



Building water and land resilience to support agriculture, rural communities and ecosystems

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Environmental Defense Fund





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Science

Using evidence to drive solutions



Economics

Rewarding people who protect nature



Partnerships

Building alliances across sectors



Advocacy

Shaping policy and taking legal action

EDF's Climate Resilient Water Systems Program



EDF's Climate Resilient Water Systems Program



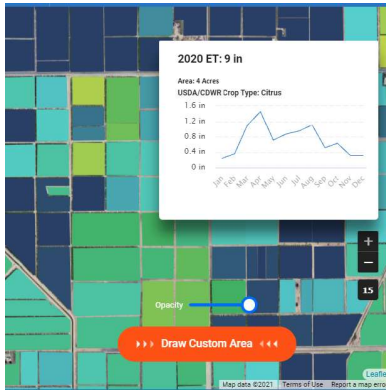
Emerging
programs:



Goal: Rebalance water systems so that they are more resilient to climate change and can support sustainable agriculture, healthy communities and thriving ecosystems.

Approach: Work closely with farmers, water managers and communities to co-develop replicable tools and approaches that can be scaled broadly.

EDF's Climate Resilient Water Systems—Key Levers



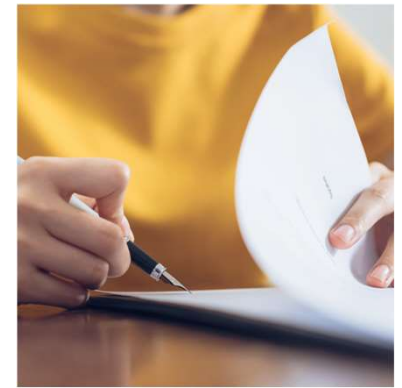
**Data &
Science**



**Policy &
Governance**



**Community
engagement**

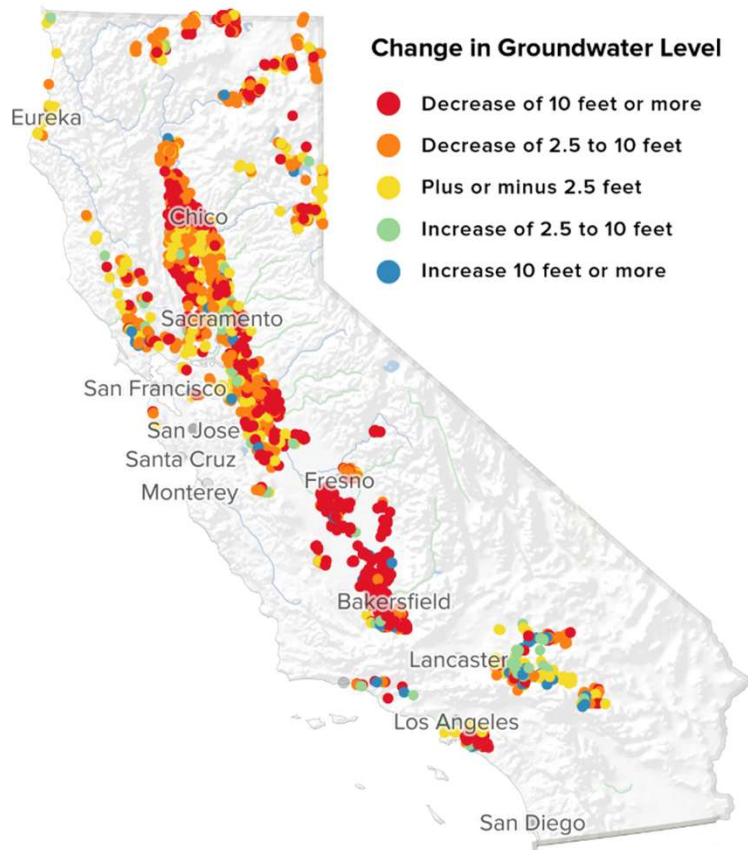


Funding

Climate Change: Driving CA Extremes

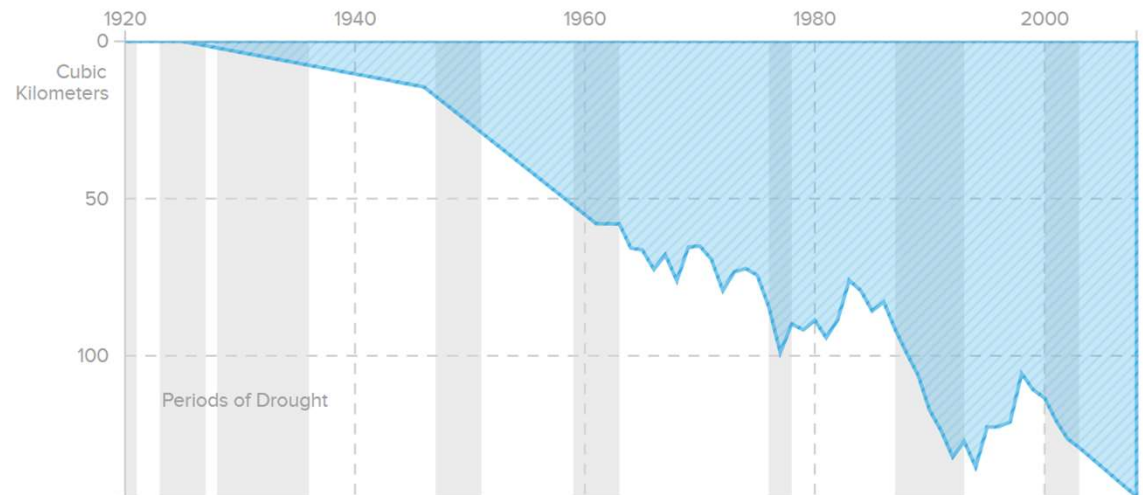


California's Deepening Groundwater Crisis



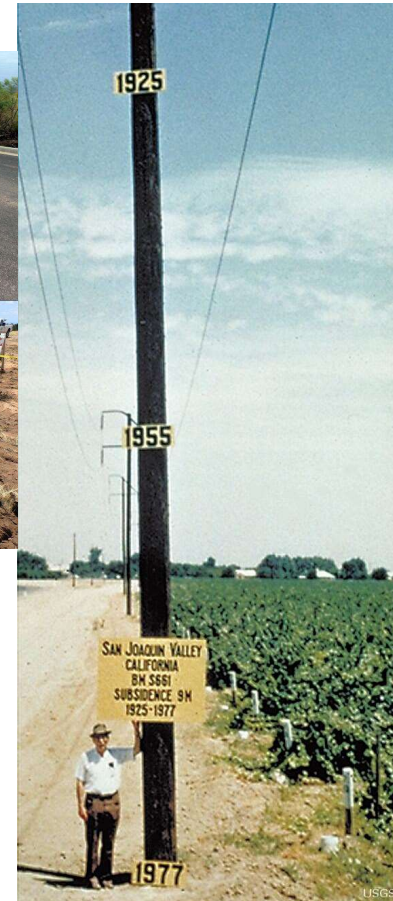
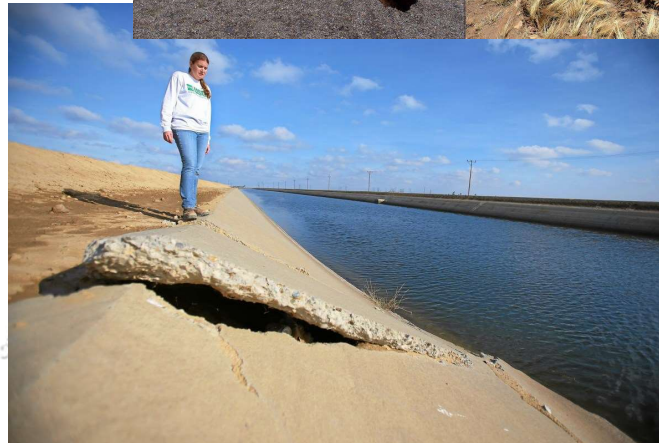
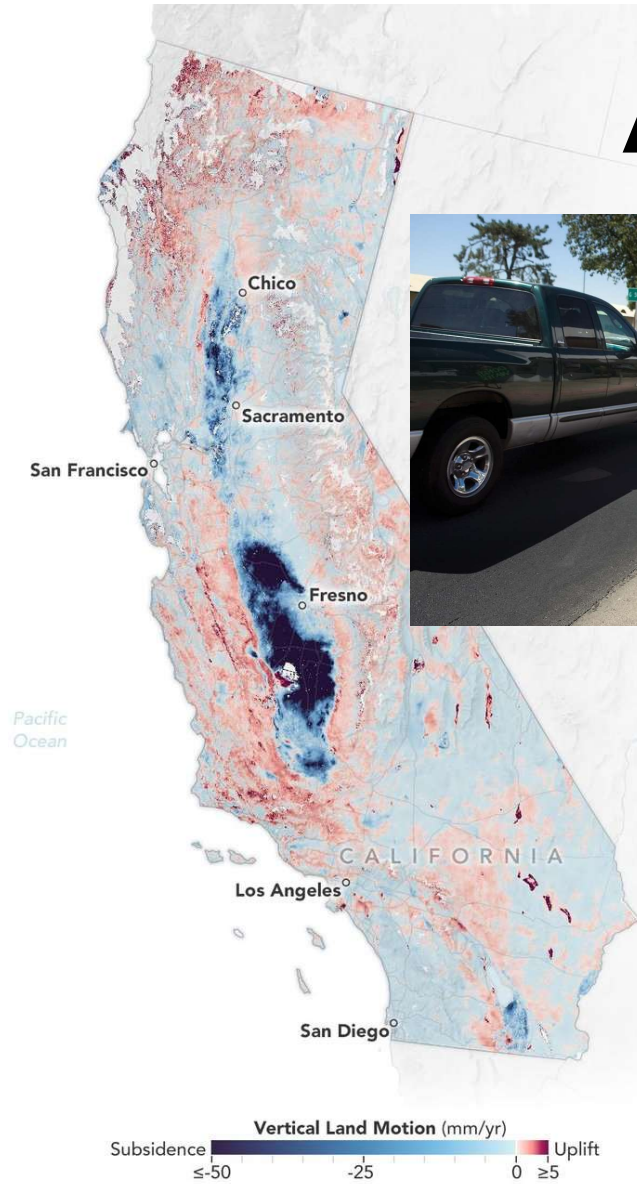
Cumulative Depletion of Groundwater from the Central Valley, 1920-2008

Central Valley aquifers lost 140 cubic kilometers of freshwater – an amount roughly four and a half times the capacity of Lake Mead in Nevada, the nation's largest reservoir.



Groundwater level changes reflect difference between Spring 2004 to Spring 2014 (past decade), and Spring 2013 to Spring 2014 (past year).

A Sinking, Cracking Central Valley



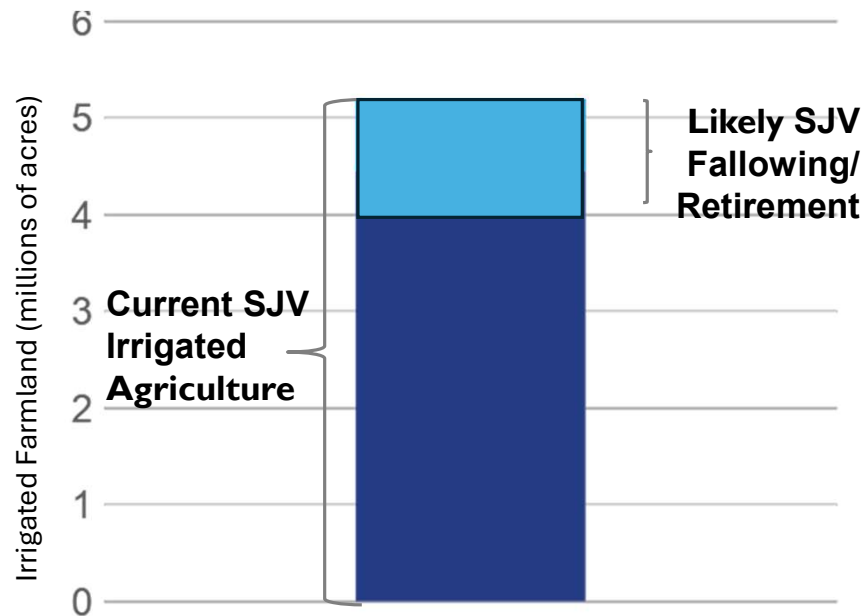
Passage of the Sustainable Groundwater Management Act (2014)



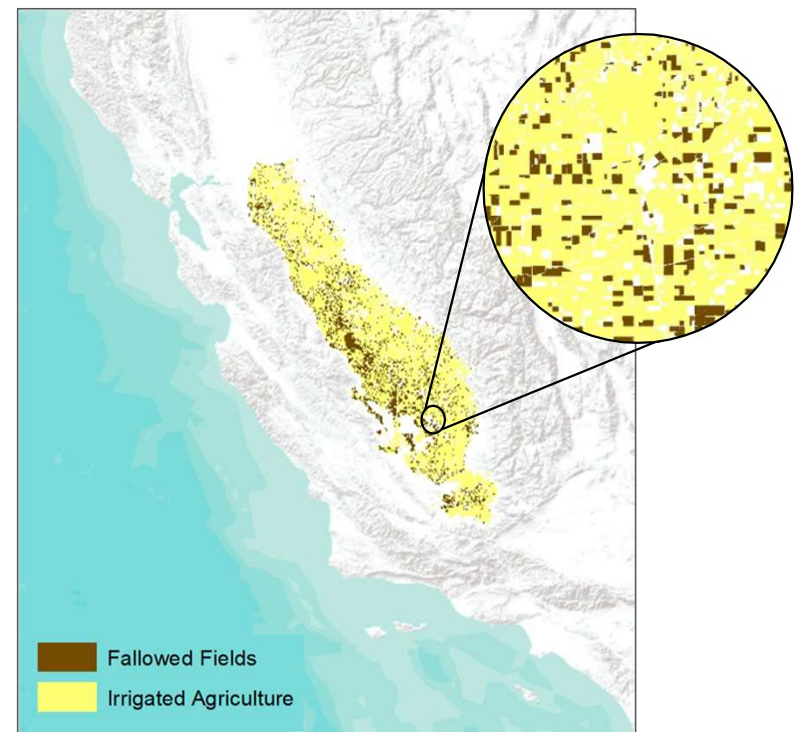
Ensure the long-term reliability of our groundwater resources and connected surface water resources by requiring sustainable management...by 2040/42.

Increased Water Scarcity and Shifting Ag Landscape

- **By 2040: Significant reduction in irrigated acreage to balance water supplies and adapt to a changing climate**



Data Source: Public Policy Institute of California

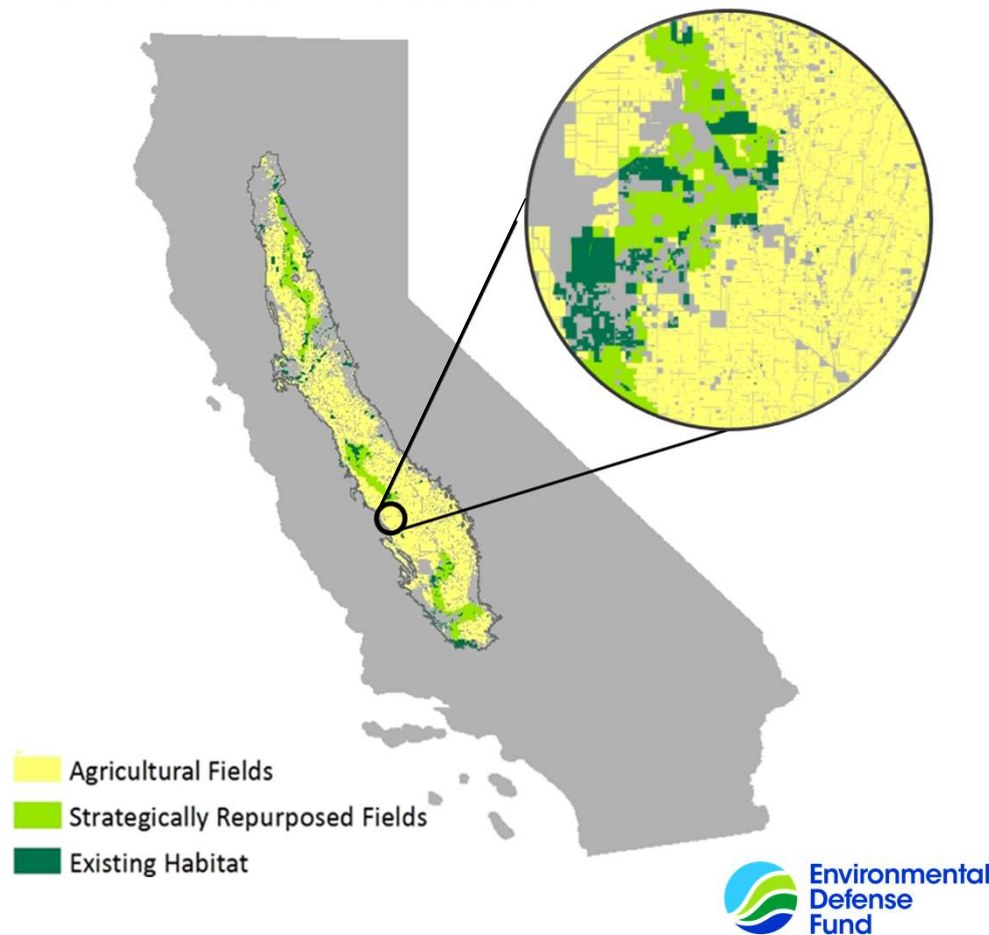
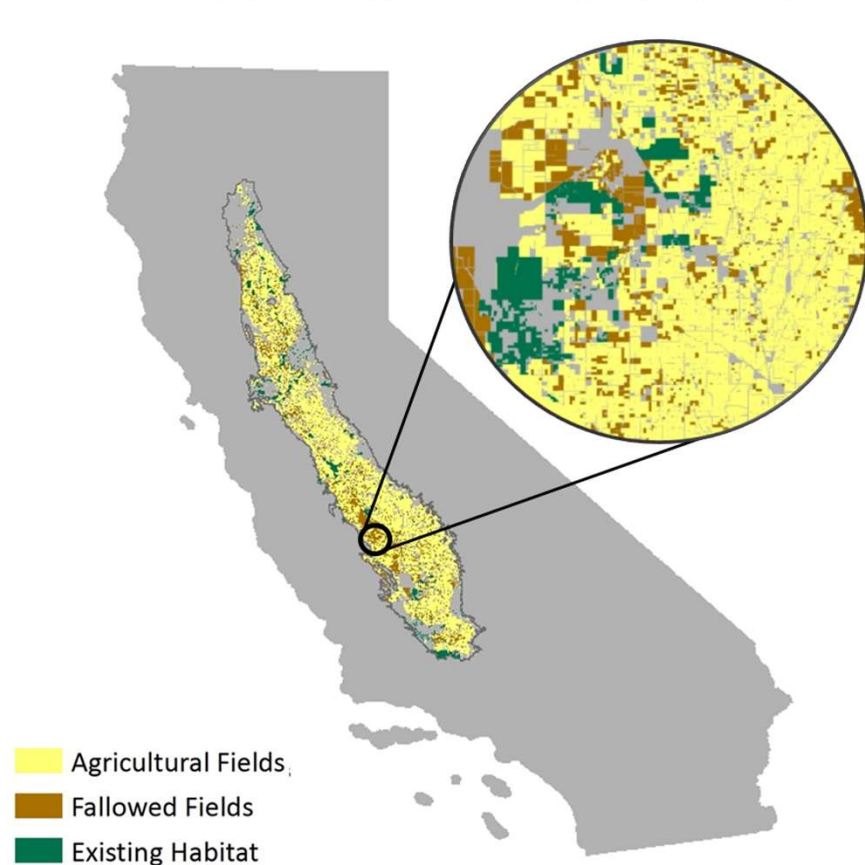


Illustrative example of potential following patterns. EDF.

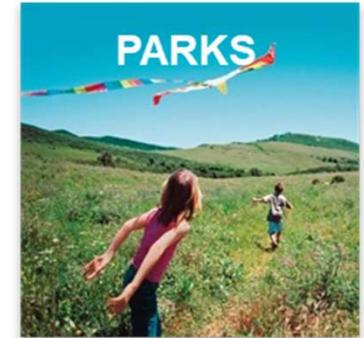
Two Paths



Planning and Coordination Can Improve Outcomes



Multibenefit Land Repurposing Options



Broadly Supported MLRP Legislation



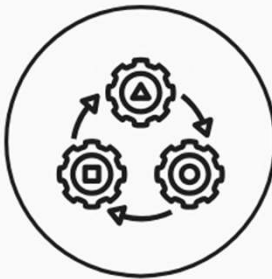
Core Principles of Strategic Land Repurposing



Guaranteed
demand reduction



Multibenefit
outcomes



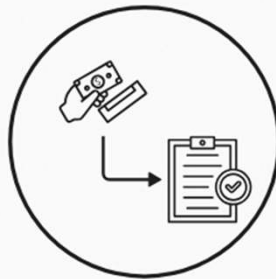
Monitoring and
adaptive management



Inclusively
developed



Regionally
coordinated



Payments tied to
public benefits



Long-term or
durable projects

Advancing Strategic Land Repurposing and Groundwater Sustainability in California

A guide for developing regional
strategies to create multiple benefits



EDF
ENVIRONMENTAL
DEFENSE FUND
Finding the ways that work

Multibenefit Land Repurposing—Scale and Scope

~20%: Estimated farmland transition in San Joaquin Valley by 2040

\$90 M: Allocated by the CA legislature to MLRP in 2021 & 2022-- supporting 8 subbasins

\$194 M: Demand for MLRP block grant funding

100+: Block grant partner organizations

1,000+ acres: approved repurposing projects in 2024

\$200 M: MLRP funding in CA \$10B Climate Bond

\$4 B+: Needed to fully adapt landscape by 2040

\$111 M: Matching funds for first 10 projects

IMAF: Corporate water replenishment target by 2030; significant interest in investing in strategic land repurposing



Paregien Basin Recharge

Recharge Basin, Habitat Plantings, and Education Opportunities

Wuk'nain Riparian and Wetland Habitat Restoration

Habitat and Tribal Land Use Restoration

Land Fallowing & Cover Crop Program

Groundwater Use Reduction and Soil Quality Improvement

Pajaro River Estuary Project

Wetland Restoration, Groundwater Use Reduction

Pilot Project in La Vina

Community Buffer and Habitat Benefits

Johnson Slough Project

Recharge Basin and Habitat Restoration

College Lake Integrated Resources Management

Groundwater Recharge, Fish Passage, & Water Treatment

Capinero Creek

Habitat Improvement and Groundwater Use Reduction

Mathews Ditch Basin Project

Flood Capture, Recharge, and Public Access Area

Flying Dragon Ranch

Riparian Habitat, Groundwater Recharge, & Public Recreation Area





Image: Groundwater Exchange

“To see an outspoken representative from a local water agency and a member of local tribal leadership engaging in productive discussion about project monitoring and outcomes increased my faith in the collaborative process.”

- MLRP block grant team member

“From the perspective of a small farmer myself, I must say that I have felt inspired with the process.”

- MLRP block grant team member



More about
EDF Water

Questions?

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