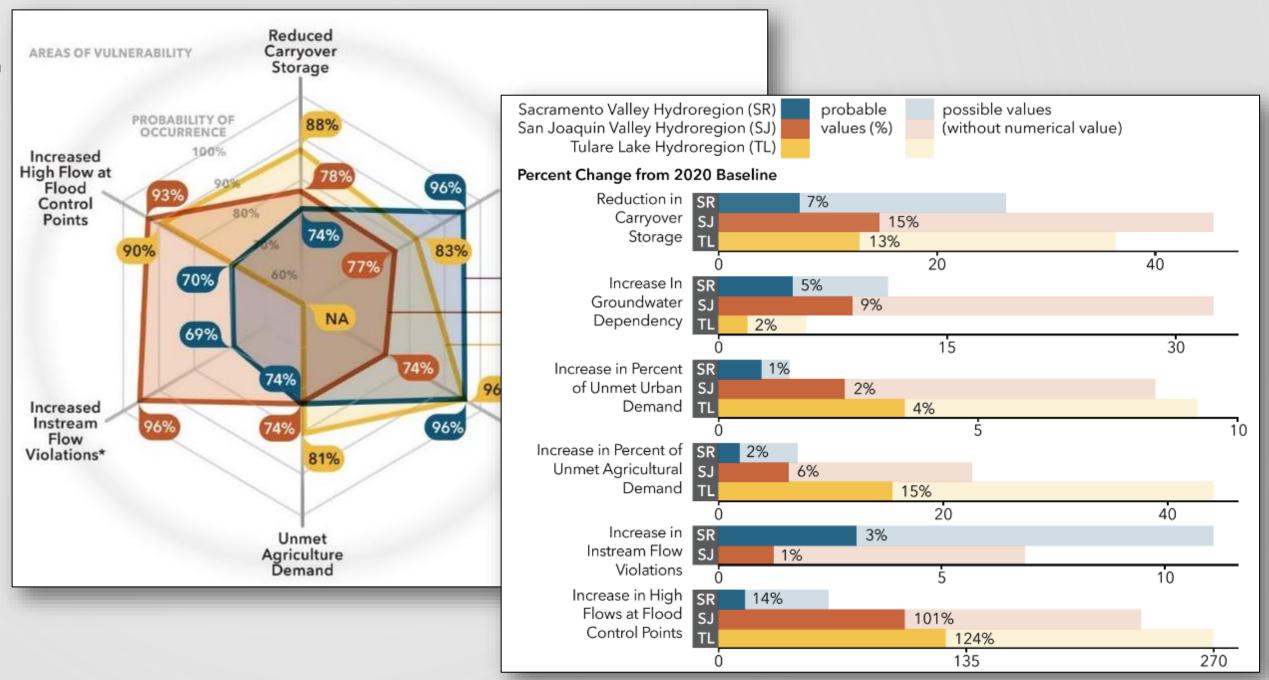
Future Scenarios Update 2028

To infinity and beyond! Or at least outside of the

Central Valley...

Paul Shipman, P.E.,
Senior Water Resources
Engineer
Division of Planning
Department of Water Resources
Paul.Shipman@water.ca.gov



Update 2028 Future Scenarios Team

Project Advisors

Abdul Khan Lew Moeller

Project Delivery Team

Paul Shipman
Mohammad Rayej
Jose Alarcon
Francisco Guzman
Salma Kibrya
Daya Muralidharan

DWR Climate Change Team

Elissa Lynn
Romain Maendly
Andrew Schwarz
Wyatt Arnold
Alejandro Perez

Stockholm Environmental Institute (SEI)

Jack Sieber
Brian Joyce
Charles A. Young
Andrea Carlos-Carlos

Woodard & Curran

Saquib Najmus Frank Qian

Water Plan Focus Group

Kamyar Guivetchi Paul Massera Eric Tsai Jennifer Stricklin Megan Fidell Hoa Ly



Vision for Update 2028 Future Scenarios

Why

Improve the understanding of future water vulnerability in California

How

Leverage an interdisciplinary team to analyze the California water system based on representative metrics

What

Update the Future Scenarios WEAP model to expand the geographic coverage, refine model representation, and evaluate adaptation strategies using best available data and methods

Future Scenarios Enhancements

- Update the current WEAP-CVPA model
 - Migration of model to USGS HUC-8s to represent watersheds
 - Model refinement to improving water accounting
 - Improved groundwater representation
 - Improving representation of agriculture through more detailed irrigation model
 - New climate dataset from the Weather Generator
- Add regions (toward statewide coverage)
 - San Francisco Bay hydrologic
 - South Coast hydrologic
- Explore combined vs separate models for new regions



Future Scenarios Enhancements

- Evaluate Adaptation Strategies
 - To be determined, may be influenced by SB 366
- Update vulnerability metrics
 - New drought related metric
 - Refined GW metric (possibly based on change in groundwater levels)
 - Refined Ecosystem metric (considering winter high flow and summer low flow)
- Develop interactive future scenarios dashboard
- Explore cloud computing and parallel processing to reduce runtimes

