

Madera County *Drought and Water Shortage Risk Analysis and Response Plan*

Pursuant to Senate Bill 552



Photo credit: Cristina Anne Costello, Unsplash



A quick summary of SB 552 Plan effort...

- Last meeting (August 1), we introduced plan and kicked off stakeholder engagement efforts
- SB 552 requires Counties to plan for drought proactively:
 - Assess drought risk to Rural Communities
 - Plan response actions
 - Focus is on State Small Water Systems (14 or fewer connections) and domestic wells
- Plan be completed over remainder of Autumn 2022, Public Draft expected in December

Drought Workgroup Engagement

Risks and Tracking Measures (Fri September 16, 10:00 am) (we are here)

- What factors contribute most to rural communities' shortage risk?
- What tracking protocols would most help the County be proactive in responding to drought?

Response Strategies (Fri October 19, 10:00 am)

- What are the most successful drought response strategies already in use?
- What are current barriers to a successful drought response that this plan could help remove in future?

Risks and Tracking Measures

Big picture – we want to understand how best to measure the problem of drought, how to catch the early warning signs



DROUGHT AND WATER SHORTAGE RISK INDICATORS

SELF-SUPPLIED COMMUNITIES

Component 1: <i>Climate Change</i>	Component 2: <i>Exposure to Current Conditions and Events</i>	Component 3: <i>Physical Vulnerability</i>	Component 4: <i>Social Vulnerability</i>	Component 5: <i>Water Shortage Record</i>
<ul style="list-style-type: none">• RC1a – Temperature Shift• RC1b – Wildfire Risk• RC1c – Saline Intrusion Risk	<ul style="list-style-type: none">• RC2a – Drought Early Warning 2019• RC2b – Wildfire Risk• RC2c – Fractured Rock Area• RC2d – Subsidence Presence• RC2e – Salt Presence (basin)• RC2f – Overdrafted Basin• RC2g – Declining Water Levels• RC2h – Population Growth• RC2i – Water Quality Index• RC2j – Surrounding Irrigated Agriculture	<ul style="list-style-type: none">• RC3a – Well Depth Flag• RC3b – Well Depth Proportion	<p>(Aggregated as RC4)</p> <ul style="list-style-type: none">• Per capita income• Median household income• % below poverty level• % 65 and over• \$ under 17• % under 5• % mobile households• % households with no vehicles• % over 25, no HS diploma• % single parent• % civilian unemployed• % in group quarters• % Renters	<ul style="list-style-type: none">• RC5a – Reported Household Outages on Domestic Well• RC5b – Reported Household Outages on Private Well

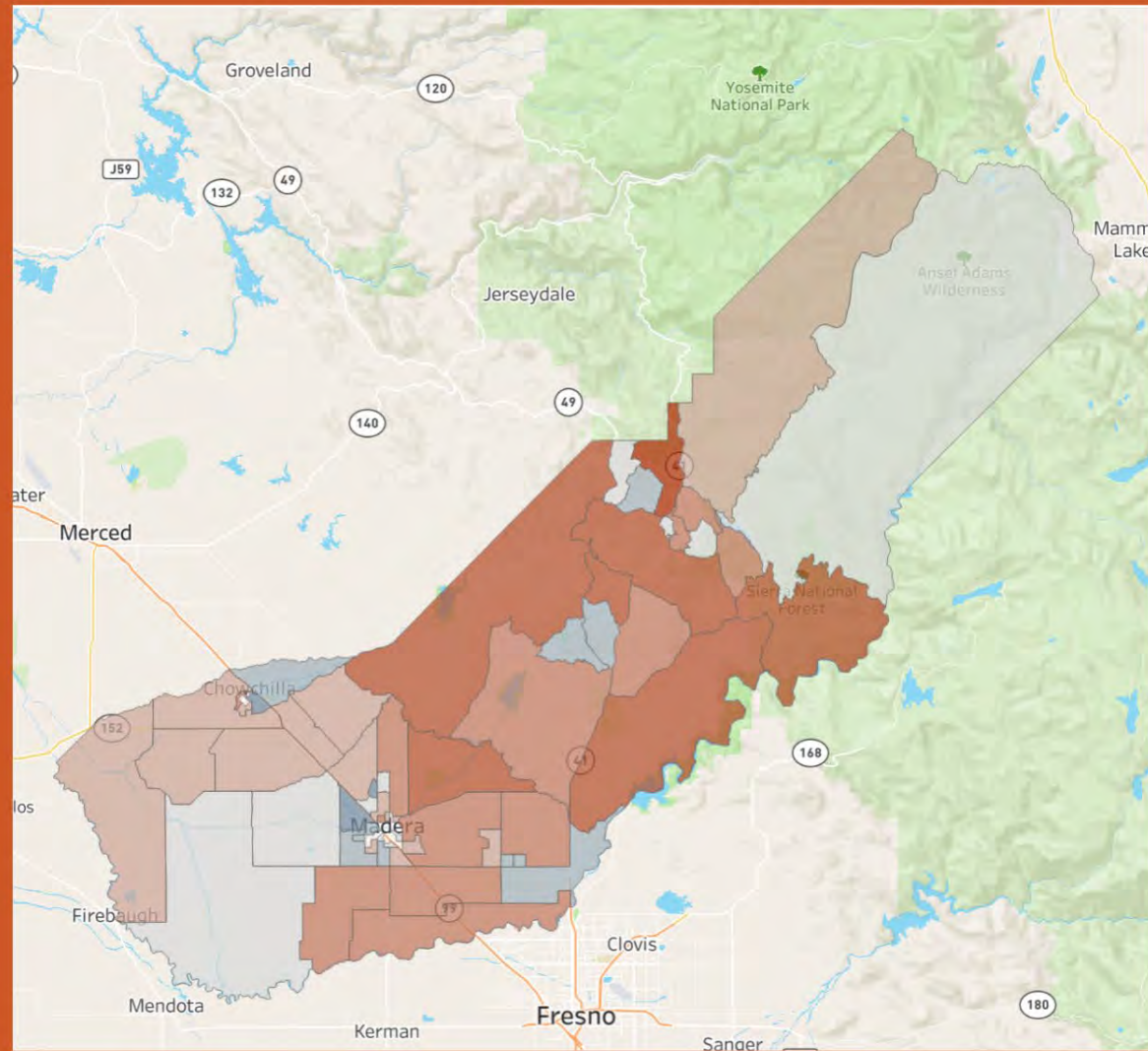
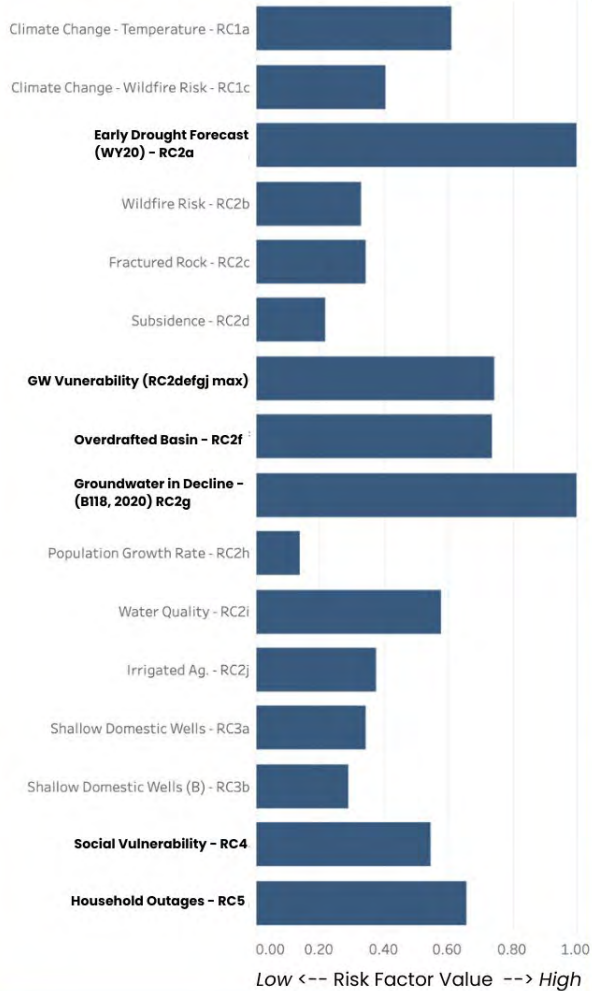
"RC" = Risk Component



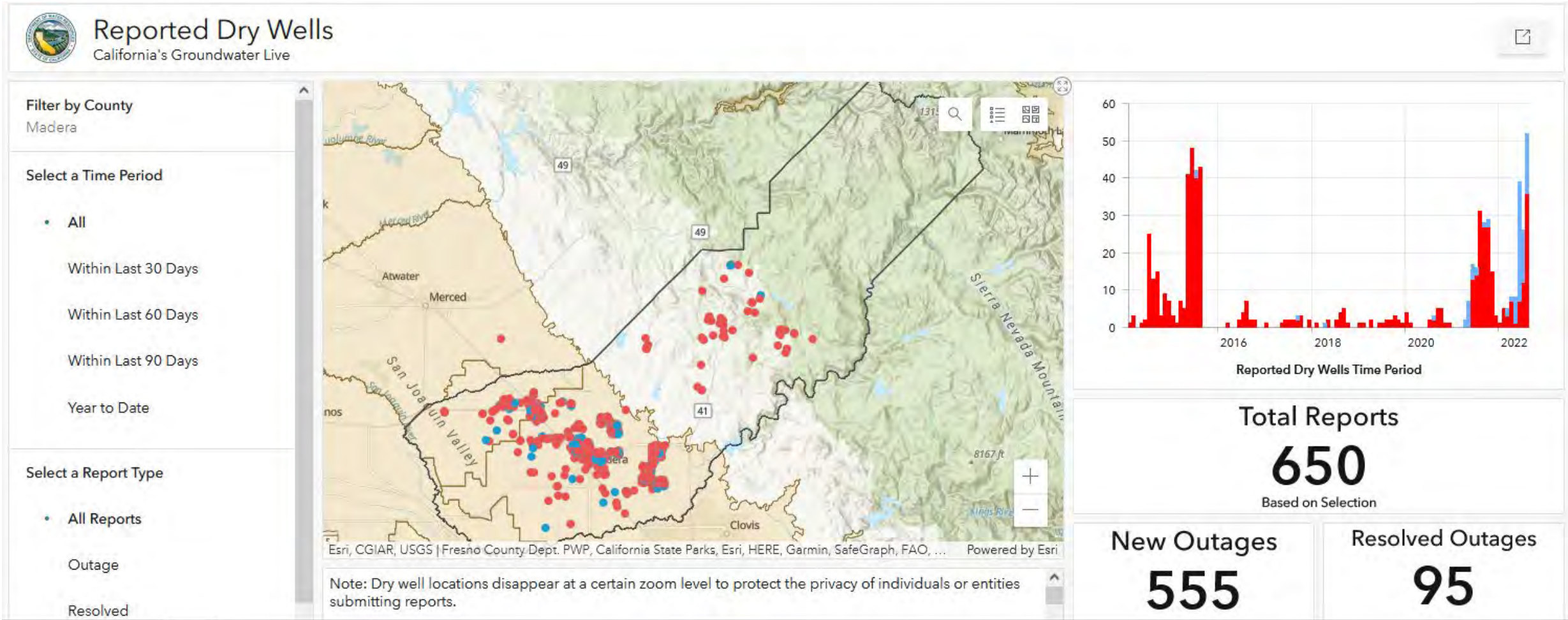
Drought & Water Shortage Risk Explorer Tool

MADERA COUNTY Self-Supplied Communities

RISK PROFILE

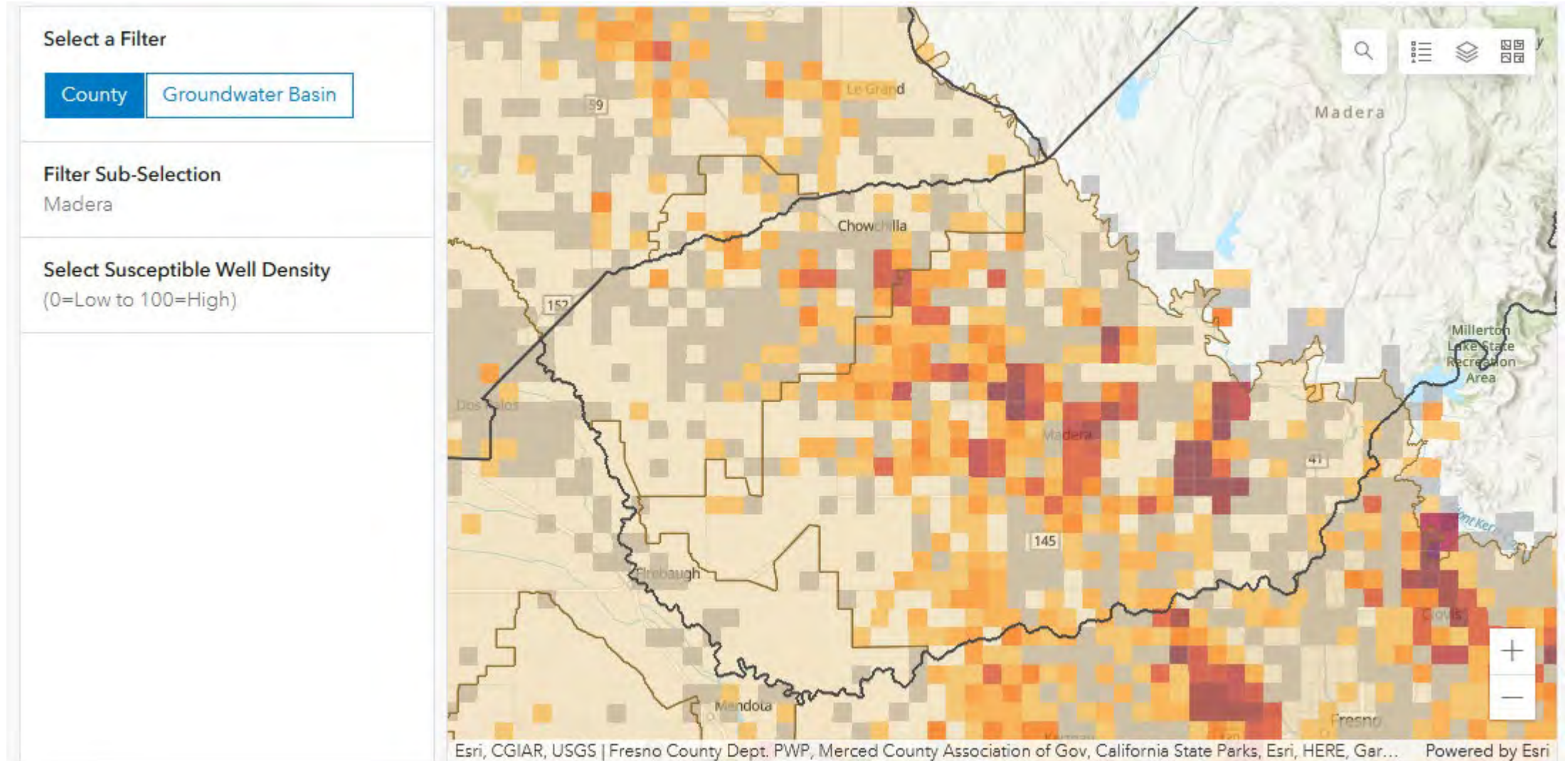


Groundwater Live dry well map



Accessed at: <https://sgma.water.ca.gov/CalGWLIVE/#groundwater>

Dry well susceptibility



Risk Factors in the foothills

- Fractured Rock groundwater users
 - SGMA does not apply
 - Groundwater levels are less closely monitored
 - Geology is less well understood
 - But very high levels of domestic well reliance
- What are the warning signs for these areas?

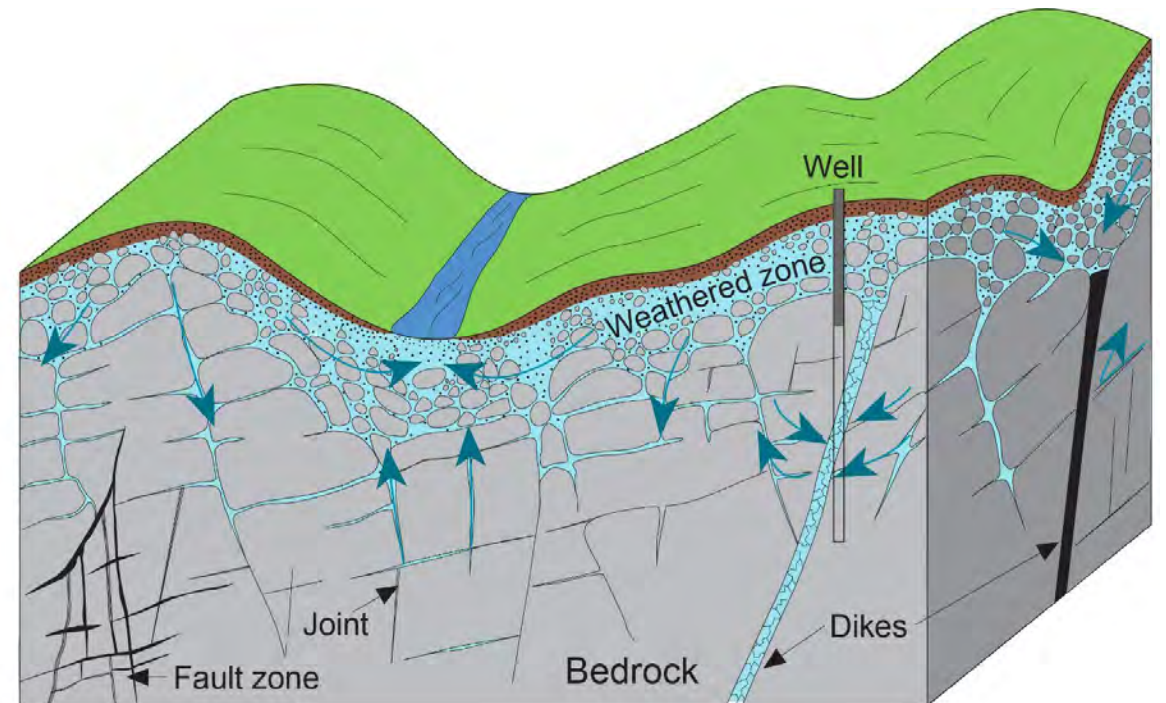


Image credit: USGS

Social vulnerability factors

Communities vary in their ability to deal with an outage. Factors may include:

- Per capita income
- Number of renters vs property owners
- English fluency
- Age
- Education
- Employment rate



Image credit: LA Times

Big picture – what were the key lessons learned
from last drought?

What warning signs were missed at the time?

Next Steps....

Response Strategies (Fri October 19, 10:00 am)

- What are the most successful drought response strategies already in use?
- What are current barriers to a successful drought response that this plan could help remove in future?

Thank you!

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