

# A Review of San Joaquin Valley Groundwater Sustainability Plans

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Jelena Jezdimirovic and Ellen Hanak

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**PPIC**

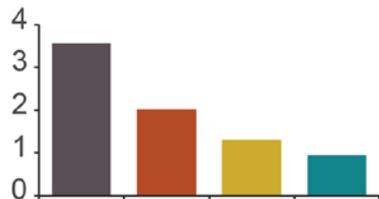
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# Flexibility is key for managing farm water demand, and new supplies can reduce land fallowing

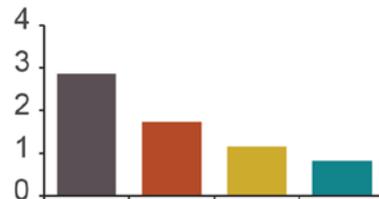
## Crop revenue losses

(billions of \$)



## Farm-related GDP losses

(billions of \$)



■ Inflexible local water use

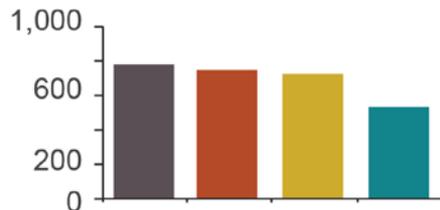
■ Local water trading

■ Valley-wide surface water trading

■ Valley-wide surface water trading + new supplies

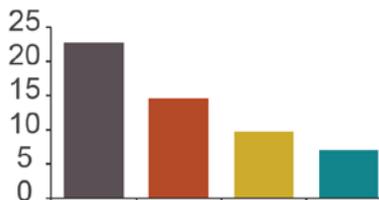
## Land fallowing

(thousands of acres)



## Farm-related job losses

(thousands of jobs)

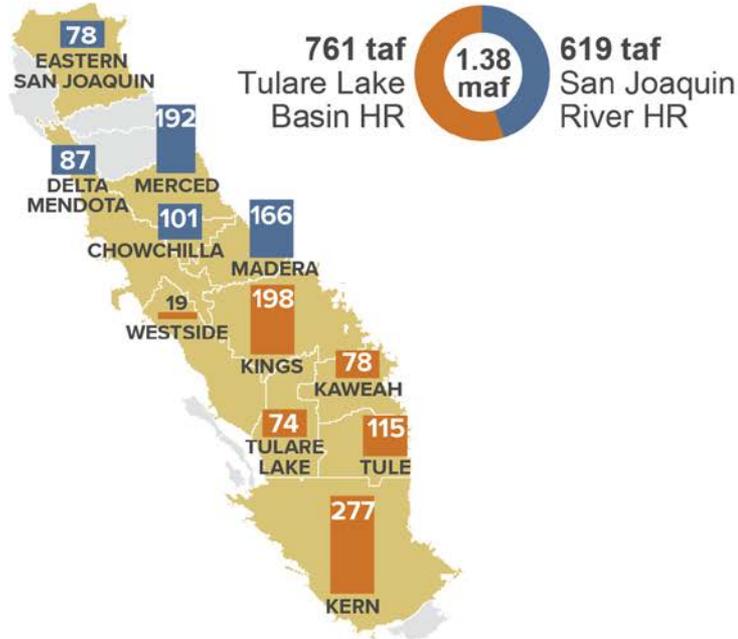


# What do the new groundwater plans say?

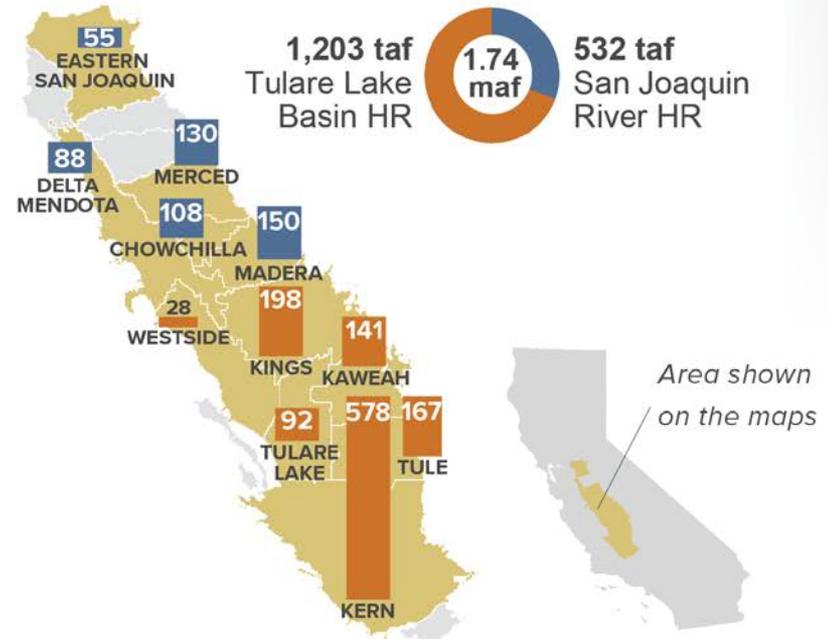


# Although accounting is inconsistent, plans acknowledge significant overdraft

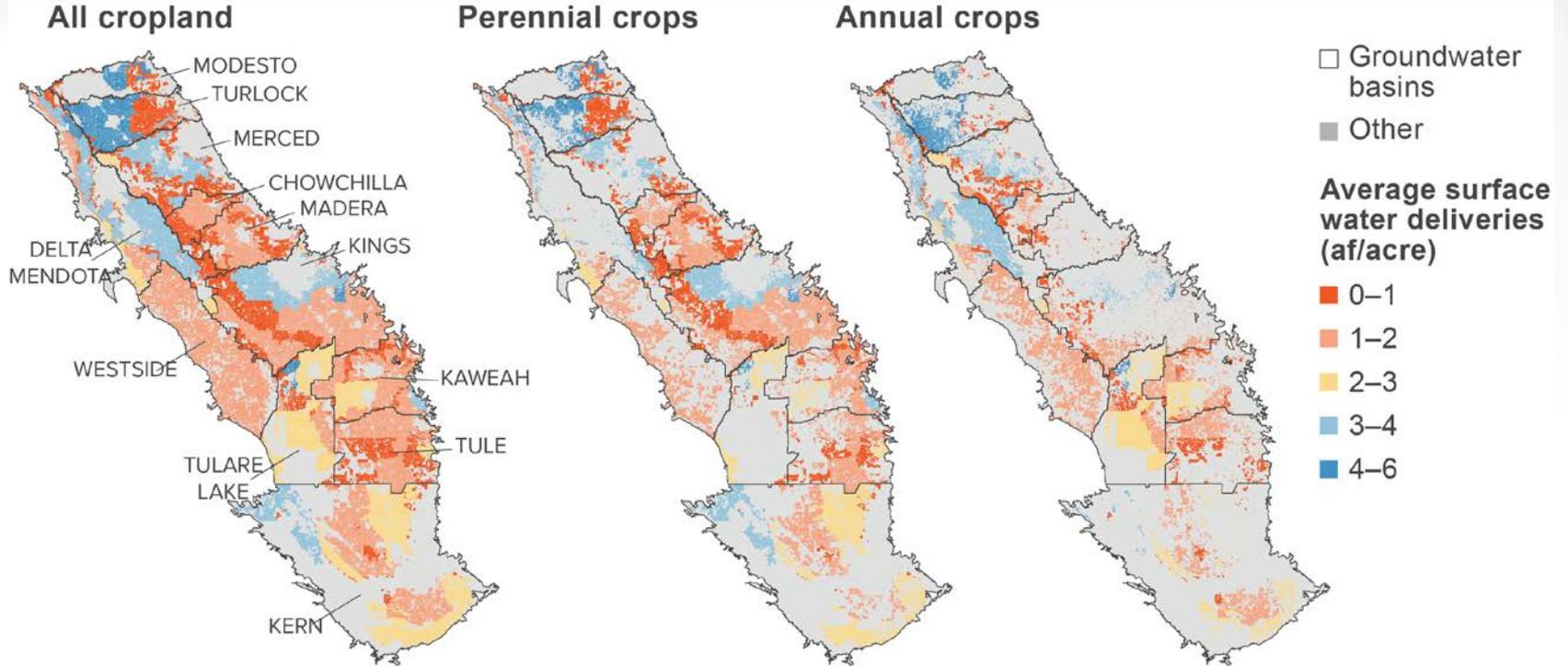
A) Plans' preferred estimates of overdraft (years variable)



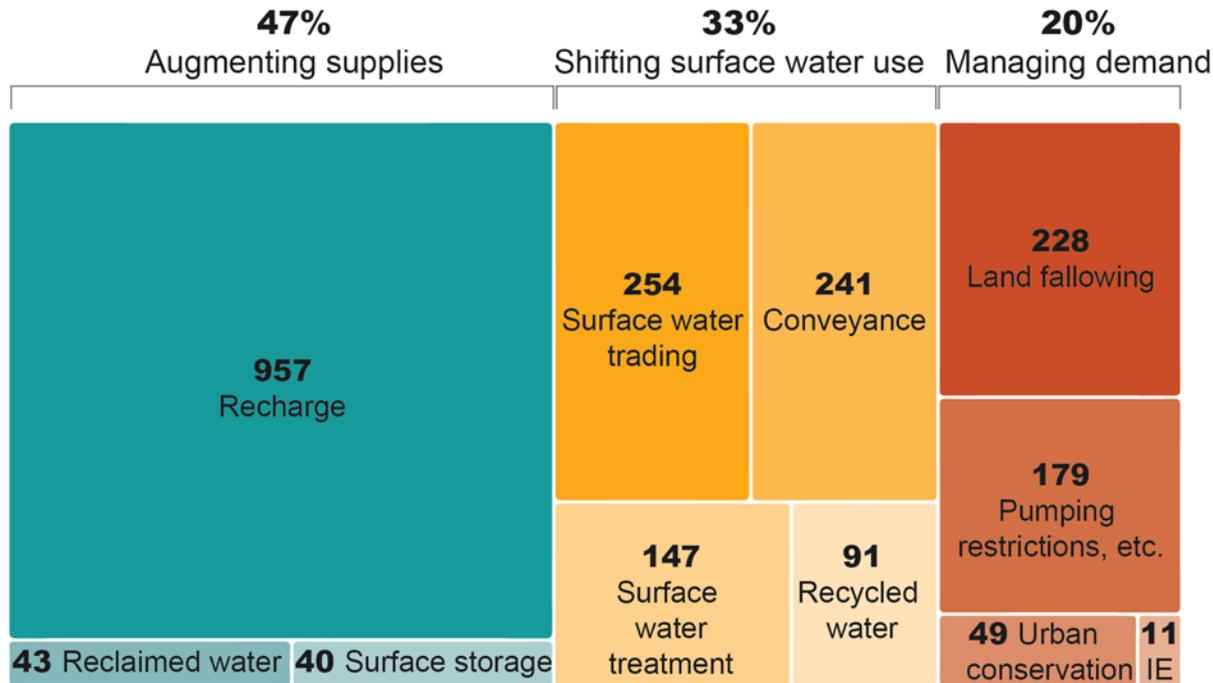
B) Overdraft recalculated from the plans (2003–10)



# Variable surface water access highlights need for regional cooperation



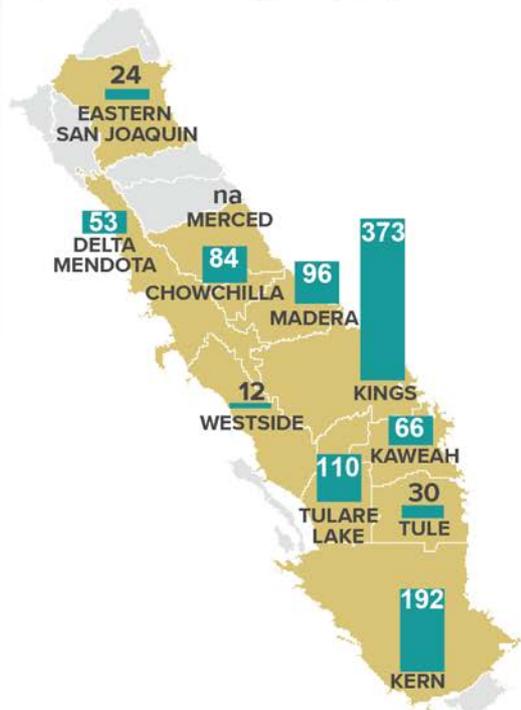
# Plans emphasize recharge, have limited focus on demand management



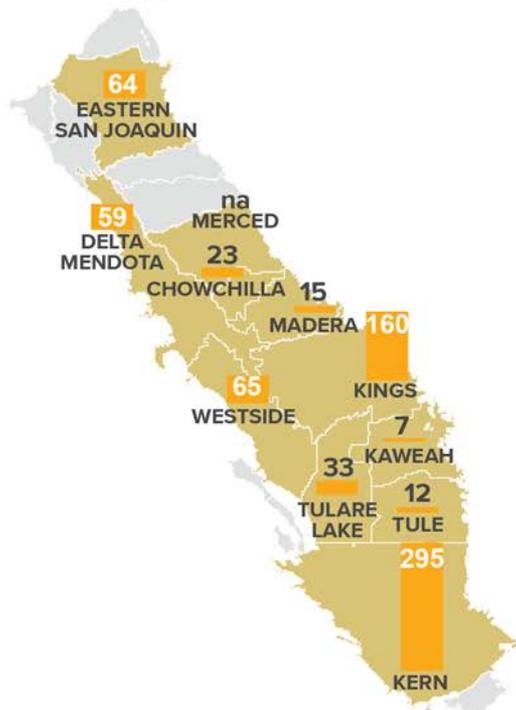
Total amount: 2,241 taf/y

# Most basins present mixed portfolios, but few propose incentives for flexible demand management

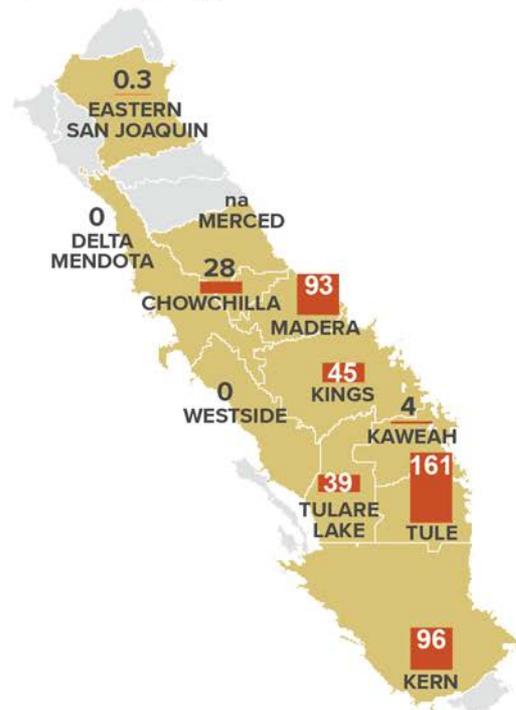
## A) Augmenting supply



## B) Shifting surface water use



## C) Managing demand



# SGMA was enacted to address the negative consequences of groundwater overdraft



Lowering of  
GW levels



Reduction of  
storage



Land  
subsidence



Seawater  
intrusion



Surface water  
depletion



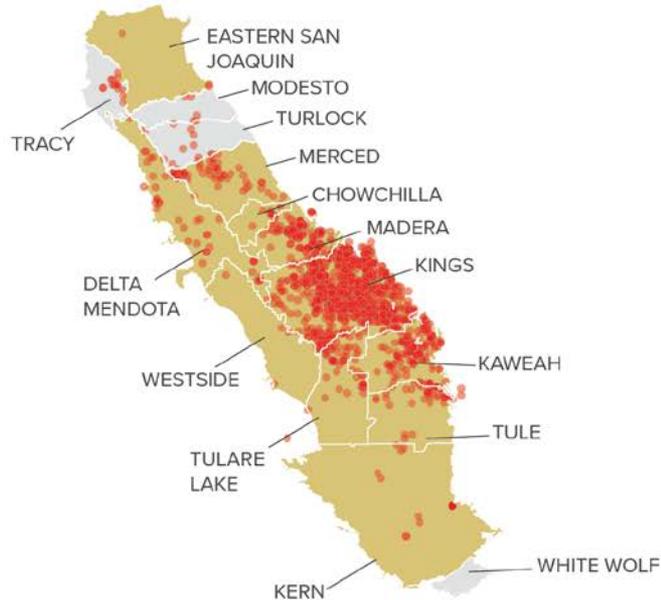
Degraded  
quality

# We reviewed how plans address two of the six undesirable results

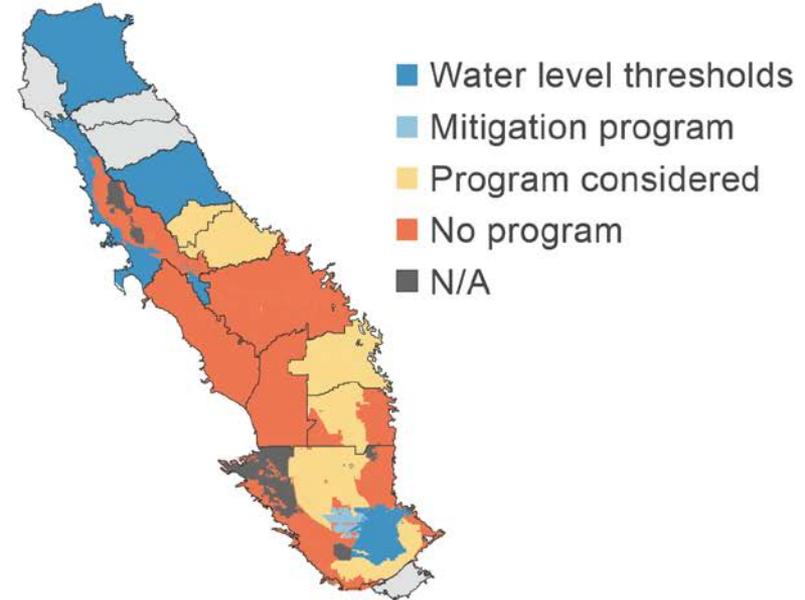


# Many plans do not have protections for domestic wells

A) Wells that went dry during 2012–16 drought

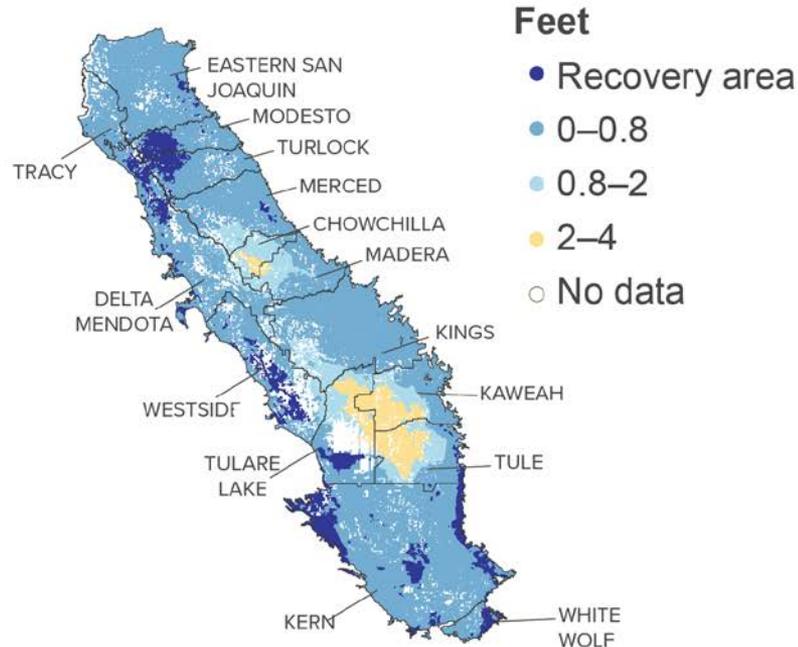


B) Well protections in groundwater sustainability plans

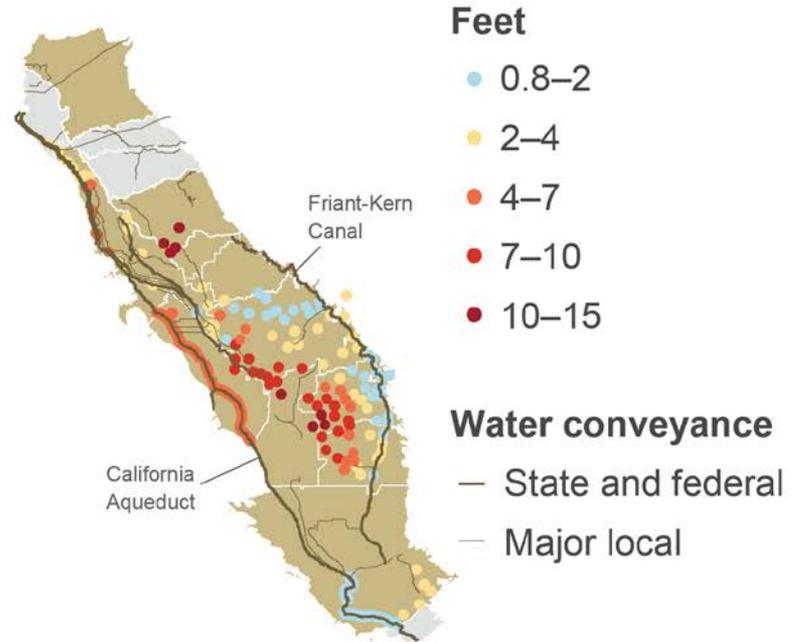


# Many plans allow for significant subsidence to continue

**A) Total subsidence  
(2015–19)**



**B) Maximum allowed subsidence  
by 2040**



# Additional information

- PPIC groundwater sustainability [blog series](#)
- [“A Review of Groundwater Sustainability Plans in the San Joaquin Valley”](#) (public comments submitted by PPIC to the California Department of Water Resources)
- Data sets:
  - [PPIC San Joaquin Valley GSP Water Budgets](#)
  - [PPIC San Joaquin Valley GSP Supply and Demand Projects](#)
  - [PPIC San Joaquin Valley Surface Water Availability](#)

# Notes on the use of these slides

These slides were created to accompany a presentation. They do not include full documentation of sources, data samples, methods, and interpretations. To avoid misinterpretations, please contact:

**Jelena Jezdimirovic** (jezdimirovic@ppic.org; 415-291-4414) or  
**Ellen Hanak** (hanak@ppic.org; 415-291-4433)

Thank you for your interest in this work.