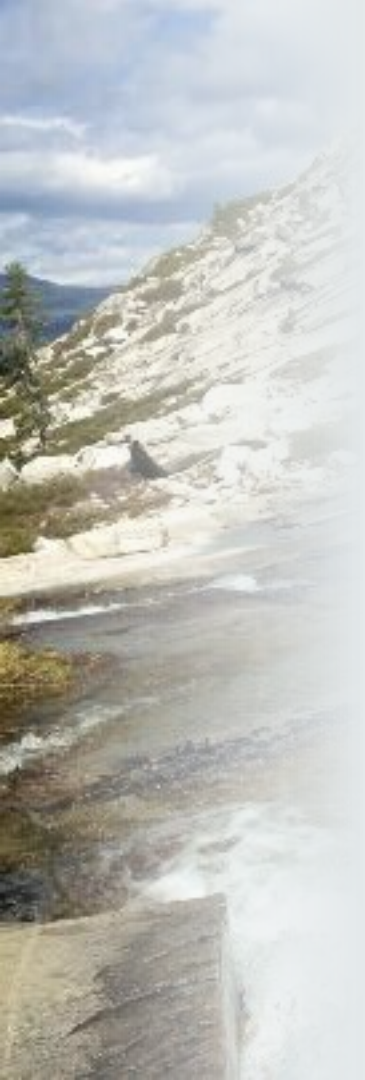

COEQWAL Project:
Drinking Water Use Case

Erik Porse
California Institute for Water Resources, UC ANR

CWEMF Annual Conference

May 13, 2025

UNIVERSITY OF CALIFORNIA
Agriculture and Natural Resources
California Institute for Water Resources

DRINKING WATER USE CASE PROJECT TEAM

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UC Merced
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Yu Cai

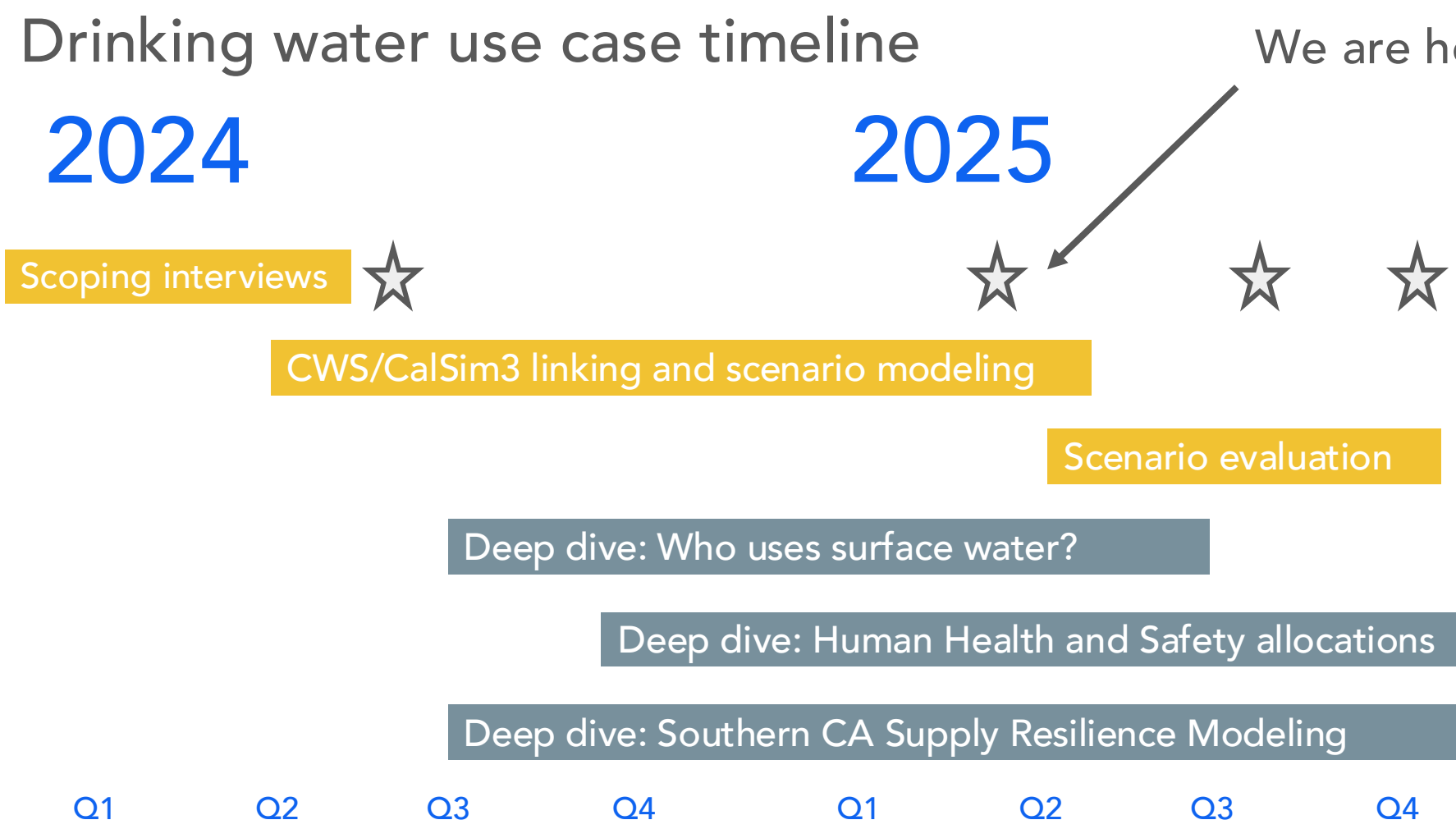
UC Davis/UCLA
Alvar Escriva-Bou
Aneesa Gomez-Cervantes
Armen Konialian

Drinking water use case

Inform and then evaluate COEQWAL water futures scenarios (CalSim3 modeling)

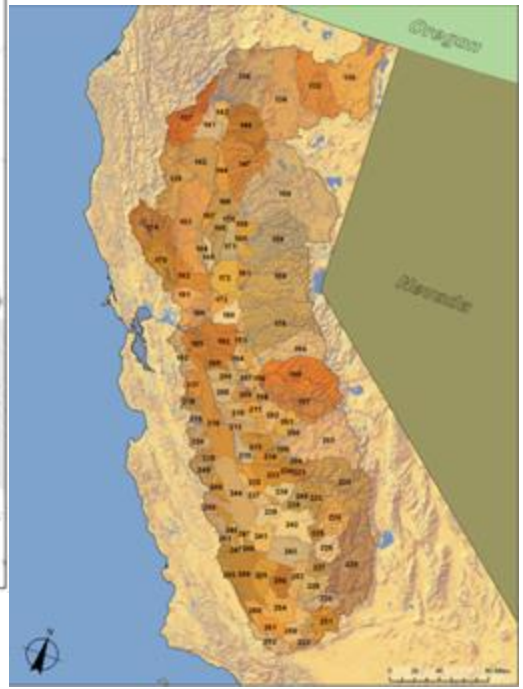
Targeted “deep dives” to address knowledge/data gaps

Drinking water use case timeline



CWS/CalSim linkage work

CalSim 3



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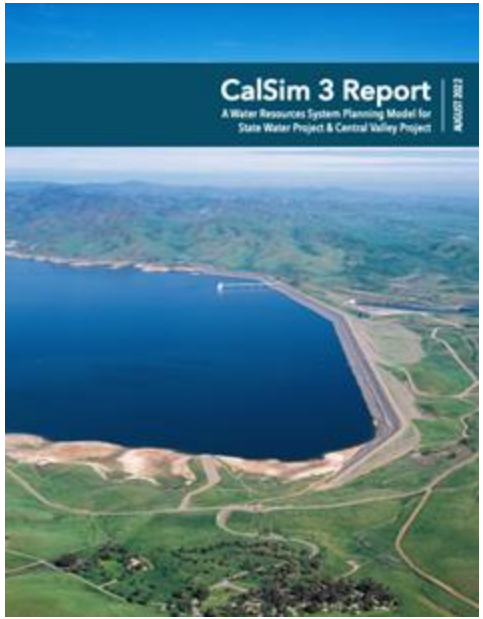
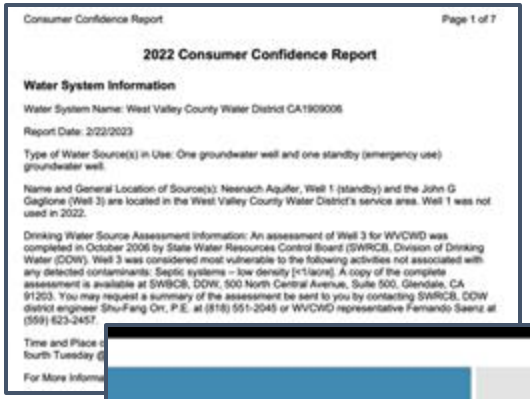
Community water systems

Information in CalSim3



Public drinking water documents & data


Consumer Confidence Report Page 1 of 7

2022 Consumer Confidence Report

Water System Information

Water System Name: West Valley County Water District CA1909006

Report Date: 2/22/2023

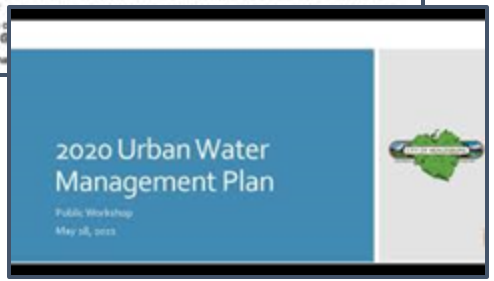
Type of Water Source(s) in Use: One groundwater well and one standby (emergency use) groundwater well.

Name and General Location of Source(s): Neenach Aquifer, Well 1 (standby) and the John G Gaglione (Well 3) are located in the West Valley County Water District's service area. Well 1 was not used in 2022.

Drinking Water Source Assessment Information: An assessment of Well 3 for WVCWD was completed in October 2006 by State Water Resources Control Board (SWRCB, Division of Drinking Water (DDW). Well 3 was considered most vulnerable to the following activities not associated with any detected contaminants: Septic systems – low density [<1/acre]. A copy of the complete assessment is available at SWBCB, DDW, 500 North Central Avenue, Suite 500, Glendale, CA 91203. You may request a summary of the assessment be sent to you by contacting SWRCB, DDW district engineer Shu-Fang Orr, P.E. at (818) 551-2045 or WVCWD representative Fernando Saenz at (559) 623-2457.

Time and Place o
fourth Tuesday @

For More Informa



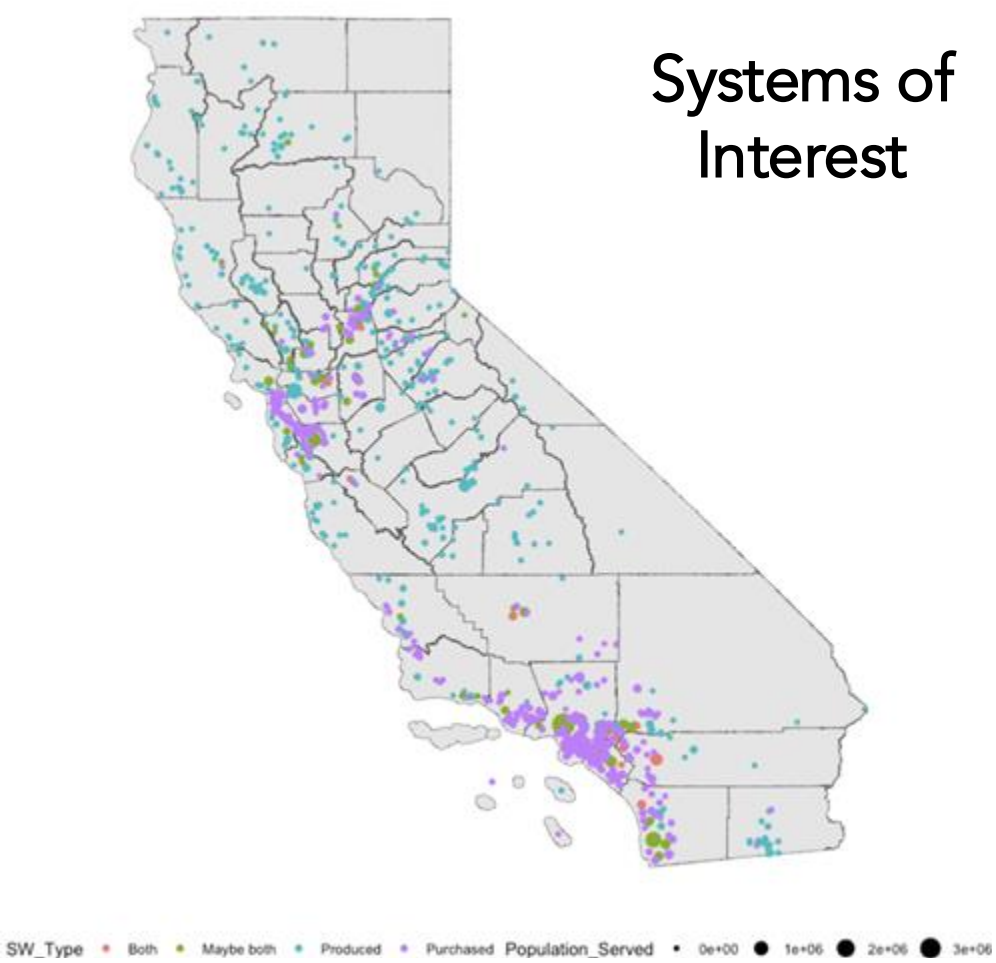
CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

DEPARTMENT OF WATER RESOURCES
STATE OF CALIFORNIA

Trace surface water sources of water systems and connect back to CalSim 3

Slide Credit: Sophia Davis, with edits

Systems of Interest



Surface water reliant CWS (n=789)

Exclusively surface water reliant CWS (n=409)

Southern California “Deep Dive”

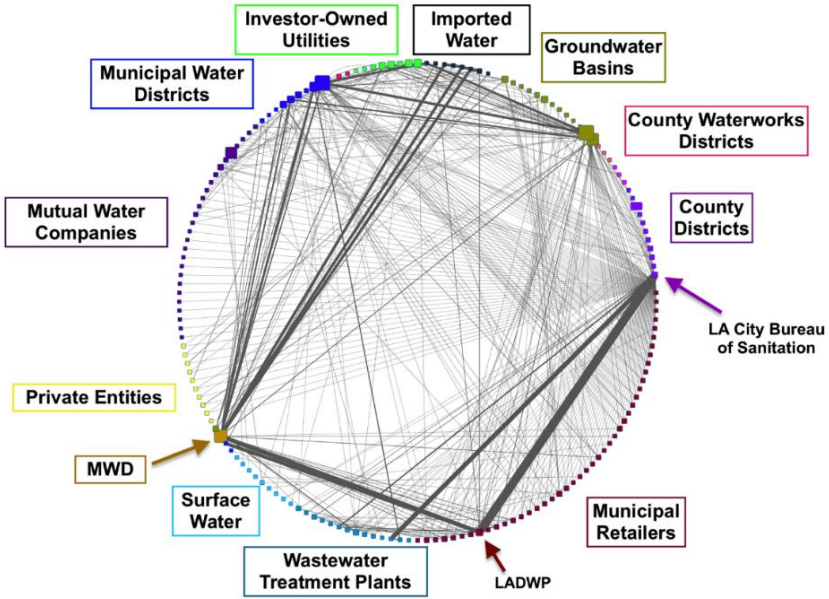
Purpose

The analysis will evaluate effects of changes in water availability from Sacramento-San Joaquin Delta operations on urban retail water suppliers in Southern California (*South of Delta*).

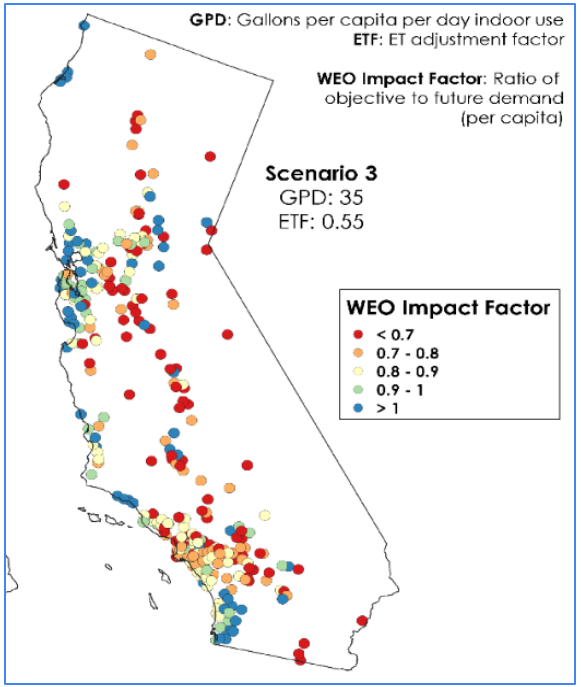
How might Southern California water suppliers and communities need to adapt to ensure water supply reliability?

Past Research

Artes: Systems analysis of water resources management in L.A. County

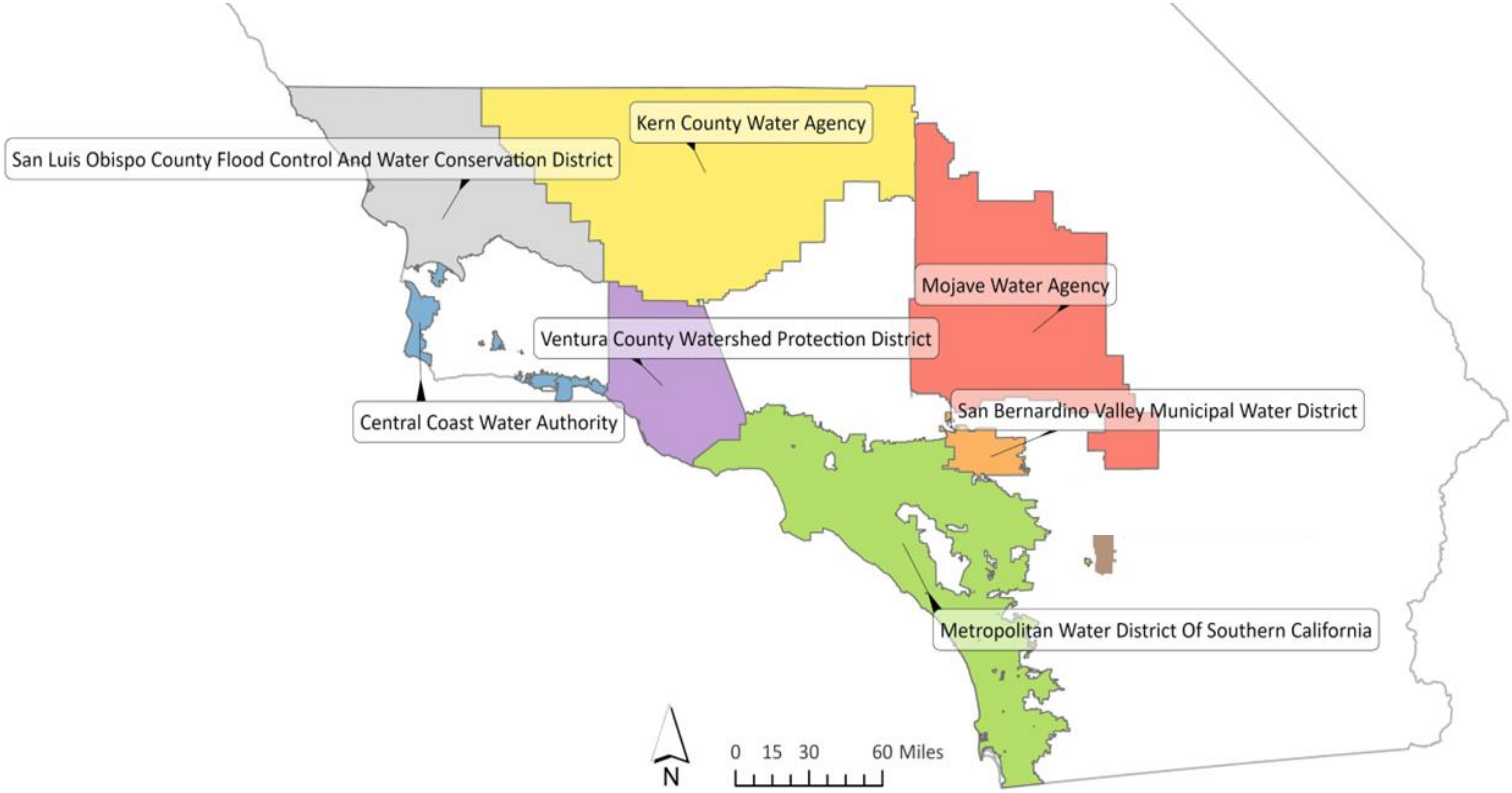


Economic and Environmental Impacts of Urban Water Conservation Regulations in California



Sources: Porse, E. et al (2017); OWP at Sacramento State (2022)

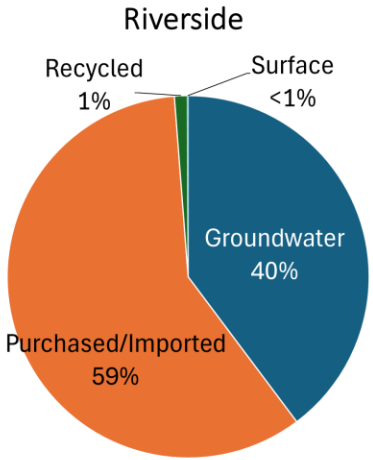
South of Delta Case Study Region: Wholesalers

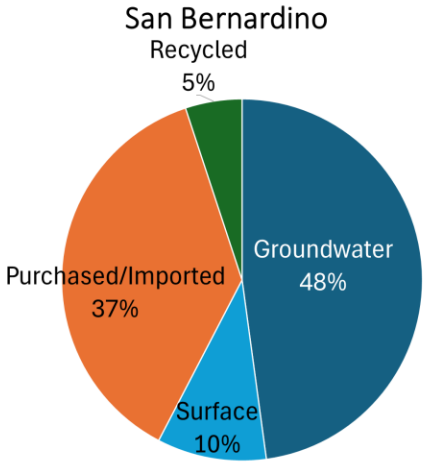


Source: State Water Districts GIS Database, data.ca.gov

Sources of Supply by County: Example

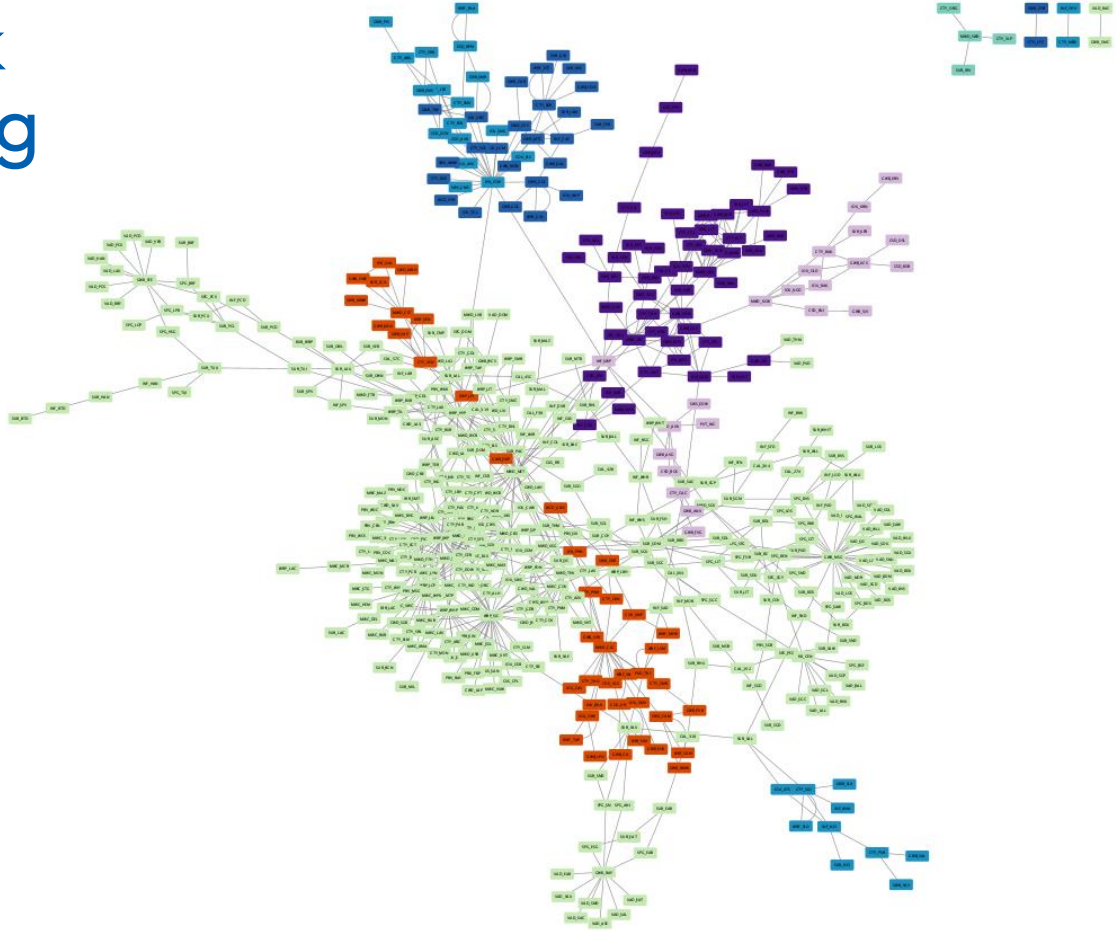
Recent (2020) water supplies by source





Data Source: 2020 Urban Water Management Plans (UWMP)

Network Modeling



Evaluation Metrics

Shortage Impact Factor

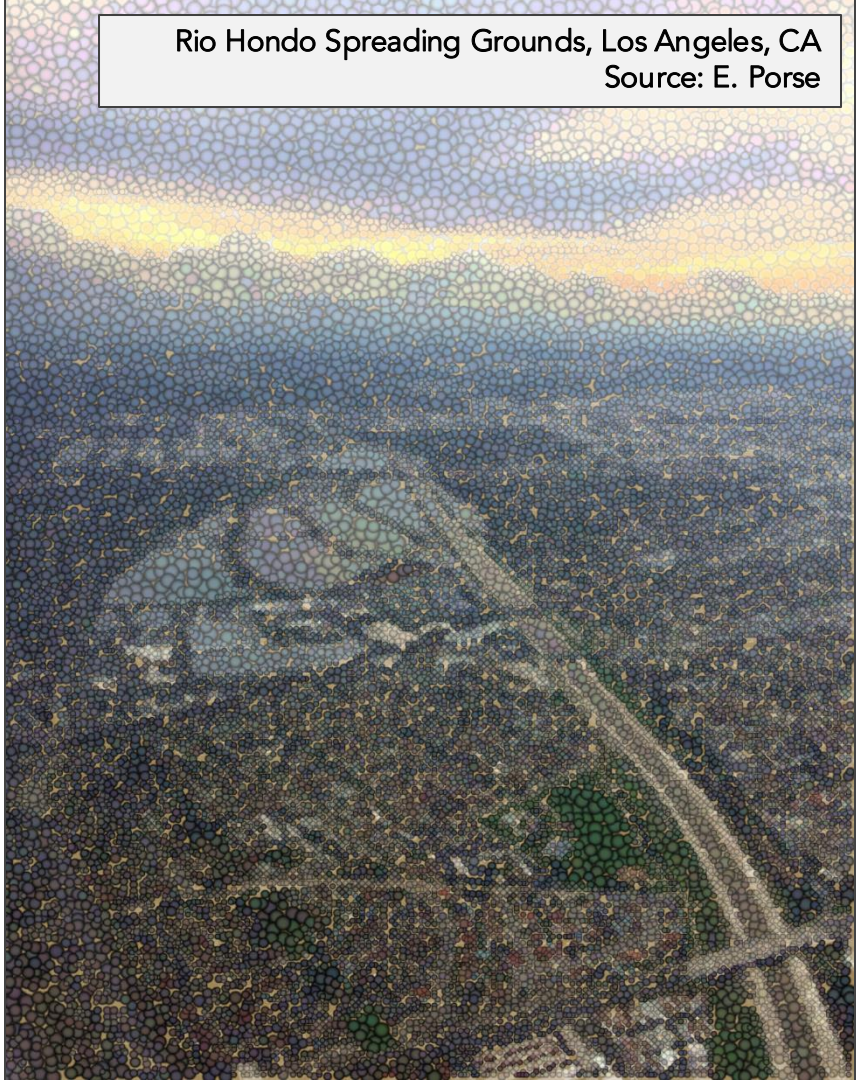
Ratio of modeled supply in a scenario and the current supply

Values less than 1.0 indicate risk of future water supply reliability challenges

$$F_g = \frac{\bar{T}_{fut_g}}{T_{cur_g}}$$

What other metrics should we consider?

Thank You


Rio Hondo Spreading Grounds, Los Angeles, CA
Source: E. Porse

Contact

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https://ciwr.ucanr.edu