub.org/knowledge/roadmap-publication-series/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Santa Rosa
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San Francisco
San Jose
Sierra National
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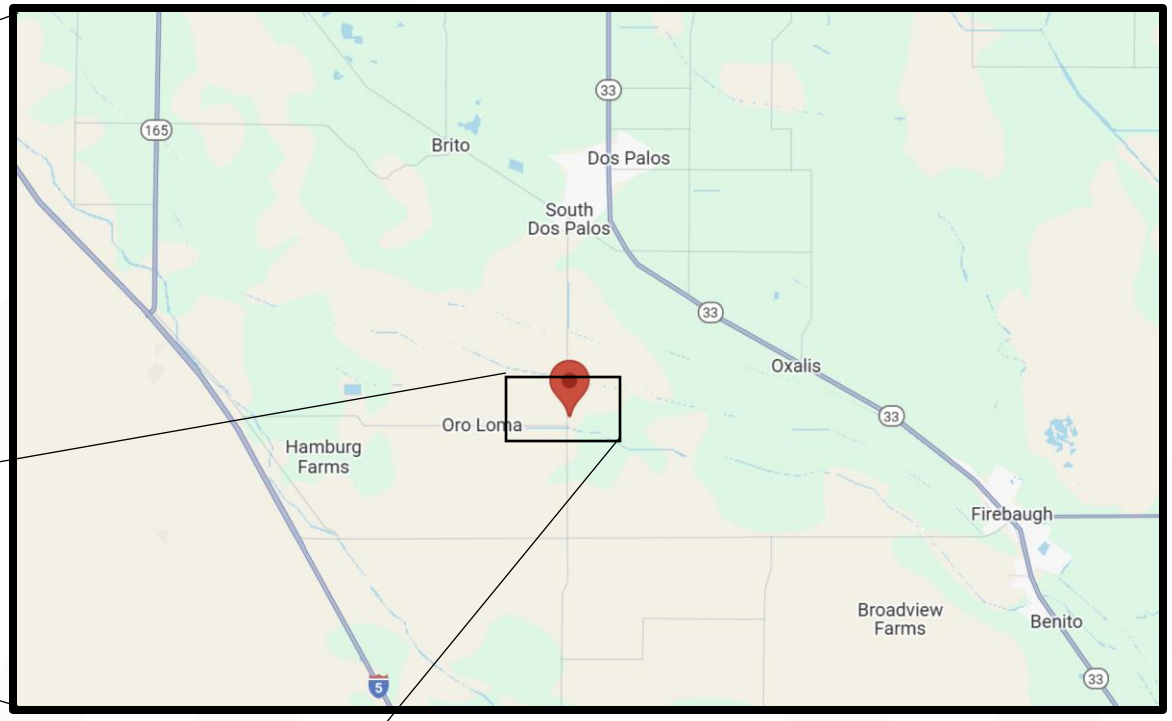
Tulare
Sequoia
National Forest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Broadview
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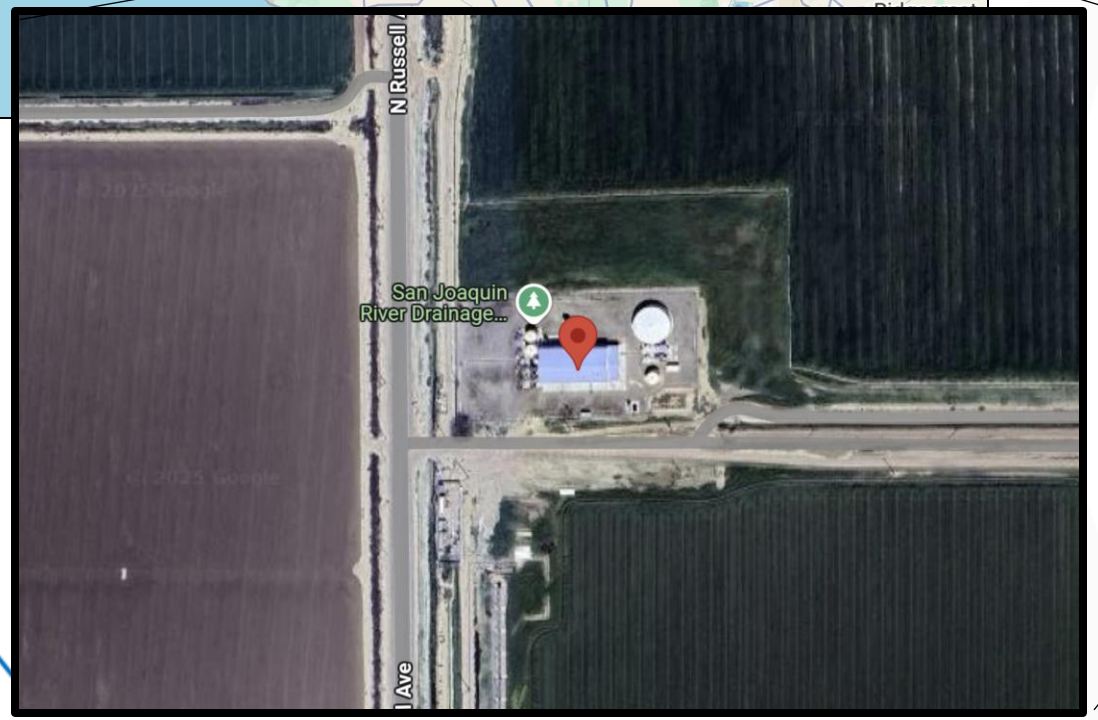
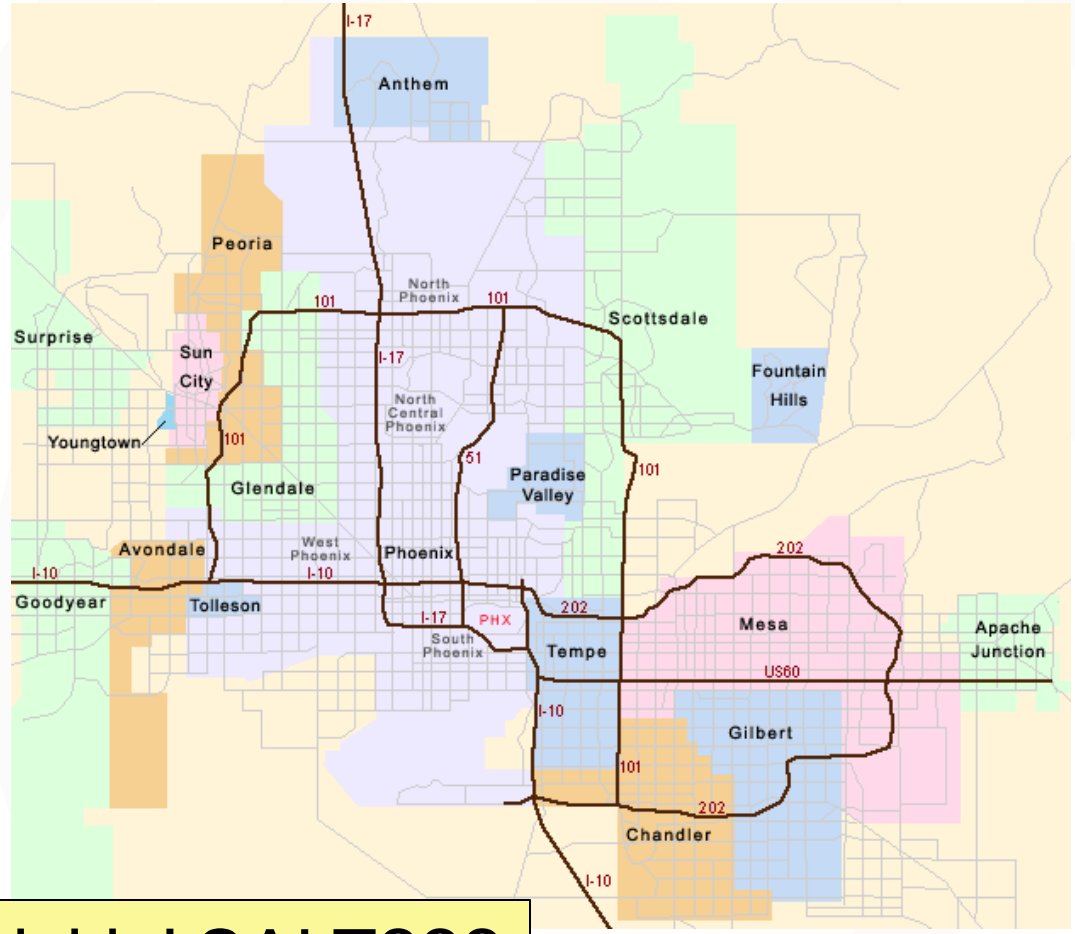

San Joaquin
River Drainage...

How do we factor in technological innovation into our long-term water resource plans?

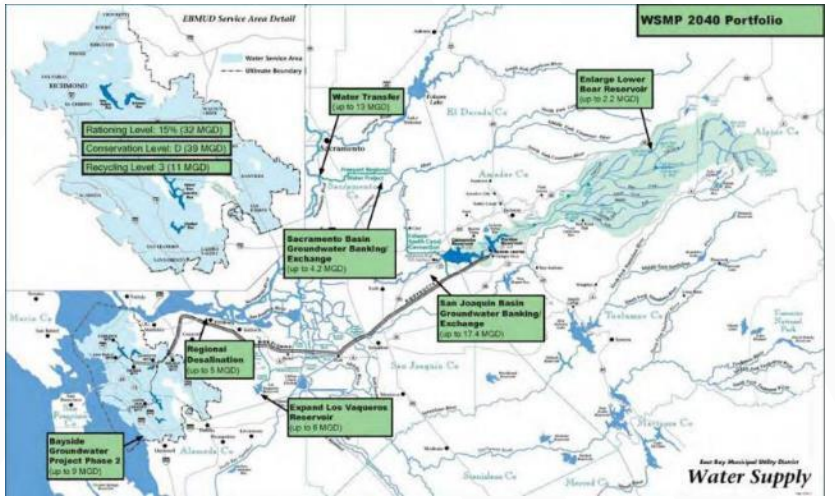
- What is the optimal water supply portfolio today?
- How will supply change in the future?
- How does that change if City of Phoenix grows its NPR, IPR and DPR capabilities?
- How does that change if modular inland brackish desalination comes in at $800/Af?
- How does that change if houses consume 50% less water?
- How does that change if Phoenix has 20 data centers, 8 fabs and a major H2 production facility?

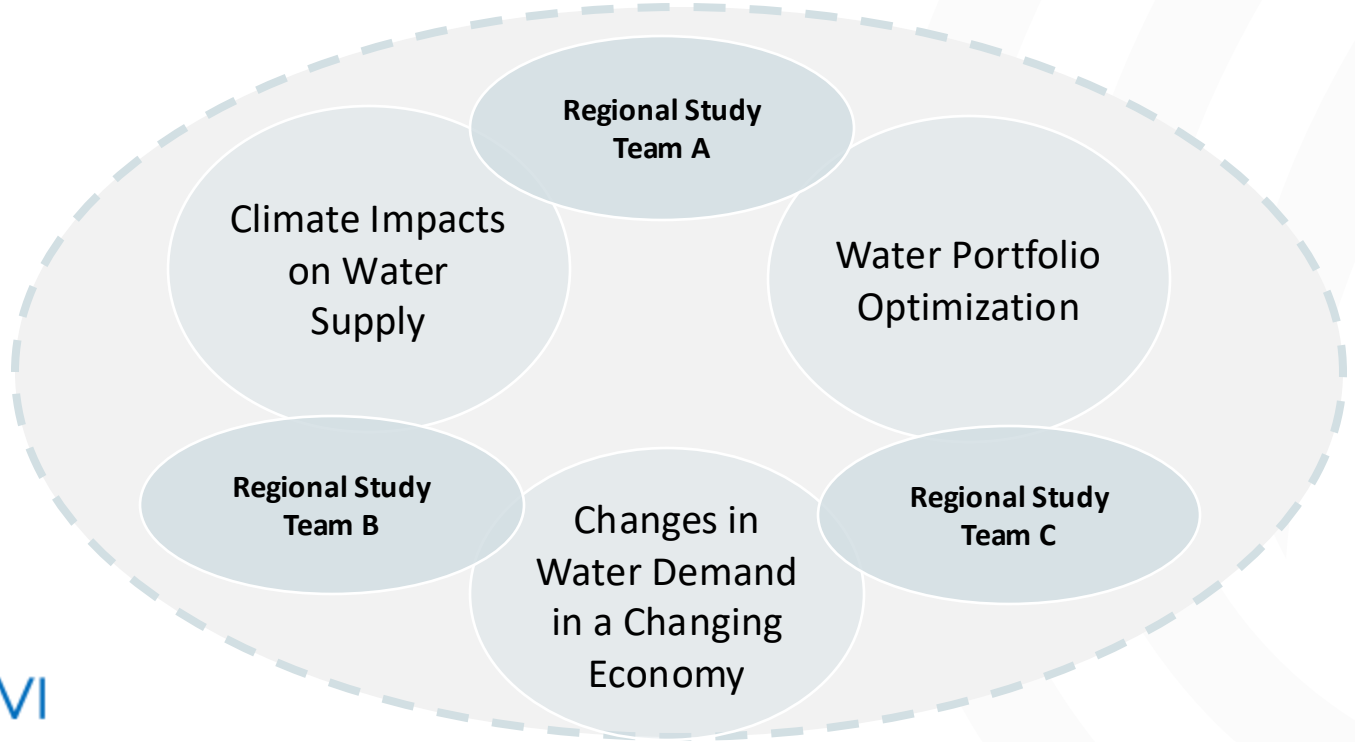


Where do I put all the frickin' SALT???

Address the regional context for water reuse that determines the value of non-traditional water treatment

Regional Water Systems will deliver ***regionally-coordinated, climate-informed, and geographically consistent*** tools for helping municipal water resource managers in diverse regions to quantitatively estimate the role of non-traditional water sources in bridging the gap between future supply and demand





Water resource plans are typically climate static (supply & demand), developed in isolation from regional partners, and use inconsistent methods

RFI coming in Q2-2025

Regional Water Systems Objectives

Support NAWI's Technology R&D

When, where, and how can advanced water treatment support affordable, resilient, secure, and decarbonized water systems?

What technology characteristics are most needed in system context?

Deliver Tools & Frameworks for Adaptive Water Management

How to balance tradeoffs among reliability, cost, carbon, etc. ?

How to visualize and manage risk?

How to make decisions more transparent for public engagement?

Cultivate a Community of Practice

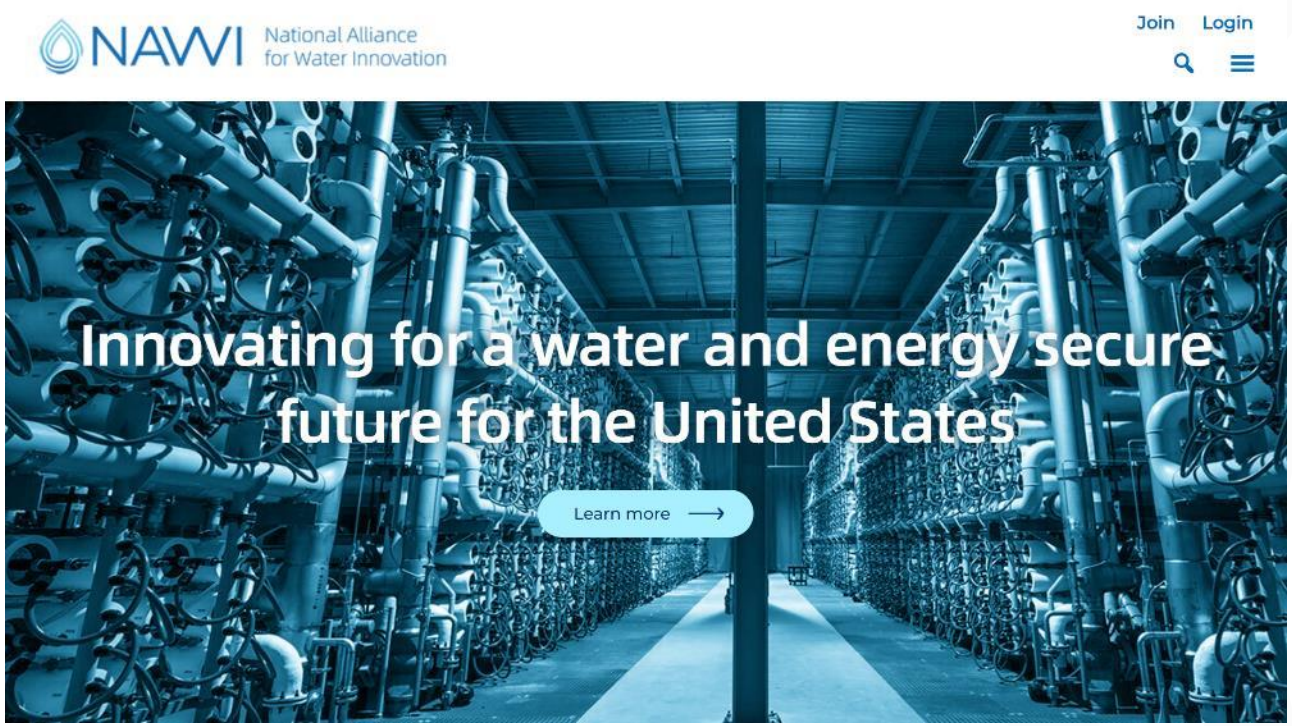
How to sustain our impact?

How to transfer insight and methodologies to other contexts?

How to support next generation of regional water system researchers and practitioners?

NAWI

For more information:



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