

Drought Resilience Plan

for Mendocino County

Second Public Workshop

Fort Bragg, February 21st, 2025

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Supervising Water Resources Engineer
EKI Environment and Water

Quick notes...

1. This presentation will be recorded.

2. Feel free to write your questions on the Zoom chat (online) or in the Comments form (in -person) we will collect those and go back to them at the Q&A session.

Agenda

1. Introduction: Droughts in Mendocino County
2. Senate Bill 552
3. Drought Task Force
4. Drought Resilience Plan
 - a. Data Collection
 - b. Risk Assessment
 - c. Management Actions
 - Drought Response: Triggers, Stages, Actions
 - d. Plan Implementation
5. Review and Public Commenting Process
6. Q&A Session
7. Next Steps and Follow -up Meetings

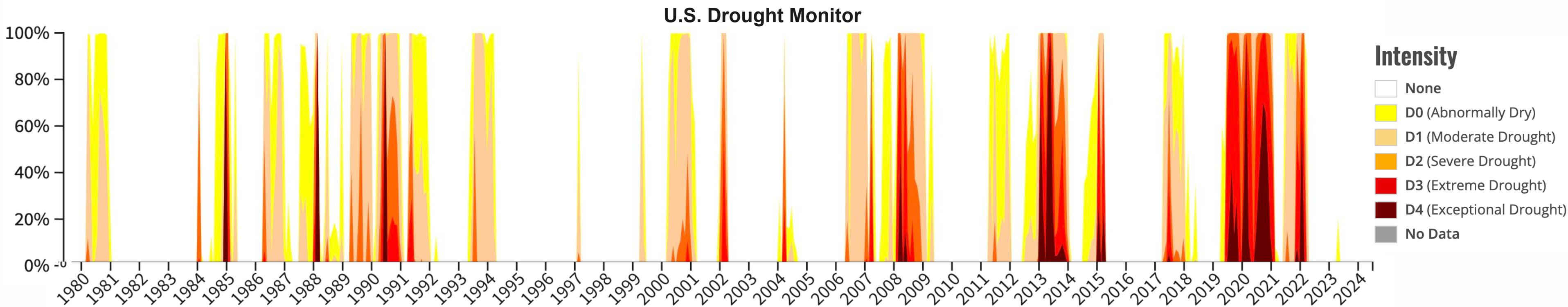
Droughts in Mendocino

Drought is the lack of precipitation over an extended period. It is a normal, recurrent feature of climate that occurs in all climate zones.

Droughts in Mendocino

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In Mendocino County, droughts on average last 3 years. In the past 45 years, droughts have increase in intensity and frequency



Droughts in Mendocino

**LATEST
NEWS**

Mendocino County was one of the first counties to be declared in a drought emergency in the 2020 -2022 drought.



MendoFever April 22, 2021

Senate Bill 552



Senate Bill 552 requires state and local governments to share responsibility in planning and responding to water shortage events, particularly for state small water systems and communities supplied by domestic wells.

Requirements



(1) Convene a standing Drought Task Force

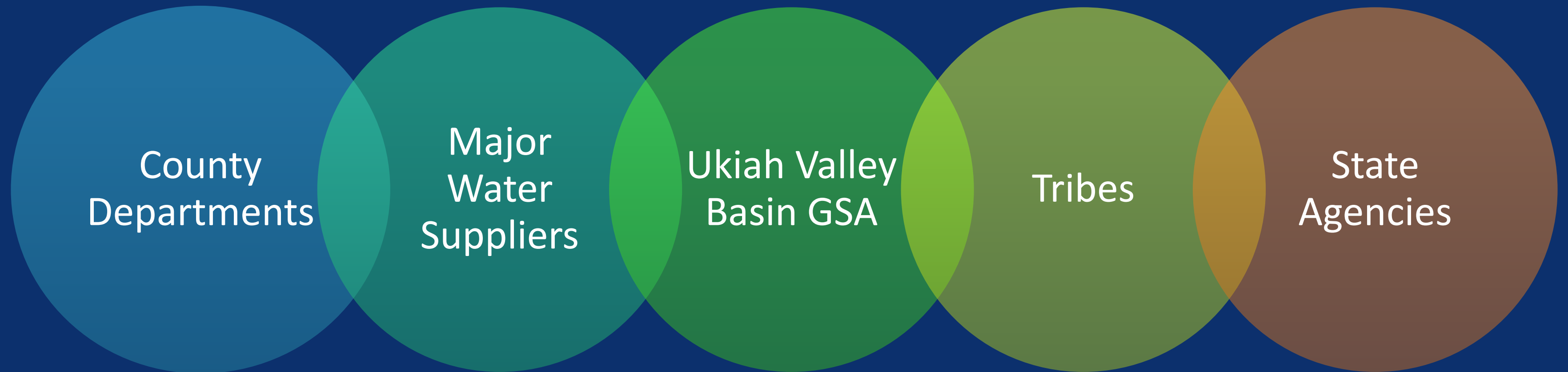


(2) Develop a Drought Resilience Plan

Senate Bill 552

Mendocino County Drought Task Force

Comprised of core members that are representatives of organizations and agencies legally responsible for small water systems



Senate Bill 552

Drought Resilience Plan

A plan demonstrating the potential drought and water shortage risk and proposing interim and long-term solutions for state small water systems and domestic wells within the County.



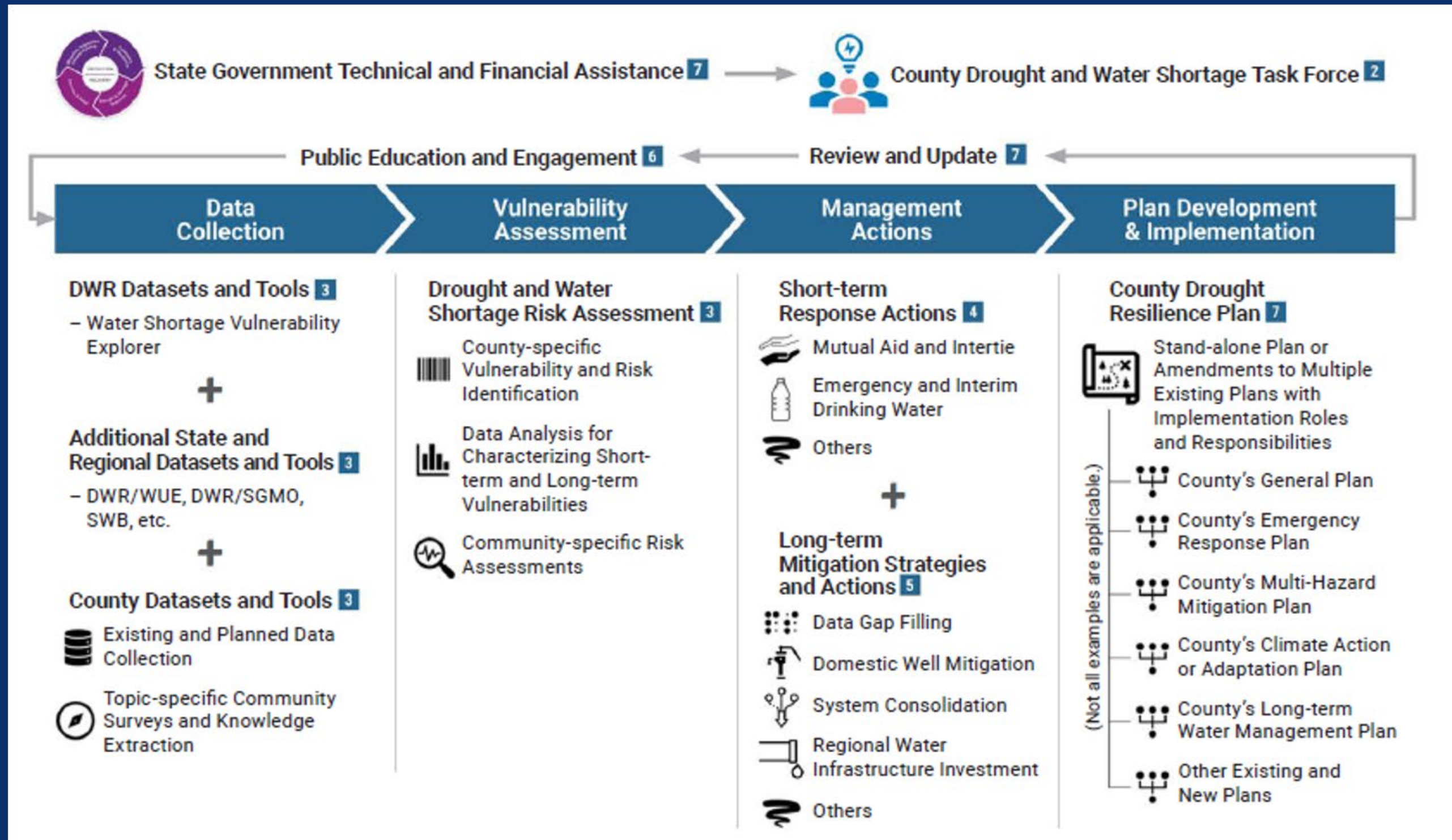
Establish a County
Drought Task Force
and develop DRP

Consultant group
developing the DRP

UCCE provides outreach
and educational efforts

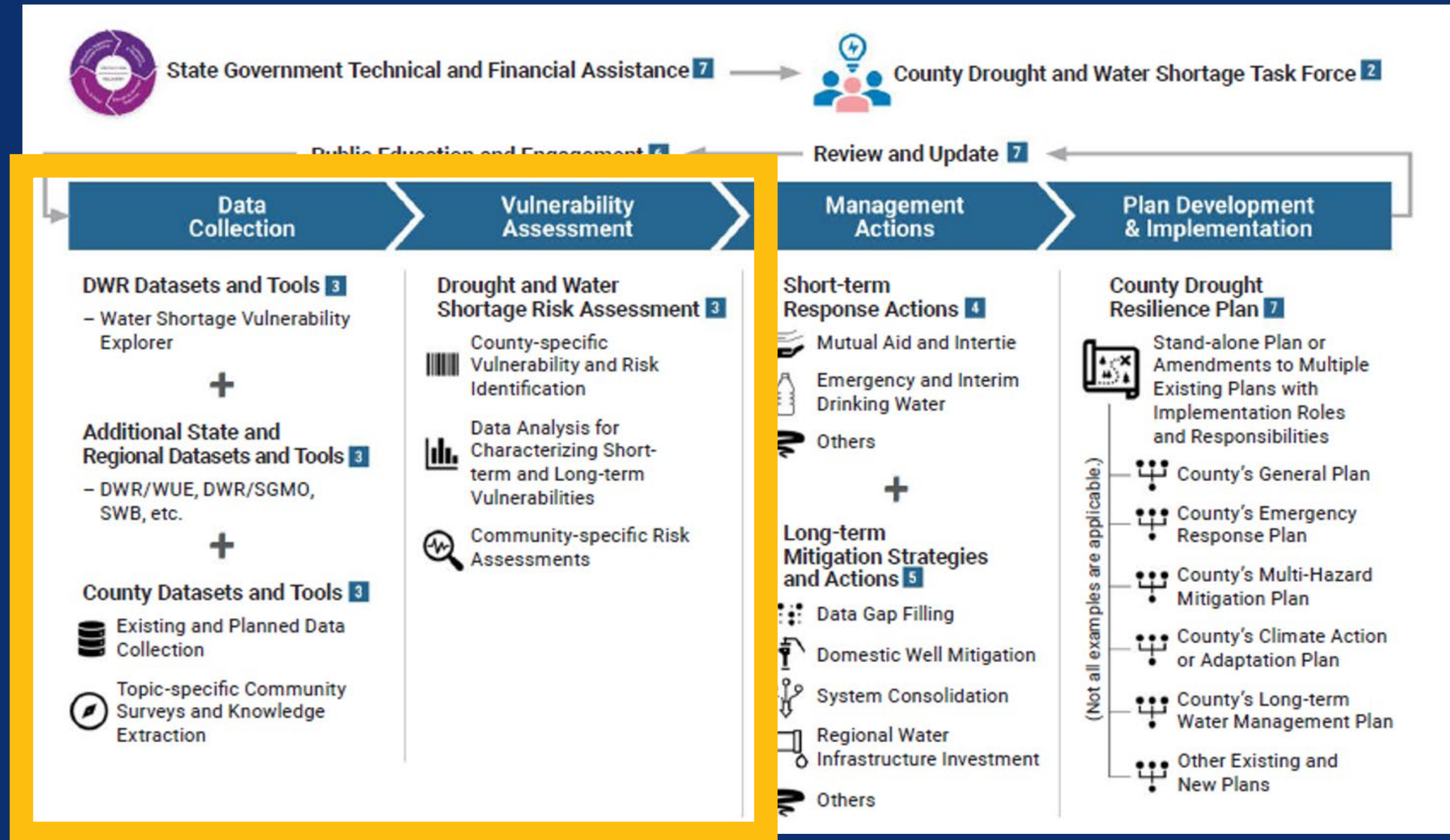
Senate Bill 552

DRP: Development Framework



Senate Bill 552

DRP: Development Framework



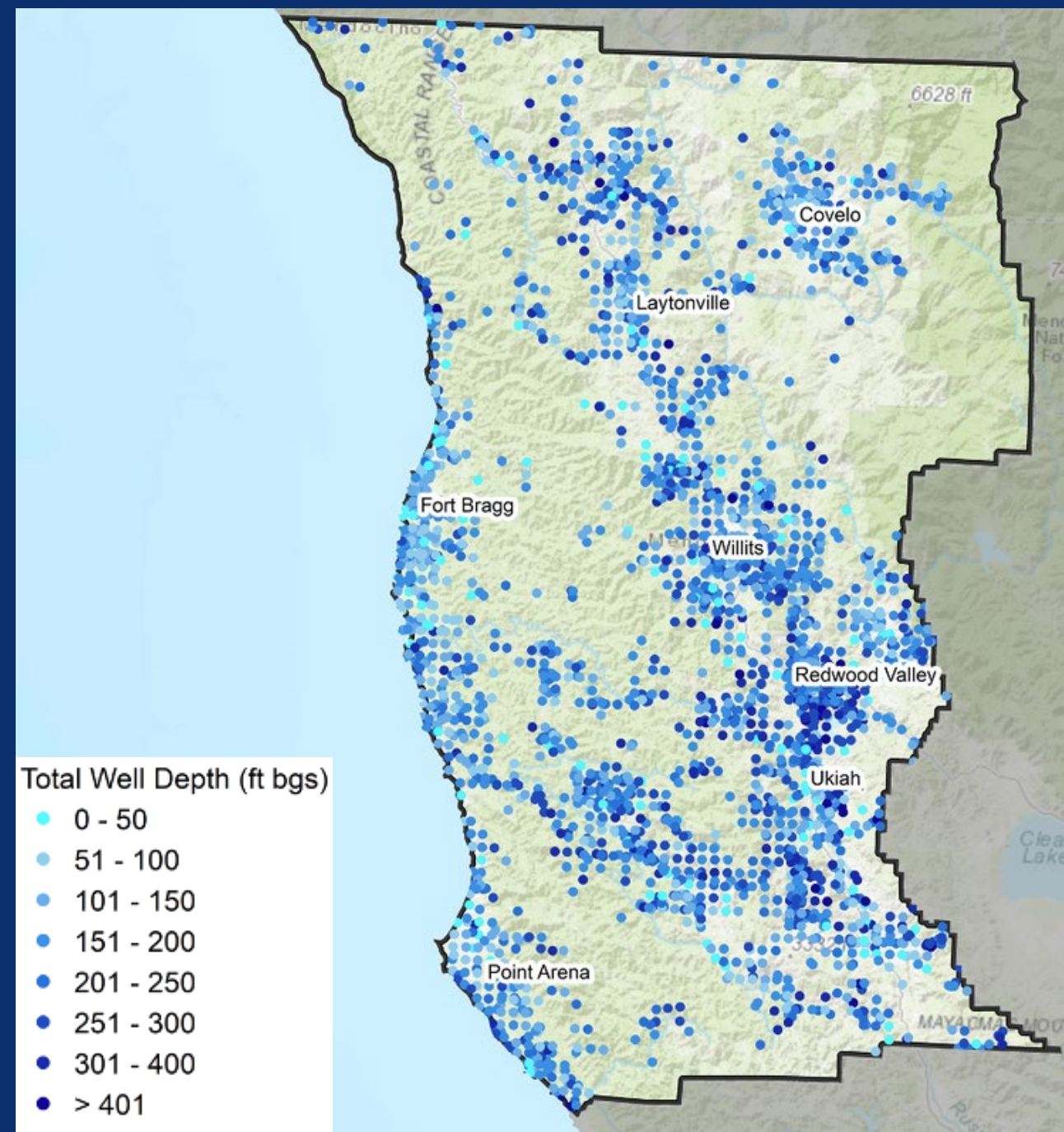
Workshop #1



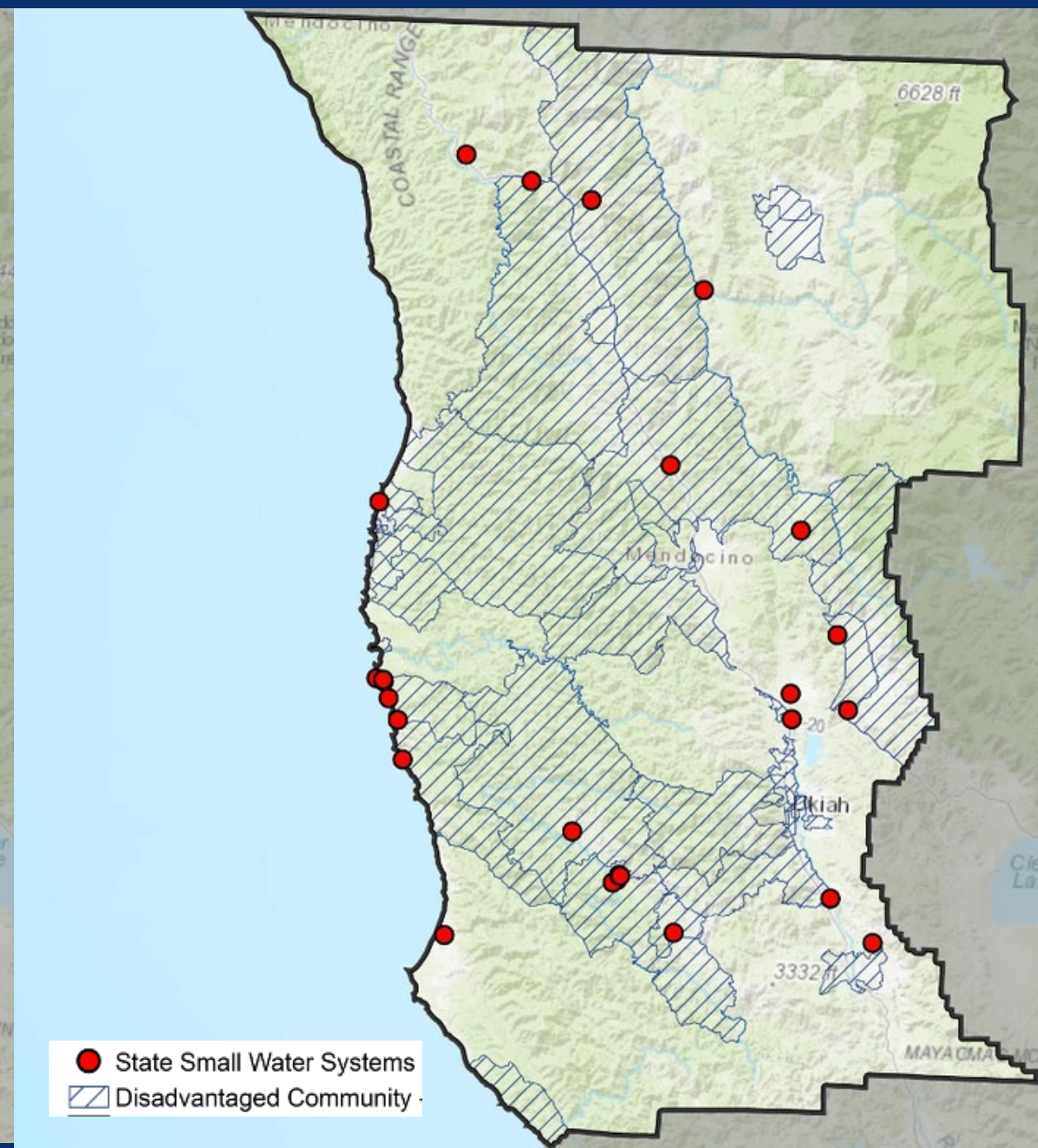
Drought Resilience Plan

1) Data Collection

Domestic wells: 7,972



State small water systems: 27



Drought Resilience Plan

2) Vulnerability Assessment

Physical Vulnerabilities

Social Vulnerabilities

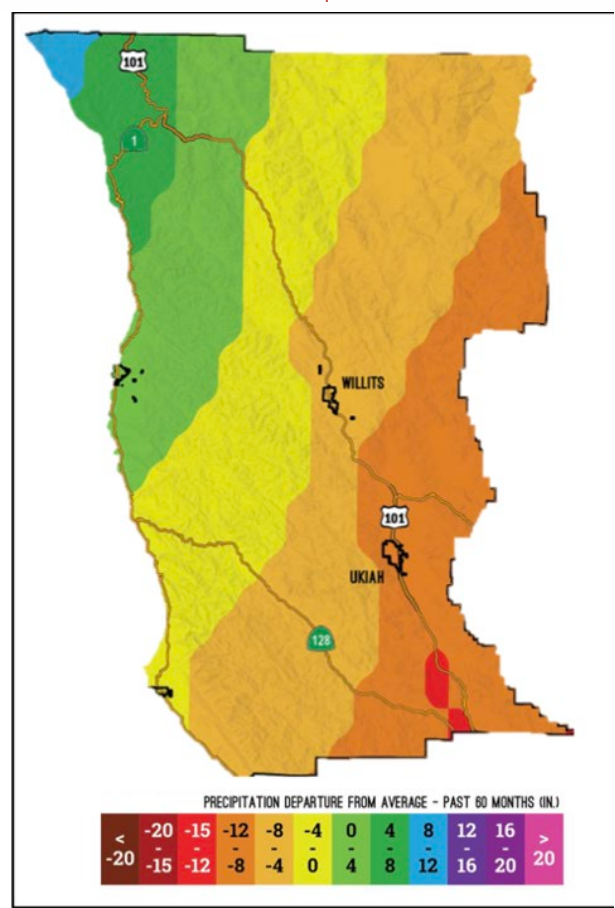


Figure 6. Departure from Average Precipitation

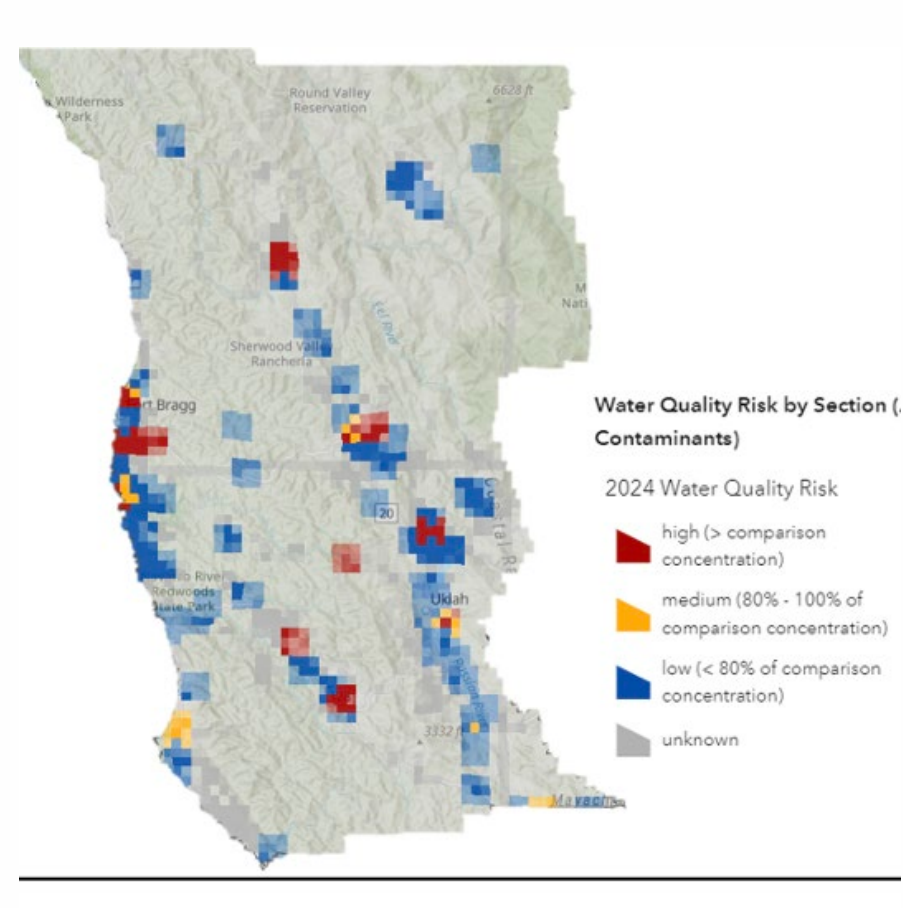


Figure 9. Water Quality Risk by Section

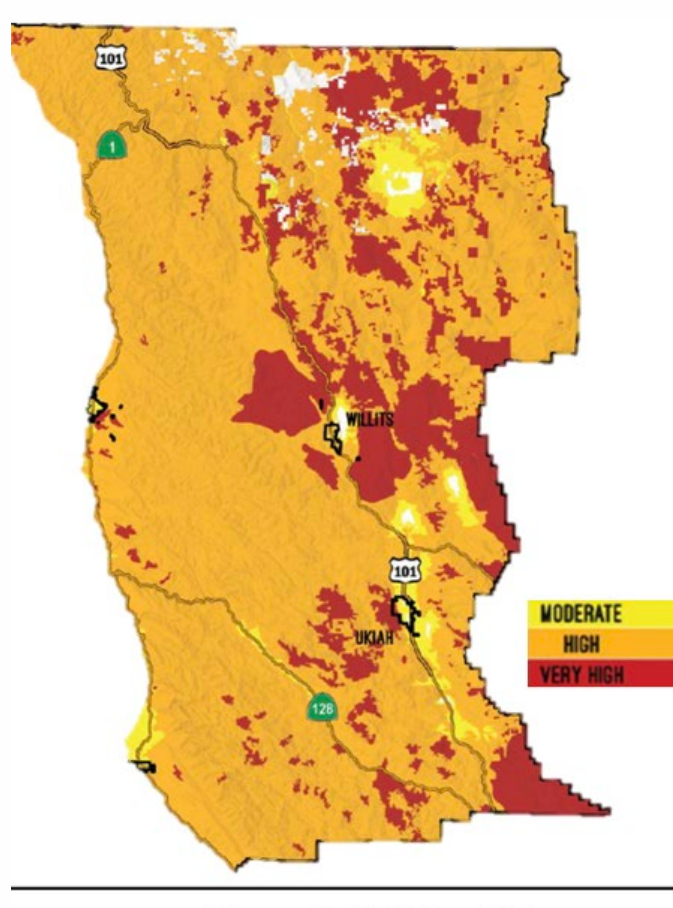


Figure 8. Wildfire Risk

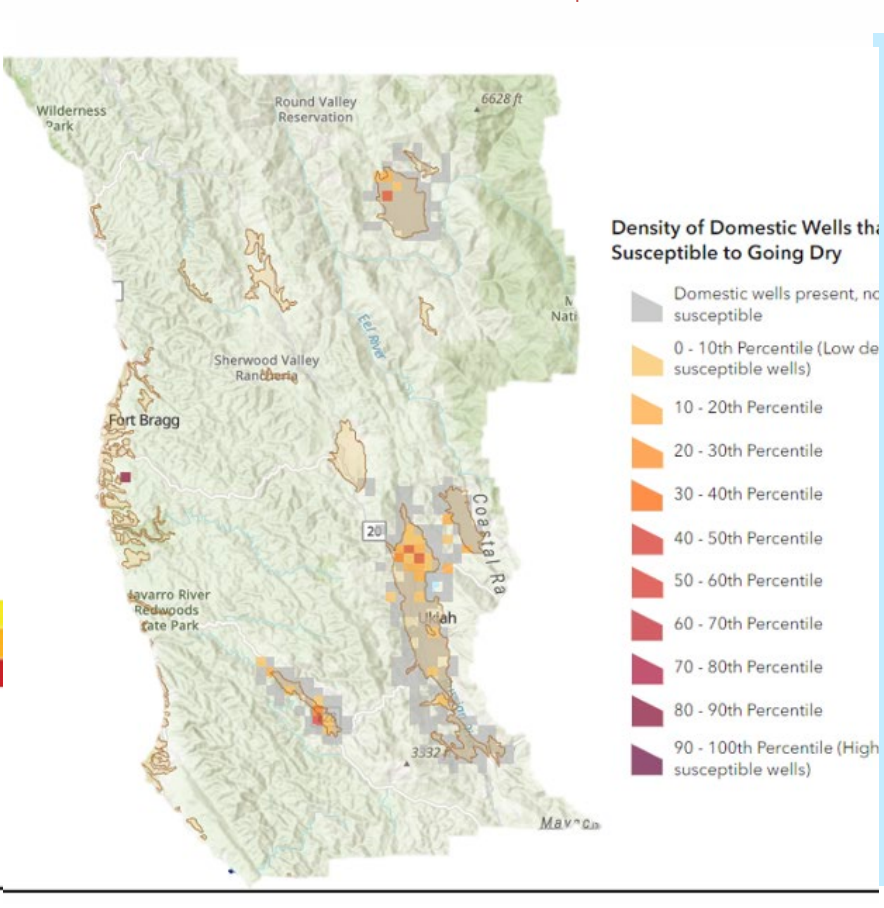


Figure 10. Dry Well Susceptibility

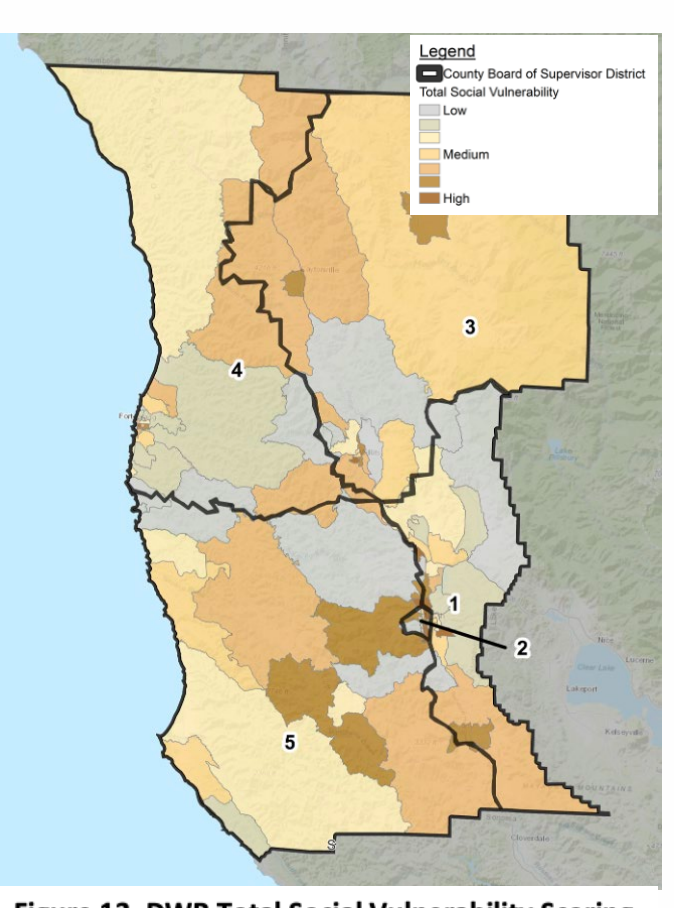
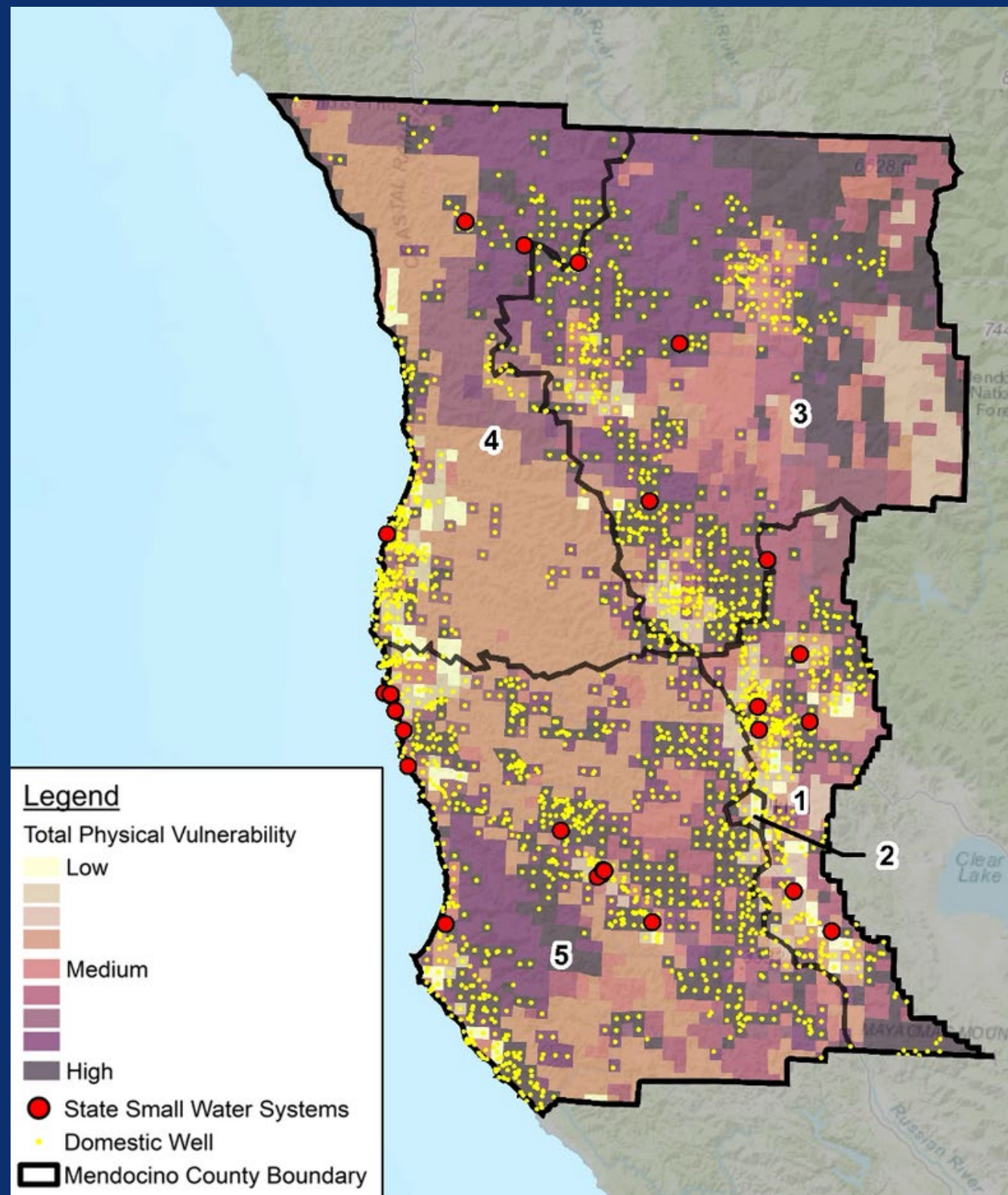


Figure 13. DWR Total Social Vulnerability Scoring

Drought Resilience Plan

2) Vulnerability Assessment



In Mendocino a total of 84% of domestic wells and 93% of state small water systems are at high risk of being impacted by drought and water shortages.

Drought Resilience Plan

2) Vulnerability Assessment

In Mendocino a total of 84% of domestic wells and 93% of state small water systems are at high risk of being impacted by drought and water shortages.

Domestic wells: 7,972

With 84% at high risk, approximately 6,696 wells could face water shortages during a drought.

State small water systems: 27

With 93% at high risk, 25 out of 27 State Small Water Systems show high vulnerability to drought.

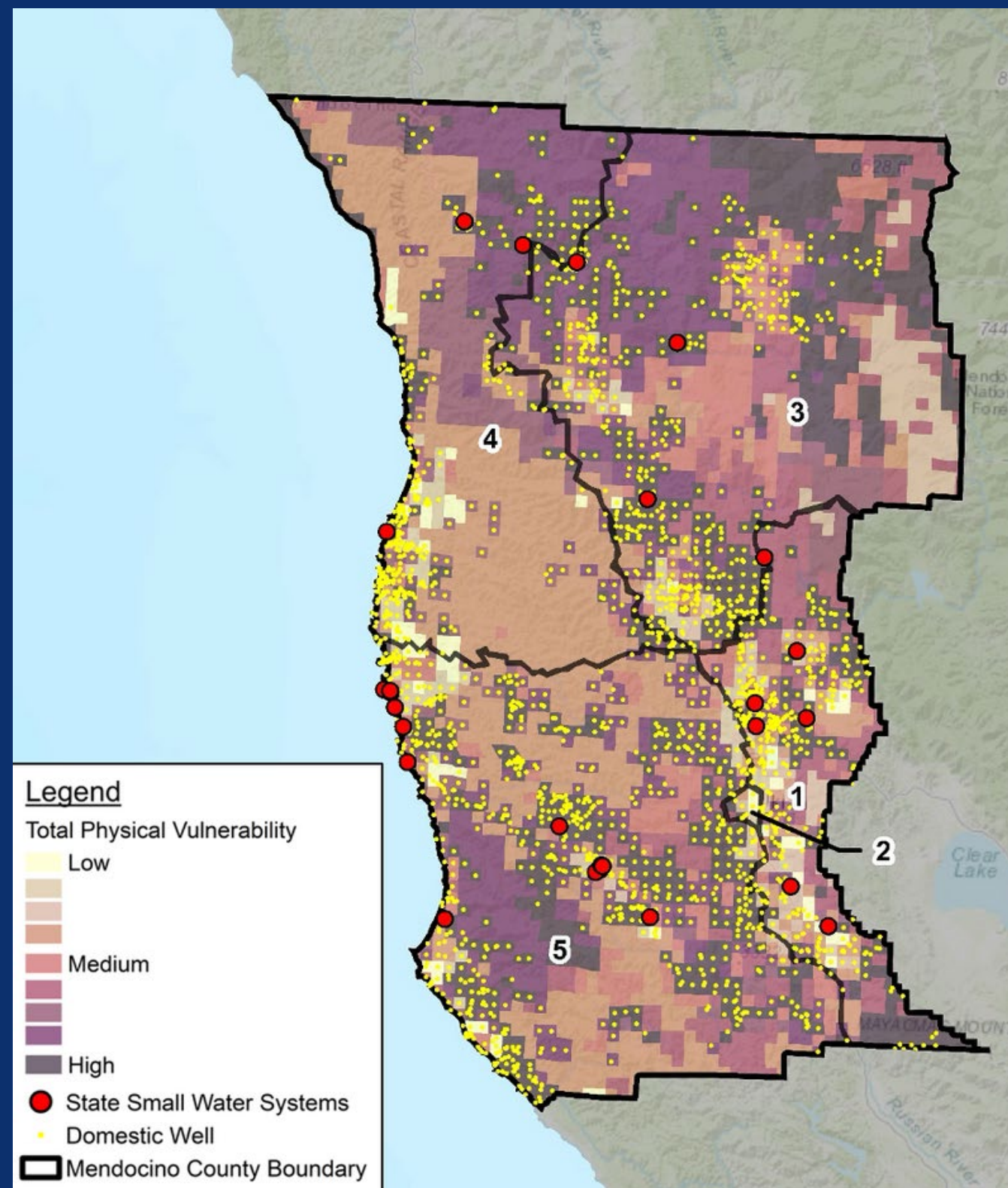
At-risk Systems by BoS District

BoS D1: 6 systems

BoS D3: 4 systems

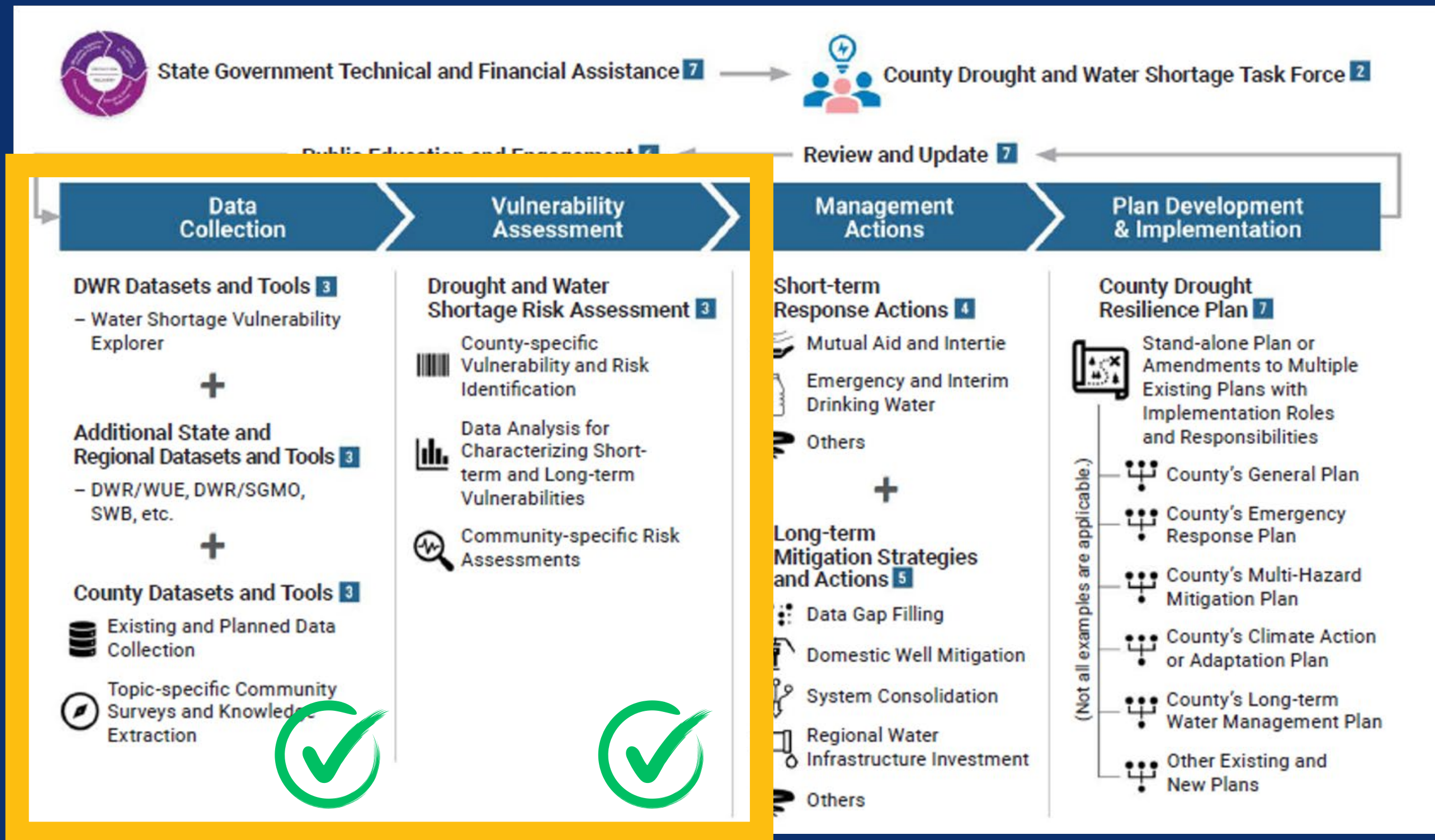
BoS D4: 3 systems

BoS D5: 12 systems



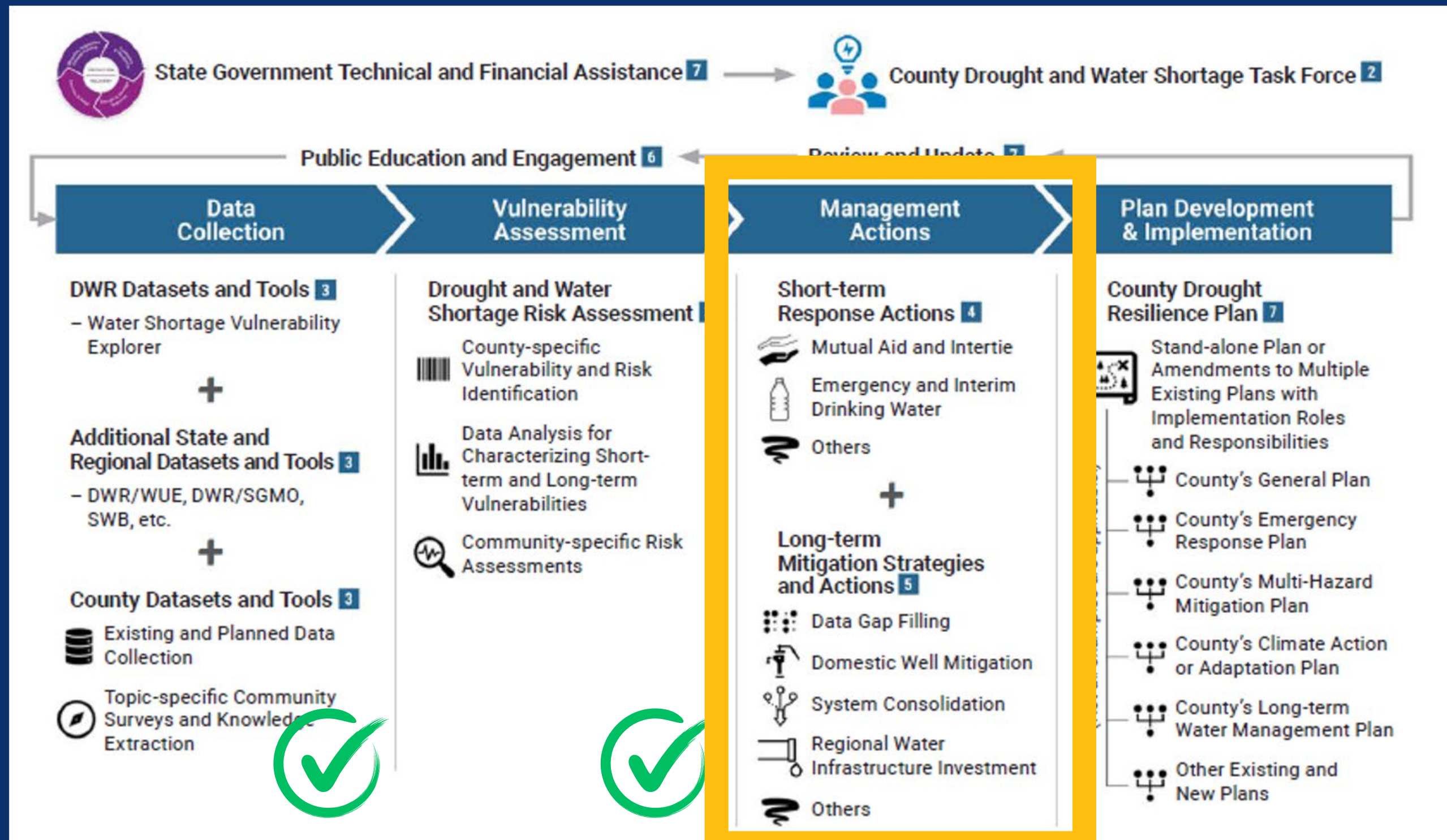
Senate Bill 552

DRP: Development Framework



Senate Bill 552

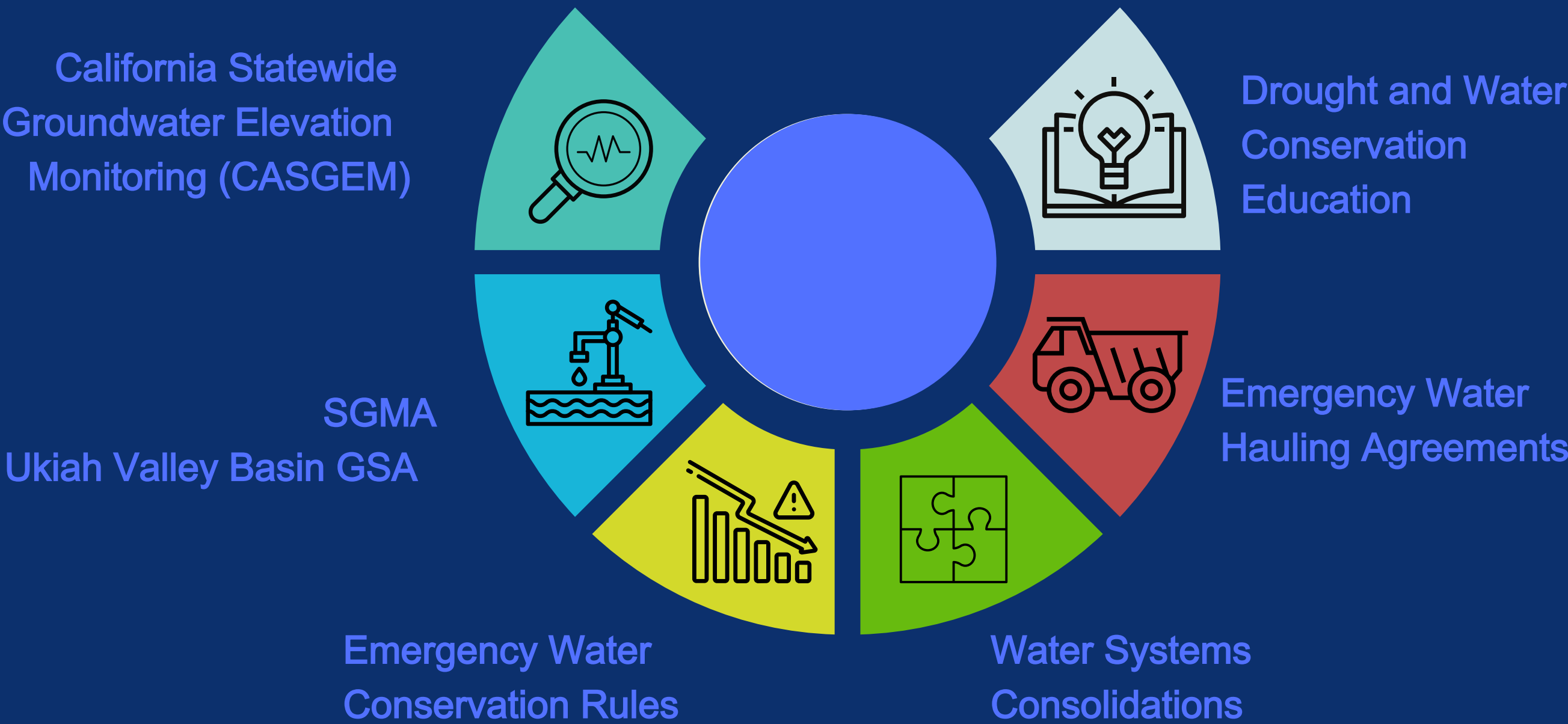
DRP: Development Framework



Drought Resilience Plan

3) Management Actions

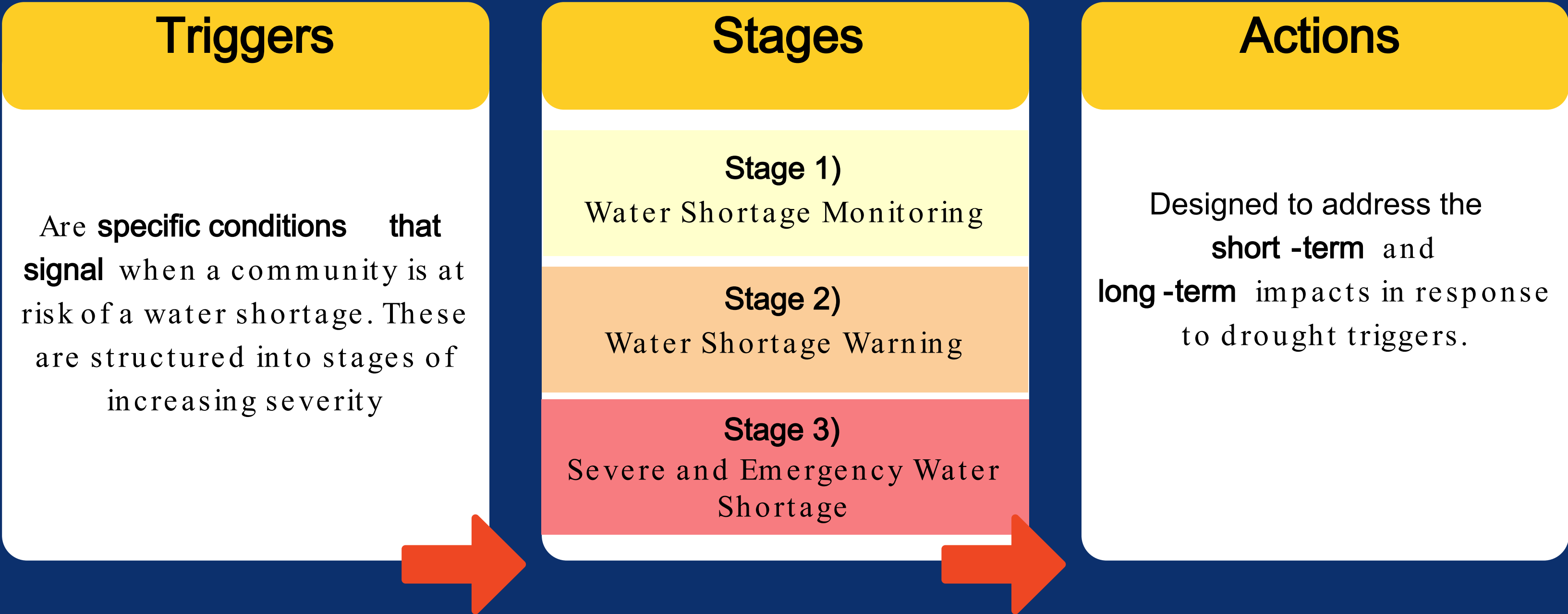
Previous Response Actions



Drought Resilience Plan

3) Management Actions

Drought Response



Drought Resilience Plan

3) Management Actions

Drought Response

Triggers

Are **specific conditions** that **signal** when a community is at risk of a water shortage. These are structured into stages of increasing severity

Stages

Stage 1)

Water Shortage Monitoring

Stage 2)

Water Shortage Warning

Stage 3)

Severe and Emergency Water Shortage

Actions

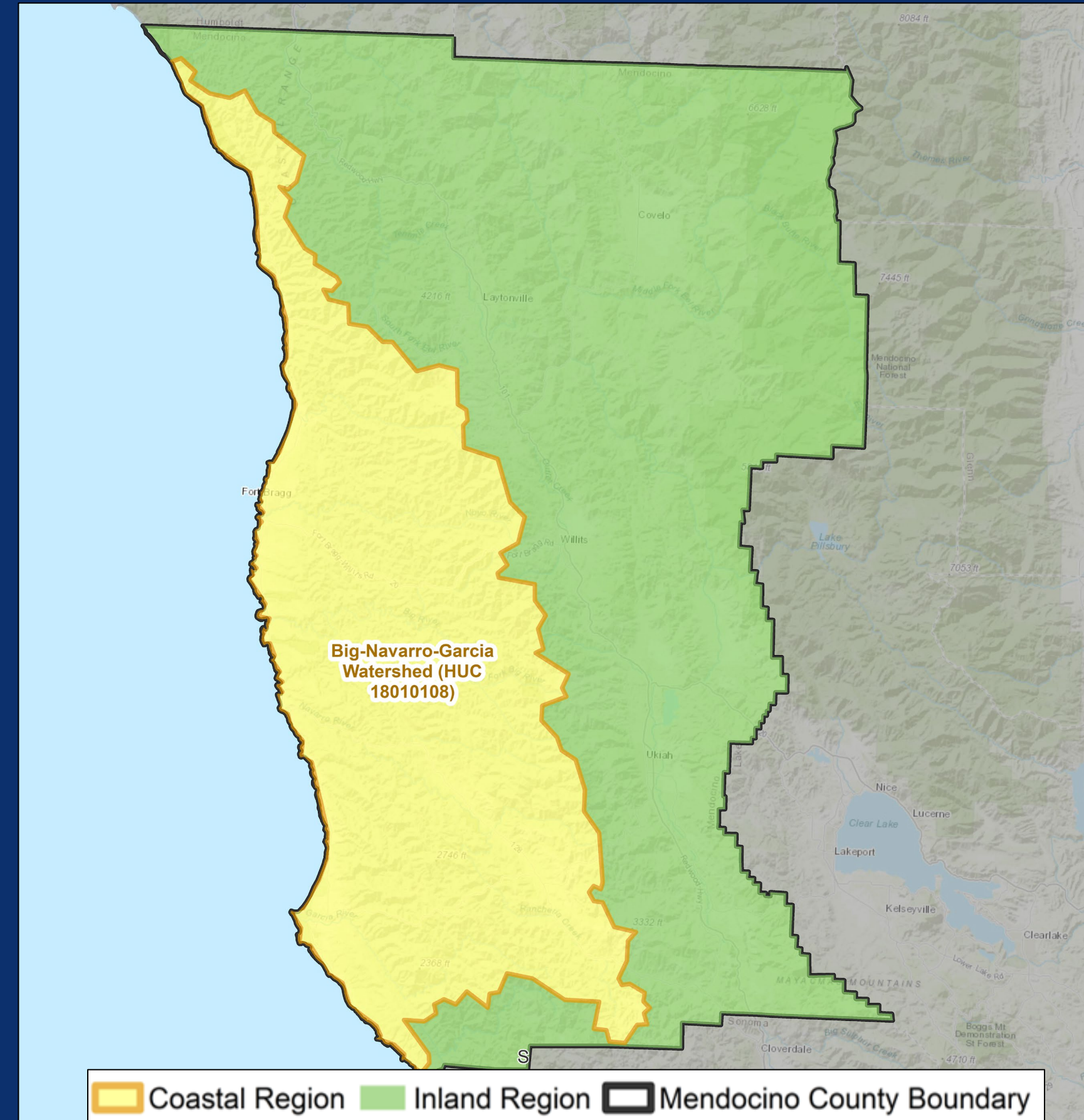
Designed to address the **short-term** and **long-term** impacts in response to drought triggers.



Drought Response Triggers

Drought triggers are geographic focus:

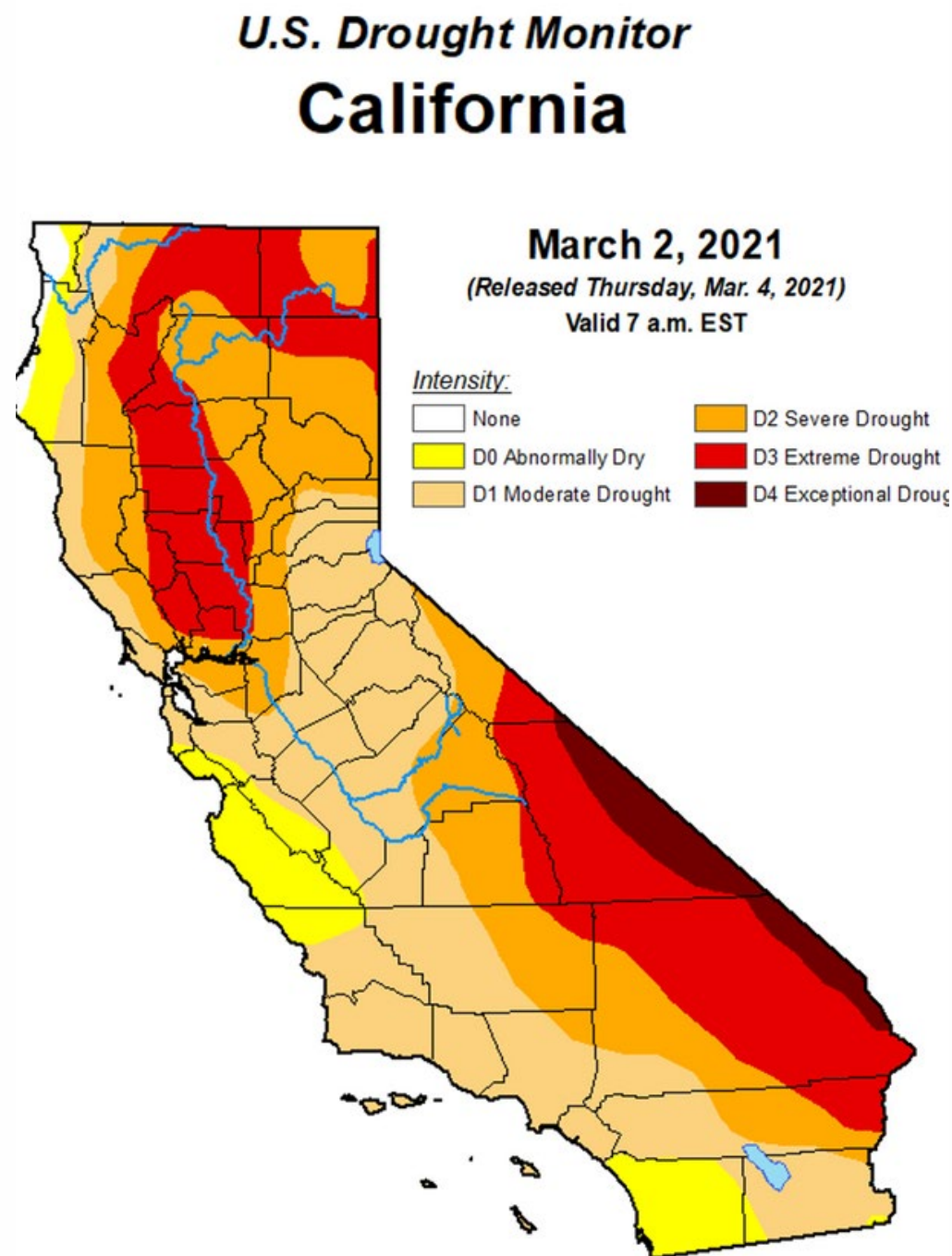
- 1) County Wide
- 2) Regional: Coastal and Inland



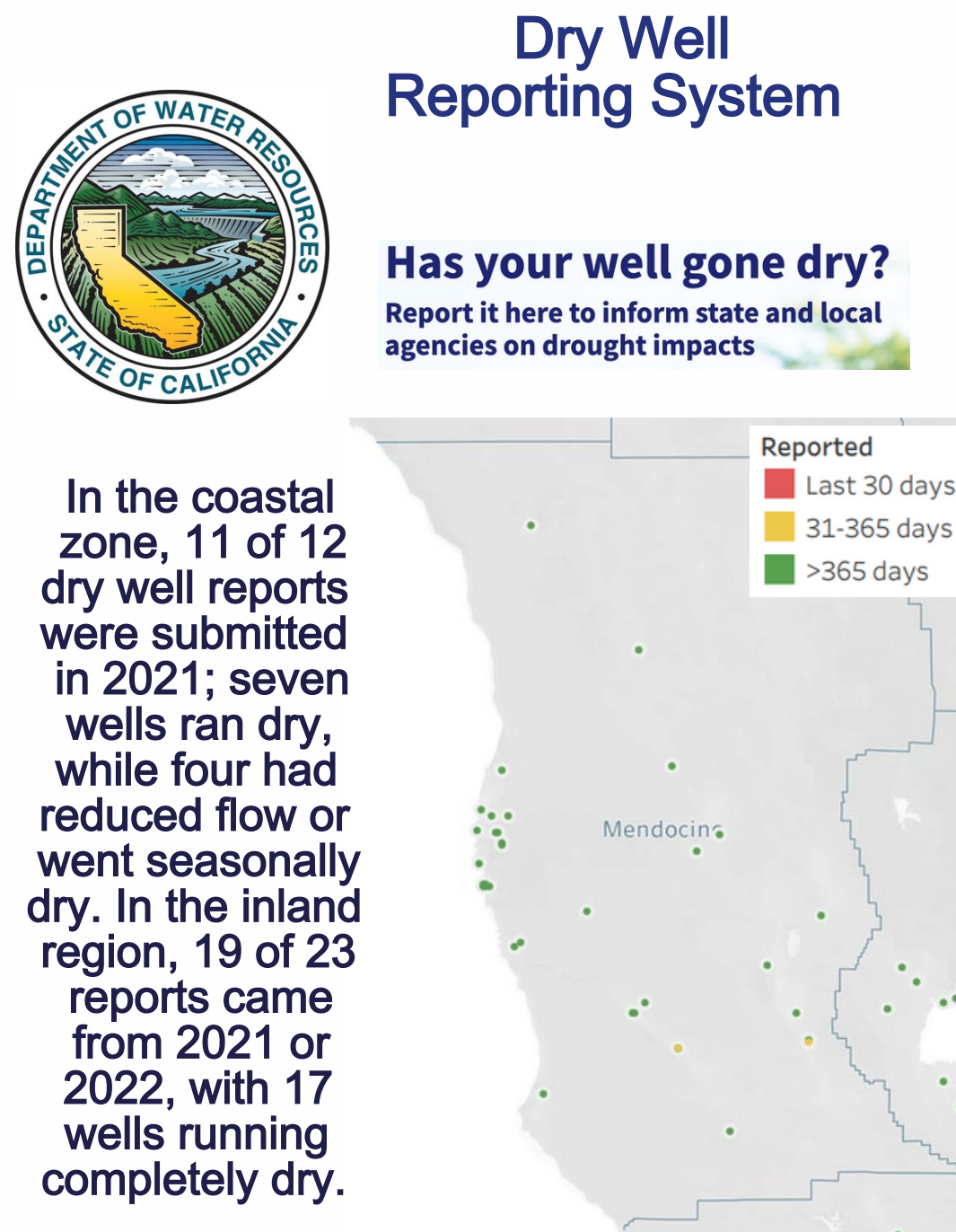


Drought Response Triggers

County Wide U.S. Drought Monitor

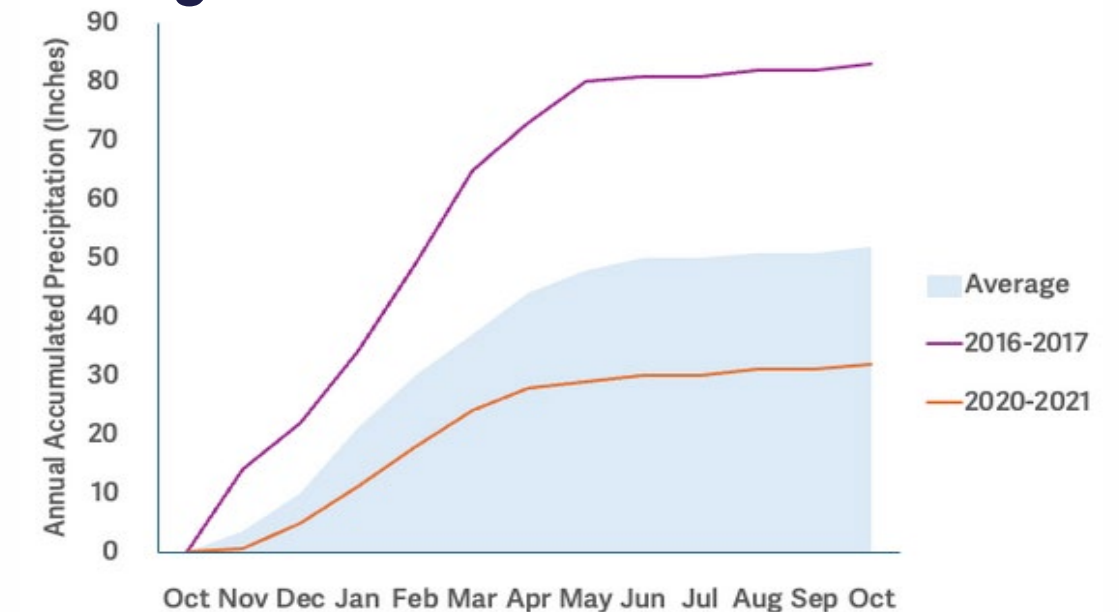


Regional Dry Well Reports

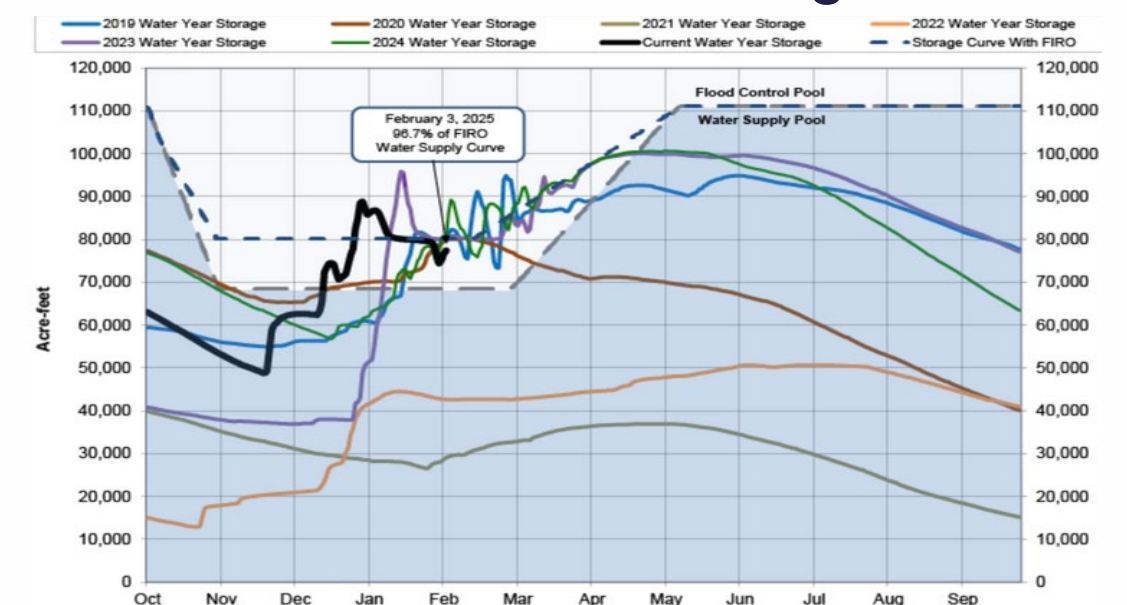


Regional Water -Year

Coastal Indicator : Accumulated Rain for Big - Navarro - Garcia Watershed



Inland Indicator: Lake Mendocino Storage



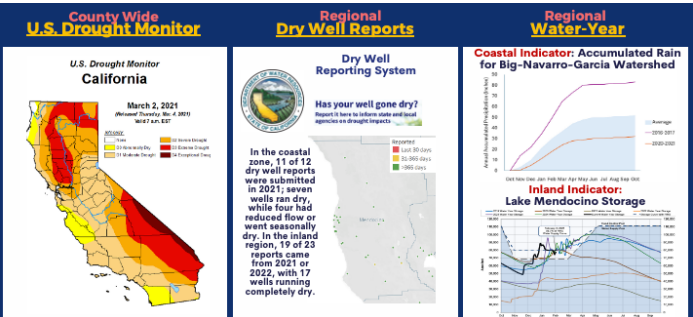
Drought Resilience Plan

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Stage 2)

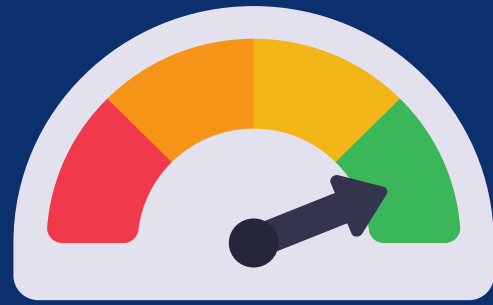
Water Shortage Warning

Stage 3)

Severe and Emergency Water Shortage

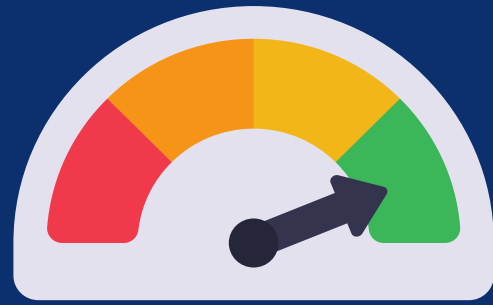
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Drought Response Stages

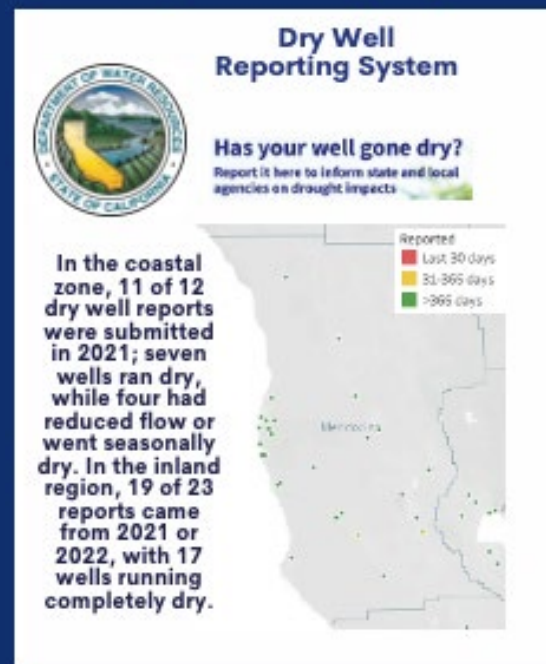
Drought Stage	Definitions
1) Water Shortage Monitoring	Reflects non -drought conditions , in which the County is experiencing no significant water shortages or drought-related stress.
2) Water Shortage Warning	Reflects light to moderate drought conditions within the County and triggers increased monitoring and drought response activities.
3) Severe and Emergency Water Shortage	Reflects extreme drought conditions within the County, during which water users may face severe water shortages.



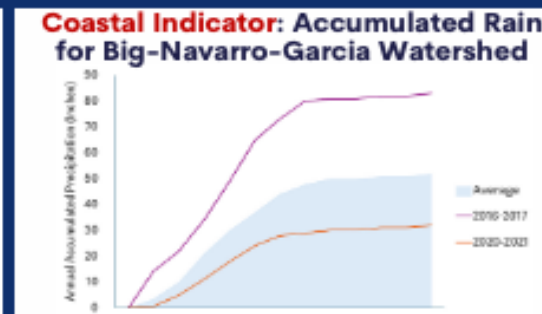
Drought Response Stages

Drought Stage	COASTAL REGION		INLAND REGION		COUNTY
	Dry Well Reports	Current Year Hydrology	Dry Well Reports	Current Year Hydrology	U.S. Drought Monitor

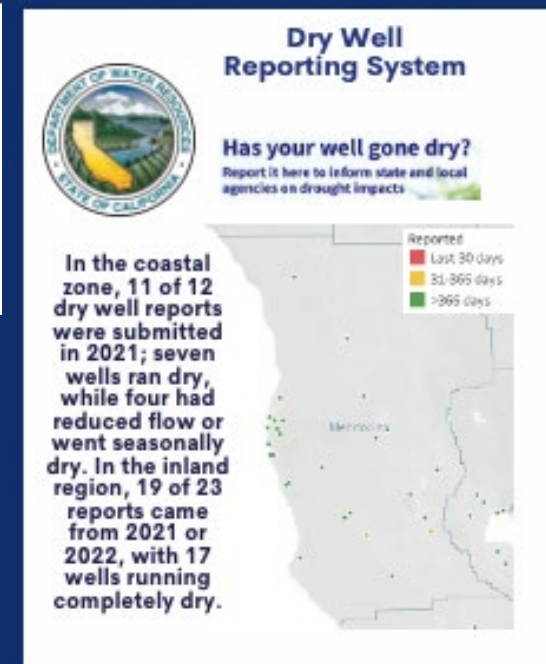
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**Regional
Dry Well Reports**



↑
**Regional
Water-Year**



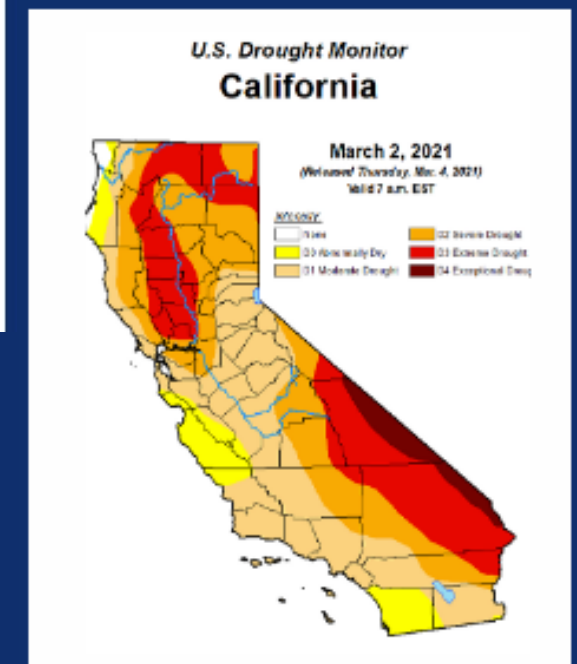
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**Regional
Dry Well Reports**

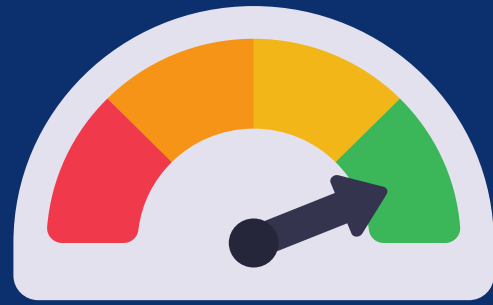


↑
**Regional
Water-Year**



↑
**County Wide
U.S. Drought Monitor**





Drought Response Stages

Drought Stage	COASTAL REGION		INLAND REGION		COUNTY
	Dry Well Reports	Current Year Hydrology	Dry Well Reports	Current Year Hydrology	U.S. Drought Monitor
1) Water Shortage Monitoring	Less than 4 reports over any three-month period	Two-year precipitation total is 80% or more of average	Less than 4 reports over any three-month period	Lake Mendocino total storage is greater than 70% of total target water supply curve	None; OR D0 Abnormally Dry
2) Water Shortage Warning	4 – 12 reports over any three-month period	Two-year precipitation total is 50 – 80% of average	4 – 6 reports over any three-month period	Lake Mendocino total storage is 45 - 70% of total target water supply curve	D1 Moderate Drought; OR D2 Drought-Severe for less than 8 consecutive weeks
3) Severe and Emergency Water Shortage	12 or more reports over any three-month period	Two-year precipitation total is less than 50% average	6 or more reports over any three-month period	Lake Mendocino total storage is less than 45% of total target water supply curve	D2 Drought-Severe for 8 or more consecutive weeks; OR D3 Drought-Extreme; OR D4 Drought-Exceptional

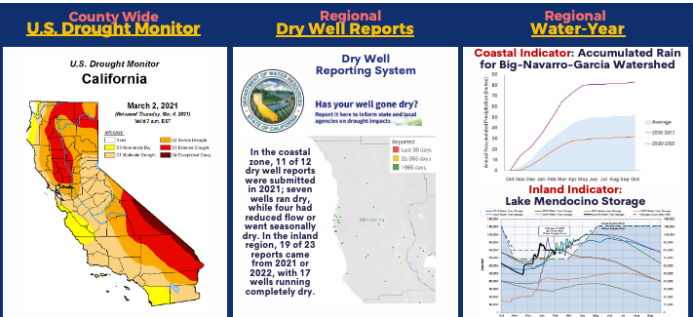
Drought Resilience Plan

3) Management Actions

Drought Response

Triggers

Are **specific conditions** that **signal** when a community is at risk of a water shortage. These are structured into stages of increasing severity



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Water Shortage Warning

Stage 3)

Severe and Emergency Water Shortage

Actions

Designed to address the **short-term** and **long-term** impacts in response to drought triggers.



Drought Response Actions

Drought Stages	Actions				
1) Water Shortage Monitoring	Tracking, Monitoring, and Info Sharing	Drought Task Force	Mutual Aid Agreements	Partnerships & Coordination (GSA, State, NGOs)	Community Engagement and Outreach
2) Water Shortage Warning		Community Engagement and Outreach	Voluntary Water Cutbacks	Temporary Ordinances	
3) Severe and Emergency Water Shortage		Identify Additional Funding	Emergency and Interim Drinking Water Supplies	Emergency Declarations	



Drought Response Actions

Drought Stages	Actions	Lead agencies
1) Water Shortage Monitoring	Track drought response triggers Convene CDTF meetings GSA coordination and Partnership with NGOs Implementation of mutual aid agreements Community engagement and outreach	Mendocino County Water Agency (MCWA) County Drought Task Force (CDTF), MCWA UVBGSA, MCWA CDTF members CDTF members, MCWA
2) Water Shortage Warning	Continue Stage I actions Enhance community engagement and outreach Voluntary water cutbacks Temporary ordinances	See agencies above CDTF members, MCWA CDTF members Board of Supervisors (BoS), Executive Office (EO)
3) Severe and Emergency Water Shortage	Continue Stage 1 and 2 actions County, State, and Federal emergency declarations Identification of funding Emergency/Interim water supplies (filling stations, water hauling, bottled water)	See agencies above BoS, EO, Office of Emergency Services (OES) EO and County Grants Unit County OES, MCWA, CDTF members

CDTF: County Drought Task Force; **GSA:** Groundwater Sustainability Agency; **MCWA:** Mendocino County Water Agency; **UVBGSA:** Ukiah Valley Basin GSA; **EO:** Executive Office; **BoS:** Board of Supervisors; **County OES :** County Office of Emergency Services



Drought Response Actions

Long -Term Action:

Long-term improvement through continued outreach and education and facilitating collaboration, coordination, and agreements between water systems and agencies, aligned with Stage 1 Drought actions.

Stage 1 Actions

Tracking,
Monitoring, and
Info Sharing

Drought Task
Force

Mutual Aid
Agreements

Partnerships &
Coordination
(GSA, State,
NGOs)

Community
Engagement
and Outreach



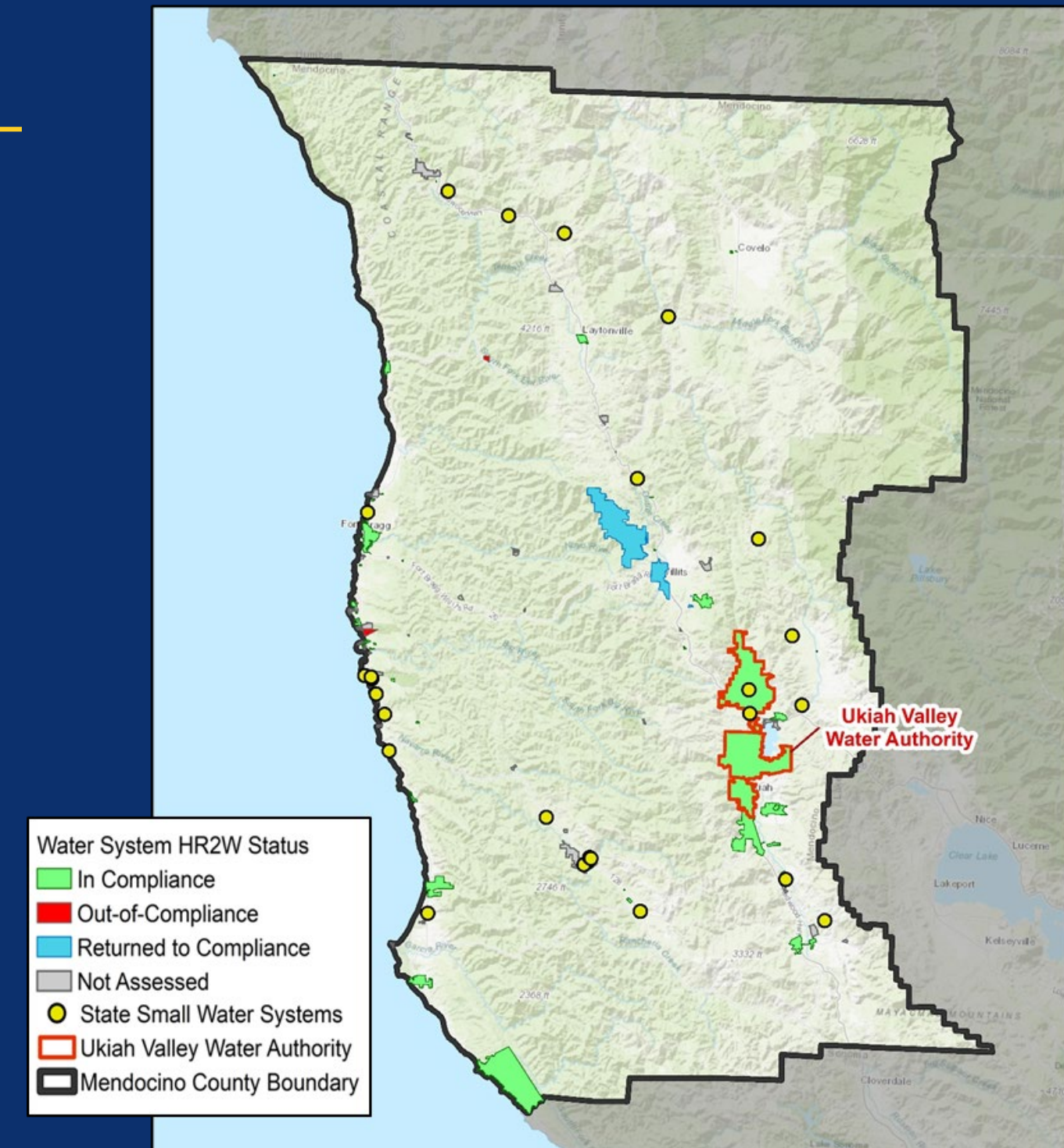
Drought Response Actions

Long -Term Mitigation: Consolidation

Consolidation can lead to enhanced water supply reliability and resiliency for State Small Water Systems

Types of Consolidation

- **Managerial** : Systems merge their technical, managerial, and financial components
- **Physical** : Systems merge, share, and/or expand their physical water system infrastructure
- **Regionalization** : Consolidation on a larger scale; multiple water systems form a single system



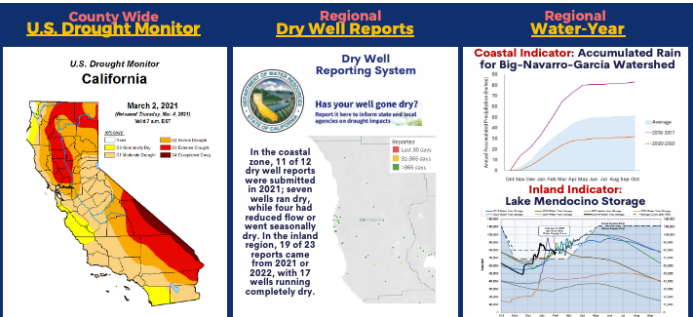
Drought Resilience Plan

3) Management Actions

Drought Response

Triggers

Are **specific conditions** that **signal** when a community is at risk of a water shortage. These are structured into stages of increasing severity



Stages

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Water Shortage Monitoring

Stage 2)

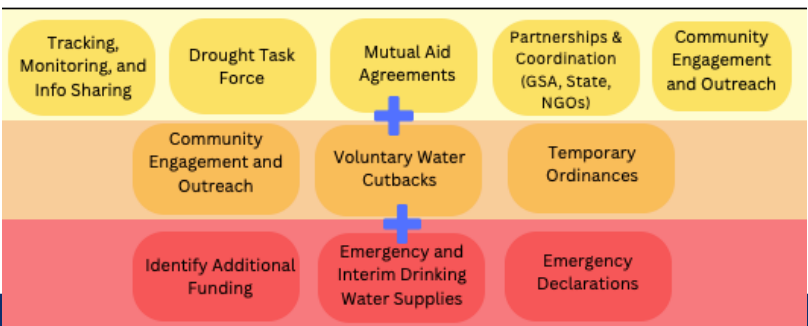
Water Shortage Warning

Stage 3)

Severe and Emergency Water Shortage

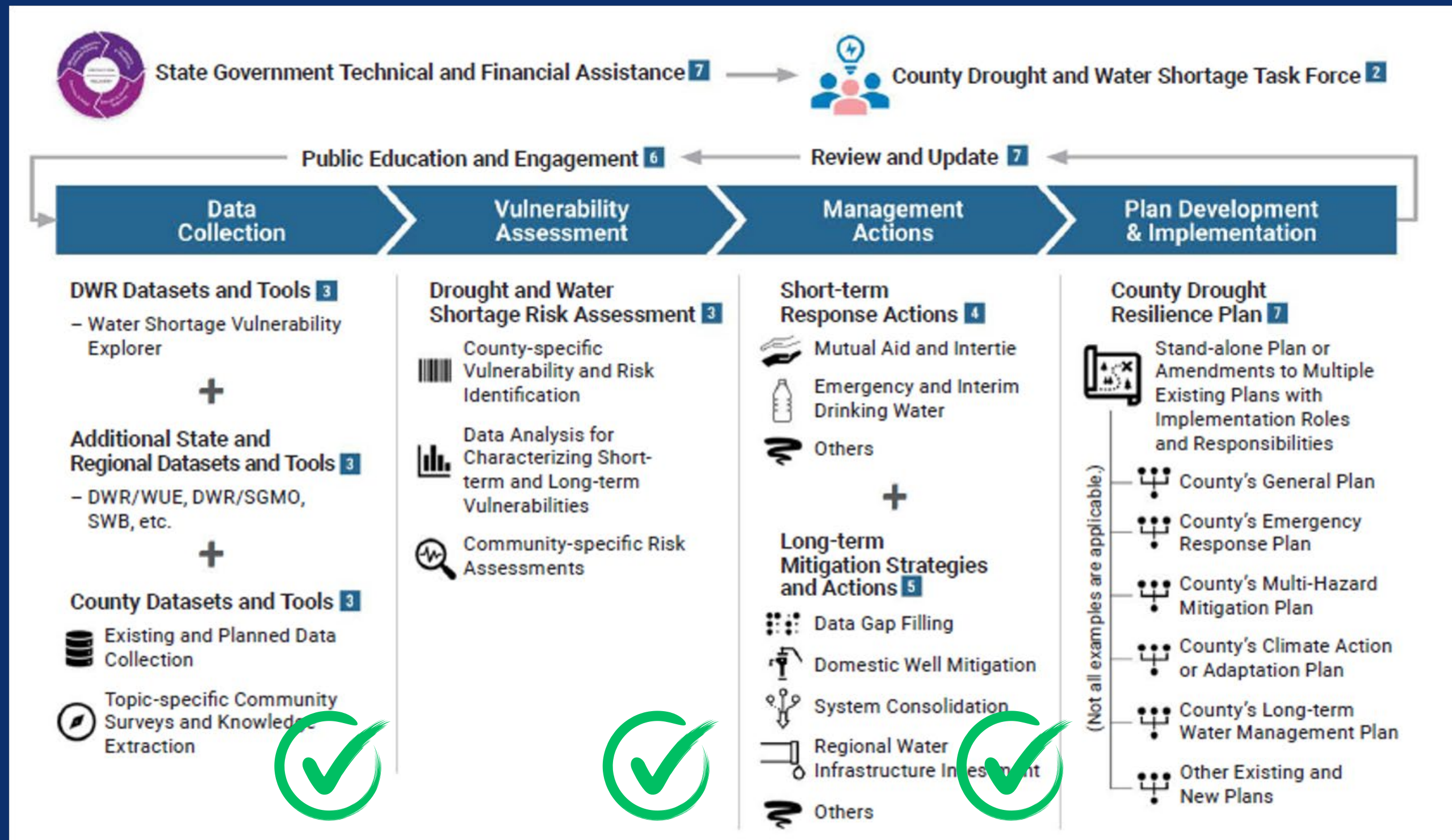
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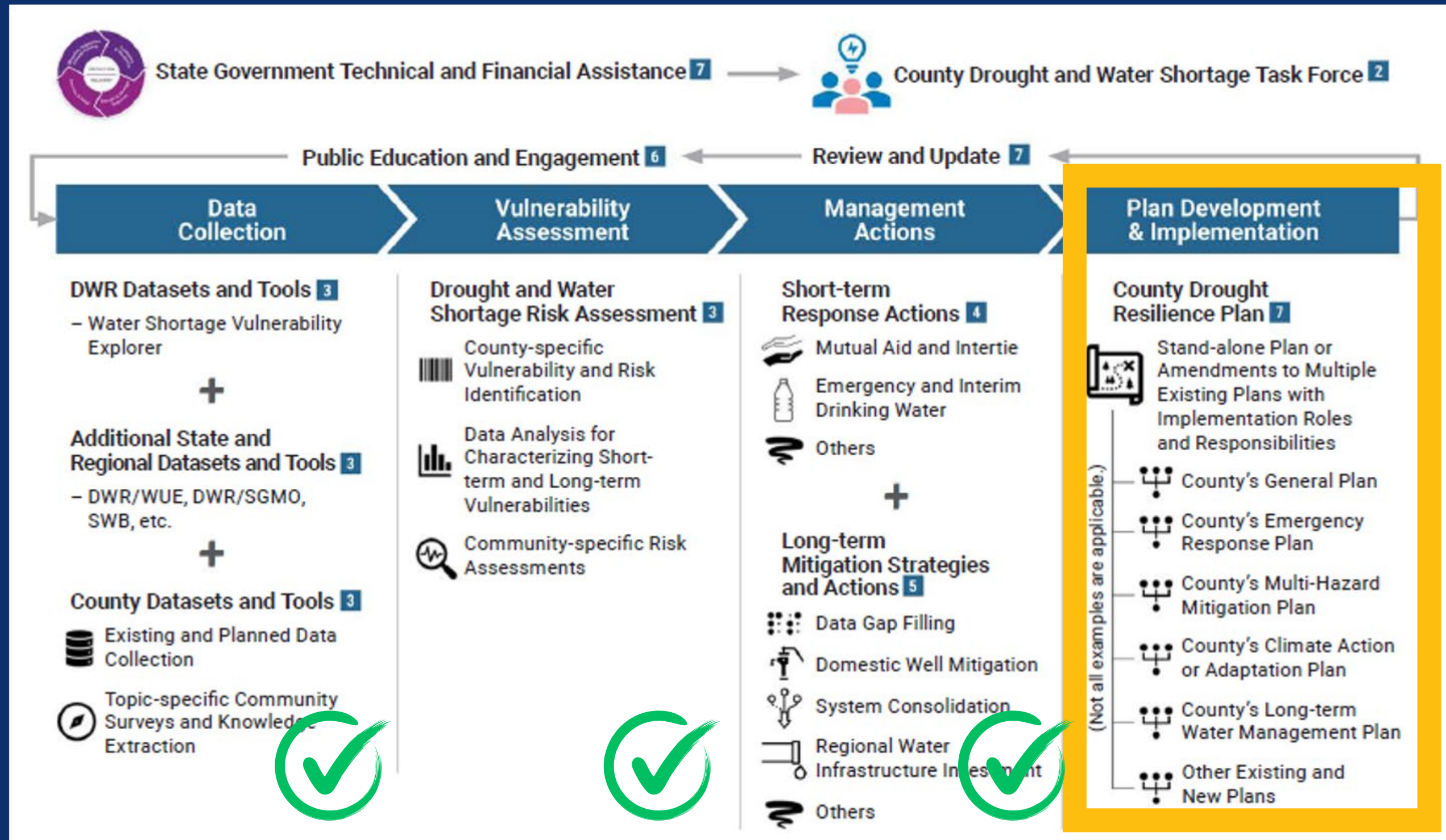
Senate Bill 552

Drought Resilience Plan



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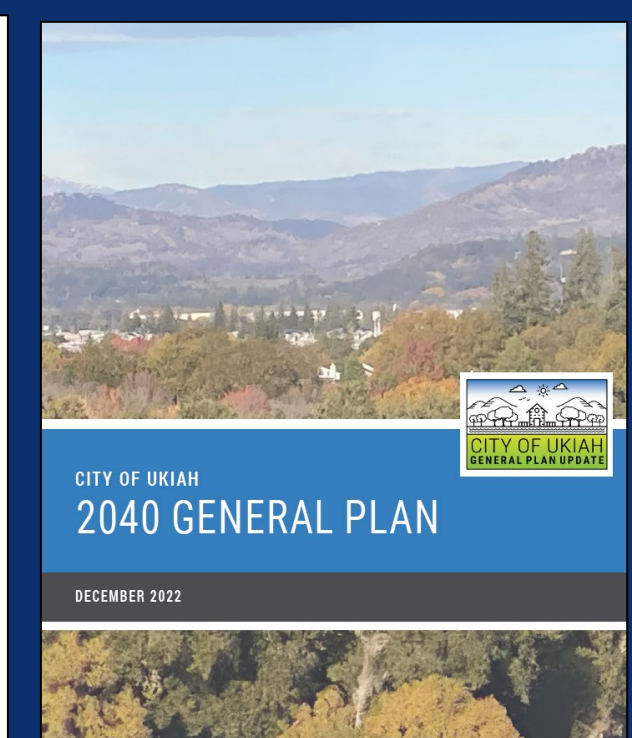
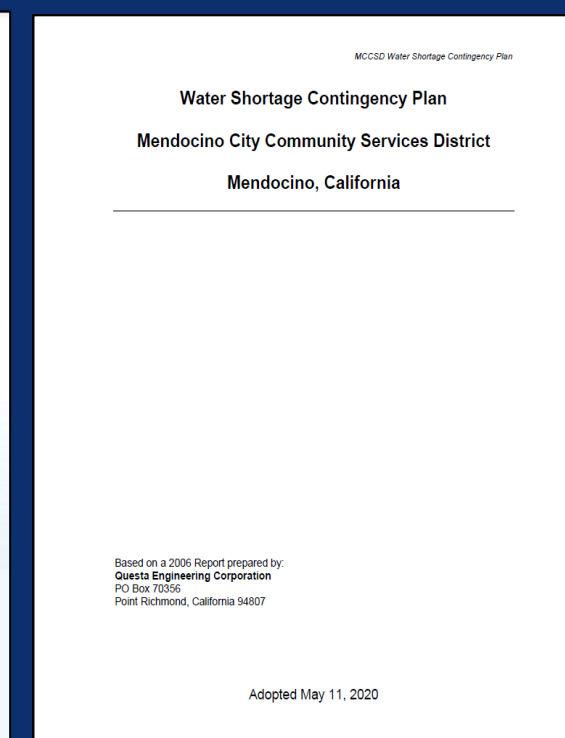
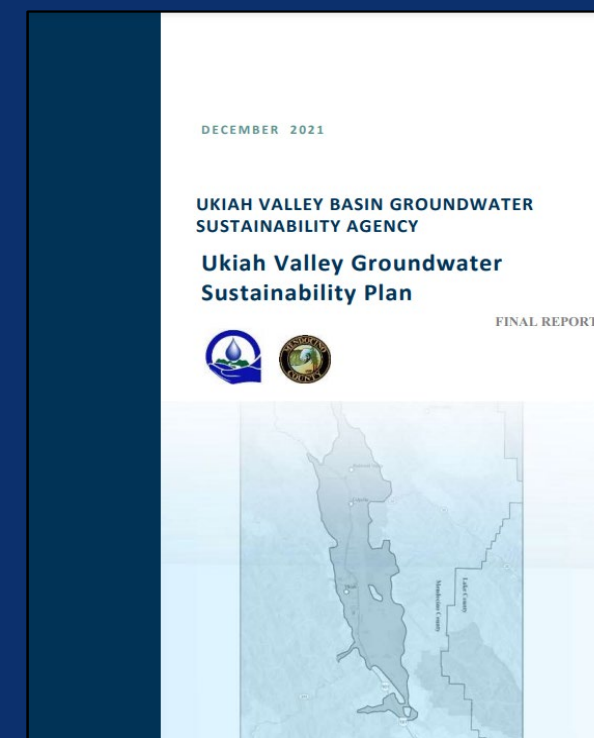
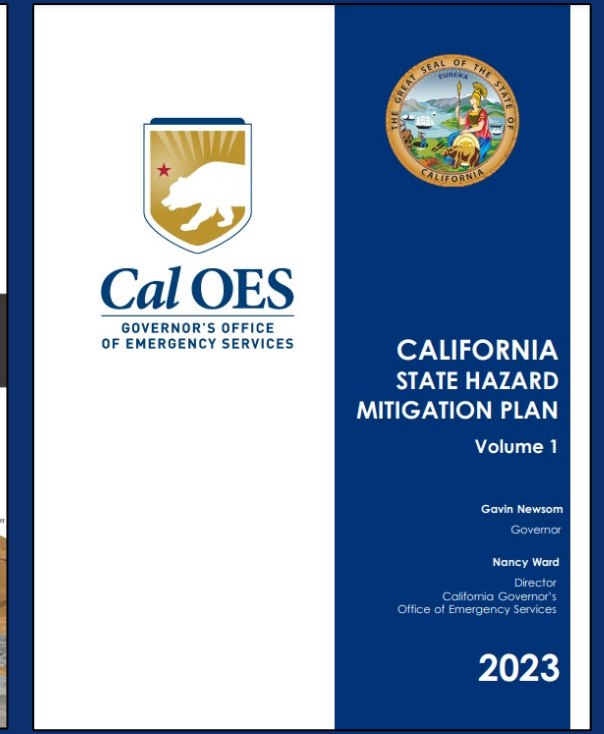
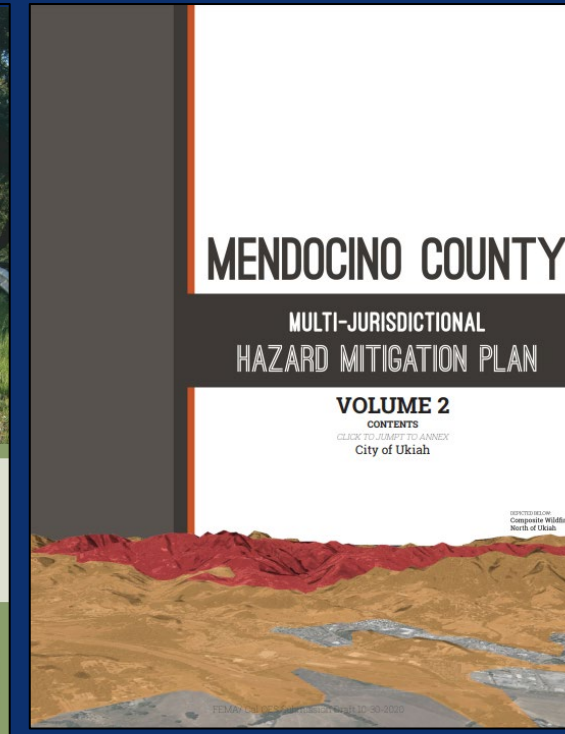
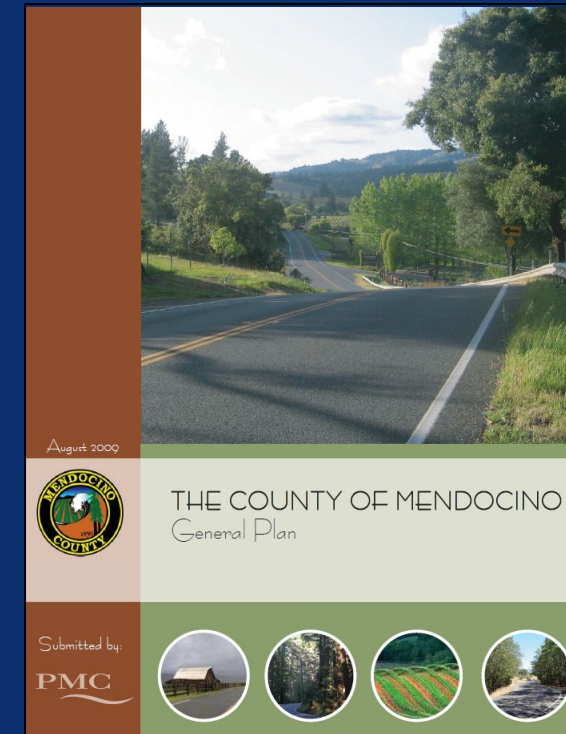
Drought Resilience Plan

4) Plan Implementation

The DRP will be implemented through a collective effort among:
MCWA, County departments, and local agencies, including CDTF members.

The DRP is a standalone document that will be implemented in conjunction with other state, county, and local plans

- State and County Hazard Mitigation Plans
- County General Plan
- City and County Emergency Operations Plans
- City and water supplier planning documents
- Ukiah Valley Basin GSP



Drought Resilience Plan

4) Plan Implementation: Considerations

Adaptive Management

County will assess and update the **DRP** as needed to reflect:

- Changing conditions
- Availability of new data
- Adjustments to response actions based on drought events
- CDTF discussions on agency roles and response actions/triggers

Funding

Led by Grants Unit and Executive Office

Federal Assistance Programs

USDA, Reclamation's WaterSmart Program

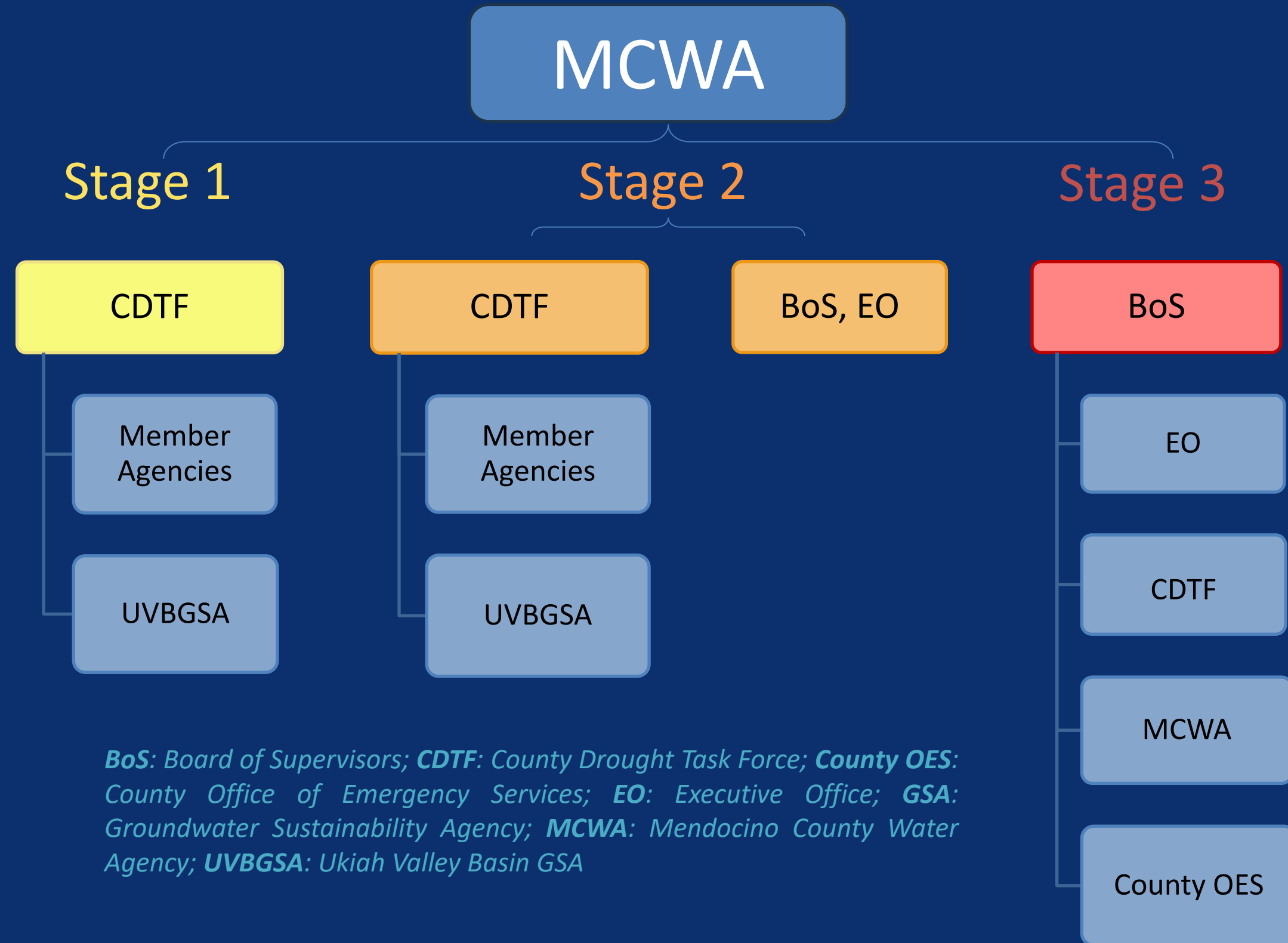
State Grants and Loans

- DWR, SWRCB: Includes funding for consolidation, emergencies, direct technical assistance, etc.
- California Financing Coordinating Committee: list of state, federal, nonprofit, and other funding programs

Drought Resilience Plan

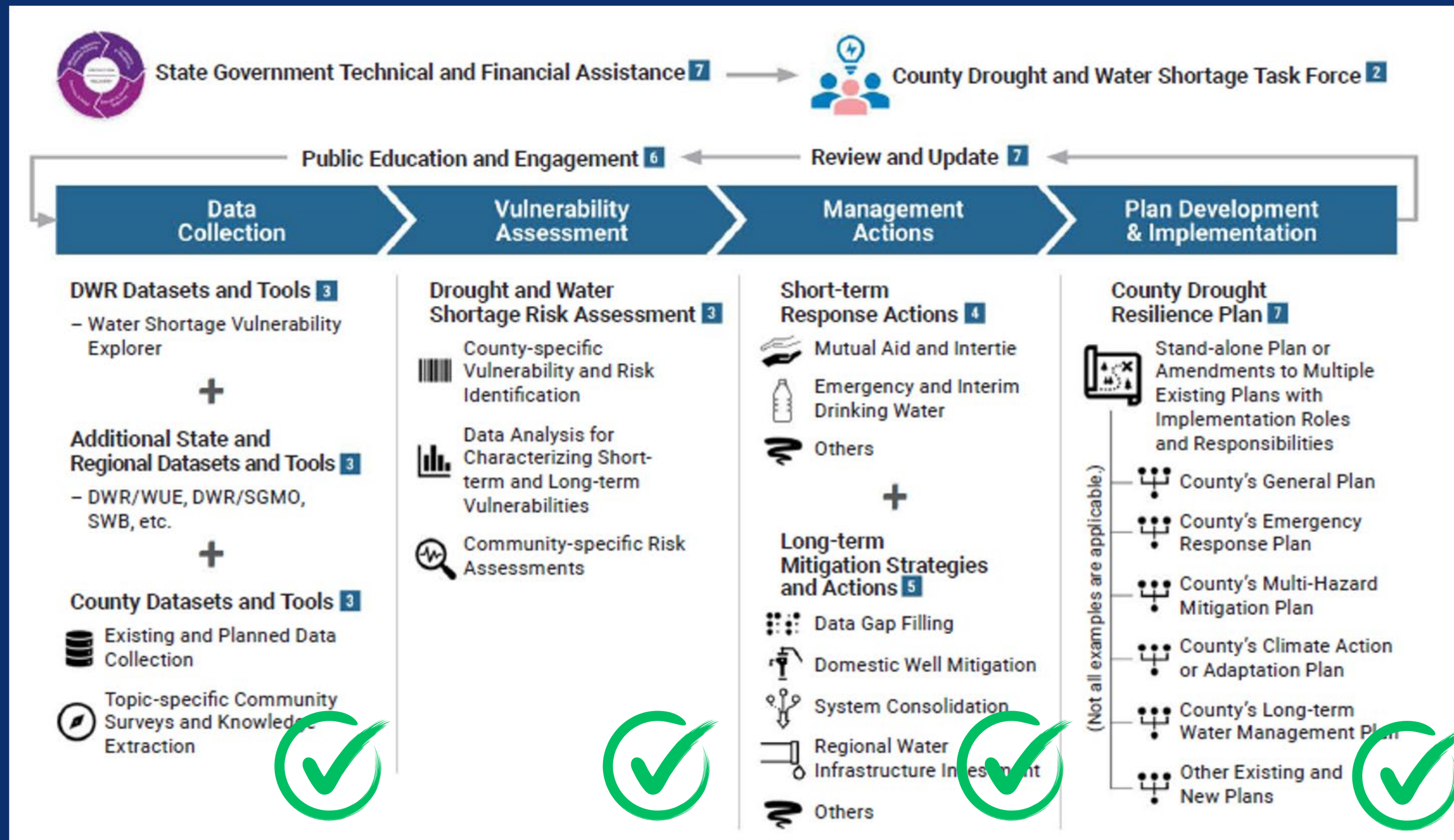
4) Plan Implementation: Road Map

- MCWA will oversee implementation of the DRP.
 - Implementation of actions and programs under DRP by MCWA and other County Departments will follow BoS's directions.
- The lead agency/agencies responsible for implementing actions is dependent on the drought stage and specific response action.



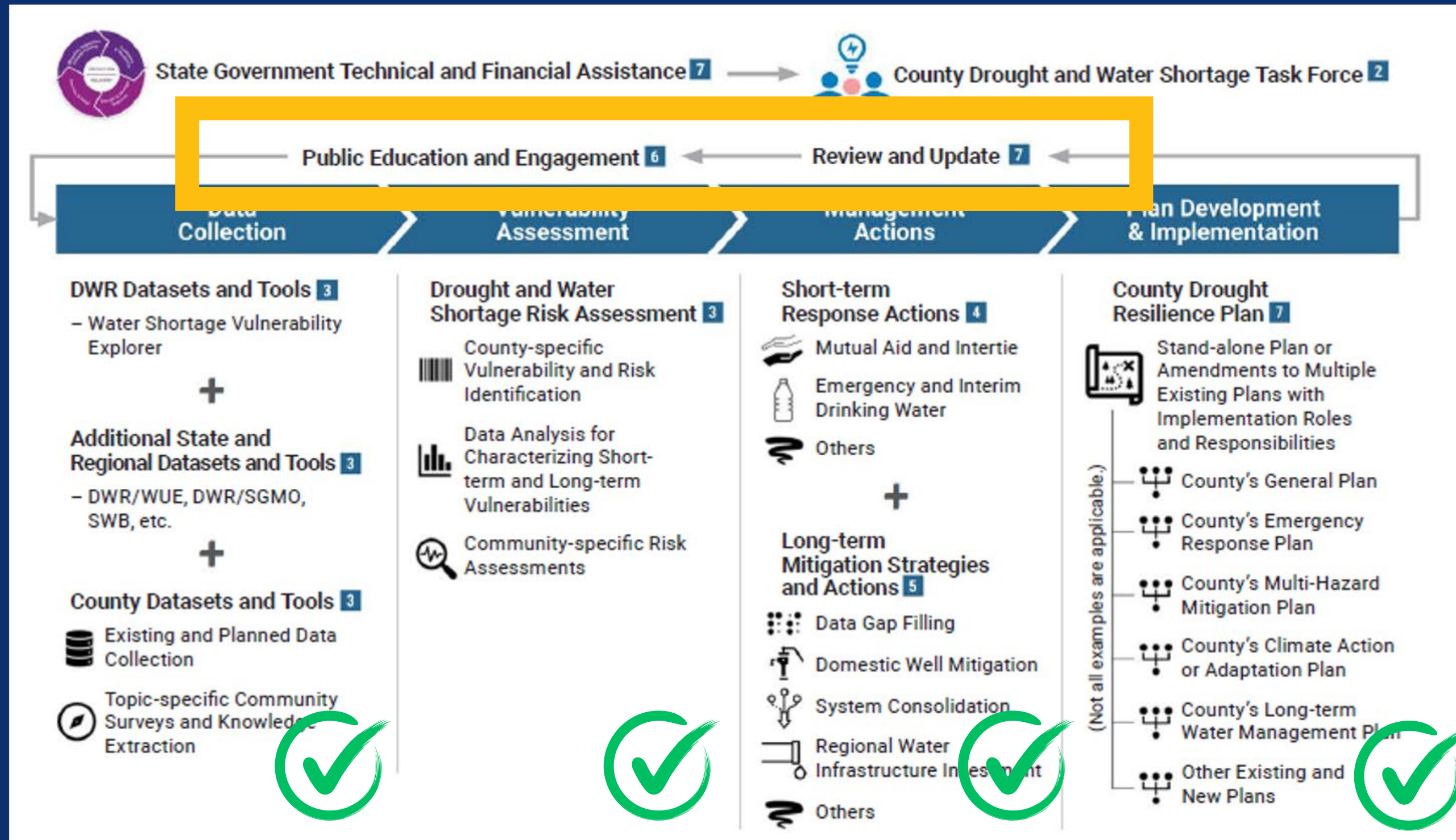
Senate Bill 552

Drought Resilience Plan



Senate Bill 552

Drought Resilience Plan



Review and Public Comment Process

Drought Resilience Plan

Review and Commenting Process

The purpose of the Review and Comment Period is to gather broad feedback from across the County, encourage collaboration, and ensure transparency in the development of the DRP.



Public comments can strengthen the DRP by providing the authoring agency with **facts or perspectives** that were lacking in the original draft.

Drought Resilience Plan

Review and Commenting Process

How much time do I have?

Commenting period will take **30 days** ,
from **March 25th** to **April 25th**

Where can I submit my comment?

The DRP Webpage will have a dedicated site to download the Plan's draft and submit your comments.

The screenshot shows the County of Mendocino website with a green header. The navigation bar includes links for Government, Departments (highlighted), Residents, Business, and How Do I... The left sidebar contains a menu with the following items: - Water Agency, Drought & - Water Conservation, Well Owner Resources, Drought Funding, - Drought Resilience Plan, Drought Resilience Plan Public Engagement Form, Get DRP Email Updates, and Dry Water Year Tools. The main content area displays the breadcrumb path: Departments » Water Agency » Drought & Water Conservation » Drought Resilience Plan ». Below this is the title 'Sign Up For Updates! - Drought Resilience Plan' with options for Font Size, Share & Bookmark, Feedback, and Print. The first step of the form asks the user to enter their email to subscribe to updates about the County Drought Resilience Plan, with an empty text box provided. A second section instructs the user to fill out their email address to receive a copy of their submission, also with an empty text box. At the bottom of the form is a reCAPTCHA checkbox labeled 'I'm not a robot' and a 'SUBMIT' button. The page number 'Page 1 / 1' is located in the bottom right corner.

COUNTY OF
MENDOCINO
California

Government Departments Residents Business How Do I...

- Water Agency

Drought &
- Water
Conservation

Well Owner
Resources

Drought
Funding

- Drought
Resilience Plan

Drought
Resilience
Plan Public
Engagement
Form

Get DRP Email
Updates

Dry Water Year
Tools

Departments » Water Agency » Drought & Water Conservation » Drought Resilience Plan »

Sign Up For Updates! - Drought Resilience Plan

Font Size: + - + Share & Bookmark Feedback Print

1. Please enter your email to subscribe to updates about the County Drought Resilience Plan.

To receive a copy of your submission, please fill out your email address below and submit.

Email Address

☐ I'm not a robot 
reCAPTCHA
Privacy - Terms

SUBMIT

Page 1 / 1

Drought Resilience Plan

Commenting Process

Review and Commenting Form

For general comments: By completing the “General Commenting Form” on the County DRP webpage

For more detailed comments: By completing the “Review and Commenting Form” and submitting the file through the “General Commenting Form”

[illegible]

Best Practices for Written Commenting



1. Before you comment:

- a. Identify, collect, and review background information: [DRP Website](#), [Factsheets](#), [PPTs](#)...
- b. Create a checklist of important considerations (e.g. response actions)

2. Reviewing the document:

- a. Focus on particular sections and skim others
- b. Check the document against your checklist, create notes.

3. Preparing to comment:

- a. Define your objectives
 - i. E.g. ensure my small water system is mapped, or to catch and correct factual errors or data gaps.
- b. Use clear organization, formatting, and language.
 - i. Use headings and sub-headings to separate your points, Phrase your comments as statements, not questions, avoid dense blocks of text, etc.

Q&A

Next Steps and Important Dates

Next Steps and Follow-up meetings

Meeting	Date	Planned Topic
CDTF Meeting	February 26, 2025	Presentation on: - Proposed Short-Term and Long-Term Response Actions - Implementation roadmap
CDTF Meeting	March 26, 2025	Public workshop on draft DRP: - Summary of outreach efforts - Overview of draft DRP - Public commenting process - Adoption process
BoS Meeting	May 20, 2025	Presentation on: - Summary of comments received and how they were addressed - Resolution to authorize County staff to upload final DRP to DWR portal

Thank You.

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