
HELLO
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What are some ways to reduce groundwater extraction in the Salinas River Groundwater Basin?

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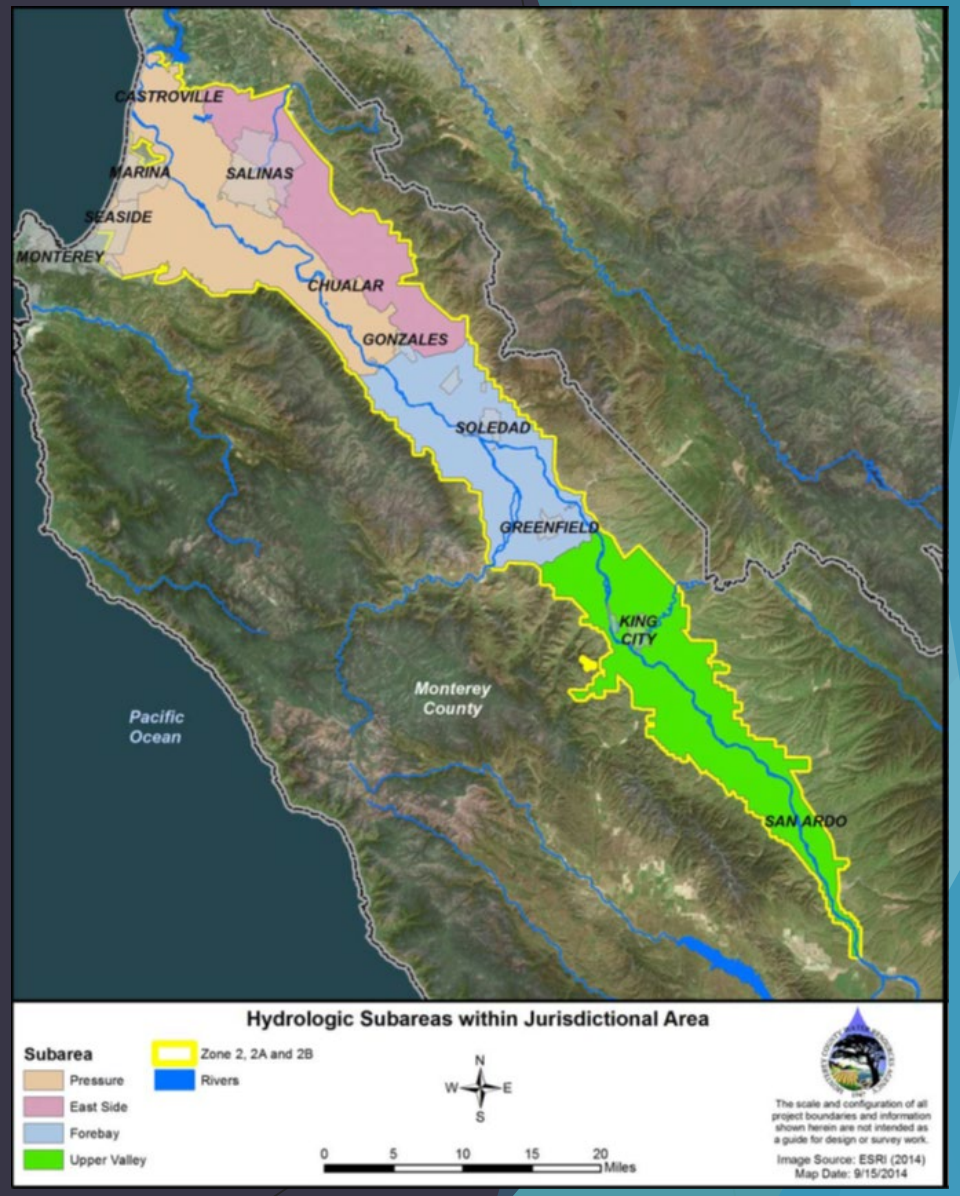
Introduction & Background

- Primary water source:
  Salinas River Groundwater Basin
- Recharge reservoirs:
  Lake San Antonio & Lake Nacimiento
- Consumers:
  Agriculture, Residents, & Environment
- Drought = Over-drafting
- Seawater Intrusion
- 2014 Sustainable Groundwater Management Act



MCWRA 2013 Groundwater Extraction Summary Report

Introduction & Background

- General Approaches:
  1. Institutional:

     Manage water consumption through policy
  2. Technological:

     Develop technology to meet water demand

- Policy Options:
  1. Maintain existing agricultural water regulations
  2. Increase agricultural water regulations

Stakeholder Perspectives: The Agriculture Industry

- **Central Values:**
  - Economic Sustainability
  - Food Production
- **Facts:**
  - Top vegetable-producing region in the nation
  - 570 million lbs. of produce exported annually worldwide
  - Contributes $8.1 billion/year to local economy
- **Empirical Assumption:**
  - Limiting groundwater will negatively impact economy and farmland

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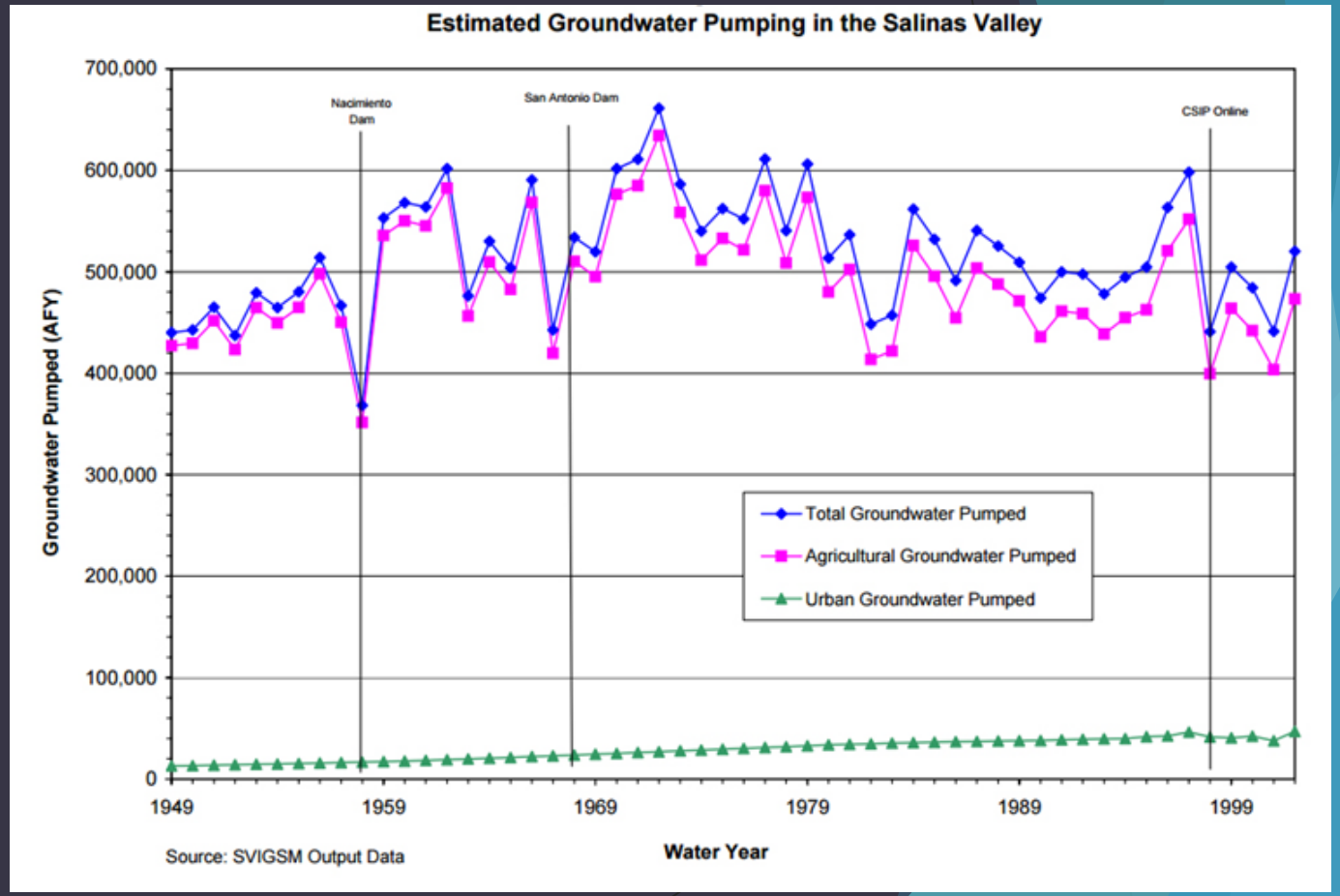
Stakeholder Perspectives: County Residents

- **Central Value:**
  - Water Sustainability/Security
- **Facts:**
  - Ag. excluded from mandatory statewide water reduction
  - Ag. consumes 90% of extracted groundwater (human use)
- **Empirical Assumption:**
  - Addressing major consumer more effective for groundwater conservation



Monterey County Groundwater Management Plan

Evaluation of Policy Options

Policy Option	Environmental Sustainability	Economic Sustainability	Social Equity
Maintain existing agricultural water regulations	- - Current extraction unsustainable (some areas)	+ - Maintains agriculture production	0 - Job security (+) - Unequal conservation (-)
Increase agricultural water regulations	+ - Limits major consumer	- - Reduces agriculture production	+ - Raises agriculture water conservation accountability

Recommendation:

Maintain existing agricultural water regulations!

Recommendation: Limitations

Limited understanding of:

1. Relevant Geologic Processes
    - Groundwater levels and recharge rate
    - Soil erosion on fallowed (unplanted) farmland
2. Economic Impacts
    - How many businesses indirectly rely on agriculture?
3. Public Opinion
    - Lacking stakeholder representative for county residents

Recommendation: Concessions

- Policy option not recommended:
  - Increasing agricultural water regulations
- Missed opportunity to:
  - Significantly reduce groundwater pumping
  - Allow greater recharge
  - Mitigate seawater intrusion

Recommendation: Justification

- Greater weight to economic sustainability
- Lacking data for environmental sustainability
- Acknowledgement of improved irrigation and yields
- Complementary approaches

Recommendation: Consequences and Implications

- Loss of groundwater resource
  - Entire consumption of groundwater in critical subareas
  - Accelerating seawater intrusion
- Ripple effects of water shortage
  - Agriculture business goes down
  - Agriculture jobs go down

Recommendation: Accountability

- Sustainable Groundwater Management Act
  - Establishment of local management agency by 2017
  - State government intervention if region cannot meet requirements

Recommendation: Conclusion

- Need more research
  - Groundwater is a difficult concept to imagine
  - New legislature for better groundwater data
- Allow time for changes
  - California farmers work towards sustainability
  - Different approaches before limiting key industry

Self-Assessment

& Questions!