



Allocating California's Water

Directions for policy reform

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The drought has underscored weaknesses in the way California allocates water...

Key issues:

- Complex water rights, contested oversight, incomplete information, poor enforcement
- Allocation of water for environment is reactive, piecemeal, uncertain, and lacking in incentives
- High administrative costs and complexity discourage water trading



...but solutions do not require a complete overhaul of California's water rights system

Reforms can improve water allocation by:

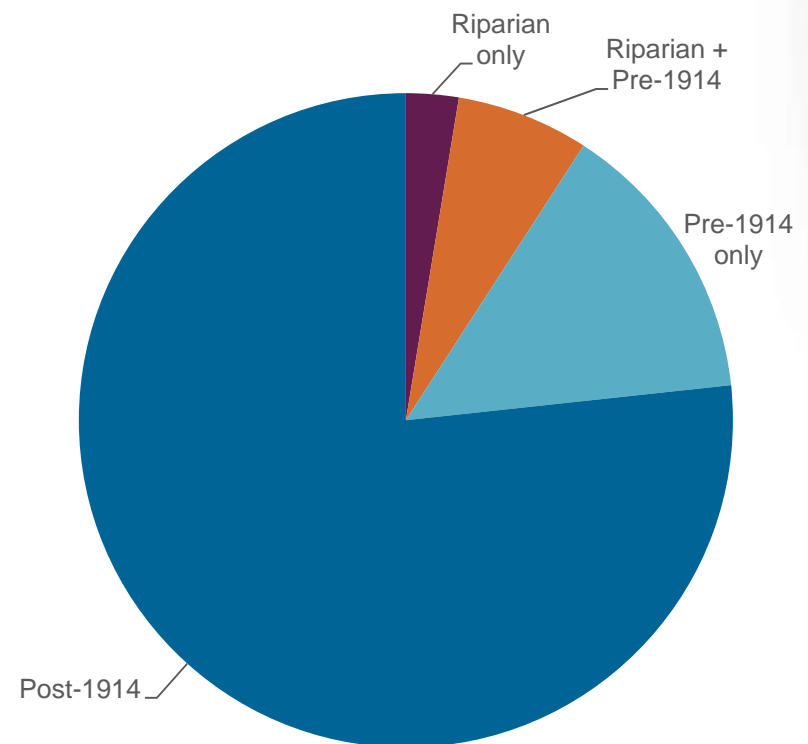
- Effectively managing the current rights system
- Improving how we manage water for the environment
- Reducing & removing barriers to water trading



Problem 1: A fragmented and often ineffective system of water rights administration

- Surface water rights are complex and not administered under a uniform system
 - Contested authority
- Most GW rights not quantified or enforced
- Surface and groundwater rights legally separate
- Gaps in critical information
 - Contrast with Wyoming

Sacramento-San Joaquin watershed demand (2010-13 avg)
35.4 million acre-feet



Source: SWRCB water demand database
Note: Post-1914 includes deliveries to some pre-1914 holders that now get their water from the CVP & SWP

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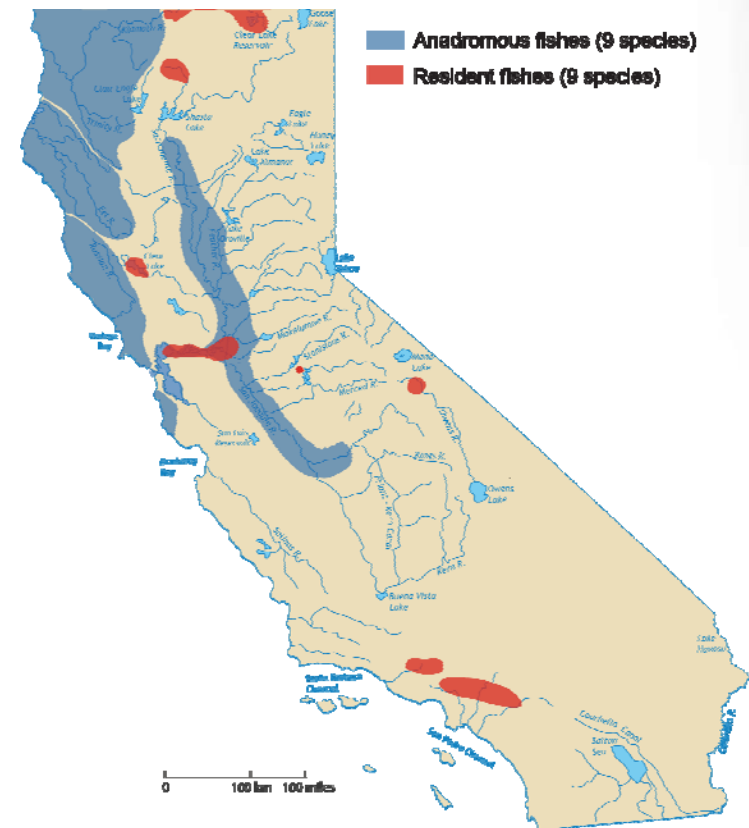
Suggested policy reforms: Administration

- Bring all surface water rights under the State Water Board's permitting system
 - Consolidate oversight
 - Quantify and embody in tradable permits
- Require surface right-holders to choose between riparian and appropriative rights
- Quantify groundwater rights in priority basins (SGMA+)
- Improve our information infrastructure
 - Develop a uniform and authoritative water accounting system
 - Enhance frequency, quantity, and accuracy of user information
 - Make information publicly available

Problem 2: Simplistic and unclear allocation of water for the environment

- Drought = crisis for fish and waterfowl
- “Environmental water” was sometimes reduced to increase supplies for people
 - But inadequate planning
 - Overly focused on ESA
 - Incentives largely political
- No systematic policy for factoring environmental flows into curtailments

18 fish at risk of extinction with continued drought

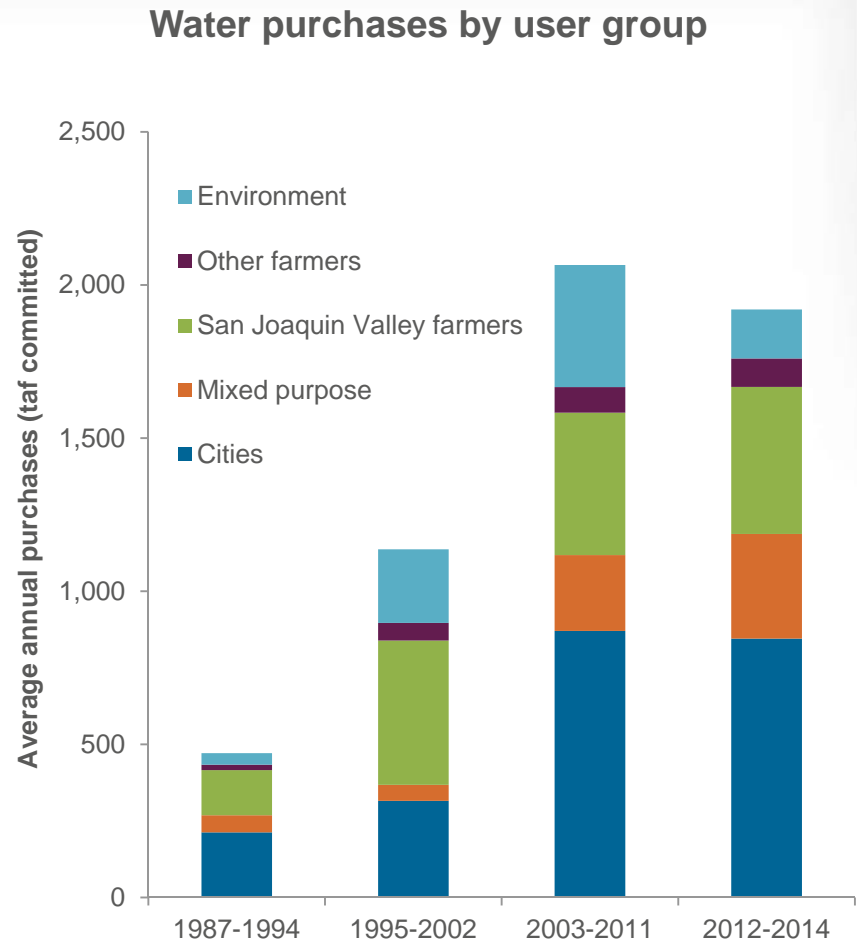


Suggested policy reforms: Environment

- Two Needed Elements:
 - Better Planning: Environmental water budgets & trade-offs
 - Markets: Flexibility and an incentive mechanism
- Examples of Environmental Markets:
 - Delta Water Trust for the Colorado River Delta
 - Environmental Water Account
 - BirdReturns (The Nature Conservancy)
- A Multi-Tier System?: regulatory, state held environmental rights, private environmental rights
- Funding Sources?
 - Bonds or other public sources of funding
 - Regulatory relief or insurance
 - Public-good charge

Problem 3: Barriers to water trading

- An essential tool for managing scarcity, but not as active as predicted
- Administrative costs are still high
- State rules are fragmented and inconsistent
- Lack of clarity on basic issues (e.g., how much water can be traded when land fallowed)
- Some significant conveyance constraints



Suggested policy reforms: Markets

- Common Markets & Free Trade Agreements for Water
 - Consolidate regional markets (water districts & water systems)
 - Preauthorize some water transfers and expedite reviews
- Independent System Operators (ISO)
 - Regional (e.g., San Francisco Bay Area)
 - State-wide (e.g., combined CVP & SWP plus)
- Open Up & Encourage Associated Markets
 - Storage (anti-speculation doctrine, tradable rights)
 - Conveyance facilities (rethink wheeling rules, tradable rights)
- Facilitative Institutions?
 - Water transfer clearinghouse

These reforms would strengthen water rights and improve our ability to adapt to scarcity

- Many reforms build on recent legal & regulatory reforms
- Other reforms are possible without new legislation
- The most extreme, however, will require new legislation and may not currently be politically feasible
- The time is ripe for change
 - Never waste a severe drought

