Drought-Ready Communities: A County Level Approach

Presented by Bonnie Robison

Friday, May 8, 2026; 9:00 to 9:30 AM

Water Resources Track

Introduction



- Small water suppliers and rural communities hit hardest during drought
- Limited resources and limited backup supply sources
- **Takeaways:**
  - How to evaluate drought risk with limited local data
  - Engagement and interagency coordination approaches that worked
  - Practical mitigation actions and phased implementation for resource-limited communities

Why County-level Drought Planning?

"Improve proactive drought planning for small water suppliers and rural communities"

- Small systems and individual well owners not required to maintain drought contingency plans and often lack planning capacity
- Rural communities may face disproportionate impacts
- Counties provide services for unincorporated areas
- Counties can coordinate across independent systems



County Drought Resilience Plans

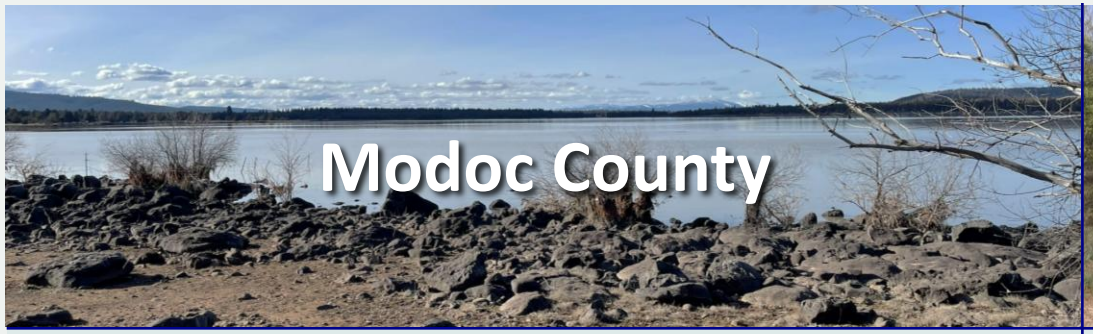
- California required counties to develop local drought task forces and drought resilience plans
- Developed drought resilience plans for Marin and Modoc counties
  - Considered water resilience for domestic wells and state small water systems
  - Identified potential drought and water shortage risks
  - Proposed interim and long-term solutions
  - Created an implementation roadmap



Goal: Practical plans that lead to meaningful, long-term solutions

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Contrasting Drought Conditions

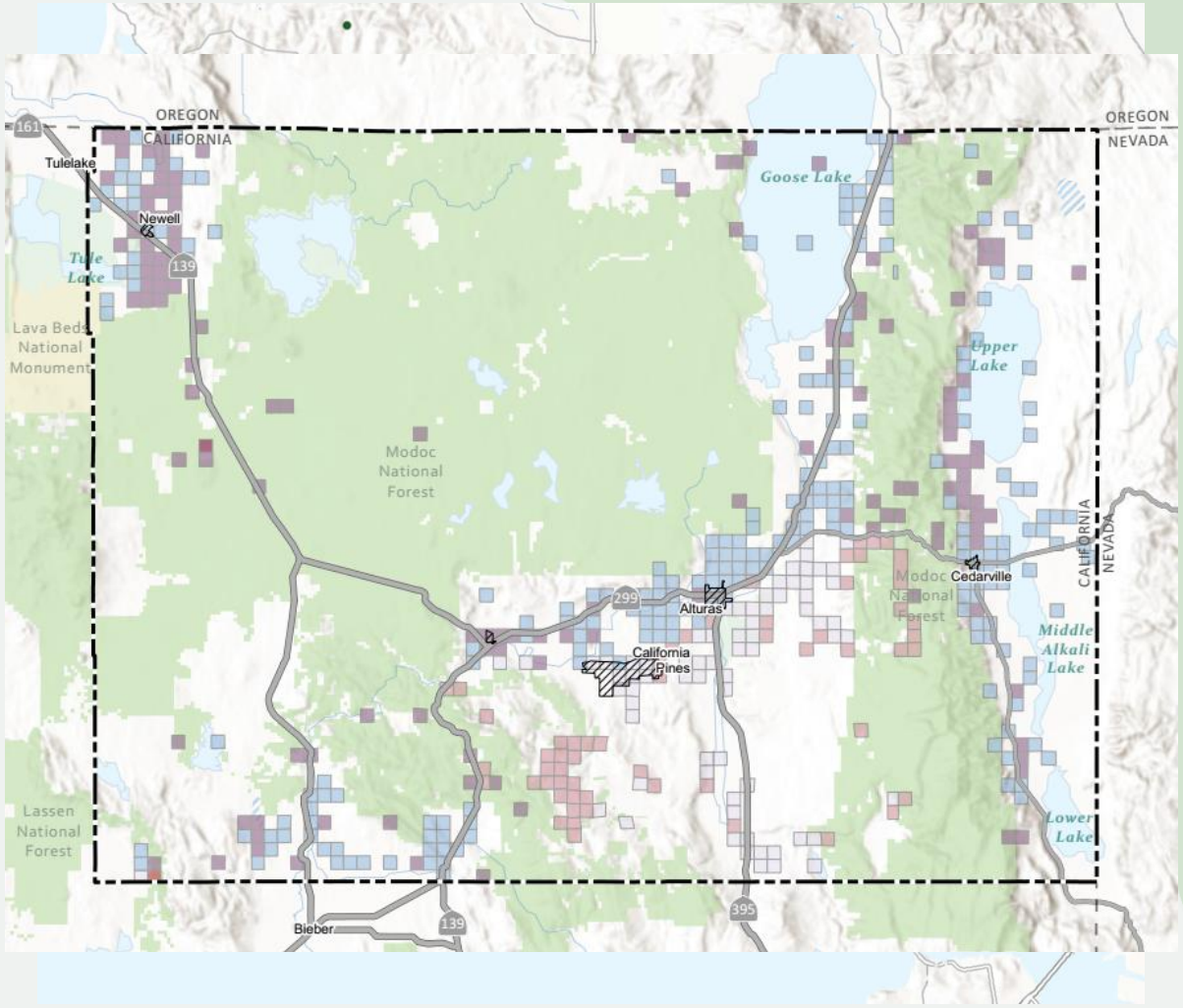




• Northeast California • Semi-arid High Desert • 3,944 square miles	• Bay Area Peninsula • Mediterranean Climate • 520 square miles
• Rural, dispersed communities • ~8,500 population	• Suburban/urban • ~258,000 population
• Small systems and individual wells • Groundwater supplemented with Pit River water system	• Multiple water districts and utilities • Local surface water reservoirs and imported supply; limited groundwater

Assessing Drought Risk and Vulnerability

- **Purpose:** Prioritize locations for future response and mitigation
- Assessed impacts of drought and water shortage on domestic well users
- Developed relative levels of vulnerability within each county
- Limited data availability
  - Used statewide and federal datasets
  - Created maps to show trends

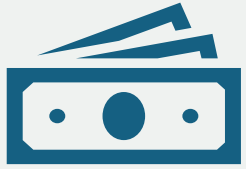


Physical and Social Vulnerability

- Susceptibility to adverse effects from a drought or water shortage



Current and Recent Conditions



Socioeconomic Status



Infrastructure Susceptibility



Household Composition



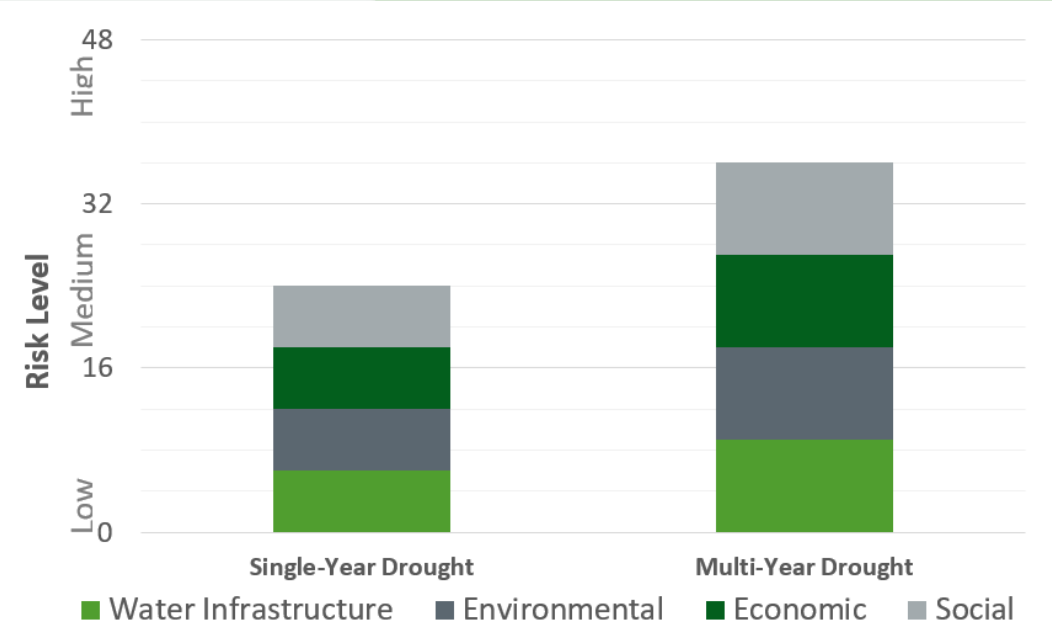
Climate Change Projections



Housing and Transportation

Risk Assessment

- Potential for damage, loss, and other impacts from a drought
- Based on event likelihood and impact
- Aligned with Local Hazard Mitigation Plans
- Considered single-year and multi-year droughts



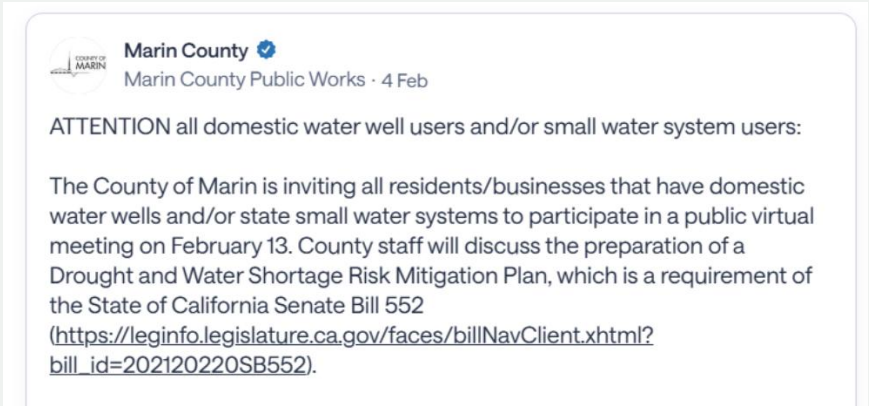
Event	Likelihood	Impact	Risk
Single-Year Drought	Likely	Negligible	**Low**
Multi-Year Drought	Likely	Limited	**Medium**
Water Shortage Event	Likely	Limited	**Medium**

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Validating Data with Local Knowledge

- **Ground truth with local input**
  - Validated mapped risk
  - Identified gaps in available data
  - Documented past drought impacts
- **Engagement and community connection**
  - Stakeholder interviews
  - Community workshops
  - Drought task force meetings
- **Community interests**
  - Local residents
  - Agricultural users
  - Water suppliers
  - Environmental groups







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Short-term Response Actions

Actions taken during an active drought or water shortage

- Build on past drought response efforts
- Align with existing response plans
- Voluntary measures focused on providing information and resources











Long-term Mitigation Strategies

Actions taken to prepare for droughts and reduce potential impacts

- Informed by community input
- Integrate with regional projects and groundwater management
- Includes highly funding-dependent infrastructure and supply projects















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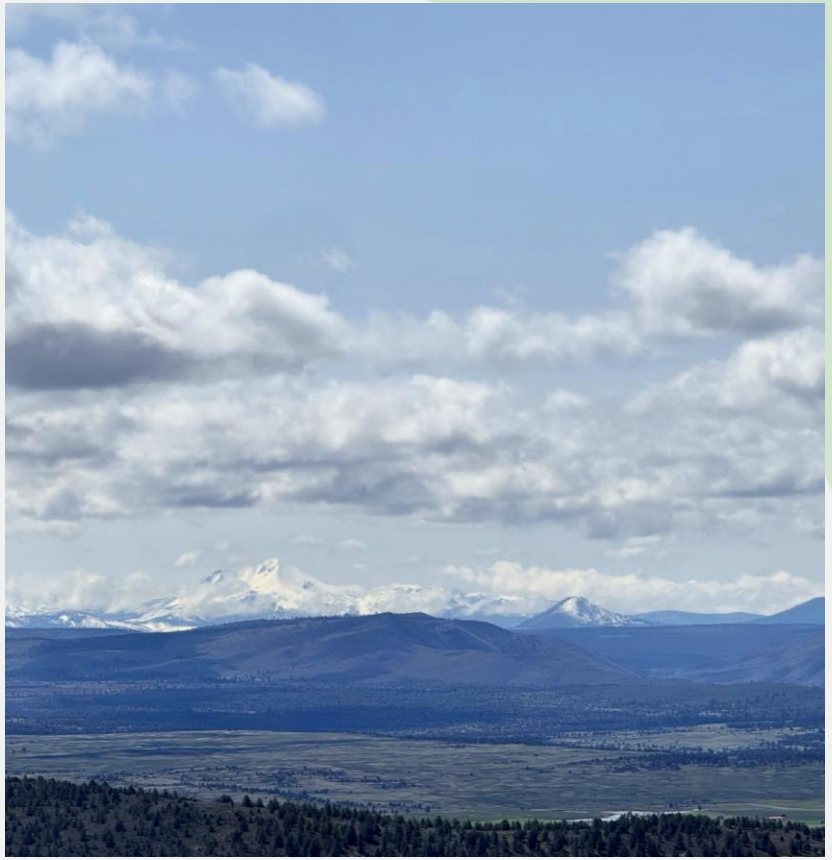
Marin County Implementation

- Community engagement and education
- Phase 1: Achievable wins
  - Enhance and tailor short-term and long-term education
  - Strengthen existing partnerships
  - Gather missing information
- Phase 2: Funding-dependent
  - Support non-potable on-site water storage
  - Improve accessibility of water hauling
  - Encourage dry well reporting
- Drought Task Force quarterly meetings



Modoc County Implementation

- Self-sufficient communities
- Focused alignment with existing county plans
- Phase 1: Achievable wins
  - Establish community drought outreach plan
  - Identify specific short-term response action triggers
- Phase 2: Funding-dependent
  - Continue work on groundwater sustainability plan implementation
  - Address data gaps on wells
- Groundwater Resource and Drought Task Force Advisory Committee



Key Lessons from Both Counties

- **Evaluation**
  - Locally identified high risk areas allow prioritization to maximize use of limited resources
  - Use available data, but identify missing pieces
- **Engagement**
  - Don’t wait for drought or water shortage to coordinate
  - Local leadership is critical
- **Implementation**
  - One-size solutions don’t work – local leadership and teams matter
  - Phase actions for flexibility aligned with funding availability

From Planning to Action

Actionable Steps

Identify Your Risk

- Map highly vulnerable systems and areas

Build Your Network

- Identify partners: regional agencies, non-profit organizations, key community members
- Develop a regional drought coordination group

Act Before the Emergency

- Pick 1 or 2 actions you can implement this year

Questions?



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