Funding SGMA Solutions in the San Joaquin Valley

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Outline

- SGMA challenges and solutions
- Key funding needs
- Possible funding sources
San Joaquin Valley is at ground zero for implementing the Sustainable Groundwater Management Act (SGMA)

Largest ag region: >50% of CA output

Biggest imbalance: ~2 M acre-feet/yr overdraft; 11% of net water use

Consequences: dry wells, sinking lands, reduced supplies for droughts

Tightest timelines: first plans due in January 2020

The groundwater math problem: attaining balance means more supply, less water use, or both

The economics problem: some solutions are more costly than others
Water trading can lower costs of managing farm water demand; new supplies can reduce land fallowing

Variable surface water access highlights need for regional cooperation on managing demand & supply
New groundwater sustainability plans emphasize recharge, have limited focus on demand management.

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Funding need #1: Fix existing water infrastructure and make smart new investments

A) Total subsidence (2015–19)

B) Maximum allowed subsidence by 2040

Feet
- Recovery area
  - 0–0.8
  - 0.8–2
  - 2–4
  - No data

Water conveyance
- State and federal
- Major local

Escriva-Bou et al. (PPIC Blog, May 14, 2020)
Funding need #2: Mitigate pumping impacts on drinking water, address quality problems

Source: Hanak et al. Water and the Future of the San Joaquin Valley (PPIC, 2019)
Funding need #3: Steward idled lands to generate value and avoid negative impacts

Potential uses of formerly irrigated lands

- 44% Solar
- 33% Other idled land
- 15% San Joaquin desert
- 4% Intermittent wetlands
- 4% Riparian corridors/floodplains

Note: New development only helps this math problem if it’s water neutral!

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Local water users, taxes pay for most water solutions in California

Annual water system spending (2014 - 2016)

Source: Hanak et al. California’s Water: Paying for Water (PPIC 2018)
State has used water bonds to help fill gaps—but annual spending rarely exceeds $1 billion

Source: Compiled by PPIC from Department of Finance.
Creative approaches needed to redirect, pool funding

- Many existing and potential sources for SGMA-related funding
  - Water, land, energy, chemical use fees (ag, urban)
  - Other local, regional taxes (e.g. sales tax surcharge)
  - State, federal grants and credits (tax, bond-funded)

- Attention to incentives will be key:
  - For farmers, keeping water rights from idled lands for use elsewhere
  - For local governments, addressing fiscal gaps from land use change
The San Joaquin Valley is at a pivotal moment

- California’s largest farming region faces unprecedented challenges and inevitable change
- Much at stake for region’s economy, public health, environment
- Most promising approaches
  - Increase flexibility
  - Provide incentives
  - Leverage multiple benefits
- Increased cooperation, coordination will be key--including for funding!
Thank you
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:

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Thank you for your interest in this work.