

Watershed Resilience Program: Charting A New Path for California's Water Future

Eric Tsai, DWR
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Climate Change Challenges

Forest and Wildfire Management

Rising temperatures, extended periods of dryness, and increasing wildfire potential will further stress and challenge management of headwater forests and lands and impact public health and safety.

Hydropower

Changing snowpack and melt timing, increasing peak electrical demands, and extreme heat events will challenge hydropower management.

Ecosystems

Higher temperatures, changing hydrology, rising sea levels will change habitats for many species and the pace of ecosystem adaptation will be challenged.

Groundwater

Changing recharge patterns, seawater intrusion in coastal aquifers, and increasing demands will continue to put pressures on groundwater systems.



Water Supply

Changing hydrological patterns including reduced snowpack, earlier melt, extended droughts, and increasing evaporative demands will stress reservoir operations and impact overall availability of water supplies.

Flood Management

More intense precipitation events, specifically atmospheric rivers, less snow-more rain, flood-after-fire events, and rising sea levels will contribute to greater flood risk in inland and coastal areas.

Water Quality

Increasing temperature, reduced spring and summer streamflow, extreme runoff and flood-after-fire events will continue to challenge water quality management.

Recreation

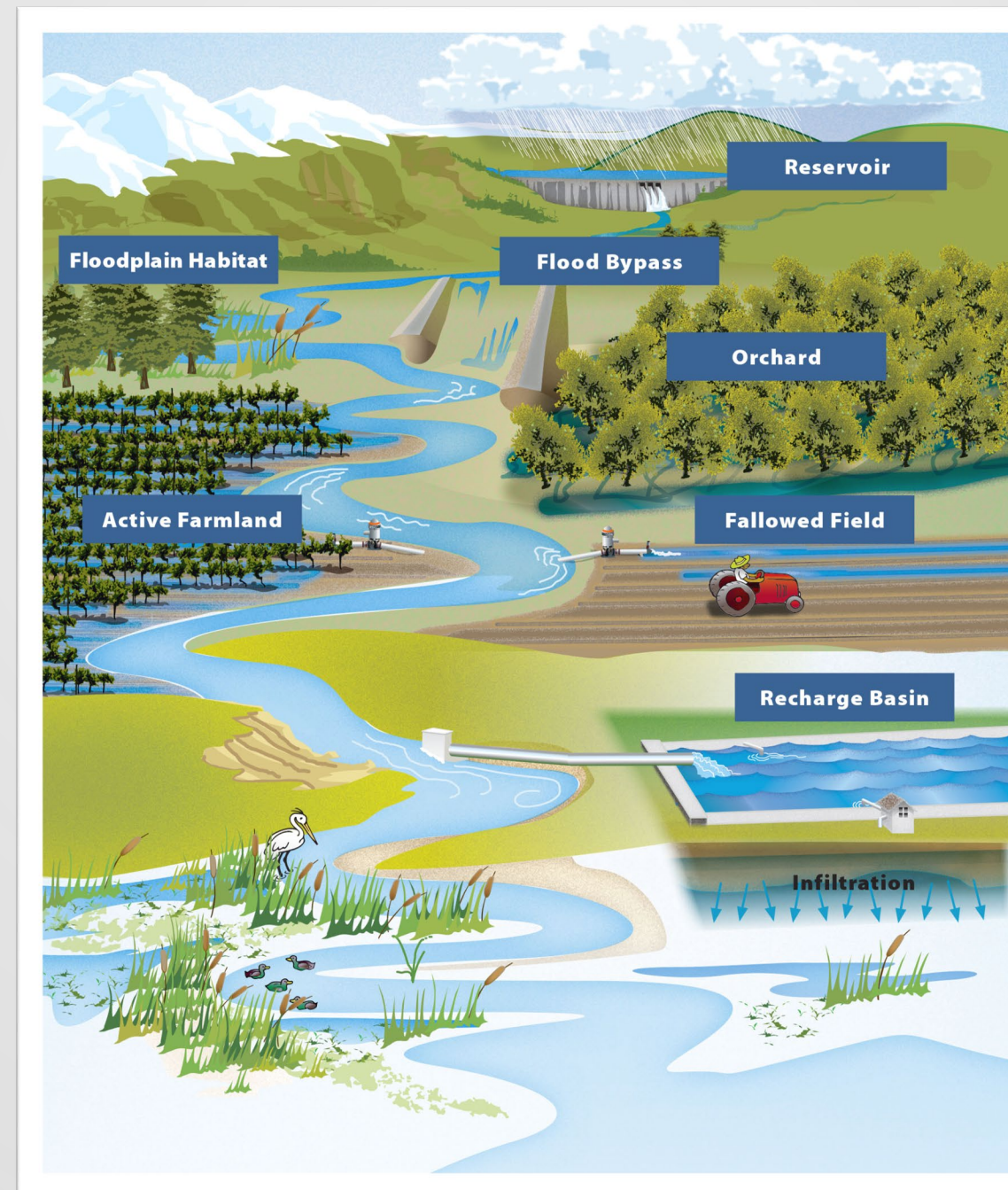
Changing snowpack, changing river and streamflows, more variability in lake levels, and rising sea levels will stress recreational resources.

Watershed Resilience Program: Translating the California Water Plan into Action

Climate Urgency



Watershed Resilience

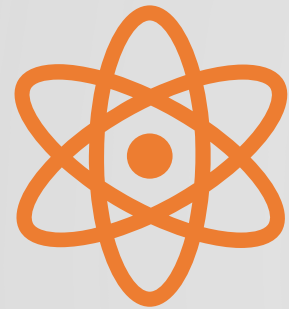


Equity in Water Management



Watershed Resilience Program

Intent and Outcomes



Program Intent

Empower local water leaders with the capacity to prepare for climate change impacts across water sectors at the watershed scale



Equity

Build and support inclusive and diverse watershed networks



Climate Science

Inform sound resilience planning with quantitative climate vulnerability and adaptation analysis



Scale

Incentivize planning on a hydrologically appropriate scale, from headwaters to groundwater basins



Statewide Vision for Watershed Resilience

Water Plan Update 2023

Themes

Watershed Resilience
Climate Change
Equity

Chapter 5: Focus on Supporting Watershed Resilience

Water Plan Recommendation 1.2:

Establish a Watershed Resilience Program

DWR Strategic Plan

Goal 2: Build Community Capacity

Objective 2: Empower Communities with Technical and Financial Assistance

Action 5: Develop and implement updates to the IRWM Grant Program, linking future local assistance support to the Water Plan's call for watershed-scale, inclusive, and climate science-driven regional planning.

Water Resilience Portfolio

Action 20 – Support groups and leaders in each of the state's regions to develop and execute integrated water resilience strategies.

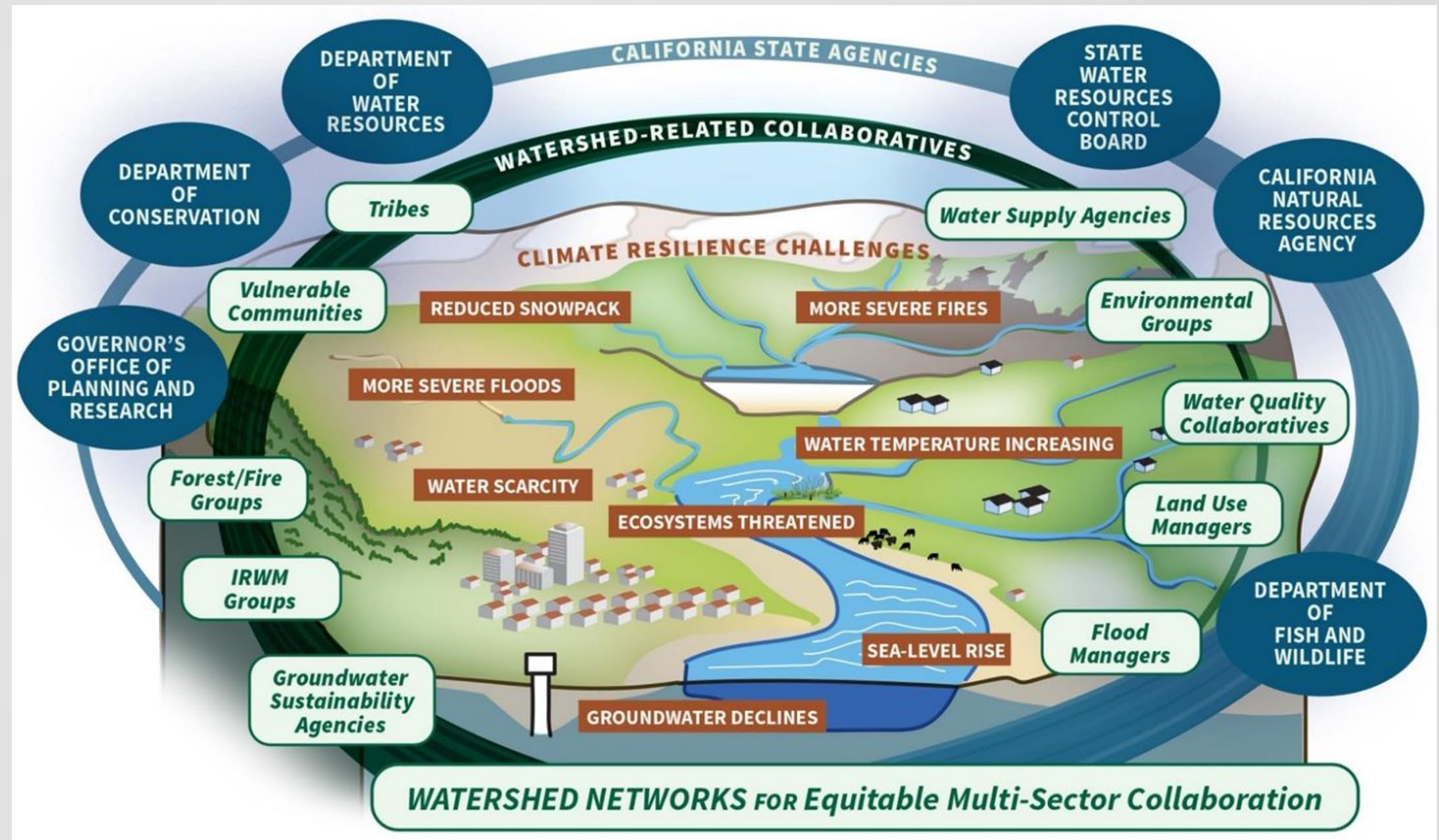
Action 20.1: Build on the Integrated Regional Water Management Program and other regional efforts to align climate scenarios and expand watershed-scale coordination and investments that contribute to water resilience. Emphasize integrated, multi-sector, and outcome-based planning, action and monitoring.

Action 27.1: Support regional decision making with watershed-scale climate vulnerability and adaptation assessments.



Watershed Networks

California Water Plan Update 2023 underscores the importance of supporting programs to incentivize robust watershed-specific climate vulnerability analyses and adaptation plans, followed by investments in multi-sector collaborations and solutions at the watershed- and regional scale



Watershed Resilience Program

To encourage and support locally-led watershed networks to:

- Manage water from headwaters to outflow at a watershed scale
- Prioritize equity and inclusiveness
- Analyze climate risks and adaptations at a watershed scale
- Collaborate across water, flood, groundwater, water quality, forest/fire, ecosystem and land use sectors.
- Develop metrics to track outcomes regionally and statewide
- Implement resilient and equitable projects and solutions



2024 Watershed Resilience Pilot Program Awards

Watersheds	Lead Agency	Award
American River	Regional Water Authority	\$2M
Calaveras River	Stockton East Water District	\$2M
Pajaro River	Pajaro Valley Water Management Agency	\$2M
Russian River	Sonoma Water Agency	\$2M
Ventura River	Ventura RCD	\$2M



Pilot Scope of Work

Task 1a: Define Watershed



Task 1b: Identify Community Participation Gaps

Task 1c: Build Inclusive Networks



Task 2: Explore Climate Hazards



Task 3: Assess Climate Vulnerabilities and Risks



Task 4: Develop and Evaluate Adaptation Strategies for Projects



Task 5: Develop Implementation Strategy



Task 6: Develop Performance Tracking Metrics



Task 7: Develop Watershed Resilience Plan



Early Lessons Learned

- Program flexibility meets regions where they are. Each pilot is unique to each watershed
- Organizing watershed networks has increased collaboration across upper and lower watershed, laying groundwork for surface water/groundwater integration
- Tribal engagement assistance/support is needed
- “Cohort” meetings with all watershed pilots has helped them learn from each other

Findings from pilot projects will inform and help shape future DWR funding programs and guide efforts to strengthen water resilience across California.



Appendix Slides





California's Resilience Depends on Natural and Built Backbone Infrastructure



State's Water Resilience is Interconnected

California's Water Resilience is Interconnected and Dependent on Built and Natural Backbone Infrastructure

