DROUGHT RESILIENCE PLAN

Mendocino County

May 2025
EKI C40067.00

EKI ENVIRONMENT & WATER, INC.
www.ekiconsult.com
2001 Junipero Serra Blvd, Suite 300 • Daly City, CA 94014

Drought Resilience Plan

Mendocino County

May 2025

Prepared for:

Mendocino County Water Agency
340 Lake Mendocino Drive
Ukiah, CA 95482

Prepared by:

EKI Environment & Water, Inc.
2001 Junipero Serra Blvd., Suite 300
Daly City, California 94014
(650) 292-9100
www.ekiconsult.com
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ABBREVIATIONS AND ACRONYMS

AB	Assembly Bill
AF	acre-feet
BoS	Board of Supervisors
Cal Fire	California Department of Forestry and Fire Protection
CASGEM	California Statewide Groundwater Elevation Monitoring
CDAA	California Disaster Act Assistance
CDEC	California Data Exchange Center
CDP	Census Designated Place
CDTF	County Drought Task Force
CFR	Code of Federal Regulations
CNR	California Department of Natural Resources
County	Mendocino County
DAC	disadvantaged community
DDW	Division of Drinking Water
DRP	Drought Resilience Plan
DWR	California Department of Water Resources
EH	Environmental Health
EO	Executive Order
EO	Executive Office
EPA	Environmental Protection Agency
FAAST	Financial Assistance Application Submittal Tool
FEMA	Federal Emergency Management Agency
GDE	groundwater-dependent ecosystem
GGSC	General Government Standing Committee
GSP	Groundwater Sustainability Plan
HR2W	human right to water
HSC	Health & Safety Code
HUC	Hydrologic Unit Code
ICARP	Integrated Climate Adaptation and Resiliency Program
IRWM	Integrated Regional Water Management
JPA	Joint Powers Authority
MAC	Municipal Advisory Council
MCCSD	Mendocino City Community Services District
MCL	Maximum Contaminant Level
MCRCD	Mendocino County Resource Conservation District
MCWA	Mendocino County Water Agency
MHI	Median Household Income
MJHMP	Multi-Hazard Local Hazard Mitigation Plan

N/A	not applicable
NDMC	National Drought Mitigation Center
NGO	non-governmental organization
No.	number
NOAA	National Oceanic and Atmospheric Administration
OES	Office of Emergency Services
OSWCR	Online System of Well Completion Reports
P/MA	project and management action
PG&E	Pacific Gas & Electric Company
PHSR	Public Health, Safety, and Resources
Plan	Drought Resilience Plan
PLSS	Public Land Survey System
RCAC	Rural Community Assistance Corporation
Risk Assessment	drought and water shortage risk assessment
RRFC	Mendocino County Russian River Flood Control & Water Conservation Improvement District
SAFER	Safe and Affordable Funding for Equity and Resilience
SB	Senate Bill
SGMA	Sustainable Groundwater Management Act
SWRCB	State Water Resources Control Board
U.S.	United States
UCCE	University of California Cooperative Extension
URRWA	Upper Russian River Water Agency
USDM	United States Drought Monitor
USGS	United States Geological Survey
UVBGSA	Ukiah Valley Basin Groundwater Sustainability Agency
UVBGSP	Ukiah Valley Basin Groundwater Sustainability Plan
UVWA	Ukiah Valley Water Authority
WCR	well completion reports

1 INTRODUCTION

1.1 Purpose of the Drought Resilience Plan

On September 21, 2021, Governor Newsom passed and signed Senate Bill (SB) 552 requiring state and local governments to share responsibility in planning for and responding to water shortage events. Under SB 552, all counties in California are required to: (1) convene a standing drought task force to facilitate drought and water shortage preparedness for State Small Water Systems (systems serving five to 14 connections and providing drinking water to fewer than 25 people on a regular basis)[1], domestic wells, and other privately supplied homes within the County, and (2) develop a plan demonstrating the potential drought and water shortage risk and propose interim and long-term solutions for State Small Water Systems and domestic wells within the County.

This Drought Resilience Plan ("DRP" or "Plan") is a standalone document developed for the purpose of SB 552 compliance; however, this Plan incorporates and consolidates elements from various emergency and water shortage documents, as described in later sections. Per SB 552, the Plan must discuss the following:

1. Consolidations for existing water systems and domestic wells (**Section 6**).
2. Domestic well drinking water mitigation programs (**Section 6**).
3. Provision of emergency and interim drinking water solutions (**Section 5**).
4. An analysis of the steps necessary to implement the plan (**Section 7**).
5. An analysis of local, state, and federal funding sources available to implement the plan (**Section 6** and **Section 7**).

Development of this plan closely follows the California Department of Water Resources (DWR's) *County Drought Resilience Plan Guidebook* (Guidebook) and is organized as follows:[8]

- **Section 1. Introduction**
- **Section 2. County Drought and Water Shortage Task Force**
- **Section 3. Drought and Water Shortage Risk Assessment**
- **Section 4. Existing Drought Response Actions**
- **Section 5. Short-Term Response Actions**
- **Section 6. Long-Term Mitigation Strategies and Actions**
- **Section 7. Implementation Considerations**
- **Section 8. References**

1.2 Overview of Mendocino County

Mendocino County (County) is located on California's northern coast and covers approximately 3,500 square miles. The County is bordered by Sonoma County to the south, Trinity and Humboldt Counties to the north, Lake, Glenn, and Tehama counties to the east, and the Pacific Ocean to the west. The County is known for its diverse landscape consisting of rugged coastline, lush forests, the Mendocino Range, and

[1] In California, the State Water Resources Control Board (SWRCB) oversees the regulation of public water systems. However, under California Health & Safety Code (HSC) § 116275(h), state small water systems, domestic wells, and other self-supplied residences are exempt from this classification and are permitted by local county health departments rather than the SWRCB, as specified in HSC § 116330. Similarly, federally regulated tribal water systems are also exempt from state oversight and, instead, fall under the jurisdiction of the U.S. Environmental Protection Agency (EPA). However, tribes may choose to assume primacy, allowing them to regulate and manage their own water systems. To date, no tribes in California have applied for and received primacy.[29]

scenic rivers. In 2020, the County had a population of 91,606.[35] Approximately one-third of the County's population resides within the four incorporated cities – Ukiah, Fort Bragg, Point Arena, and Willits – with the other two-thirds of the population spread throughout several unincorporated communities. The County's Median Household Income (MHI) is $65,520, compared to the statewide average of $91,551.[36] Approximately 85% of the County area and 66% of the County population is within a disadvantaged community (DAC).[2]

1.3 Land and Water Use

The majority (97%) of the County is covered by natural vegetation, including mixed conifer forests, coastal grassland, and riparian vegetation. Approximately 1% of the County is covered by irrigated agriculture, with the remaining 2% dedicated to urban and other uses.[38] As mentioned above, there are four incorporated cities, as well as several unincorporated communities in the County. The County has a prominent agricultural presence, with prevalent crops including wine grapes, cannabis, fruits, and nuts. According to the United States Geological Survey's (USGS's) National Water Information System, the County uses approximately 93,600 acre-feet (AF) of water annually.[40] Of this total, 83% (77,500 AF) is used for agriculture, 13% (12,000 AF) for domestic and municipal use, and 4% (4,100 AF) for industrial purposes.

Water suppliers and individual water users in the County obtain water from both surface and groundwater resources. Approximately 68% of the County's supply is sourced from groundwater.[40] The County overlies 22 groundwater basins, many of which are smaller coastal basins.[3] None of these basins are considered "critically overdrafted" by DWR, and only one basin, the Ukiah Valley Groundwater Basin, is classified as medium priority and subject to the Sustainable Groundwater Management Act (SGMA). According to DWR's Online System of Well Completion Reports (OSWCR), there are over 9,000 well completion reports (WCR) in the County, approximately 85% of which are recorded for domestic supply. The County's groundwater basins and their DWR basin prioritizations are shown in **Figure 1**.

The County's main surface water supply sources are the Russian River and Eel River and their tributaries. Other local surface water sources include the Navarro River, Big River, and Gualala River and numerous creeks, streams, and springs. Surface water sources make up approximately 32% of the County's supply.[40] Many residents and suppliers in the County are dependent on Eel River water diverted to the Russian River through the Potter Valley Project, which has historically been owned and operated by Pacific Gas & Electric Company (PG&E). On average, approximately 62,500 AF of water is diverted annually by the Potter Valley Project to support downstream municipal, agricultural, recreational, and fire suppression uses for over a half million residents in Mendocino, Sonoma, and Marin Counties. In 2019, PG&E notified the Federal Energy Regulatory Commission that it would not be relicensing the project and, in January 2025, released a public draft License Surrender Application, outlining plans to remove the Scott and Cape Horn dams and decommission the Potter Valley Project.

Following this announcement, various local and State agencies and organizations, along with the Round Valley Indian Tribes, signed a Memorandum of Understanding on February 13, 2025, allowing for continued limited diversions from the Eel River when river flows are sufficiently high to support aquatic wildlife.[3] These diversions are projected to reduce annual transfers from the Eel River to approximately 35,000 AF, which will, in turn, introduce greater uncertainty regarding county-wide water supply reliability. As such, Russian River users are expected to decrease their reliance on Eel River water and develop new water supply solutions over the 30-year term of the agreement.[8-2][23]

To supplement surface water and groundwater sources, several water suppliers utilize alternate supply sources, such as recycled water. The City of Ukiah produces approximately 1,000 AF of recycled water

annually used for irrigation of agriculture, parks, and schools, as well as industrial purposes such as dust control. Mendocino City Community Services District (MCCSD) produces recycled water to irrigate athletic fields at Mendocino High School and is working in cooperation with Mendocino Unified School District to expand the production and use of recycled water for outdoor irrigation in Mendocino Village. The City of Willits recycles treated wastewater through irrigation of pasture lands adjacent to the city. The City of Fort Bragg is evaluating the feasibility of developing a recycled water alternative and has also received grant funding to conduct a desalination pilot study.

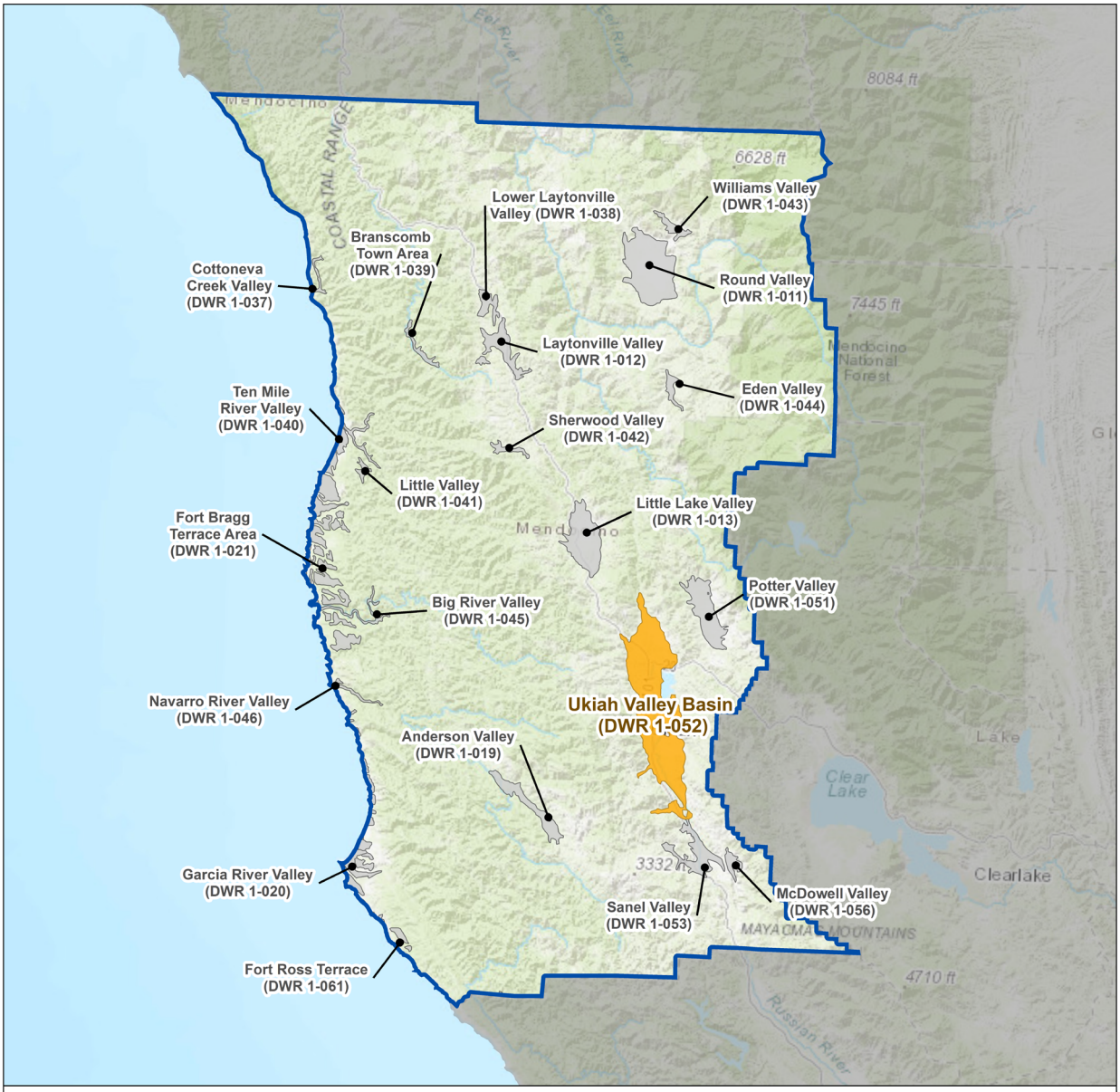


Figure 1. Groundwater Basins and DWR Prioritization

2 COUNTY DROUGHT AND WATER SHORTAGE TASK FORCE

SB 552 states that a "county shall establish a standing county drought and water shortage task force to facilitate drought and water shortage preparedness for State Small Water Systems and domestic wells within the county's jurisdiction". From July 2021 to August 2022, the County established a County Drought Task Force (CDTF) with leadership from two County Supervisors and held public meetings no less than quarterly. In August 2022, the CDTF was integrated into the Public Health, Safety, and Resources (PHSR) Standing Committee, which included a dedicated agenda item to address drought and water shortage matters at its regularly scheduled meetings.

As of January 2024, the CDTF is maintained under the County Board of Supervisors (BoS) General Government Standing Committee (GGSC). As such, the CDTF is subject to the *Rules of Procedure of the Board of Supervisors of the County of Mendocino*, which outlines the working procedures for Board and committee meetings. Two County Supervisors are appointed as members of the GGSC and oversee the CDTF. The BoS GGSC Appointees are required to report to the full BoS after each GGSC committee meeting and bring CDTF recommendations and actions before the full BoS for decision-making.

2.1 County Drought Task Force Membership

According to Guidebook, the CDTF should, at a minimum, include core members that are representatives of organizations and agencies legally responsible for public water systems, State Small Water Systems, and domestic wells and implementing the requirements of SB 552. In Mendocino County, members who may have resources, capabilities, and ideas to contribute for drought and water shortage planning are also included. All identified CDTF members are listed in **Table 1** below.

Members of the CDTF serve in an advisory capacity and are invited to provide information and input related to drought conditions, domestic well and small water system needs, and drought response actions. As such, representatives from all member agencies were invited via email to each CDTF meeting, as documented in **Appendix A**.

Table 1. CDTF Membership

Role	Group	Entity
Core Member	County Departments	BoS
		Executive Office (EO)
		Water Agency
		Transportation
		Environmental Health (EH)
		Office of Emergency Services (OES)
		Planning and Building Services (PBS)
	Major Public Water Suppliers	City of Ukiah
		City of Fort Bragg
		City of Willits
		Point Arena Water Works
		Mendocino County Russian River Flood Control and Water Conservation Improvement District (RRFC)
		Mendocino City Community Services District
		Ukiah Valley Water Authority
	Other	Ukiah Valley Basin Groundwater Sustainability Agency
		Mendocino County Resources Conservation District
Other Member	Tribes	Coyote Valley Band of Pomo Indians

Role	Group	Entity
		Guidiville Rancheria
		Hopland Band of Pomo Indians
		Pinoleville Pomo Nation
		Potter Valley Tribe
		Redwood Valley Rancheria
		Sherwood Valley Band of Pomo Indians
		Yokayo Tribe of Indians/Yokayo Water System
		Manchester-Point Arena Band of Pomo Indians
		Cahto Tribe
		Round Valley Indian Tribes
	State Agencies	State Water Resources Control Board
		North Coast Regional Water Quality Control Board
		Department of Water Resources
	State Small Water Systems	See **Table 4**
	Other Public Water Systems	See **Appendix A**
	Municipal Advisory Councils (MACs)	Redwood Valley MAC
		Hopland MAC
		Round Valley MAC
		Gualala MAC
		Laytonville MAC
		Westport MAC
	Other	University of California Cooperative Extension (UCCE)

2.2 Drought Task Force Meetings

Table 2 includes a summary of CDTF Meetings. Meeting attendance and materials are documented in **Appendix B**. Past GGSC meeting agendas and minutes can be found on the County BoS webpage[2].

Table 2. County Drought Task Force Meeting Summary

Meeting Name	Date	Topics Covered
GGSC Meeting	September 25, 2024	• Overview of the DRP purpose and objectives • Planned technical process for DRP development CDTF roles and responsibilities • Stakeholder engagement • Drought and Water Shortage Risk Assessment results • Schedule and topics for future meetings
GGSC Meeting	February 26, 2025	• Short-term response actions • Long-term mitigation strategies and actions • Implementation roadmap
GGSC Meeting	March 26, 2025	• Summary of outreach efforts • Overview of draft DRP

[2] https://www.mendocinocounty.gov/government/board-of-supervisors/agendas-and-minutes

Meeting Name	Date	Topics Covered
		• Public commenting process • Adoption process
BoS Meeting	May 20, 2025	• Overview of SB 552 and DRP • Summary of outreach efforts • Summary of comments received and how they were addressed • Resolution to authorize County staff to upload final DRP to DWR portal

2.3 Additional Stakeholder Engagement Efforts

2.3.1 Community Meetings

The County partnered with the University of California Cooperative Extension (UCCE) to host two public meetings discussing DRP development. The purpose of these meetings was to inform the public about the DRP development process and elicit feedback and input from stakeholders. Community meetings were held in a hybrid format, with in-person and online attendance available. To ensure broad participation, meetings were held in both inland and coastal regions, providing opportunities for diverse communities to engage in the discussion. Meeting notices were posted on the County DRP webpage, County's social media accounts, County libraries, and available community bulletin boards, as well as published in local news, emailed to interested water stakeholders, and sent to County departments. **Table 3** contains a summary of community meetings, and meeting attendance and materials are documented in **Appendix C**.

Table 3. Community Meeting Summary

Date and Location	Topics Covered
September 25, 2024 in Ukiah	• SB 552 background • CDTF roles and responsibilities • DRP development process • Drought and Water Shortage Risk Assessment results • Public engagement opportunities • Open discussion and feedback
February 21, 2025 in Fort Bragg	• SB 552 review • CDTF roles and responsibilities review • DRP development process ○ Review of data collection process and risk assessment results ○ Short-term response actions ○ Long-term mitigation strategies and actions ○ Plan implementation • Overview of Public Commenting Process • Public engagement opportunities • Open discussion and feedback

2.3.2 Drought Resilience Plan Webpage

The County published a DRP webpage[3] on the County Water Agency website to provide background information, meeting notices, and news related to SB 552 and DRP development. This page also includes a link to a DRP Public Engagement Form, which allows any member of the public to fill out a simple online form to engage with Plan development and provide data, information, or input relevant to the DRP. Lastly, the webpage includes a DRP Email Update Sign-up Form, allowing the public to opt in for email updates from the County on DRP developments, such as meeting notices and press releases. The same website was used for the DRP commenting process and hosts the final DRP. Additionally, DRP fact sheets and presentation materials from CDTF meetings are regularly uploaded to the site. A snapshot of the DRP webpage is shown in **Figure 2.**

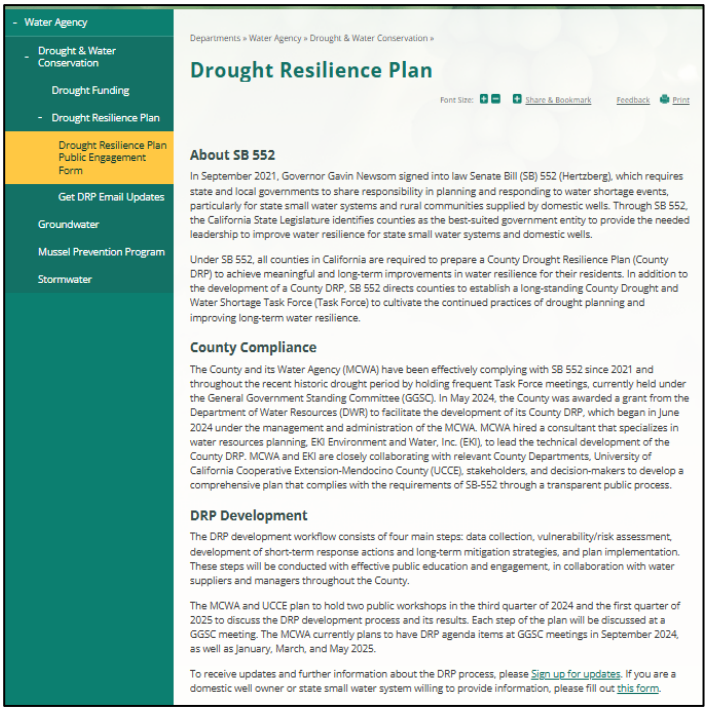


Figure 2. Drought Resilience Plan Webpage Snapshot

2.3.3 Summary of Public Comments on the Draft DRP

Although not required by SB 552, the County conducted a public review period for the Draft DRP in order to gather input from County stakeholders, foster collaboration across the County, and ensure transparency in the Plan's development. The public review period lasted 31 days, from March 26, 2025, to April 25, 2025. During this time, members of the public were encouraged to submit comments on the Draft DRP prior to its finalization. Through this process, the County aimed to identify and incorporate perspectives or information that may have been absent from the Draft DRP.

Comments were accepted online through the DRP webpage[3] via the "General Commenting Form" for broad feedback and the "Review and Commenting Form" for more detailed input. Copies of these forms are included in **Appendix D**. Printed forms could also be submitted in person or mailed to the Mendocino County Department of Transportation office.

A total of three comments were received during the public review period through the online General Commenting Form. These comments raised concerns related to water use and water supply in the county, including the need for additional water supply augmentation and storage projects in light of the potential decommissioning of the Potter Valley Project; State regulations addressing human right to water (HR2W) and defined conservation targets; and water use for cannabis cultivation. While these concerns reflect important perspectives and are acknowledged, they fall beyond the scope and intent of the DRP and SB-552 requirements and are more appropriately assessed and potentially addressed through broader and more comprehensive regulatory frameworks and regional water management initiatives. All submitted comments and the County's responses are summarized in Table 1 of **Appendix D**.

[3] https://www.mendocinocounty.gov/departments/water-agency/drought-water-conservation/drought-resilience-plan

3 DROUGHT AND WATER SHORTAGE RISK ASSESSMENT

Per SB 552, "*A county shall develop a plan that includes potential drought and water shortage risk* and proposed interim and long-term solutions *for State Small Water Systems and domestic wells within the county's jurisdiction*" (underlining added for emphasis).

Based on this directive, the County conducted a drought and water shortage risk assessment (Risk Assessment) to understand pathways of how drought and water shortage may occur and affect County residents. The findings from this analysis provide the foundation for developing a plan to reduce or avoid impacts due to water shortage events, as outlined in subsequent sections of this DRP.

The Risk Assessment approach closely follows that outlined in DWR's guidebook, which is based on the 2013 Federal Emergency Management Agency (FEMA) Local Mitigation Planning Handbook.[8],[14] FEMA's approach involved five steps, which are depicted in **Figure 3**. Each step is described in detail in **Sections 3.1** through **3.4** below.

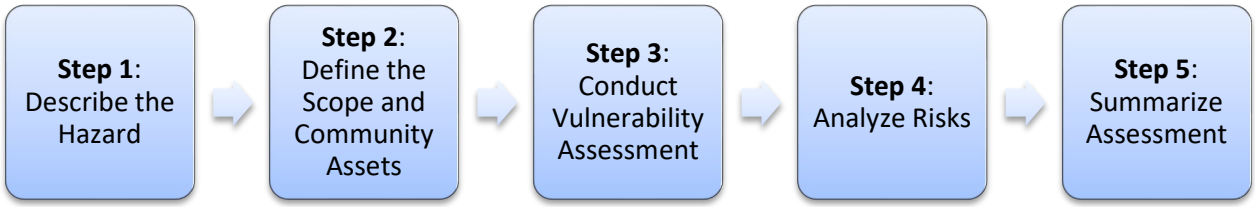


Figure 3. Risk Assessment Approach

3.1 Step 1: Describe the Hazard

3.1.1 Drought History and Projected Risk

Drought is the prolonged lack of precipitation over an extended period. It is a natural, recurring feature of climate that can occur in virtually all climate zones, with durations ranging from a few months or years to several decades. As discussed in further detail below, droughts can lead to water shortage events that often result in negative impacts on communities, the environment and the economy. The severity of drought effects varies across regions, depending on factors such as water supply availability, storage capacity, local climate patterns, and natural vegetation.

California's water resources have historically been stressed by periodic drought cycles and overuse, creating the need for unprecedented state and local water-use regulations. In recent years, extreme drought has impacted almost every county in California, including Mendocino County. The most extreme drought conditions in Mendocino County's recent history were experienced in 1991. This was part of a drought period that for much of California lasted for six years, from 1987 to 1992.[16] DWR has state-wide hydrologic data that indicates multi-year droughts have been occurring since the early twentieth century, with droughts increasing in duration and frequency in recent years. The County has experienced drought conditions for much of the recent 20-year period, which has seen multi-year droughts from 2007 to 2009, 2012 to 2016, and 2020 to 2022.[1]

As discussed in **Section 1.3** above, the County's water supply comes from both surface and groundwater resources, which are both impacted during drought. Generally, surface water sources are quicker to deplete in response to drought than groundwater aquifers, except for shallow, unconfined aquifers and fractured rock aquifers; however, groundwater supplies generally take longer to recover after long drought periods. Domestic wells are particularly at-risk during drought events because they often rely on

limited and shallow groundwater sources that can quickly deplete when water levels drop. Additionally, State Small Water Systems often lack the infrastructure or resources to effectively manage and conserve water during extended dry periods.

Based on climate change projections, droughts are likely to become more frequent and more extreme in California due to increases in temperature and shifts in precipitation patterns. Research suggests that for much of the state, wet years will become wetter and dry years will become drier. Additionally, dry years are more likely to be followed by dry years, increasing the risk of multi-year droughts.[1] It is highly likely that the County will experience similar or more severe drought conditions in the future to those experienced in the last 20 years.

Recent multi-year droughts have caused severe water supply disruptions in several portions of the County, impacting both individual domestic wells and public water systems. County residents have experienced direct impacts of drought, such as water shortages, water restrictions, increased water prices, water quality degradation, and restricted access to recreational areas. Droughts also have the potential to severely impact the County's agricultural and recreational industries and adversely affect residents through indirect social and economic impacts, such as job loss and increased food prices. In addition to drought-related impacts felt by County residents, prolonged droughts also have negative impacts on the environment, leading to impacts such as habitat degradation, vegetative stress, and direct effects to aquatic wildlife as a result of reduced flows.

3.1.2 Other Hazards

The purpose of this DRP, pursuant to SB 552, is to identify potential drought and water shortage risks and propose interim and long-term strategies for State Small Water Systems and domestic wells within the County. However, it is important to note that in addition to water shortages, other hazards frequently co-occur with and exacerbate the impact of drought – namely, wildfire and water quality issues. While the Plan does not explicitly plan for these events, other hazards are identified and presented to provide a holistic understanding of drought-related risks in the County.

Approximately 97% of the County is covered by natural vegetation, with extensive forested areas. As such, wildfire poses a significant hazard to County residents, especially during dry conditions. Recent years have seen severe wildfire activity during drought periods. In 2020, at the onset of a multi-year drought, the August Complex Fire burned over 1 million acres, including eastern portions of the County, and became the largest wildfire in California history. From 2012 to 2017, a series of major fires fueled by dry conditions impacted the County and surrounding areas. These wildfires not only pose a direct threat to homes and infrastructure but can also adversely affect surface water quality through increased sedimentation and runoff.

In addition, changes in vegetation and land cover can contribute to drought severity and strain water supplies by altering ecosystem functions that regulate water availability. The loss of deciduous oak woodlands to native conifer encroachment is a growing concern across much of the Pacific Northwest and northern California, including Mendocino County. Specifically, the spread of Douglas-firs into Oregon white oak and California black oak woodlands has significantly reduced plant and animal biodiversity, disrupted ecosystem services, and altered fire regimes, contributing to the degradation of wildlife habitats, cultural practices, biodiversity, and other vital ecological functions.[38] Regarding water supply, this shift in forest composition drastically impacts water yield by altering forests' vegetation structure, resulting in reduced groundwater infiltration and increased evapotranspiration. These changes not only strain water resources but also exacerbate drought conditions by decreasing natural groundwater recharge and reducing long-term water supply reliability.[4]

3.2 Step 2: Define Community Assets

SB 552 requires counties to assess and plan for drought and water shortage risks for State Small Water Systems and domestic wells. To support the risk assessment, the County conducted an asset inventory to map the locations of all State Small Water Systems and domestic wells using the best available data and information. This assessment is subject to update and change upon availability and collection of additional information and data.

The County used DWR's OSWCR to determine the count and locations of domestic wells. The OSWCR dataset was filtered to exclude the following well records:

- Well records missing location information, as it cannot be confirmed whether these wells lie within the County.
- Wells constructed before 1977[4], as these wells have likely been abandoned or replaced due to age.

As shown in **Figure 4**, there are estimated to be 7,972 domestic wells in the County. Approximately one third of these wells are drilled less than 100 feet below the ground surface. Groundwater supply from shallow wells is more susceptible to contamination from surface pollutants and going dry due to limited storage and is generally considered more at-risk than supply from deeper wells.

The County used the State Water Resources Control Board's (SWRCB) identification of State Small Water Systems, which are defined as water systems that provide water supply for at least five and up to 14 service connections and provide drinking water to fewer than 25 people on a regular basis.[26] As listed in **Table 4** and shown on **Figure 5**, it is estimated that twenty-seven (27) State Small Water Systems are within the County. State Small Water Systems may be at risk during water shortage events due to limited technical and operational resources to respond to emergencies.

[4] Use of 1977 as an age threshold is consistent with the screening practice used by DWR's California's Groundwater Live: Well Infrastructure.[11]

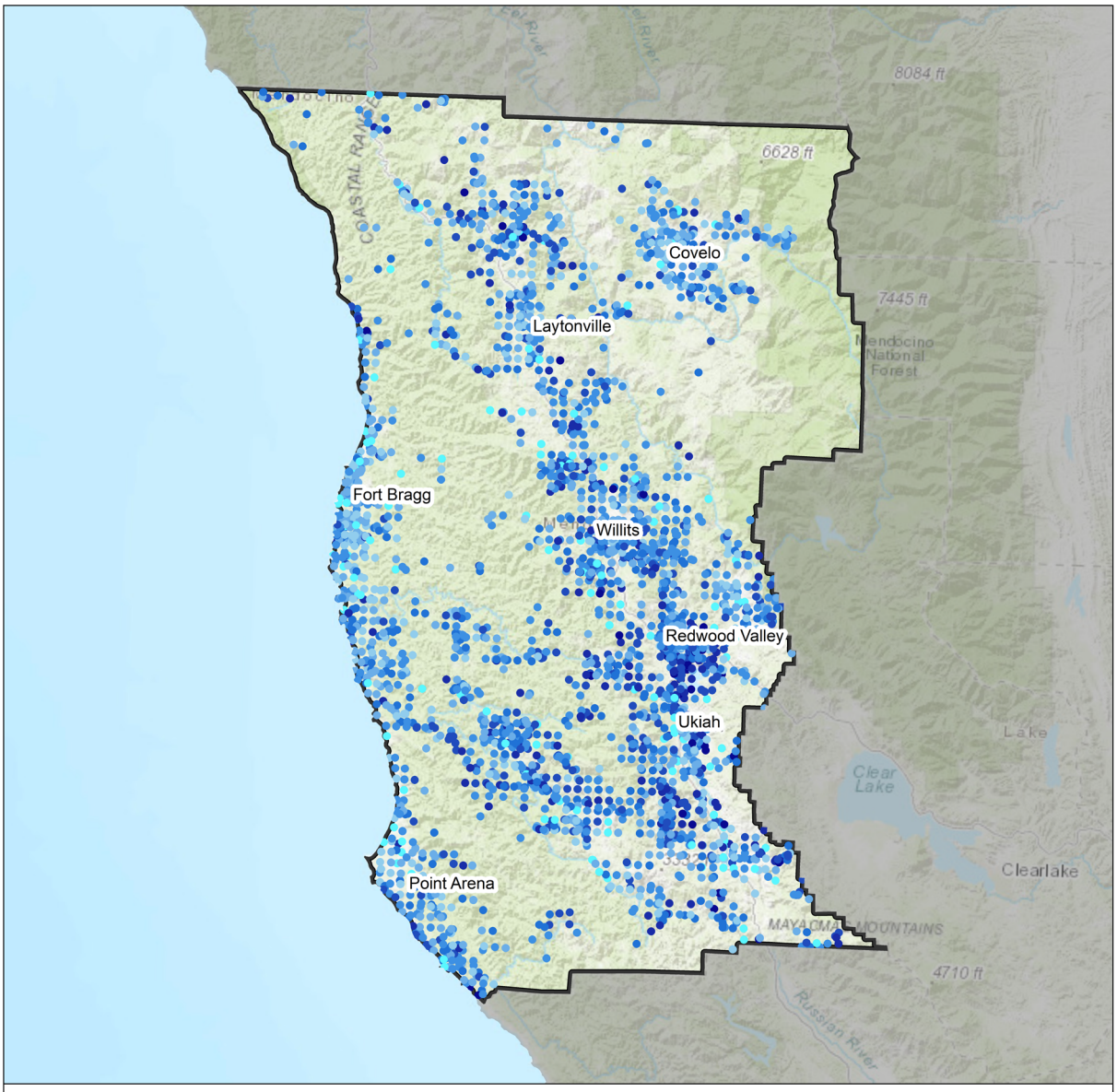


Figure 4. Domestic Well Depths

Table 4. State Small Water Systems

Water System Name[1]	Mendocino County BoS District	Service Area Type
Anderson Valley Inn	5	Other Transient Area
Anderson Vineyard Family Housing	5	Residential Area
B & L Mobile Home Park	1	Mobile Home Park
Big Bend Lodge	4	Other Transient Area
Boonville Apartments	5	Residential Area
Cottages At Little River Cove	5	Other Transient Area
Daniel Way Water System	1	Residential Area
Dave Burgess Water System	5	Residential Area
Dos Rios Mutual Water Company	3	Residential Area
Henry Station Mutual Water Company	1	Residential Area
Hillcrest Trailer Court Inc.	1	Other Residential Area
Horseshoe Circle Water Association	1	Residential Area
Little River Business District	5	Retail Employees
Little River Headlands Association	5	Residential Area
Navarro Water Project	5	Residential Area
North O'Town Industrial Center	4	Industrial/Agricultural
Pacific View Mutual Water System	5	Residential Area
River's Bend	5	Other Transient Area
Salmon Creek Mutual Water System	1	Residential Area
Schooners Landing	5	Residential Area
Sleepy Hollow RV Park	3	Other Residential Area
Tan Oak Park	4	Other Residential Area
The Andiron	5	Other Transient Area
UC Hopland Research & Extension Center	1	Institution
Van Zandt's Redwood View Resort, LLC	5	Other Transient Area
Wildwood Ranchos I	3	Residential Area
Wildwood Ranchos II	3	Residential Area

Abbreviations:
"BoS" = Board of Supervisors
"SWRCB" = California State Water Resources Control Board
"DDW" = Division of Drinking Water

Notes:
(1) SWRCB defines State Small Water Systems as those with at least five and up to 14 connections, serving fewer than 25 people on a regular basis. However, during the process of identifying these systems within the County, inconsistencies were found in the publicly available SWRCB sources regarding the definition of State Small Water Systems. For instance, the SWRCB's 2024 Aquifer Risk Map lists State Small Water Systems in each of California's counties, including the population served and the number of service connections for each system. Yet, many of the systems identified in this dataset either serve more than 25 people or do not meet the minimum connection requirement to be classified as a State Small Water System. For consistency with the SWRCB definition of State Small Water Systems, only water systems classified by the SWRCB in Source (1) were considered to meet the connection and population requirements of State Small Water Systems. Based on this, it is estimated that there are 27 State Small Water Systems in Mendocino County.

Sources:
(1) Drinking water system information was obtained from the SWRCB DDW's California Drinking Water System Boundaries dataset, which was downloaded from the SWRCB's GIS portal and combines multiple SWRCB datasets to consolidate information collected by SWRCB and streamline stakeholder outreach efforts. Last updated in September 2024, the dataset provides a system classification (e.g., community, non-transient non-community, transient non-community, and State Small Water System), number of connections, population served, and water system area boundary, among other information, for each water system.

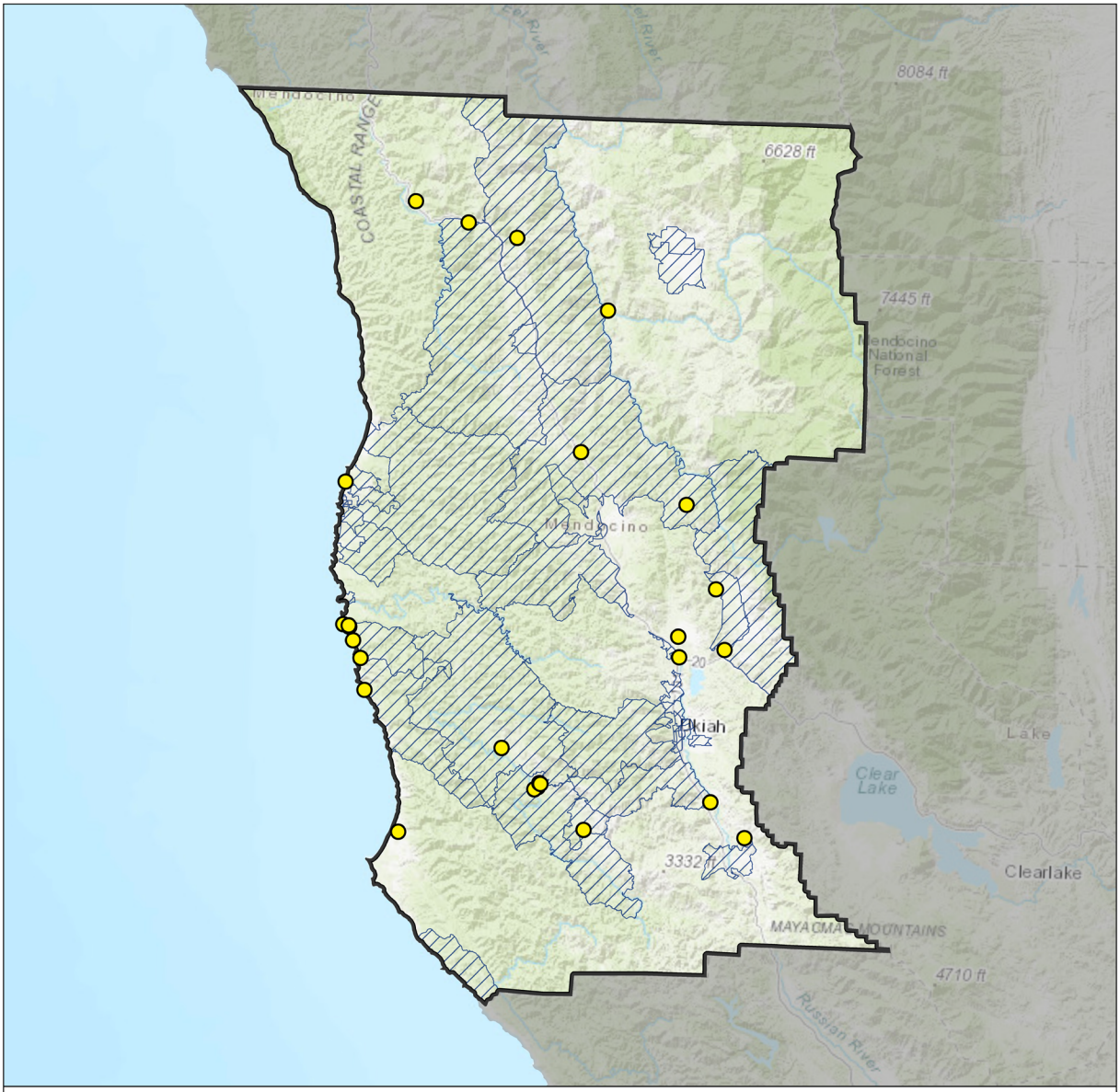


Figure 5. State Small Water Systems

3.3 Step 3: Conduct Vulnerability Assessment

Per DWR's guidebook, there are two major categories of vulnerability for counties to consider in a drought and water shortage risk assessment: physical vulnerability and social vulnerability. For both categories, DWR has compiled relevant statewide data and conducted a stakeholder participation process to create a Water Shortage Vulnerability dataset that serve as basic information for counties to rely on for DRP development.[6],[7] In this DRP, the County has utilized DWR's dataset, which is supported and validated by findings from the County Multi-Jurisdictional Hazard Mitigation Plan (MJHMP).[16]

3.3.1 Physical Vulnerability Assessment

3.3.1.1 Physical Vulnerability Factors

DWR developed a checklist for assessing physical vulnerability that includes several indicators evaluated in DWR's statewide Small Water Systems and Rural Communities Drought and Water Shortage Contingency Planning and Risk Assessment (Table 3-3 of the DWR Guidebook). Based on available data and information and the risk assessment conducted in the County MJHMP, relevant drought and climate-related physical vulnerabilities factors were identified as follows:

- Changes in temperature and precipitation
- Wildfire risk
- Sea level rise (for coastal communities)
- Groundwater quality degradation
- Declining groundwater levels
- Communities in fractured rock areas
- Household outages on domestic wells and dry domestic wells

Each of these factors are discussed in detail below.

Changes in Temperature and Precipitation

Changes in temperature and precipitation patterns are projected to occur as a result of climate change. In the California North Coast region, it is predicted that annual maximum temperatures will increase by 5 to 9 degrees Fahrenheit by the end of the 21st century.[16] Increases in temperature can exacerbate the severity of drought conditions and indirectly impact water supply. Higher temperatures increase the rate of evaporation from the soil and surface water bodies and increase vegetative demand for water, leading to greater losses in local water supplies.

Additionally, annual precipitation is likely to be delivered in more intense storms, with shorter wet seasons and prolonged dry seasons. Parts of the County, namely the southeastern portions of the County including the City of Ukiah, are already experiencing departures from historic average temperature and precipitation (**Figure 6**).[18]

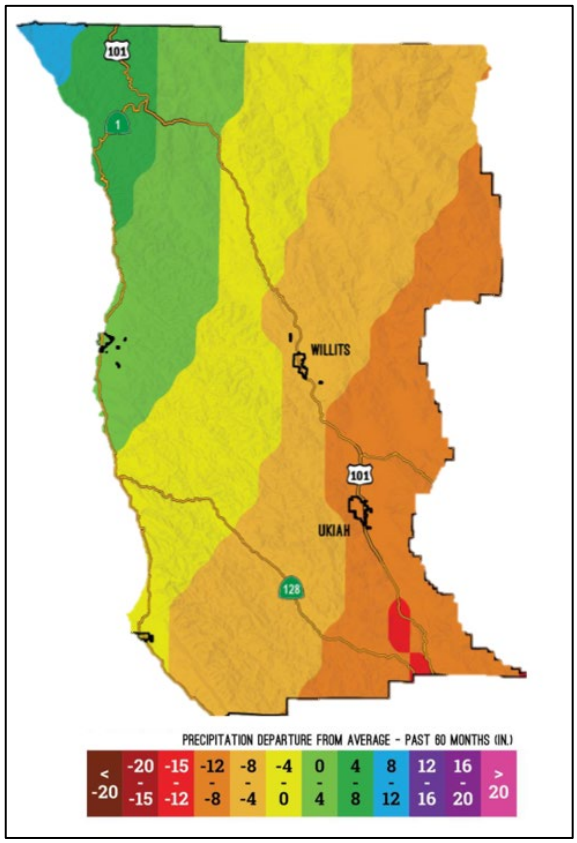


Figure 6. Departure from Average Precipitation

This observed departure from historic average temperature and precipitation values is consistent with trends reported by Cal-Adapt, which shows that the annual average maximum temperature within the County has increased just under 2 degrees Fahrenheit since the beginning of the 21st century and is expected to increase by 5 to 9 degrees Fahrenheit by 2100 (**Figure 7**), in line with County estimates.[1]

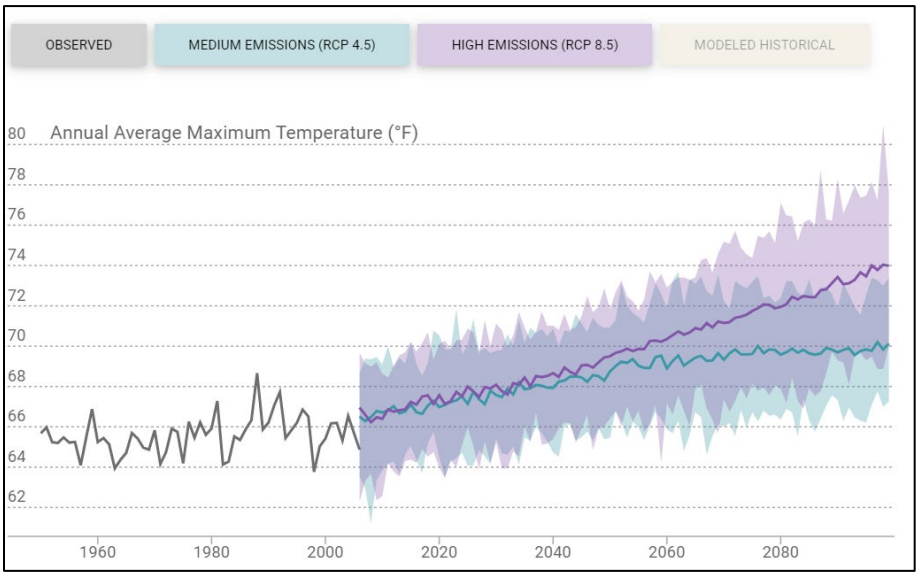


Figure 7. Annual Average Maximum Temperature

Wildfire Risk

Drought and wildfire events often co-occur, as low precipitation that characterizes drought periods creates conditions that increase the risk of wildfire. The County possesses many vegetative fuel types including grass, oak woodlands, brush, mixed chaparral, timber, and cut-over slash, that become dry and flammable during drought conditions. Within the County, historic wildfire occurrences have been the most common in the mountainous areas in the eastern portion of the County, and on average, a wildfire occurs in the County every year.[16] Wildfires can impact water supply through the contamination of surface water bodies, including reservoirs, due to increased sedimentation, runoff, and pollution from wildfire debris. As shown in **Figure 8** from the County MJHMP, based on data from the California Department of Forestry and Fire Protection (Cal Fire), most of the county is characterized as having high to very high wildfire risk.

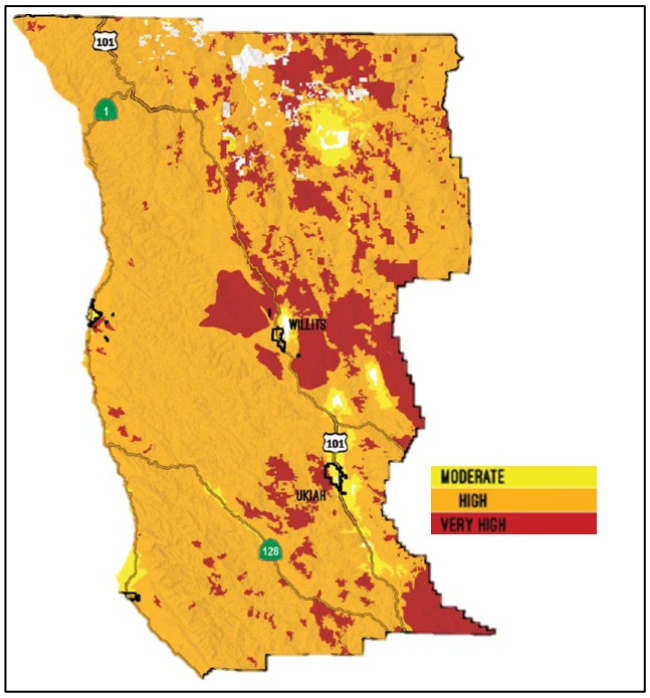


Figure 8. Wildfire Risk

Sea Level Rise

Sea level rise and drought are interconnected through the broader impacts of climate change. Planning for direct impacts due to sea level rise, such as inundation of homes, businesses, and infrastructure, is outside the scope of this DRP. Coastal flooding and storm surge inundation occur during periods of high or intense precipitation, which would most often occur in normal to wet years, opposite of drought. Nonetheless, sea level rise has the potential to impact water supply through seawater intrusion into the County's coastal freshwater aquifers. Seawater intrusion has not been a documented widespread issue in the County's coastal aquifers; however, it has occurred in localized areas near Point Arena where wells are drilled below sea level near the ocean.[3] The terrace deposits between Ten Mile River and Laguna Point and Alder Creek and Point Arena are susceptible to saltwater intrusion.[3]

Groundwater Quality Degradation

SWRCB's 2024 Aquifer Risk Map[5] was used to evaluate water quality risk in the County.[27] The SWRCB dataset considers data for most chemical constituents with a Maximum Contaminant Level (MCL), and several additional constituents that may affect human health. **Figure 9** shows the total water quality risk for all constituents. A section is considered "high risk" if any recent sampling result is above the comparison concentration for that constituent (e.g., the MCL).

[5]Note that the SWRCB's 2024 Aquifer Risk Map has been archived and can be accessed here: https://gispublic.waterboards.ca.gov/portal/apps/experiencebuilder/experience/?id=18c7d253f0a44fd2a5c7bcfb42cc158d&page=2024-Map.
The updated 2025 Aquifer Risk Map can be found at the following link: https://gispublic.waterboards.ca.gov/portal/apps/experiencebuilder/experience/?id=18c7d253f0a44fd2a5c7bcfb42cc158d

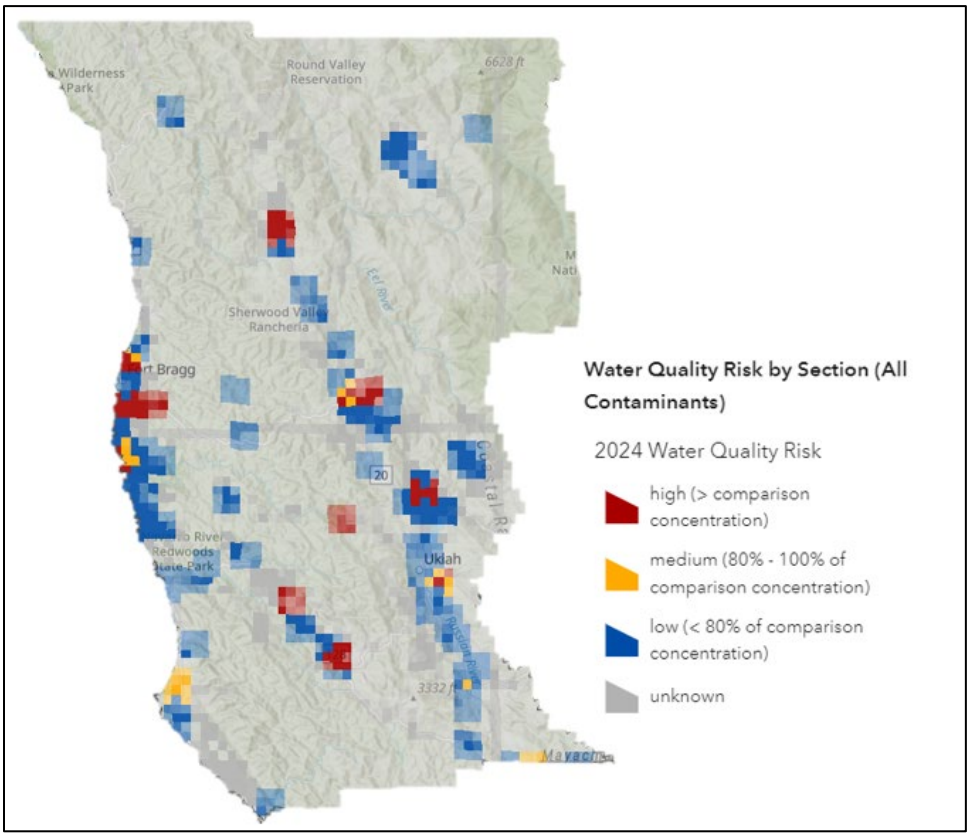


Figure 9. Water Quality Risk by Section

High-risk areas for degraded water quality include the City of Fort Bragg, Anderson Valley, Redwood Valley, Laytonville, Talmage, and the City of Willits, along with its surrounding areas. The 2024 Aquifer Risk Assessment estimates that 1,721 domestic wells in the County are considered "high risk" for water quality, and no State Small Water Systems are considered "high risk" for water quality.[28]

Declining Groundwater Levels

Outside of the Ukiah Valley Basin, which is subject to SGMA, groundwater elevation data is limited throughout the County. CASGEM data, as available, was used to evaluate long-term groundwater elevation trends.[3] As shown on **Figure 10**, groundwater levels respond to seasonal fluctuations but show long-term stability throughout the County. Wells in the Covelo Round Valley Basin in the northern portion of the County show declining trends; however, this basin is considered "very low" priority by DWR and is not considered to be experiencing overdraft. The "Dry Domestic Wells" section below discusses areas where declining groundwater levels have the greatest risk of causing household water outages.

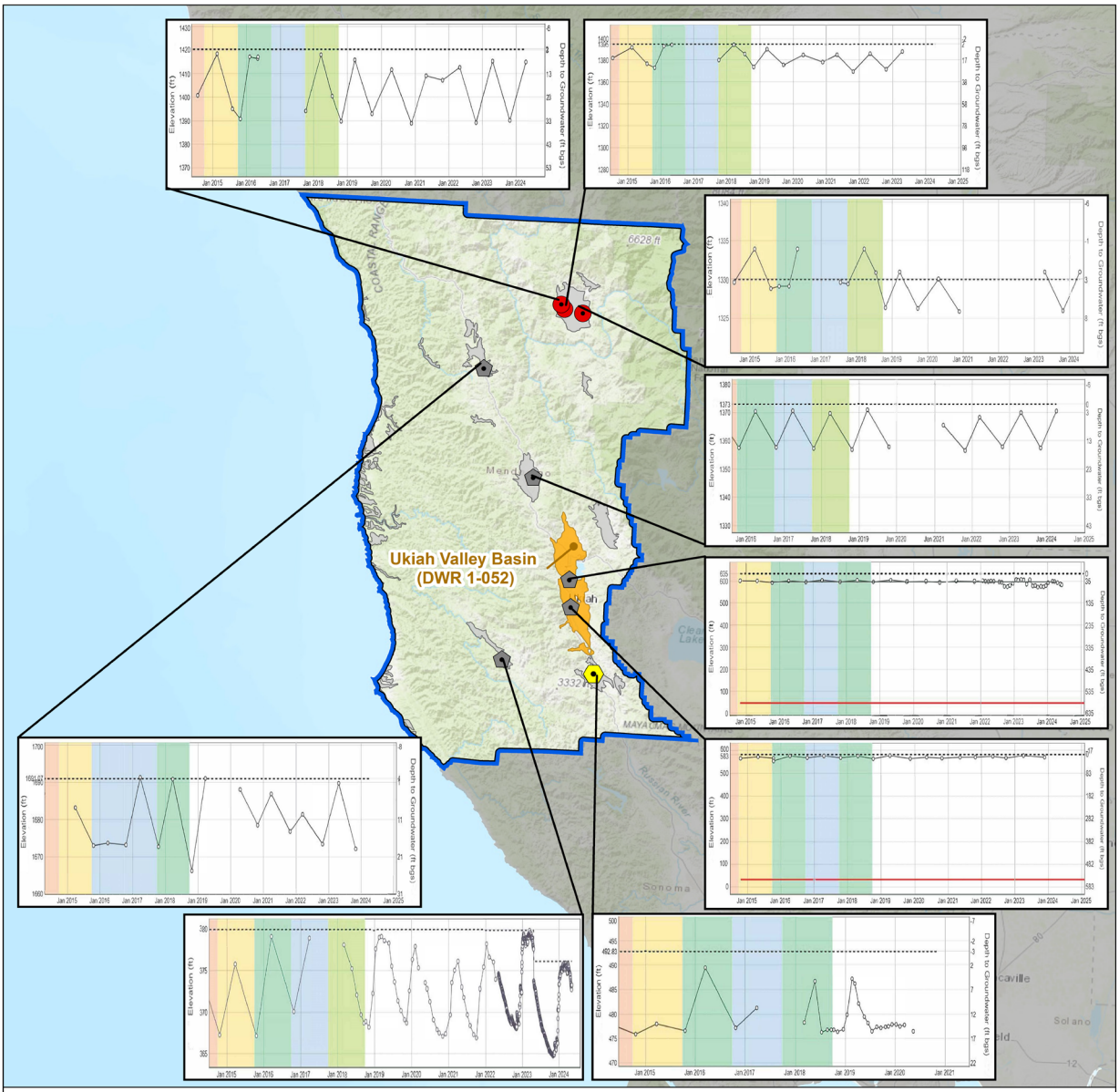


Figure 10. Groundwater Level Trends

Communities in Fractured Rock

Fractured rock aquifers typically have high hydraulic conductivity, meaning water flows through the fractures relatively quickly. While this can facilitate rapid recharge, it also means that these formations are more sensitive to drought conditions and have higher rates of depletion. Fractured rock can also be more susceptible to contamination due to the direct pathways provided by fractures. According to DWR's Bulletin 118, there are several smaller, typically coastal basins that have groundwater available in bedrock fractures.[3] However, it is difficult to estimate how many existing domestic and public supply wells are in fractured rock aquifers. The Town of Mendocino is a notable example of a community that is known to have individual supply wells in fractured rock and may be more susceptible to household water outages during drought conditions.[33]

Dry Domestic Wells

DWR has developed an interactive mapping tool, the Dry Well Susceptibility Tool, which identifies areas within groundwater basins that may be prone to water supply shortages. DWR estimates that there are 82 domestic wells in the County that are susceptible to going dry, or 1% of all domestic wells. Susceptible wells are located in Anderson Valley, Redwood Valley, east of Caspar, and in Covelo (**Figure 11**). Additionally, water users can report dry wells to DWR. Between 2015 and 2024, 36 domestic wells have been reported dry to DWR within the County, with most reported dry during the 2020 to 2022 drought period (**Figure 12**). Reported dry wells are located throughout the County, with the highest densities near the City of Fort Bragg, Anderson Valley, and City of Ukiah.

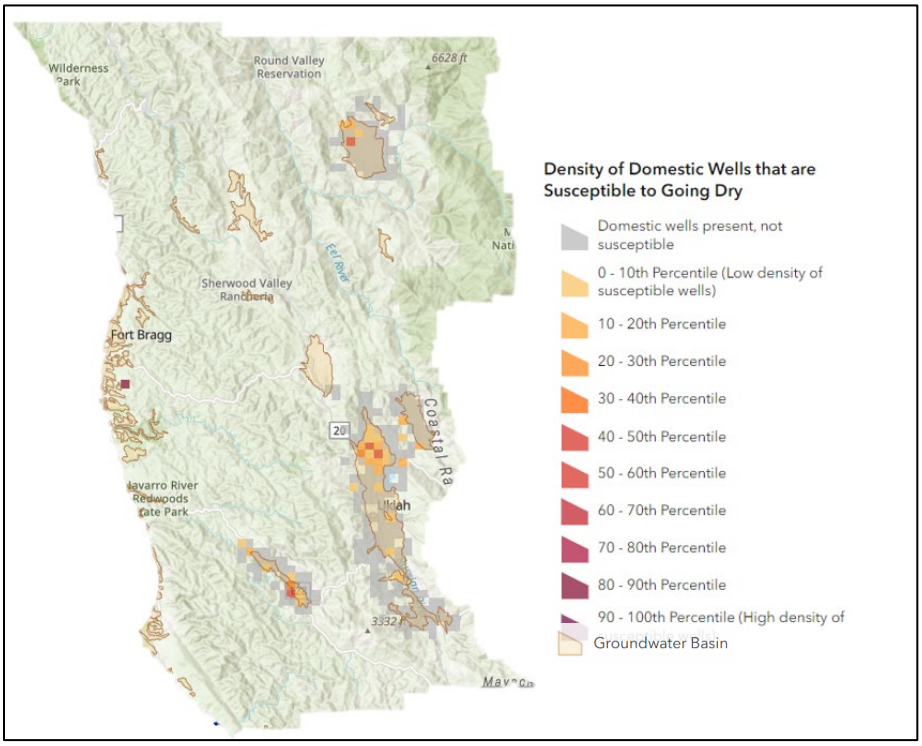


Figure 11. Dry Well Susceptibility

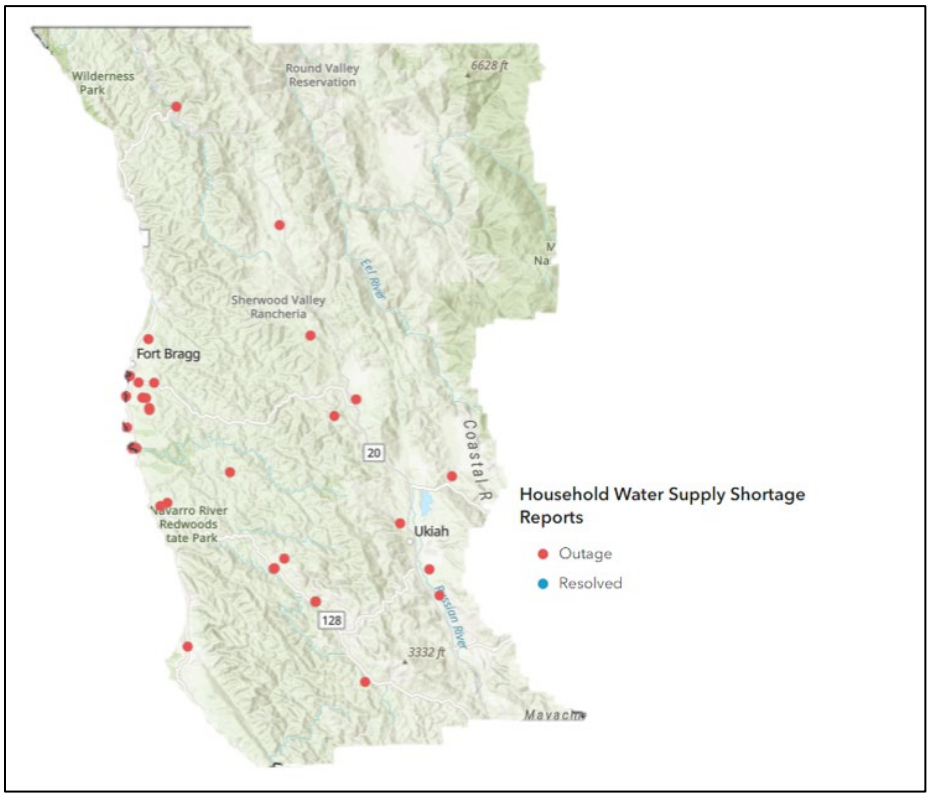


Figure 12. Reported Dry Wells

3.3.1.2 DWR Physical Vulnerability Assessment

The County utilized DWR's statewide Water Shortage Vulnerability Scoring to quantify physical drought-related vulnerability in various portions of the County, in consideration of the factors described above.[7] These physical risk factors increase the likelihood of infrastructure failure and water supply outages. DWR's scoring was found to be generally consistent with the risk assessment performed in County's MJHMP, and therefore DWR's Water Shortage Vulnerability data is used in this DRP to identify vulnerability and assess risk at a county scale.[16] Total Physical Vulnerability Scoring was aggregated by DWR per the methodology outlined in DWR (2024b), and takes into account all physical risk factors listed in the DWR Water Shortage Vulnerability Tool, including those deemed most relevant to the County (**Section 3.3.1.1**). Physical Risk was grouped into categories based on DWR's aggregated scoring as follows:

- **High Risk:** Total Physical Vulnerability Score > 35
- **Medium Risk:** 18 < Total Physical Vulnerability Score < 35
- **Low Risk**: Total Physical Vulnerability Score < 18

These groups were defined based on the mean and standard deviation of aggregated physical vulnerability scores for State Small Water Systems (36 ± 12) and domestic wells (39 ± 15). In general, systems with aggregated physical scores above the mean are categorized as high risk, while those below the mean minus one standard deviation are considered low risk. To align with the DWR mapping categorization and enhance usability within its online mapping portal, the cutoff values were slightly adjusted to 35 and 18, respectively.

Figure 13 shows DWR's Total Physical Vulnerability Scoring mapped by Public Land Survey System (PLSS) sections. Most of the County is considered to have medium to high physical vulnerability. The highest physical vulnerability is in the northeastern and southeastern portions of the County, and the lowest physical vulnerability is east of the City of Ukiah and in the central, coastal portion of the County. It is

noted that this map only shows physical vulnerability; it does not show risk, which considers the location of key water infrastructure. Risk is analyzed further in **Section 3.4** based on these findings.

3.3.2 DWR Social Vulnerability Assessment

Similar to its approach to physical vulnerability detailed above, the County utilized DWR's statewide Water Shortage Vulnerability Scoring to quantify social vulnerability in the County.[6] Several demographic and socioeconomic characteristics of a population have been shown in disaster risk management to be associated with a reduced ability to prepare for or otherwise mitigate impacts of drought, water shortage, and other disasters. DWR's analysis considered several social vulnerability factors based on a County Drought Advisory Group's findings and reports by the United States Center for Disease Control for social indicators of a population's vulnerability to drought.[9] Statistics for select social vulnerability factors for both the County and the State of California are shown in **Table 5** below. The County has a higher vulnerability for most of these risk factors than the statewide average.

Table 5. Summary Statistics for Social Vulnerability Factors

Social Vulnerability Factor	Mendocino County[1]	California[1]
Median household income	$65,520	$91,551
Average per capita income	$39,330	$46,661
Percent of population Living in poverty	19	12
Percent of persons 65 years of age or older	25	16
Percent of persons 5 years of age or younger	5	5
Percent no vehicles available	9	7
Percent of population unemployed	6	4
Percent of population who speak English less than well	9	17
Percent mobile homes	9	4
Percent persons with High School Diploma or less	63	55
Percent population with single-parent	29	22

Sources:
(1) United States Census Bureau, 2020.[35]

Figure 14 shows DWR's Total Social Vulnerability Scoring mapped by census block groups. Most populated areas of the County are considered to have significant social vulnerability. As previously noted, approximately 85% of the County area and 66% of the County population is within a DAC.[2] As stated above, this map only shows social vulnerability; it does not show risk, which considers the location of key water infrastructure. Risk is analyzed further in **Section 3.4** based on these findings.

3.4 Step 4: Analyze Risks

The next step of the risk assessment is to analyze the previously characterized hazards (**Section 3.1**) and vulnerabilities (**Section 3.3**) for the identified community assets (i.e., domestic wells and State Small Water Systems; **Section 3.2**). This analysis is presented in two ways: as a risk matrix and by mapping.

3.4.1 Risk Matrix

Risk matrices account for the probability of occurrence and severity of impact. It is important to understand the vulnerabilities outlined in **Section 3.3** for future planning, as infrastructure and systems constructed in those areas should be designed to withstand these vulnerabilities. However, to be considered at-risk for the purposes of this DRP, an area must have a high probability of a drought-related occurrence and currently contain vulnerable water infrastructure (i.e., domestic wells or State Small Water Systems).

A risk matrix (**Table 6**) was constructed to inform the development and prioritization of various actions for short-term response and long-term mitigation at the County level. In this context, the risk matrix was summarized by the five County Supervisorial Districts and the identified community assets within each district. Risk was characterized as “high”, “medium”, or “low” based on the average score for domestic wells or State Small Water Systems within each County Supervisorial District compared to state-wide percentiles.

Domestic wells and State Small Water Systems across all Supervisorial Districts generally exhibit medium to high total physical vulnerability and high social vulnerability. The presence of these assets, particularly in areas with overlapping vulnerabilities, highlights the County’s overall susceptibility to future droughts. While mitigation strategies should be tailored to local hazards, a county-wide approach to drought resilience planning is essential to effectively address these risks. A detailed identification of at-risk domestic wells and State Small Water Systems is provided in **Section 3.4.2**.

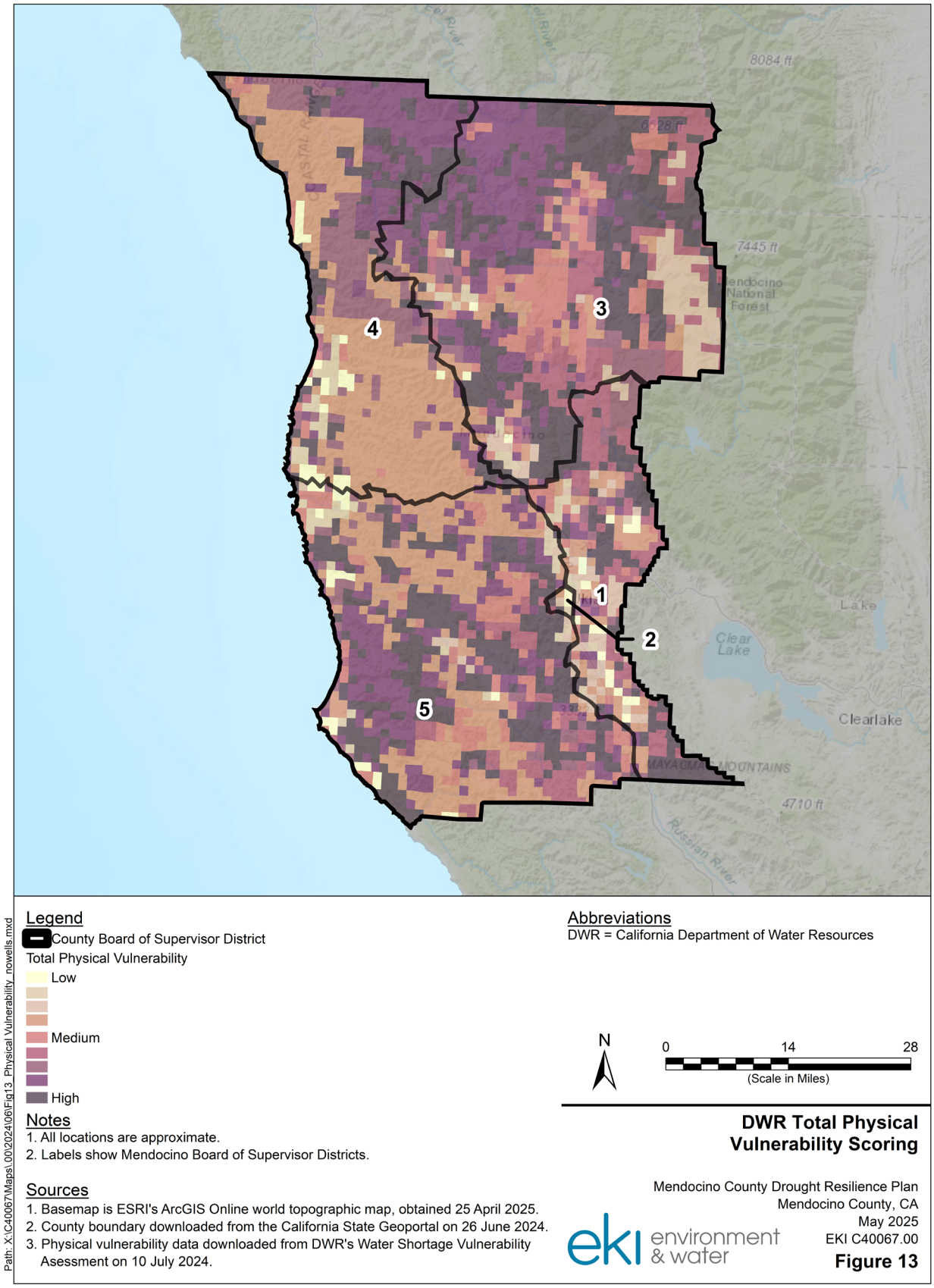


Figure 13. DWR Total Physical Vulnerability Scoring

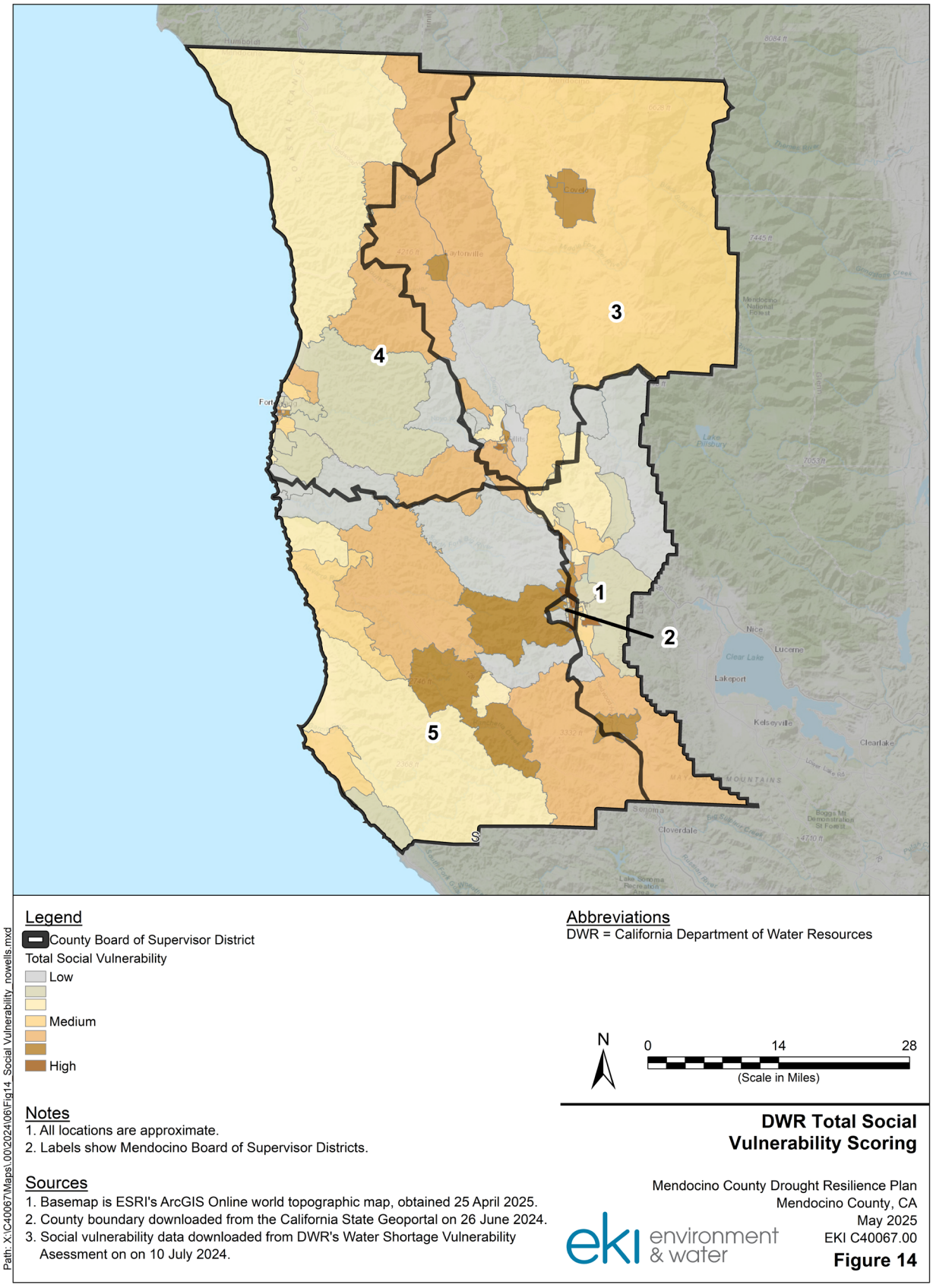


Figure 14. DWR Total Social Vulnerability Scoring

Table 6. Drought and Water Shortage Risk Matrix

Asset	Count	Selected Physical Vulnerability Criteria					Total Physical Vulnerability	Total Social Vulnerability
		Household Water Outage	Dry Well Susceptibility	Groundwater Level Decline	Groundwater Quality	Wildfire		
Board of Supervisors District #1								
Domestic Wells	1,202	Low	High	(1)	Medium	High	Medium	High
State Small Water Systems	7	High	Medium	(1)	Low	Medium	High	High
Board of Supervisors District #2								
Domestic Wells	11	Low	Low	(1)	Low	High	High	High
State Small Water Systems	0	N/A	N/A	(1)	N/A	N/A	N/A	N/A
Board of Supervisors District #3								
Domestic Wells	1,440	Low	Medium	(1)	Medium	High	High	High
State Small Water Systems	4	Low	Medium	(1)	Low	High	High	High
Board of Supervisors District #4								
Domestic Wells	1,943	High	High	(1)	High	High	High	High
State Small Water Systems	3	Low	Medium	(1)	Medium	High	High	High
Board of Supervisors District #5								
Domestic Wells	3,376	High	High	(1)	Low	High	High	High
State Small Water Systems	13	Low	High	(1)	Low	High	Medium	High

Abbreviations:
"N/A" = not applicable

Notes:
(1) DWR's statewide Water Shortage Vulnerability Scoring includes a Groundwater Level Decline indicator, which represents changes in groundwater level elevations from 2003 to 2023. The scoring for this metric was recently revised using DWR's 2024 California's Groundwater Conditions Semi-Annual Update and is scaled from 0 to 1, with 0 indicating an absence of monitoring well data between two points and 1 indicating the presence of declining wells. A review of this indicator across Mendocino County shows that the majority of the County contains blank data for this metric, a condition not addressed in the Water Shortage Vulnerability Scoring methodology documentation. For the purpose of this analysis, these blanks are assumed to represent data gaps, and a determination of Low, Medium, or High risk could not be made for this indicator for any of the County's BoS districts. However, this assumption does not negatively impact the results of this risk assessment or the actions and strategies presented in this DRP, as the majority of the County's defined assets are still categorized as having high total physical vulnerability, which indicates that the majority of domestic wells and state smalls across the County are considered at high risk regardless of this metric.

3.4.2 Risk Mapping

In addition to summarizing County risk in the risk matrix above, community assets were mapped against DWR's Total Physical and Social Vulnerability Scoring, as shown in **Figure 15** and **Figure 16**. This mapping allows the County to identify specific areas with at-risk domestic wells and State Small Water Systems.

As shown on **Figure 15** and **Figure 16**, there are 6,654 domestic wells in the County (84%) located in areas that have high physical and/or social vulnerability to drought (i.e., total physical vulnerability score greater than 35 and/or total social vulnerability score greater than 0.55). The locations with the highest density of these at-risk wells are listed in **Table 7**.

Table 7. Primary At-Risk Domestic Well Locations

Category	Name
Cities	Fort Bragg
Census Designated Places (CDPs)	Calpella CDP
	Talmage CDP
	Brooktrails CDP
	Covelo CDP
	Boonville CDP
	Philo CDP
	Manchester CDP
	Laytonville CDP
	Redwood Valley CDP
	Potter Valley CDP
Unincorporated Communities	Town of Mendocino
	Pine Grove
	Caspar
	Whitesboro
	Navarro
	Fish Rock
	The Oaks
	Yorkville
Native American Tribal Lands	Redwood Valley Rancheria
	Pinoleville Rancheria
	Coyote Valley Reservation
	Yokayo Tribe of Indians
	Sherwood Valley Band of Pomo Indians[24]

Similarly, as shown on **Figure 15** and **Figure 16**, there are twenty-five State Small Water Systems (93%) in areas that have high physical and/or social vulnerability to drought.

- Anderson Valley Inn
- Anderson Vineyard Family Housing
- B & L Mobile Home Park
- Big Bend Lodge
- Boonville Apartments
- Cottages At Little River Cove
- Daniel Way Water System
- Dave Burgess Water System
- Dos Rios Mutual Water Company
- Hillcrest Trailer Court Inc.
- Horseshoe Circle Water Association
- Little River Business District
- Navarro Water Project
- North O'Town Industrial Center
- Pacific View Mutual Water System
- River's Bend
- Salmon Creek Mutual Water System
- Schooners Landing

- Sleepy Hollow RV Park
- Tan Oak Park
- The Andiron
- UC Hopland Research & Extension Center
- Van Zandt's Redwood View Resort, LLC
- Wildwood Ranchos I
- Wildwood Ranchos II

3.5 Step 5: Summarize Assessment

A significant portion of the County and its domestic wells (84%) and State Small Water Systems (93%) are at high risk of being impacted by drought and water shortage events in the future. The results of the Drought and Water Shortage Risk Assessment are to be used as the foundation for education and outreach and to develop and prioritize short-term response actions and long-term mitigation strategies for drought. While primary risk factors and local hazards vary across the County and are considered in mitigation planning, the County as a whole remains at risk and vulnerable to drought. As such, no areas under this plan should be excluded from future drought preparedness efforts.

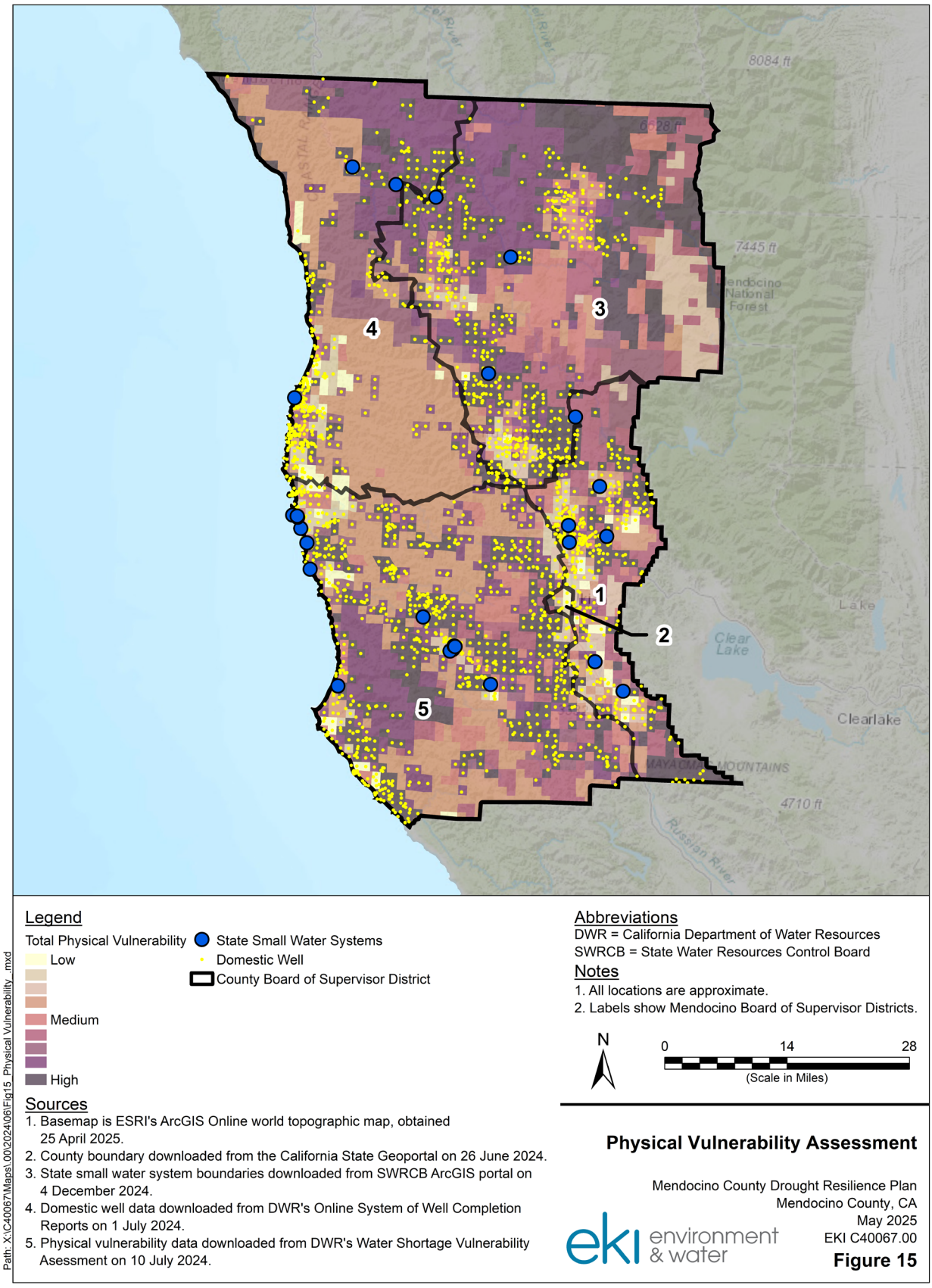


Figure 15. Physical Vulnerability Assessment

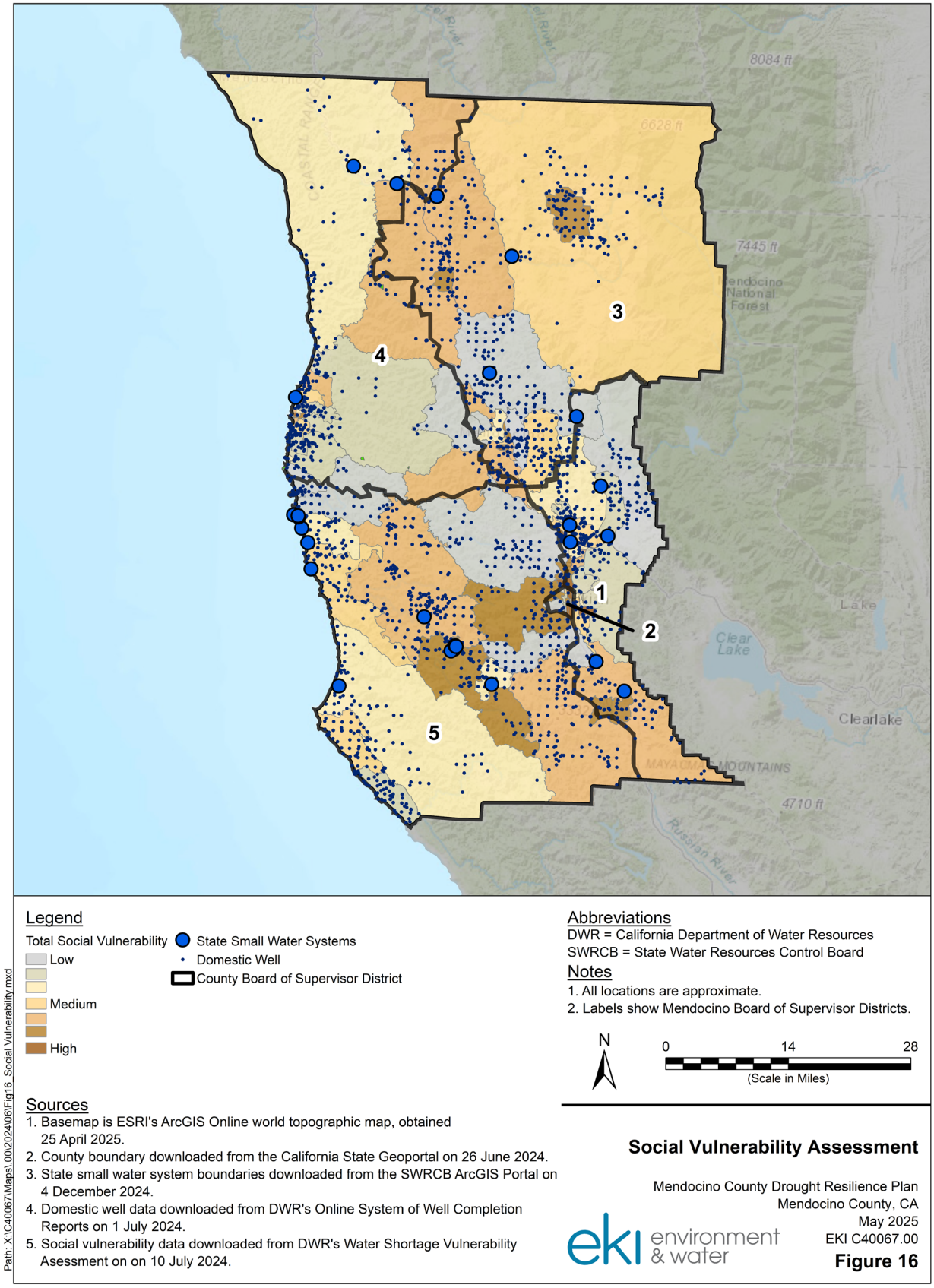


Figure 16. Social Vulnerability Assessment

4 EXISTING DROUGHT RESPONSE ACTIONS

Over the past decade, the County has taken several actions related to drought planning and mitigation in response to statewide regulations and local conditions during droughts. Specific programs, regulations, and actions are discussed below.

4.1.1 Regulatory-Based Actions

California Statewide Groundwater Elevation Monitoring (CASGEM)

Since 2009, the CASGEM Program has tracked seasonal and long-term groundwater elevation trends in groundwater basins statewide. The program establishes a collaboration between local entities and DWR to collect statewide groundwater elevation data, to be made available to the public. The CASGEM Program relies and builds upon previously established local long-term groundwater monitoring networks. The County coordinates the collection of groundwater elevation data from local agencies, and then uploads data to the CASGEM system.[15] The County's participation in the CASGEM Program has provided important information on groundwater elevations and trends during drought periods.

Sustainable Groundwater Management Act (SGMA)

On September 16, 2014, the California legislature enacted SGMA for the purpose of achieving and maintaining groundwater sustainability throughout the State. SGMA requires local government and water agencies in high and medium priority basins to develop Groundwater Sustainability Plans (GSPs) to halt overdraft and bring the basin into sustainable conditions within 20 years of GSP implementation. The Ukiah Valley Basin is the only basin within the County subject to SGMA, as it was designated a medium-priority basin by DWR. The County holds a seat on the Board and Technical Advisory Committee (TAC) of the Ukiah Valley Basin Groundwater Sustainability Agency (UVBGSA) and, therefore, has taken an active role in GSP development and implementation. The GSP contains several projects and management actions intended to reduce groundwater consumption or utilize alternate sources of supply within the portion of the County covered by the Ukiah Valley Basin.[21] The Ukiah Valley Basin GSP (UVBGSP) also outlines well registration and mitigation as future projects and management actions likely to be implemented to support domestic wells within the Basin, contingent on available funding. Additionally, SGMA requires groundwater monitoring and annual reporting for the Basin.

Statewide Emergency Conservation Regulations

During the recent 2014 to 2017 and 2021 to 2023 droughts, the Governor of California issued proclamations of statewide drought emergencies and passed Executive Orders that called for action to strengthen the ability to manage water in drought conditions, including the implementation of mandatory water conservation regulations.[29]

In May 2016, the SWRCB enacted emergency water conservation regulations in compliance with the Governor's Executive Order (EO) B-37-16 declaring a statewide drought emergency. EO B-37-16 Making Water Conservation a California Way of Life sets forth actions to use water more wisely, eliminate water waste, strengthen local drought resilience, and improve agricultural water use efficiency and drought planning. In April 2017, EO B-40-17 lifted the drought emergency in the majority of the State, including the County, but retained many of the conservation requirements under EO B-37-16. In 2018, the California State Legislature enacted two policy bills, SB 606 (Hertzberg) and Assembly Bill (AB) 1668 (Friedman), as direct outcomes of EO B-37-16 and established a new framework for long-term water use efficiency in California. As directed by the framework, DWR developed recommendations for improving drought planning of small water suppliers and rural communities, which became the basis of SB 552.

During the recent drought, in January 2022, the SWRCB adopted an emergency drought regulation that prohibited specific water waste activities identified in the Governor's October 2021 drought

proclamations. In March 2022, Governor Newsom issued EO N-7-22 that maintained drought emergency and directed the SWRCB to consider adopting emergency regulations that (1) require suppliers submit a preliminary annual supply and demand assessment, (2) require suppliers to enter Stage 2 of Water Shortage Contingency Plans (WSCPs), and (3) define and ban irrigation of "non-functional" turf in commercial, industrial, and institutional areas. The SWRCB adopted emergency regulations pursuant to the March EO in May 2022 and defined the ban on irrigation of “non-functional” turf.

In March 2023 Governor Newsom issued EO N-5-33 that terminated certain provisions from previous State of Emergency Proclamations and EOs that were no longer needed considering improving drought conditions, such as those provisions requiring suppliers to enact Stage 2 of their WSCPs. In May 2023, the SWRCB readopted the ban on using potable water for watering non-functional turf in commercial, industrial and institutional areas throughout the state. On December 21, 2023, the SWRCB emergency regulation to prohibit wasteful water uses expired.

Emergency Water Conservation Rules and Regulations in Mendocino County Code Section 7.10

In response to the 2007 to 2009 drought, the County adopted Ordinance No. 4224 in July 2009 and Ordinance No. 4231 in January 2010, establishing Emergency Water Conservation Rules and Regulations (Mendocino County Code § 7.10) to support both statewide and local conservation goals. These ordinances were later updated in January 2014 through Ordinance No. 4323 to reflect the conditions of the 2012 to 2016 drought and revise conservation requirements (Mendocino County Code § 7.10.030).[19]

The current regulations require that all water users in the County reduce water use by 20% and local water suppliers implement their WSCPs. These provisions were initially intended to meet the immediate action necessary to avoid depleting Lake Mendocino storage and to consequently avoid the indirect costs to public health and safety, and economic losses to the County’s residents. However, they also apply to any future drought emergency declaration within the County. Per Mendocino County Code § 7.10.060, the current ordinance is presently inactive but will be reinstated upon a new drought emergency declaration within the County through a Resolution by the County’s BoS.[19]

Mendocino County Multi-Jurisdictional Hazard Mitigation Plan

In response to the passage of the Disaster Mitigation Act (2000), the County developed a MJHMP to identify prevalent hazards within the County and develop mitigation strategies to respond to identified vulnerabilities.[16] Preparation of this plan allows the County to access grant funding from FEMA’s Hazard Mitigation Assistance program, and the plan must be updated every five years to remain in compliance with federal mitigation grant conditions. In the County’s current version of the plan dated January 2021, drought is identified as one of the few hazards that has the potential to impact the entire population of the County. In this plan, the County identified three ongoing mitigation actions related to drought:

1) **ma-DR-MC-196:** Develop a public education campaign to encourage water conservation during drought
2) **ma-DR-MC-197:** Amend land use codes to incorporate regulations that encourage and incentivize water savings for development.
3) **ma-DR-MC-198:** Replace existing turf grass and water intensive landscaping with drought resistant landscaping

4.1.2 Local Drought Planning and Response

In addition to regulatory actions, the following actions have been implemented in the County to understand and mitigate risks due to drought.

Formation of the Ukiah Valley Water Authority

The Ukiah Valley Water Authority (UVWA) is a JPA formed between the City of Ukiah, Millview County Water District, Redwood Valley County Water District, Calpella County Water District, and Willow County Water District. Its primary purpose is to enhance the reliability of water supplies throughout the Ukiah Valley. UVWA will collaborate with California's Safe and Affordable Funding for Equity and Resilience (SAFER) Program to modernize outdated infrastructure and pool resources, improving water supply management for the region. By consolidating the agencies, UVWA will increase operational efficiency, expand the use of water rights and assets, and provide greater stability to communities, particularly during droughts when water supplies are limited. This consolidation is a crucial step in ensuring long-term water reliability for the region.[34]

Interties between Systems

Interties exist within the County between the Willow County Water District, City of Ukiah, Millview County Water District, Calpella County Water District, and the Redwood Valley County Water District. While the interties between the Millview and Calpella County Water Districts and between the Calpella and Redwood Valley County Water Districts are used regularly, the interties between the Willow County Water District and the City of Ukiah and between the City of Ukiah and Millview County Water District are currently used only for emergency purposes.

UVWA is currently assessing the infrastructure of its member agencies and identifying necessary capital projects, such as pipeline extensions and storage upgrades, to improve system reliability and distribution. Based on the findings of these assessments, the authority plans to pursue grant funding to support these infrastructure improvements, including upgrades to the interties between its member agencies.

Emergency Water Hauling Agreements

During the 2020 to 2022 drought, the City of Fort Bragg nearly exhausted its water supply, impacting both its residents and those of Mendocino Village and surrounding areas that typically rely on purchasing water from the City during shortages. In response, the County and the City of Ukiah took unprecedented emergency action, hauling water over 70 miles to Fort Bragg to provide a critical replacement supply. This effort was made possible through funding for the County from DWR's Small Community Drought Relief Program. Under the direction of the Board of Supervisors, the County entered into a mutual aid agreement with the Cities of Ukiah and Fort Bragg to fulfill the grant's requirements as an emergency measure. This water shortage event in particular highlights the importance of County-wide drought and emergency planning.

Drought and Water Conservation Education

The County has collaborated with several local agencies, including the RRFC, the Mendocino County Resource Conservation District (MCRCD), and UCCE, to develop and compile educational materials and resources related to drought and water conservation, including information related to the development of this Plan and County Drought Task Force Meetings. A library of resources is hosted on the County website[6].

[6] https://www.mendocinocounty.gov/government/mendocino-county-water-agency/drought-water-conservation

5 SHORT-TERM RESPONSE ACTIONS

As discussed in **Section 3**, in accordance with SB 552, counties are required to develop both short-term response actions and long-term mitigation strategies to address the risks posed by droughts and water shortages to State Small Water Systems and domestic well users. Short-term response actions, in particular, should focus on areas identified in the risk assessment as being highly vulnerable to future droughts and water shortages. In contrast to long-term mitigation strategies, which aim to reduce future vulnerabilities associated with water scarcity, short-term response actions are designed to address the immediate impacts of such events during their early stages and while drought conditions persist.

The risk assessment results, detailed in **Section 3.5**, show that a significant portion of the County, including 84% of domestic wells and 93% of State Small Water Systems, is at high risk of being affected by future water shortages due to physical and social vulnerabilities. Therefore, the short-term response actions defined herein are intended to be implemented on a countywide or coastal- or inland-region basis, as the majority of the County is considered to be at high risk. These regions are defined and discussed in greater detail in **Section 5.1.3**. This section describes the drought response triggers and the corresponding short-term response actions the County may implement in response to various drought and pre-drought conditions. It is worth noting that actions identified under this plan are complementary to local actions taken by local water suppliers, and should be implemented in conjunction with other existing local, regional, and countywide plans as discussed in **Section 7.**

5.1 Drought Response Triggers

Counties are encouraged to establish triggers for activating drought response actions to ensure those responsible for implementing the response are prepared to act proactively before a drought or water shortage occurs. DWR suggests the use of potential triggers, such as the State's declaration of a drought emergency, local conditions like critical water shortages or drought declarations, or other disasters, to prompt short-term response actions.[8] A review of the circumstances leading to past drought declarations was conducted to establish appropriate drought response triggers for the County. The review revealed that for the 2020 to 2022 drought, the USDA, County, and the State of California each declared a drought emergency in the County based on the following criteria:

1) **USDA Declaration**
   - On March 5, 2021, the USDA secretary designated 50 of California's counties, including Mendocino County, as primary natural disaster areas due to recent drought conditions. This designation, made in accordance with 7 Code of Federal Regulations (CFR) § 759.5, was based on data from the U.S. Drought Monitor (USDM)[7], which indicated that these counties experienced drought intensity levels meeting one of the following thresholds during the growing season: D2 (Drought-Severe) for eight or more consecutive weeks, D3 (Drought-Extreme), or D4 (Drought-Exceptional).[37] The USDM drought intensity classifications are described in more detail in **Section 5.1.2** below.
2) **County Declaration**
   - On April 20, 2021, the Mendocino County Board of Supervisors declared a local drought emergency through Resolution No. 21-051, citing significantly lower-than-average rainfall and reservoir levels of Lake Pillsbury and Lake Mendocino which were drastically below target storage levels as reasons for the drought declaration.[17]

[7] https://droughtmonitor.unl.edu/

3) **State Declaration**
   - Following the County's declaration, on April 21, 2021, Governor Newsom declared a local drought emergency in Sonoma and Mendocino counties, citing two-year rainfall totals at approximately half of the expected averages and record-low storage levels of Lake Mendocino and Lake Sonoma.[20]

The drought response triggers outlined in this plan are aligned with the conditions that prompted drought declarations by the USDA, County, and State during the 2020 to 2022 drought. These triggers, detailed further below, are designed to address varying levels of water shortages and are structured into stages of increasing severity:

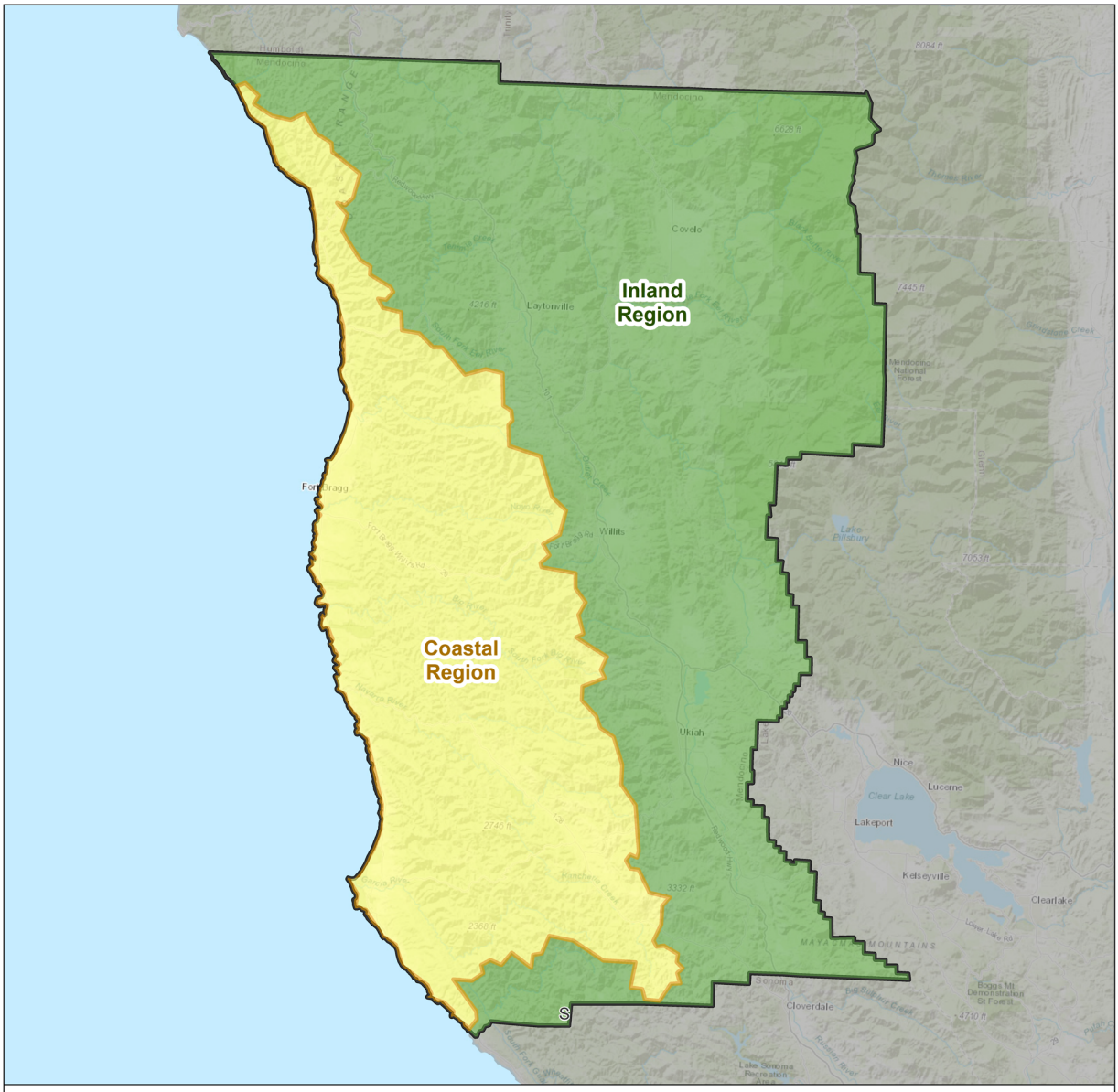
- **Stage 1** – Water Shortage Monitoring:
  - The Stage 1 drought response stage reflects non-drought conditions, in which the County is experiencing no significant water shortages or drought-related stress. Response actions associated with Stage 1 include routine monitoring and the ongoing activities of the CDTF. Unless Stage 2 or Stage 3 are enacted, the County remains in Stage 1.
- **Stage 2** – Water Shortage Warning:
  - The Stage 2 drought response stage reflects light to moderate drought conditions within the County and triggers increased monitoring and drought response activities, in addition to the routine activities outlined in Stage 1.
- **Stage 3** – Severe and Emergency Water Shortage:
  - The Stage 3 drought response stage reflects extreme drought conditions within the County, during which water users may face severe water shortages. The enactment of a Stage 3 response triggers emergency-related actions, in addition to the monitoring and mitigation activities associated with Stages 1 and 2.

The specific drought response activities associated with each stage are discussed in detail in **Section 5.2**. It is worth noting drought triggers can be revised as part of future plan updates to incorporate new and improved data, reflect changes in regional hydrology due to climate change, and account for infrastructure upgrades and other relevant factors.

5.1.1 Geographic Focus

Recognizing the distinct differences in precipitation patterns, groundwater resources, surface water availability, and overall water resources management practices between the County's coastal and inland regions (shown in **Figure 17** below), drought triggers are tailored separately for each region, in addition to a countywide framework. This approach allows the drought response stages and their corresponding response actions to be activated in each region independently in the case that varying level of drought severity is experienced in those regions.

Based on available data and the criteria leading to previous drought declarations within the County, the drought stage triggers for the coastal region include the number of dry well reports and two-year precipitation totals, while the drought stage triggers for the inland region include the number of dry well reports and reservoir storage levels (see **Section 5.1.3**). Drought stage triggers for the County as a whole are based on the County's classification according to the USDM (see **Section 5.1.2**). These monitoring metrics are discussed in further detail below.



Legend

Coastal Region | Inland Region | Mendocino County Boundary

Abbreviations

CNR = California Department of Natural Resources
HUC = Hydrologic Unit Code
DRP = Drought Resilience Plan
DWR = California Department of Water Resources

Notes

1. All locations are approximate.
2. Mendocino County's coastal region is defined as the Big-Navarro-Garcia Watershed (HUC 18010108) for the purpose of this DRP.
3. Mendocino County's inland region is defined as the area within Mendocino County outisde of the County's coastal region.

Sources

1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 25 April 2025.
2. County boundary downloaded from the California State Geoportal on 26 June 2024.
3. HUC 8 watershed boundaries downloaded from the CNR GIS portal on 18 December 2024.

N

0 14 28
(Scale in Miles)

Mendocino County Coastal and Inland Regions

Mendocino County Drought Resilience Plan
Mendocino County, CA
May 2025
EKI C40067.00
Figure 17

Path: X:\C40067\Maps\.00\20241212\Fig17_Watershed_Coastal.mxd

Figure 17. Mendocino County Coastal and Inland Regions

5.1.2 Countywide Triggers

The USDM is a publicly available online map maintained by meteorologists and climatologists at the National Oceanic and Atmospheric Administration (NOAA), the USDA, and the National Drought Mitigation Center (NDMC)[8] at the University of Nebraska-Lincoln. The map, updated weekly on Thursdays, highlights areas experiencing drought conditions across the U.S. and its territories, categorizing them into four drought intensity classifications: moderate (D1 Drought-Moderate), severe (D2 Drought-Severe), extreme (D3 Drought-Extreme), and exceptional (D4 Drought-Exceptional). The map also identifies areas with no drought, categorizing them as "none" for normal or wet conditions, or abnormally dry (D0 Abnormally Dry) for regions that may be transitioning into or out of drought. The USDM provides drought data at various spatial scales, including, but not limited to, national, state, county, geographic region, and Hydrologic Unit Codes (HUCs).[21] **Figure 18** shows the USDM of California on March 2, 2021, preceding the USDA's March 5, 2021 emergency declaration.

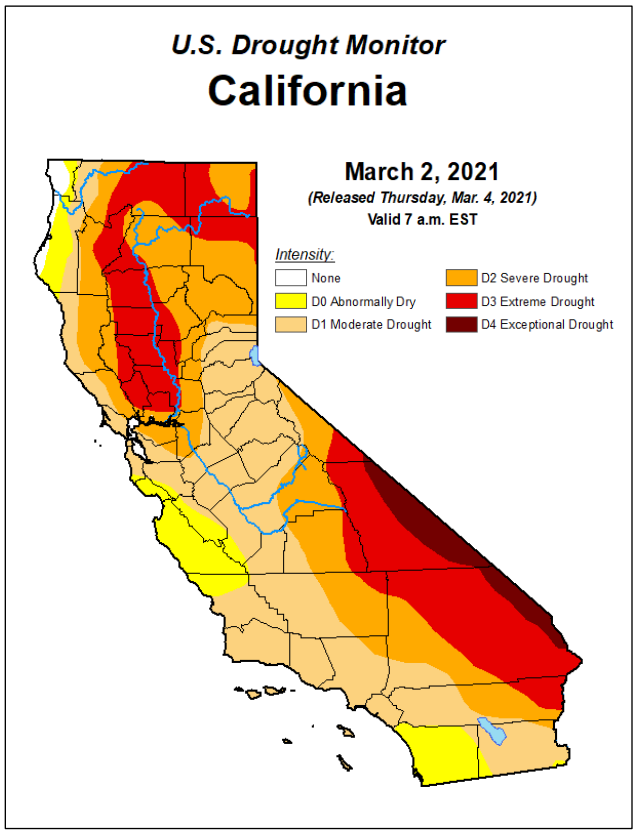


Figure 18. California USDM, 2 March 2021

As discussed in **Section 5.1**, the USDA uses the USDM to identify regions experiencing drought conditions and to guide the declaration of drought emergencies. Similarly, the County can rely on the USDM to track drought conditions within its boundaries and activate the corresponding stage of drought response based on the USDM classification status. The threshold for triggering a countywide Stage 1 drought response is set when the USDM classification for the County is either "none" or D0 Abnormally Dry. While a D0 Abnormally Dry classification may signal the onset of a drought, it can also indicate recovery from previous drought conditions. As a result, a D0 classification within the County does not trigger the activation of the County's Stage 2 drought response actions, which are aimed at mitigating light drought impacts. In accordance with 7 CFR §759.5 and the USDA's March 5, 2021 emergency declaration for 50 counties within the State of California, including Mendocino County, the Stage 3 threshold to trigger a drought emergency throughout the County is set as a drought intensity value for any portion of the County of either a D2 Drought-Severe classification for eight or more consecutive weeks, a D3 Drought-Extreme classification, or a D4 Drought-Exceptional classification.[37] As a result, the threshold for enacting the County's Stage 2 drought response actions is a drought classification throughout the County of either a D1 Drought-Moderate, or D2 Drought-Severe for less than eight consecutive weeks, as detailed below and included in **Table 8**.

- **Stage 1** – Water Shortage Monitoring
  - USDM classification throughout the County of "none" or "D0 Abnormally Dry"

[8] https://droughtmonitor.unl.edu

- **Stage 2** – Water Shortage Warning
  - USDM classification for any portion of the County of D1 Drought-Moderate; **and**
  - No portion of County with D2 Drought-Severe classification for more than eight consecutive weeks
- **Stage 3** – Severe and Emergency Water Shortage
  - USDM classification for any portion of the County of D2 Drought-Severe for eight or more consecutive weeks; **or**
  - D3 Drought-Extreme classification for any portion of the County; **or**
  - D4 Drought-Exceptional classification for any portion of the County

Based on data availability, the County will monitor the USDM monthly during non-drought periods and weekly when any portion of the County is classified as D1 Drought-Moderate or greater.

5.1.3 Regional Triggers: Coastal and Inland Regions

5.1.3.1 Dry Well Reports

In early 2014, a cross-agency Work Group led by DWR established the Dry Well Reporting System[9] to collect data on well outages and connect well owners with resources and aid in response to the 2012 to 2016 drought.[12] The data gathered through this system is publicly available through DWR and can be used to assess well conditions in the County. While wells can go dry for various reasons, including equipment failure, age, and overdrafts, an increase in dry well reports may also signal drought conditions.

Since the inception of the dry well reporting system in 2014, the County has generally seen low numbers of dry well reports during non-drought years, with most years receiving zero to two reports. However, during the 2020 to 2022 drought, the County experienced an increase in the number of dry well reports received across both the coastal and inland regions. For example, in the coastal region, 24 out of 27 of the total dry well reports received to date were submitted in either 2021 or 2022. Out of these 24 wells, 17 were reported to have run dry, while the other seven were reported to have either experienced a reduction in water pressure causing lower flows or to run seasonally dry. In the inland region, six of the eight total dry well reports received to date were submitted in 2021, with four of these wells reported to have run dry.

To determine the threshold for triggering a drought stage response within each region of the County, the average cumulative number of dry well reports received during drought years for any three-month period was calculated for each region and set as the Stage 3 threshold. This threshold represents the number of reports that would be expected to be received or exceeded under extreme drought conditions. Similarly, the Stage 1 threshold was set as the average cumulative number of dry well reports received during non-drought years for any three-month period. The Stage 2 threshold was set as the cumulative number of dry well reports received above the Stage 1 threshold and below the Stage 3 threshold. Based on this methodology, triggers were set for the cumulative number of dry well reports received over any three-month period for both of the County's regions, as detailed below and included in **Table 8**.

<u>Coastal Region</u>

- **Stage 1** – Water Shortage Monitoring
  - Reports received over any three-month period do not exceed three (3) reports
- **Stage 2** – Water Shortage Warning
  - Four to 12 reports are received over any three-month period

[9] https://mydrywell.water.ca.gov/report/

- **Stage 3** – Severe and Emergency Water Shortage
  - More than 12 reports are received over any three-month period

Inland Region

- **Stage 1** – Water Shortage Monitoring
  - Reports received over any three-month period do not exceed three (3) reports
- **Stage 2** – Water Shortage Warning
  - Four to six reports are received over any three-month period
- **Stage 3** – Severe and Emergency Water Shortage
  - More than six reports are received over any three-month period

The County will monitor the Dry Well Report System database on a monthly basis during non-drought times and with increased frequency during drought and water shortage events. It is important to note that the number of dry wells reported through the Dry Well Reporting System likely underrepresents the actual shortages that have occurred within the County. Additionally, because the system relies on self-reporting, there may be occasional errors and omissions in the data.[12] As part of the Community Engagement and Outreach short-term response action, outlined in **Section 5.2.4**, the County will continue to encourage self-reporting of well outages through the Dry Well Reporting System to more accurately capture the state of groundwater supply within the County during drought events. The County's Environmental Health (EH) Department also encourages data submittal to the Dry Well Reporting System as part of its standard response to permitting requests for well rehabilitation or outage reports.

5.1.3.2 Current Year Hydrology

In addition to the number of dry well reports received by the County, the current year's hydrology can serve as an indicator of potential or ongoing water shortage events across the County. Specifically, precipitation and reservoir levels can be used to assess the likelihood of shortages if these levels are below average. Due to the varying surface water supply conditions throughout the County, different metrics are used to evaluate current year hydrology and potential water supply shortages in the County's coastal and inland regions, as outlined below.

Coastal Region

Precipitation is a key indicator of the hydrological state of the County's coastal region. The California Water Watch[10], maintained by DWR, is a publicly available dashboard that provides daily updated precipitation statistics on a watershed basis. The Big-Navarro-Garcia Watershed (HUC 18010108), which defines the County's coastal region, can be monitored to track two--year precipitation totals and assess the coastal region's hydrologic condition.[13] Consistent with the State's April 21, 2021, drought declaration, which stated that two-year rainfall totals throughout the County were approximately half of the expected amount (as shown in **Figure 19**), the threshold for triggering a Stage 3 drought response within the County's coastal region is set as a two-year rainfall total of less than 50% of the expected two-year rainfall total for any given month.[20] The Stage 2 threshold was set at a two-year rainfall total of 50% to 80% of the expected rainfall, the upper threshold of which was the percent measured eight weeks prior to the State drought declaration. This is consistent with the USDM's drought emergency criteria for a D2 Drought-Severe lasting eight weeks or longer. The Stage 1 threshold was set at a two-year rainfall total of greater than 80% of the expected rainfall, as detailed below and included in **Table 8**.

[10] https://cww.water.ca.gov/

- **Stage 1** – Water Shortage Monitoring
  - Two-year precipitation total in the Big-Navarro-Garcia Watershed is greater than 80% of the average two-year precipitation total
- **Stage 2** – Water Shortage Warning
  - Two-year precipitation total in the Big-Navarro-Garcia Watershed is 50 – 80% of the average two-year precipitation total
- **Stage 3** – Severe and Emergency Water Shortage
  - Two-year precipitation total in the Big-Navarro-Garcia Watershed is less than 50% of the average two-year precipitation total

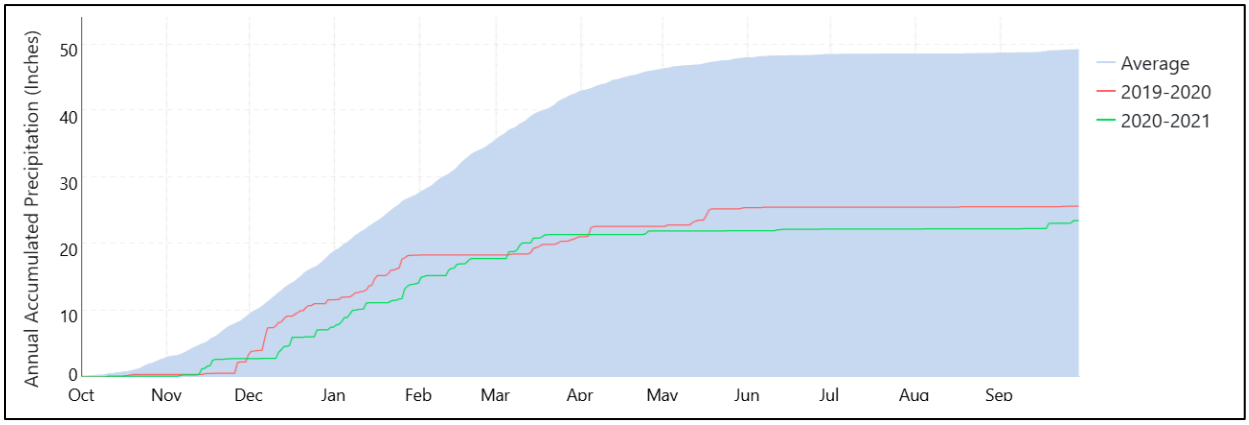


Figure 19. Annual Precipitation Accumulation Chart for the Big-Navarro-Garcia Watershed

The County will monitor the California Water Watch dashboard for the Big-Navarro-Garcia Watershed[11] on a monthly basis during non-drought times and with increased frequency during drought and water shortage events.

Inland Region

Reservoir storage levels are a key indicator of drought conditions, as prolonged dry periods reduce the water flowing into reservoirs from rainfall and snowmelt. When storage levels drop significantly, it suggests that water demand is exceeding supply, which is a clear sign of drought stress on a water system. Within the County, Lake Mendocino, a crucial drinking water source for the cities of Ukiah and Hopland, relies on yearly rainfall and water diverted from the Potter Valley Project for its water supply.[25] Leading up to the 2020 to 2022 drought, both Lake Mendocino and Lake Pillsbury saw their storage levels fall well below target. Both the County and State cited Lake Mendocino's reservoir storage level, which was just 44.2% of the target water supply curve as of April 2021, as a key factor in their 2021 drought declarations for the County.

As such, the reservoir storage level of Lake Mendocino can serve as an indicator of the County's hydrologic state and help predict future or ongoing water shortage events within the County. Consistent with the 2021 drought declarations, the threshold for triggering a Stage 3 drought response in the inland region of the County is set as when Lake Mendocino's storage drops to less than 45% of the target water supply curve.[17],[20] To determine the Stage 1 threshold, storage levels in normal and wet years were compared to the target curve. In these years, reservoir storage levels of Lake Mendocino typically reached their greatest deviation from the target supply curve in September, with levels around 70% of the target water

[11] https://cww.water.ca.gov/info?address=39.12647%20-123.45352

supply (**Figure 20**).[25] As a result, the Stage 1 threshold is set at storage levels greater than 70%, with Stage 2 falling between the Stage 1 and Stage 3 thresholds, as detailed below and outlined in **Table 8**.

- **Stage 1** – Water Shortage Monitoring
  - Total storage level of Lake Mendocino is greater than 70% of the total target water supply curve
- **Stage 2** – Water Shortage Warning
  - Total storage level of Lake Mendocino is 45 – 70% of the total target water supply curve
- **Stage 3** – Severe and Emergency Water Shortage
  - Total storage level of Lake Mendocino is less than 45% of the total target water supply curve

The storage levels of Lake Mendocino are updated daily and available to the public through the California Data Exchange Center (CDEC)[12], which is managed by DWR. The County will monitor the reservoir levels of Lake Mendocino[13] through the CDEC on a monthly basis. While drought declarations can be made at any time based on storage levels, it is recommended that comparisons to the target curve first occur in the spring (March to May), consistent with previous declarations. Spring storage levels provide a reliable estimate of available water supply for the water year. Drought stage determined based on spring storage conditions then can be refined if major departures are observed during the irrigation season.

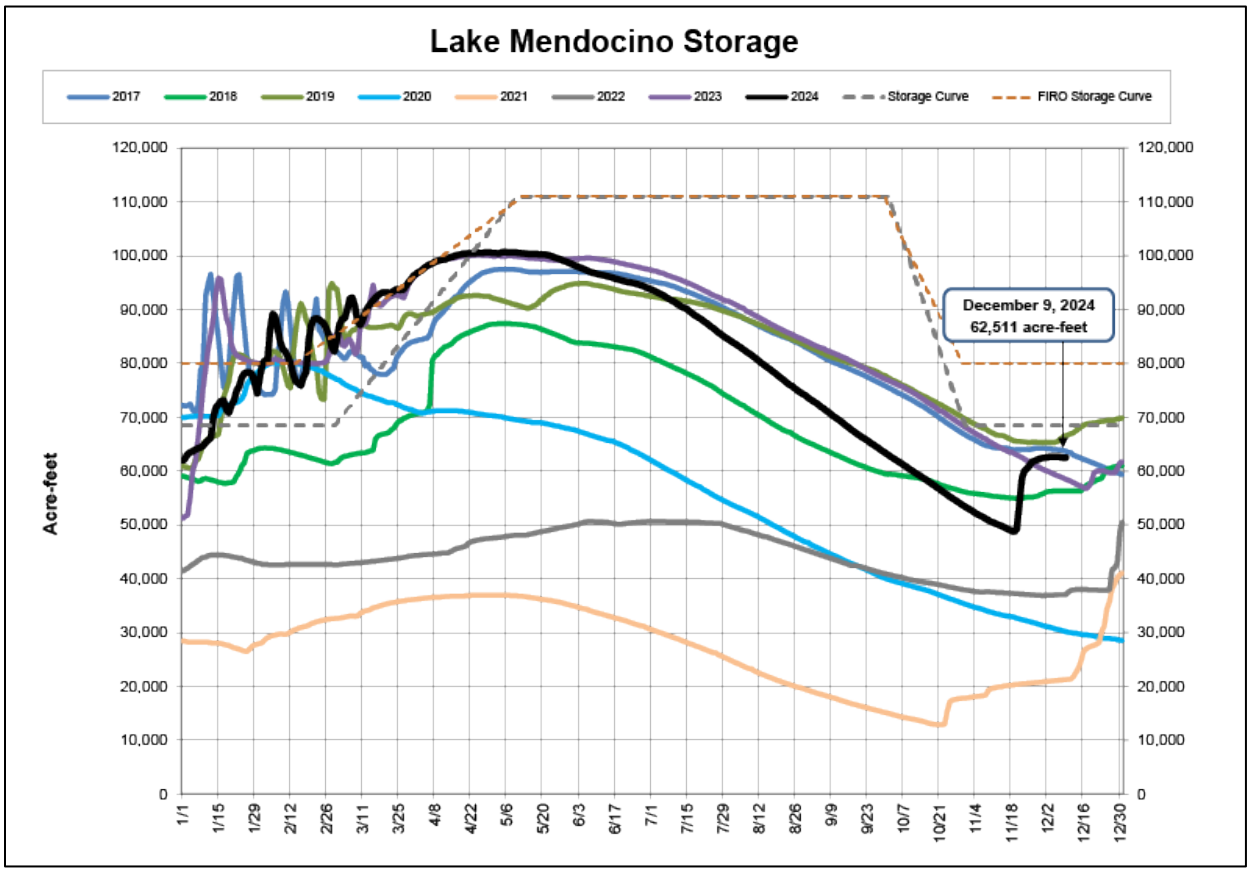


Figure 20. Weekly Water Supply Reservoir Levels for Lake Mendocino

[12] https://cdec.water.ca.gov/
[13] https://cdec.water.ca.gov/dynamicapp/QueryDaily?s=COY&d=13-Jan-2023+15:15

Table 8. Drought Response Triggers

Drought Stage	COASTAL REGION		INLAND REGION		COUNTYWIDE
	Dry Well Reports[1]	Current Year Hydrology[2]	Dry Well Reports[1]	Current Year Hydrology[3]	U.S. Drought Monitor[4]
1 – Water Shortage Monitoring	Less than 4 reports over any three-month period	Two-year precipitation total is greater than 80% 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	More than 12 reports over any three-month period	Two-year precipitation total is less than 50% of average	More than 6 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

Notes:

(1) Dry well information for wells within the County is available through DWR's Dry Well Reporting System database (https://data.cnra.ca.gov/dataset/dry-well-reporting-system-data).

(2) Current year hydrology within the County's coastal region is assessed using two-year precipitation totals for the Big-Navarro-Garcia Watershed (HUC 18010108), available through DWR's California Water Watch dashboard (https://cww.water.ca.gov/).

(3) Current year hydrology within the County's inland region is assessed by comparing the reservoir storage level of Lake Mendocino to the total target water supply curve. Storage levels are updated daily and are available through DWR's CDEC (https://cdec.water.ca.gov/).

(4) Countywide triggers are defined as the USDM's drought monitor intensity classifications for any portion of the County, consistent with CFR § 759.5 (https://droughtmonitor.unl.edu/).

5.2 Response Actions

This section details the specific short-term response actions to be implemented during each drought stage. The actions are designed to address escalating water shortage conditions, as summarized in **Table 9.** Detailed descriptions of each action are provided below.

Table 9. Drought Stages and Short-Term Response Actions

Response Action	Lead Agencies
Stage 1: Water Shortage Monitoring	
Drought Response Triggers (track drought response triggers and determine drought stage)	Mendocino County Water Agency (MCWA)
CDTF (Convene CDTF meetings and increase frequency as necessary)	CDTF, MCWA
GSA coordination	MCWA, UVBGSA
Partnership with Non-Governmental Organizations (NGOs)	MCWA, CDTF
Facilitation of mutual aid agreements	CDTF members, stakeholders, MCWA
Identification of additional funding	County Grants Unit, MCWA
Stage 2: Water Shortage Warning	
Continue with Stage 1 actions	--
Community engagement and outreach	CDTF members, MCWA
Voluntary water cutbacks	CDTF members
Temporary ordinances	County BoS, EO, EH, PBS, MCWA
Stage 3: Severe and Emergency Water Shortage	
Continue with State 1 and 2 actions	--
Community engagement and outreach (increased and enhanced compared to Stage 2)	CDTF members, County OES, EO, MCWA
County emergency proclamation	BoS, EO
Identify and pursue additional funding	EO, County Grants Unit
Seek state and federal emergency declarations	EO, County OES
Emergency and interim water supplies (filling stations, water hauling, bottled water)	County OES, MCWA, CDTF members

5.2.1 County Drought Task Force

During the enactment of Stages 2 and 3 for any portions of the County, the CDTF will transition from routine semi-annual (twice a year) meetings to more frequent quarterly and monthly meetings, respectively. The CDTF may also consider meeting more frequently during the onset of a drought.

The purpose of the increased meetings during periods of drought is to provide real-time coordination of drought response actions, facilitate adaptive decision-making, and address emergencies promptly.

Additionally, the CDTF may serve as a platform for local water suppliers to coordinate mutual aid and share best practices.

Potential topics for CDTF meetings include:

- **Status Updates**
  - Review water supply conditions and drought monitoring metrics as described in **Section 5.1**.
  - Monitor the effectiveness of short-term drought response actions and their implementation
- **Coordination and Collaboration**
  - Facilitate collaboration of neighboring water suppliers to share resources (emergency water suppliers, staff support, etc.)
  - Prioritize the allocation of drought relief resources for affected communities
  - Collaborate on design and implementation of long-term action such as water supply augmentation projects (recharge projects, cropping patterns, sustainable and nature-based solutions, etc.)
- **Community Engagement and Outreach**
  - Address public concerns and feedback gathered through the public outreach process as described in **Section 5.2.4**.
  - Refine messaging and public outreach based on updates
- **Strategy Adjustments**
  - Recommend updates to Drought Stages or short-term response actions based on evolving conditions
  - Propose additional measures if existing actions are insufficient.
- **Funding and Assistance Needs**
  - Identify the need for additional funding sources and explore opportunities for assistance from NGOs to support drought response efforts.

5.2.2 GSA Coordination

County will coordinate closely with the UVBGSA to enhance drought preparedness efforts within the boundaries of the Ukiah Valley Basin. The UVBGSA, through the development and implementation of its GSP, adheres to sustainable management criteria aimed at preventing undesirable results that could impact beneficial users, including domestic wells and State Small Water Systems. As part of its GSP implementation, the UVBGSA is advancing key mitigation actions such as a well registration program and well mitigation plan to address the needs of domestic well users during periods of water scarcity.

The County is a member of the board and technical advisory committee of the UVBGSA and is directly engaged with UVBGSA decision-making. The County and UVBGSA will work collaboratively to ensure their respective drought preparedness actions are aligned and mutually supportive. This partnership will help streamline efforts, optimize resource use, and provide a unified approach to addressing water challenges during drought conditions. Furthermore, as a core member of the CDTF, UVBGSA will remain actively engaged in all aspects of drought planning, preparedness, and mitigation efforts carried out under the framework of SB 552. This alignment will strengthen the County's ability to respond effectively to drought impacts while maintaining consistency with the sustainable groundwater management strategies established by the UVBGSA.

5.2.3 Facilitation of Mutual Aid Agreements as Necessary

The County may facilitate the development and, in specific cases, the implementation of mutual aid agreements under the direction of BoS to ensure water systems are prepared to provide support and

supplemental water supplies during drought conditions. These agreements would ideally be developed by CDTF members during non-drought years to enable rapid and efficient action when needed, but may also be implemented during elevated drought conditions when necessary to support emergency response efforts. However, the responsibility for implementation remains with the participating water systems.

As needed and under the direction of the BoS, the County may coordinate outreach to identify water systems with the capacity to provide assistance and those in need of support during drought. The County may also facilitate permitting processes related to water transfers or infrastructure adjustments necessary for implementing mutual aid agreements. Additionally, the County may assist in streamlining communication and logistical planning among participating entities to ensure that mutual aid agreements are practical, actionable, and compliant with state and local regulations. These efforts, when undertaken, aim to enhance regional drought resilience by promoting collaboration, minimizing delays, and supporting the effective management of water resources.

5.2.4 Community Engagement and Outreach

Effective and coordinated community engagement and outreach are critical components of the drought response strategy. Outreach efforts will be led by the County and CDTF members within their respective jurisdiction areas in coordination with local entities including MCRCD, UCCE, and NGOs, as well as local community members.

As discussed in **Section 5.1.1**, the County and CDTF will identify areas and communities at risk during a drought or water shortage. The County and CDTF members can then prioritize outreach efforts to those focus areas and communities. While education and outreach efforts are pillars of drought preparedness at all stages, such efforts will be enhanced and become more targeted through additional frequency and venues during stages 2 and 3 of drought.

The core outreach priorities may include:

- **Declaration of Water Shortage**: Announce the stage of drought action and inform about heightened drought risk in specific geographic focus areas
- **Announcement of Management Actions**: Communicate local and regional actions such as State surface water curtailments, water waste prohibitions, County temporary ordinances, etc.
- **Call for Voluntary Conservation**: Encourage water users to reduce water usage through voluntary cutbacks (**Section 5.2.5**), provide water conservation tips, and promote available resources.
- **Resource Information**: Inform the public about available support services to assist them in preparing for responding to drought, including
    - Resources for well maintenance: The County's drought portal includes a domestic well owner resource page that will provide updated information about informational resources, local, state, federal, and NGO programs providing well assistance, and venues for additional support.
    - The ability to report dry wells and outages through the California Dry Well Reporting System.
    - Information sharing for State Small Water Systems: The County's drought portal includes a Support Request Form for State Small Water Systems to share information with the County and request emergency support facilitation.
    - The process to request interim drinking water solutions, such as bottled or hauled water, for domestic well owners and State Small Water Systems covered under this plan, contingent upon BoS direction.

To reach diverse residents effectively, outreach venues may include websites, social media, postcards, billboards, radio, television, and/or in-person events such as town hall meetings, as identified and deemed

appropriate. The County and CDTF members will make reasonable efforts to provide multilingual outreach in culturally appropriate formats.

5.2.4.1 County's Drought Portal

As described in **Section 4.1.2**, the County maintains a drought and water conservation website[14] in collaboration with several local agencies. During different drought stages, the County will update its website to host drought information and key outreach messages described above.

5.2.5 Voluntary Water Cutbacks

While the County is not a water supplier and lacks the authority to impose mandatory water use restrictions, it can leverage its public outreach efforts to promote voluntary conservation across all water use sectors. Encouraging voluntary reductions can help alleviate pressure on limited water resources, such as shared groundwater supplies, during periods of drought.

Accompanying a call for voluntary reduction targets (e.g., 10%, 15%, or 20%), the County will share practical water conservation tips and promote available resources, such as rebate programs offered by local water suppliers, or grants available through local, state, or federal agencies.

Example water conservation tips include:

- Fixing leaks in faucets, pipes, and irrigation systems,
- Installing water-efficient appliances and fixtures, such as low-flow showerheads and toilets.
- Reducing outdoor water use by adjusting irrigation schedules and replacing lawns with drought-tolerant landscaping,
- Avoiding watering hardscape or watering within 48 hours of a rain event,
- Using automatic shutoff nozzles on a water hose,
- Reusing greywater for non-potable purposes, such as watering plants, and
- Turning off taps while brushing teeth or washing dishes to minimize water waste.

The County anticipates that its calls for voluntary water reductions will primarily target domestic well owners and be implemented in collaboration with the UVBGSA and CDTF members. Large and small water systems will implement measures outlined in their WSCPs.

5.2.6 Temporary Ordinances and Permit Streamlining

On July 13, 2021, the County adopted Ordinance No. 4494 allowing for the temporary installation and use of water tanks during the drought emergency. The ordinance was intended as a temporary measure to allow County residents and businesses to install additional small, onsite water storage with relaxed zoning, setback, and permitting requirements. The ordinance expired concurrently on April 25, 2023, when the County terminated the local drought emergency declaration. Individuals who installed temporary water storage tanks were given 30 days to either remove these tanks or apply for appropriate permits to keep them. The County will consider adopting similar temporary ordinances to provide relief and preserve health and safety during future droughts. A copy of Ordinance No. 4494 is provided in **Appendix E**.

The County recently evaluated all its Planning and Building permitting processes, and its EH well permitting process, to enhance customer service and streamline permitting procedures. The assessment found that the County's well permitting process is already sufficiently streamlined, with permit reviews taking up to just five days. As such, EH currently does not plan to implement temporary changes to its well permitting program during droughts. However, the County will evaluate whether updates to its well

[14] https://www.mendocinocounty.gov/government/mendocino-county-water-agency/drought-water-conservation

permitting requirements, such as minimum depths requirements, are necessary based on the findings of the ongoing Coastal Groundwater Study (see **Section 6.2.1**).

5.2.7 Emergency Proclamations

5.2.7.1 County Emergency Proclamation

A County-level emergency proclamation can serve as a valuable tool to increase public awareness about drought conditions and emphasize the need for water conservation. Additionally, such a declaration can unlock access to funding sources for emergency drought response. However, issuing an emergency declaration is solely at the discretion of the County's elected officials and cannot be prescribed by this plan.

5.2.7.2 Seek State and Federal Declarations

To access additional funding for emergency drought response, the County may pursue a Gubernatorial State of Emergency Proclamation if one is not already in place. This proclamation can unlock funding sources such as the California Disaster Act Assistance (CDAA) or allocations from the State General Fund for emergency measures. Following the Governor's Emergency Proclamation, the County may request that the Governor seek a Presidential Declaration of an Emergency or a Presidential Declaration of a Major Disaster. These federal-level declarations can provide funding through FEMA to support both immediate emergency response efforts and longer-term recovery initiatives. All state and federal declarations should align with the County's adopted MJHMP.

5.2.8 Identification of Additional Funding

While SB 552 adds new responsibilities for counties, the legislation does not provide a new funding source for counties to implement new programs. Securing additional funding is crucial for effective drought response, as many actions – such as increased frequency of groundwater monitoring, providing emergency supplies, and conducting widespread outreach – can be costly. Without adequate financial resources, the County and local water suppliers may face challenges mitigating the impacts of a drought.

Potential funding sources include the SWRCB SAFER program, CDAA, Integrated Regional Water Management (IRWM) grants, State Revolving Funds, other State and Federal Grant Funds, and individual water systems' reserve funds where applicable. Information about the primary sources of state funding for drought preparedness and mitigation can be obtained from California Grants Portal[15], and more specifically, the DWR Grants and Loans webpage[16] and SWRCB Financial Assistance Funding webpage[17].

The County also tracks applicable grant opportunities through the Grants Unit within its EO and publishes information on its Drought Funding webpage[18]. While the County cannot provide direct assistance with grant application, support, and administration, MCWA will coordinate with the Grants Unit during non-drought times to regularly update the Drought Funding webpage with funding opportunities for projects related to drought preparedness and resiliency. During severe and emergency drought conditions, MCWA will work with the Grants Unit to seek additional funding sources as needed and directed by the BoS, to implement appropriate mitigation strategies and will update the Drought Funding webpage accordingly.

[15] https://www.grants.ca.gov/
[16] https://water.ca.gov/work-with-us/grants-and-loans
[17] https://www.waterboards.ca.gov/water_issues/programs/grants_loans/
[18] https://www.mendocinocounty.gov/government/drought-funding

Alongside the County's efforts, local water suppliers, the UVBGSA, and NGO partners may also seek additional emergency funding to support drought response. During a drought emergency, the County will strengthen coordination with these groups to identify, evaluate, and pursue all available funding opportunities. The responsibility for applying for a grant will depend on the specific requirements of each funding solicitation and the agency best positioned to lead the application.

5.2.9 Emergency and Interim Water Supplies

During water shortage events, the County may collaborate with local water suppliers to facilitate the establishment of emergency water hauling agreements between suppliers. A prior example of this type of facilitation is the mutual aid agreement between the County, the City of Ukiah, and the City of Fort Bragg, which was executed during the 2020 to 2022 drought (**Appendix F**). These agreements rely on grant funding to support their implementation. If it is determined that emergency drinking water solutions are necessary, the County can act as a facilitator if needed, working with local water suppliers and NGO partners to implement solutions.

Emergency drinking water solutions may include the following:

- Dedicated water filling stations
  - Identify strategic locations accessible to affected communities
  - Coordinate with large purveyors and explore their willingness and capacity to establish filling stations
- Water hauling
  - Facilitate agreements for water hauling between suppliers and communities in need.
  - Identify and pursue funding sources to support water hauling operations
- Packaged or bottled water
  - Develop plans for distributing bottled water

It is anticipated that local water suppliers will lead efforts in establishing water filling stations or arranging water hauling, contingent on funding availability. Emergency responses conducted by the County will be generally led by the OES, directed by BoS, and follow the County's Hazard Mitigation Plan and Emergency Operations Plan.

5.2.10 Partnership with NGOs

NGO partnerships could add significant value to drought response by supporting effective and equitable implementation of drought response actions. Historically, emergency response actions have been carried out by the County and local water suppliers. This plan builds on those efforts while recognizing the potential for NGOs to enhance capacity. The County will collaborate with existing community organizations and NGO partners to determine responsibilities for delivering emergency water, assisting with well maintenance, testing, and reporting, and ensuring effective implementation of drought solutions.

The County will seek active collaboration with existing community organizations and NGO partners to define roles and responsibilities for drought response efforts. NGOs can assist in delivering emergency water supplies, coordinating well repairs and replacements, conducting water quality testing, and reporting data, contingent upon availability of funding and resources. They are also well-positioned to support public education and outreach efforts, raising awareness about conservation measures and available resources for water users during drought conditions. The County will facilitate NGO involvement by establishing protocols and agreements to streamline their integration into drought response operations.

Additionally, the County will actively support NGOs in securing grant funding for projects related to water supply reliability and natural resource conservation, such as the restoration of oak woodlands (as discussed in **Section 3.1.2**), by providing letters of support for their initiatives. The County has also provided financial support for conservation and management projects through past and current agreements with MCRCD for services related to improving forestland and oak woodland health, soil management, and water resources, with a focus on landowner outreach and support.

An additional advantage of partnering with NGOs is their ability to independently secure funding for drought-related programs. NGOs often have access to grant opportunities and other funding sources that can augment resources for the County's drought response efforts. The County will work with NGO partners to identify and pursue these funding opportunities, ensuring that financial constraints do not hinder critical response actions.

An important example of NGO collaboration is the Rural Community Assistance Corporation (RCAC), which provides foundational support for individual well owners. Through its Individual Well Program, RCAC offers well assessments, water quality testing, and financial assistance for well repair and replacement. These services directly address challenges faced by communities reliant on private wells during droughts. The County will coordinate with RCAC to ensure that residents are aware of and can access these resources, particularly in high-priority areas impacted by drought. The County will continue this partnership through providing information on its drought portal to facilitate access to RCAC services, improve outreach to County residents to attend educational seminars held by RCAC for SB-552 compliance and drought preparedness, and enhance its overall engagement with RCAC through CDTF and DRP implementation.

5.2.11 Emergency Interties

Interties are physical connections between water systems that enable water transfers, which can be critical during droughts or water quality emergencies. Their use depends on pre-established agreements between participating water systems. Within the County, some interties, such as those between the Millview and Calpella County Water Districts and between the Calpella and Redwood Valley County Water Districts, are used regularly, while others, like those between the Willow County Water District and the City of Ukiah, are designated for emergency use. These interconnections demonstrate the value of advance planning in improving drought resilience.

The County is not a water supplier and does not own or operate interties. Its role is limited to facilitating discussions and collaboration among water systems when needed. The County has no direct responsibility for implementing interties or managing water distribution. While interties can also be part of broader regional water management strategies, long-term response actions, and consolidation efforts, the County does not oversee such projects beyond its role in fostering coordination and supporting planning efforts as appropriate.

6 LONG-TERM MITIGATION STRATEGIES AND ACTIONS

In addition to short-term response actions, counties are required under SB 552 to develop long-term mitigation strategies and actions designed to reduce future vulnerabilities posed by droughts and water shortages to State Small Water Systems and domestic well users. Unlike short-term response actions, which address immediate needs during a drought event, long-term mitigation strategies and actions are designed to provide long-term solutions and preventive measures for areas identified as high risk in the risk assessment (see **Section 3.5**). These measures aim to proactively reduce the potential impacts of drought and water shortage events before they occur. While long-term mitigation measures will not eliminate the need for emergency response actions during a water shortage event, their effective implementation is expected to lessen dependence on these short-term- response actions, including those outlined in **Section 5.2**, ultimately reducing both the scope and costs of these actions. This section outlines the long-term mitigation strategies and actions the County may implement to enhance the reliability and resilience of water supply to State Small Water Systems and domestic well users prior to the onset of a water shortage event.

6.1 Considerations for Mendocino County

At a minimum, SB 552 requires that counties consider the implementation of a drinking water well mitigation program and a system consolidation plan as part of their DRP. DWR offers guidance on these two actions and recommends additional long-term mitigation strategies that counties may consider through the DWR Guidebook, while recognizing that the feasibility of implementing these approaches varies by county based on each county's individual needs and resources.[8] For instance, the ability of counties to implement the strategies suggested by DWR may be limited by social factors, such as political and public support, as well as by financial, technical, and human resources.

As discussed in **Section 5.2.5**, the County is not a water supplier and therefore, lacks the authority to implement certain long-term mitigation actions recommended by DWR, such as the consolidation of State Small Water Systems and investments in regional water infrastructure. Despite these limitations, the County will accomplish meaningful long-term improvements to water supply reliability and resilience through continued outreach and education, as well as by facilitating collaboration and agreements between water systems and agencies, in alignment with Stage 1 drought response actions. These actions, along with additional long-term mitigation strategies and actions identified by the County, are detailed in **Section 6.2** below.

6.2 Mitigation Strategies and Actions

6.2.1 Improving Understanding of County's Water Supply Resources and Hydrogeology

The County will continue efforts to enhance its understanding of local water supply systems and hydrogeology through studies conducted in coordination with relevant agencies, water entities, and the UVBGSA. These efforts are contingent upon the availability of external funding and resources. By advancing scientific knowledge of regional water conditions, the County aims to support more informed water management decisions and long-term drought resilience planning.

One example of such efforts is the ongoing groundwater study of coastal Mendocino County, initiated in response to reports of approximately 40 wells running dry during the 2020 to 2022 drought. Funded by the California Coastal Commission, this study seeks to improve understanding of coastal groundwater hydrology, identify factors contributing to well outages, and update well adequacy testing procedures. The study will also assess groundwater recharge, the effects of climate change, and potential land-use

planning strategies, as well as generate a map-based database of groundwater conditions to aid future decision-making.

In addition to this study, the UVBGSA recently initiated the process of conducting a study on the groundwater-dependent ecosystems (GDEs) and interconnected surface waters within the Ukiah Valley Basin, aimed at characterizing the interconnection between surface and groundwater and understanding the GDEs that support aquatic wildlife in the upper Russian River and its tributaries, including adjacent watersheds. The UVBGSA secured funding for the project in September 2024 from the California Department of Fish and Wildlife's Watershed Grants Program. The project, which will incorporate geochemical, biological, physical, and hydrological modeling under various management and climate scenarios, is designed to assist the UVBGSA in water resources management and decision-making concerning instream flows, ecosystem outcomes, and aquatic wildlife within the Basin.[42]

Moving forward, the County will seek funding opportunities to support similar studies across other regions, recognizing that data-driven insights are essential for long-term drought preparedness. By fostering collaboration with scientific experts, agencies, and local stakeholders, the County aims to improve the resilience of water supplies through enhanced understanding of its resources and informed decision-making.

6.2.2 Drinking Water Well Mitigation Program

Counties are required under SB 552 to consider a drinking water well mitigation program as part of their county's DRP. DWR recommends that drinking water well mitigation programs in County DRPs should include:

1) Identification of wells that may be considered high risk through the county's risk assessment;
2) An outline of mitigation strategies for high-risk wells, such as well rehabilitation and deepening;
3) Collaboration with local and State agencies to implement community-based solutions; and
4) A plan for continued coordination on well monitoring to track any changes in conditions as they arise.[8]

Within the County, the UVBGSA is responsible for overseeing groundwater management within the Ukiah Valley Basin. As outlined in the Ukiah Valley Groundwater Basin GSP, UVBGSA has initiated the first phase of the "Well Analysis, Rehabilitation, and Impact Mitigation" project and management action (P/MA), which aims to mitigate the impacts of drought and water shortage events on domestic well owners within the Ukiah Valley Basin. The first phase of this P/MA involves conducting a study to assess existing domestic wells in the groundwater basin, identify high-risk areas and groundwater users, evaluate existing vulnerabilities, and develop strategies for mitigation of drought and water shortage impacts on domestic well users. Following the completion of this phase, UVBGSA will begin implementation of the identified mitigation measures for drinking water and domestic wells in the event of a drought or water shortage emergency. The implementation of these measures is contingent on UVBGSA securing funding via available grants and may include actions such as the construction of new wells, rehabilitation and deepening of existing wells, providing financial aid to impacted well owners, and potentially enacting ordinances to streamline well permitting procedures within the Ukiah Valley Basin.[41]

In accordance with SB 552, the County has identified domestic well users, both within and outside of the Ukiah Valley Basin, who may be at high risk through the County's risk assessment conducted during the development of this DRP (see **Section 3.5)**. As a member of the Board and TAC, the County will collaborate with the UVBGSA to support the GSA's implementation of the "Well Analysis, Rehabilitation, and Impact Mitigation" P/MA within the Ukiah Valley Basin. As part of the DRP implementation, the County will monitor the drought triggers identified in **Section 5.1** on a monthly basis during non-drought periods and with increased frequency during elevated drought conditions. While domestic well mitigation outside of

the UVBGSA is not currently feasible at the County level beyond the assistance outlined in this DRP, the County can facilitate the identification of funding needed for mitigation projects and serve as a central coordination hub through CDTF meetings, providing a forum for agencies and domestic well owners to collaborate, share information, and discuss necessary actions to address domestic well impacts.

6.2.3 System Consolidation

State Small Water Systems and households relying on private domestic wells for their water supply are often less resilient to drought and water shortage events than larger public water systems due to supply, operational, regulatory, and economic limitations. As such, under SB 552, counties are required to consider system consolidation within their DRPs. System consolidation involves the joining of two or more water systems, with the smaller system typically being absorbed by the larger water system, and may involve extending existing infrastructure to connect nearby households or systems.

The goal of consolidation is to enhance the resilience and reliability of the water supply or water quality for at least one of the involved systems. Depending on the type of consolidation (i.e., physical or managerial), the successful consolidation of two or more water systems can provide numerous benefits, including, but not limited to, the following:

- **Improved Water Quality**
  - Consolidation can ensure a more reliable and consistent water quality by merging systems with different levels of treatment capabilities.
- **Increased Reliability**
  - Larger, consolidated systems are typically more resilient to supply disruptions, ensuring continued service during droughts or emergencies.
- **Cost Savings**
  - Pooling resources across multiple systems can reduce operational and maintenance costs, making water services more affordable for all users.
- **Enhanced Infrastructure**
  - Consolidation can facilitate the extension and upgrading of infrastructure, allowing for better access to clean water for underserved areas.
- **Improved Operational Efficiency**
  - Consolidation allows for more streamlined operations, leading to better management practices, a more efficient use of resources, and lower costs for drinking water per individual.
- **Regulatory Compliance**
  - Smaller systems may struggle to meet regulatory standards; consolidation with a larger system helps ensure compliance with water quality and safety regulations.

In accordance with SB 88, the SWRCB has the authority to require the consolidation of water systems that are either failing or at risk of failing to meet the HR2W requirements with a larger, more reliable water system to improve service and ensure safe drinking water. This legislation, enacted in 2015, specifically targets small water systems and domestic well systems that are not providing adequate, reliable, or safe drinking water, especially in the face of drought or contamination. Unlike the SWRCB, the County does not have the authority to mandate consolidation but may support and facilitate consolidation efforts between water systems within the County. This section provides an overview of the different types of consolidation, identifies potential consolidation opportunities for State Small Water Systems within the County, and discusses funding and additional resources to support consolidation efforts.

6.2.3.1 Types of Consolidation and Regionalization

The consolidation of two or more water systems can be physical or non-physical ("managerial") based on the needs of the water systems involved. In practice, consolidations may incorporate elements of both physical and managerial consolidation. While some consolidations may involve only two systems, water system regionalization involves multiple systems across a larger area, such as a county or watershed. A discussion of each of these methods is provided below.

Physical Consolidation

Physical consolidation involves the integration or shared use of infrastructure, such as distribution pipelines, storage tanks, pumping stations, and water treatment plants, between two or more water systems. When a physical consolidation occurs, one water system is dissolved, and its customers are provided service by an existing water system.[8] Due to the potentially high cost of merging or extending infrastructure between two systems, physical consolidation is best suited for systems within three miles of one another, according to a 2018 study by the University of California. However, the study suggests that, in practice, the limit is closer to one mile, as current state funding programs and grants will not cover the costs of long-distance physical connections.[22]

In addition to merging existing water systems, physical consolidation can also involve connecting households that rely on domestic drinking wells to a nearby water system or establishing a new water system by retiring the domestic wells of nearby households. Given the County's limited authority over domestic well users, the suggested consolidation opportunities discussed in this DRP focus exclusively on State Small Water Systems. While the County does not specifically identify consolidation opportunities for high-risk domestic well users, it could potentially assist these users by facilitating consolidation efforts on an as-needed basis, where appropriate, and under direction of BoS.

Managerial Consolidation

Managerial consolidation occurs when a small water system joins a larger water system for managerial functions while still using its original water supply and distribution system. Managerial consolidations involve the sharing of financial, managerial, or technical resources, such as shared billing systems, equipment, and staff, to improve efficiency and reduce costs.[8] While physical consolidations are most effective for systems located within three miles of each other due to physical constraints, managerial consolidations can cover a wider range. A 2018 study by the University of California suggests that managerial consolidations are best suited for systems within a one-hour commute of one another, as this ensures productivity and efficiency for staff traveling between the systems.[22]

Regionalization

Regionalization is the process of combining multiple smaller water systems or private well communities into a single, larger water system. Regionalization typically covers a broad geographic area, such as a county or watershed, allowing local systems or communities to pool resources and share infrastructure. Similar to consolidation, the main goal of regionalization is to improve the reliability, efficiency, and resiliency of water systems, often through partnerships like joint ventures or formal agreements. However, due to its larger scale, regionalization is usually more legally and institutionally complex than the consolidation of two nearby water systems. Given the benefits of regionalization, the SWRCB can support water suppliers, local elected officials, or community organizations in developing a regionalization project that creates a sustainable regional drinking water solution.[31]

Example – Ukiah Valley Water Authority (UVWA)

As discussed in **Section 4.1.2**, the UVWA JPA is an example of successful regional consolidation within the County. Formed in early 2024, it is designed to provide reliable and cost-effective water services to over

9,100 connections in the Greater Ukiah Valley. UVWA includes the Willow County Water District, Millview County Water District, Redwood Valley County Water District, Calpella County Water District, and the City of Ukiah. The authority aims to optimize the use of its member agencies' broad portfolio of water resources to address supply challenges, such as the decommissioning of the Potter Valley Project, water shortages during droughts, and aging infrastructure.[34]

UVWA is currently assessing member agencies' infrastructure and identifying necessary capital projects, including pipeline extensions and storage upgrades, to enhance system reliability and distribution. Based on these findings, the authority will pursue grant funding to support infrastructure improvements and strengthen water mobility across the region, in line with state initiatives to encourage consolidation and improve water system infrastructure.[34]

6.2.3.2 Consolidation Analysis

As discussed above, the County may help facilitate and support consolidation efforts between water systems within its boundaries. As part of this effort, the County conducted an analysis to identify potential consolidation opportunities for State Small Water Systems. The consolidation opportunities identified through this analysis are intended solely to serve as informational resources for the County's State Small Water Systems. These opportunities are voluntary and do not impose any requirements or obligations on systems to pursue consolidation.

Given the size of the County and the proximity of its water systems, managerial consolidation could be feasible on a countywide scale. This means that all State Small Water Systems could undergo managerial consolidation with one or multiple other systems within the County, if desired. As a result, this analysis focuses specifically on identifying candidates for physical consolidation with State Small Water Systems based on their proximity to other systems within the County. Drinking water system information for water systems within Mendocino County used in this analysis, including State Small Water Systems, was obtained from the SWRCB Division of Drinking Water's GIS portal and combined with data from the SWRCB SAFER dashboard. Data obtained from the SAFER dashboard includes each system's HR2W status (i.e., failing, at-risk, potentially at-risk, not at-risk), based on the SWRCB's June 2024 Drinking Water Needs Assessment.

Using this data, the County identified potential candidates for physical consolidation by locating water systems within three miles of each State Small Water System. The results of this analysis are presented in **Appendix G**. The locations of the State Small Water Systems and candidate water systems, including their HR2W compliance status as of June 2024, are shown in **Figure 21**. It is important to note that consolidation feasibility is primarily influenced by proximity, which depends not only on the direct distance but also on the actual length of required connecting infrastructure. Additional factors such as design, construction, and ongoing operation and maintenance costs, as well as the overall benefits, typically measured by the number of users served or the volume of water provided, also play a critical role. As a result, the analysis presented here is highly preliminary and, in most cases, represents an optimistic assessment.

The County found that of the 27 State Small Water Systems within the County, only two systems are not well suited for physical consolidation, as they are located more than three miles away from the nearest system. For State Small Water Systems with multiple consolidation candidates, the results presented in **Appendix G** indicate the closest system, along with relevant details about each candidate, such as population served, location, number of connections, contact information, and system type. The results also include the current HR2W status of each nearby system based on the SAFER dashboard data. This information can provide insght as to whether physical consolidation with a particular system would benefit the State Small Water System given water quality concerns of the nearby system.

6.2.3.3 Funding for Consolidation and Regionalization

Self-funding is often the most efficient and cost-effective approach for consolidation projects when private capital is available, as it eliminates the additional contract requirements tied to State and federal funding. However, for many systems, self-funding may not be a viable option due to financial constraints, and State or federal funding assistance may be required. Public water systems, State Small Water Systems, and large clusters of domestic wells interested in consolidating should contact the SWRCB's DDW SAFER Engagement Unit for guidance on funding options and consolidation considerations.

In addition to contacting SAFER Engagement Unit staff, systems seeking assistance with consolidation can visit the SWRCB's Funding and Incentives for Consolidation and Regionalization Projects webpage[19], which outlines options for consolidation funding, and incentives for consolidation and regionalization projects. Although the funding opportunities identified on this webpage are primarily intended for public water systems and State Small Water Systems, large clusters of domestic wells may also qualify if a larger public water system applies on their behalf.

SWRCB drinking water funding applications must be submitted through the Financial Assistance Application Submittal Tool (FAAST)[20]. Applications require four key components: general information, environmental documentation, technical details, and financial data. The necessary forms and instructions for both planning and construction funding are available on the FAAST webpage.

It should be noted that certain nonprofit non-transient non-community water systems, including public schools, childcare facilities, and eldercare facilities, may qualify for State funding support. However, private transient and non-transient water systems, such as wineries, restaurants, and office buildings, are ineligible for State assistance and, therefore, must independently secure funding for consolidation projects.

In addition to those outlined on the SWRCB's Funding and Incentives for Consolidation and Regionalization Projects webpage, additional funding opportunities may be available for certain consolidation projects. As discussed in **Section 5.2.8**, State and federal funding opportunities for drought resiliency-related projects are regularly updated on the County's Drought Funding webpage. The applicability of these opportunities to consolidation projects is dependent on various factors, including available funding, applicant type, and project type.

6.2.3.4 Additional Resources

In addition to the SWRCB's DDW SAFER Engagement Unit staff, the County may serve as a point of contact at the direction of the BoS to facilitate and support consolidation efforts among water systems within the County. While the County does not have the authority or intention to mandate consolidation or the resources to directly fund these efforts, County staff can assist interested systems by identifying potential nearby systems for consolidation, facilitating discussions, and helping to identify funding opportunities for such projects. Beyond these efforts, the County does not have the funding or resources to assist interested systems with additional efforts related to consolidation, such as administration, technical assistance, or infrastructure improvements. In the case that interested systems are unable to fund consolidation efforts through private means or through the funding options outlined in **Section 6.2.3.3**, the County may consider additional support, only if external funding and resources are provided through grants, direction provided by the BoS, and resources are available to employ qualified consultants,

[19] https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/fundingincentives.html
[20] https://faast.waterboards.ca.gov/

administer grants, and manage the projects. Any such assistance would be also dependent on the County's procurement of external funding and technical assistance outside of existing County staff.

Additionally, the SWRCB's DDW maintains the Drinking Water System Outreach Tool[21], an online database designed to assist water systems with partnership outreach across the State. According to the tool's documentation, it is primarily used for "planning consolidations between water systems, domestic well consolidations to create water systems in under-developed areas, and regional projects."[32] This database may be helpful to systems in determining future consolidation opportunities with nearby systems, as well as in viewing nearby completed consolidation projects.

[21] https://gispublic.waterboards.ca.gov/portal/apps/webappviewer/index.html?id=70d27423735e45d6b037b7fbaea9a6a6

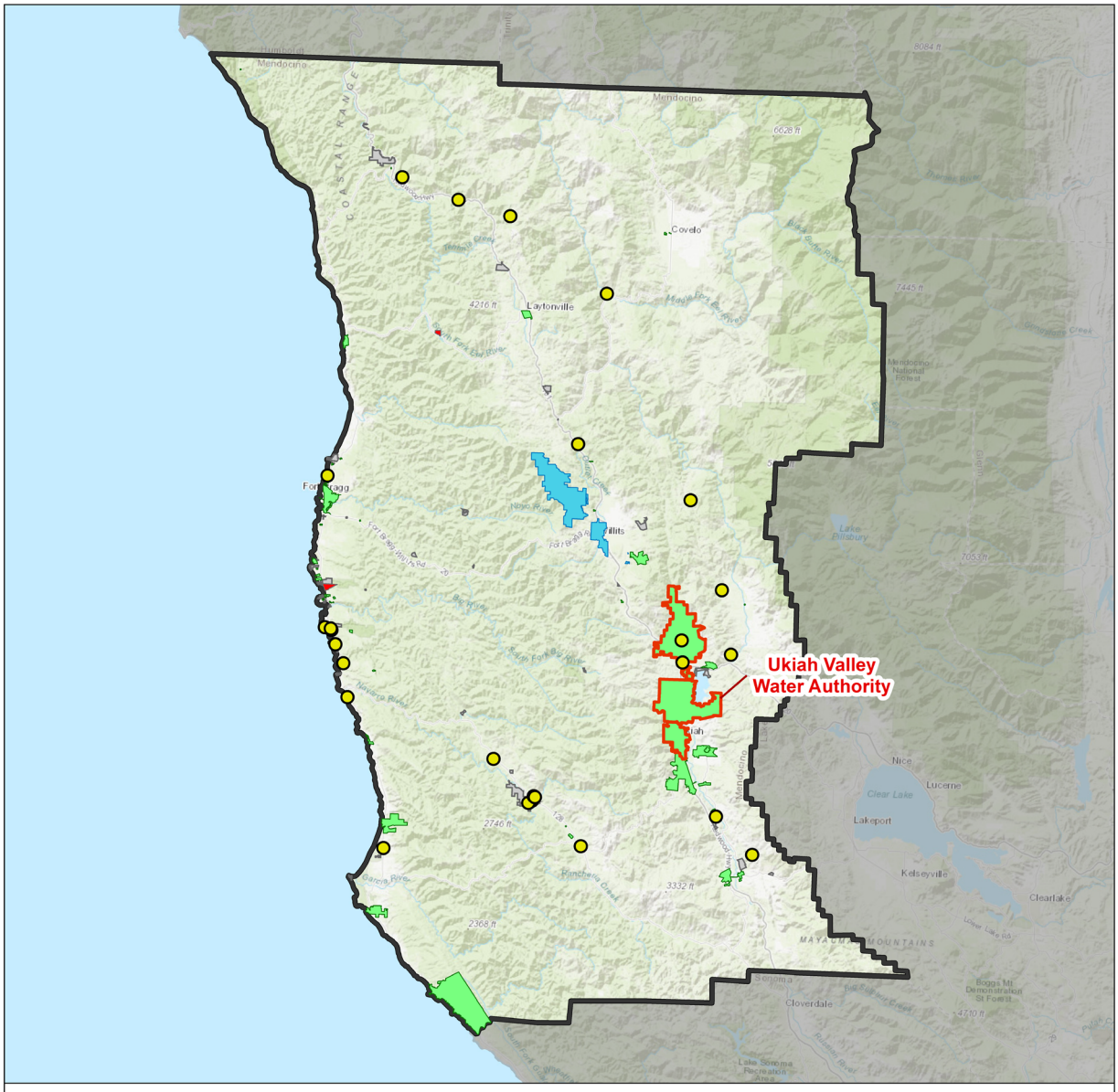


Figure 21. Consolidation Opportunities for State Small Water Systems

6.2.4 Tracking and Monitoring

As part of the ongoing DRP implementation, the County will monitor the drought response triggers defined in **Section 5.1** on a monthly basis during non-drought conditions (Stage 1) and more frequently during drought conditions (Stages 2 and 3). Depending on whether the entire County or just one region is in an elevated drought response stage, the County may increase the monitoring frequency of the relevant drought response triggers, depending on the availability and update frequency of the data, as deemed helpful. The drought response triggers for each of the County's geographic focus areas, as defined in **Section 5.1.3**, are provided below in **Table 10**, along with their data source and their corresponding update frequency.

Table 10. Drought Response Triggers and Update Frequency

Geographic Area	Drought Response Trigger	Data Source	Data Source Update Frequency
Countywide	USDM	NDMC, NOAA, USDA	Weekly on Thursdays
Coastal Region	Precipitation	DWR	Daily
	Dry Well Reports	DWR	Daily
Inland Region	Lake Mendocino Reservoir Storage Levels	DWR	Daily
	Dry Well Reports	DWR	Daily

6.2.5 County Drought Task Force

During non-drought conditions (Stage 1), the CDTF will convene regularly for semi-annual meetings as outlined in the CDTF charter. If any portion of the County enters a Stage 2 or Stage 3 drought response stage, the CDTF will shift from semi-annual meetings to quarterly and monthly meetings, respectively. During the enactment of a Stage 2 or Stage 3 drought response stage, CDTF meetings may focus on short-term- actions that are either actively being implemented or are planned in response to water shortage conditions in the County. As discussed in **Section 5.2.1**, the CDTF may use these meetings to assess the effectiveness of short-term measures, allocate drought relief resources to affected communities, explore available funding opportunities, and identify any additional short-term actions required beyond those outlined in this DRP.

While CDTF meeting topics during non-drought conditions will likely overlap the short-term actions outlined in **Section 5.2.1**, the focus of the CDTF during Stage 1 conditions will likely shift to prioritizing outreach and education, long-term mitigation strategies, and planning efforts. Following future water shortage events, the CDTF will review short-term drought response actions taken during the previous water shortage event to assess their effectiveness and may recommend revisions to this DRP, such as the removal or addition of short-term response actions, if necessary. Additionally, regular CDTF meetings could serve as a hub for information sharing, coordination, and collaboration among water suppliers. These meetings may also provide a platform for developing mutual agreements, including those related to emergency response, management, consolidation, and regionalization efforts among CDTF members, and for facilitating the building of partnerships between local entities, water suppliers, and NGOs.

6.2.6 Community Engagement and Outreach

As discussed in **Section 5.2.4**, the County will actively engage in community outreach and education related to drought preparedness during all drought response stages, with increased focus, frequency, and targeted efforts during Stages 2 and 3. While outreach during Stages 2 and 3 is likely to focus on critical topics, such as water shortage declarations, management actions, and voluntary conservation, the County's outreach priorities during non-drought conditions will center on sharing resources and information related to drought preparedness and mitigation. Examples of such efforts include updating

the County drought portal[22] with resources for well owners and State Small Water Systems and providing updates on drought-related funding opportunities through the County Drought Funding Webpage[23].

Additionally, the County will continue to advertise upcoming CDTF meetings to CDTF members and individuals subscribed to DRP emails. At these meetings, the County will provide updates on funding opportunities and the current status of tracking drought response triggers. Following each meeting, all presented materials will be published on the County DRP webpage[24] for public access.

The County may identify and pursue additional outreach activities based on emerging needs and available funding. To effectively reach a diverse population, outreach efforts may include websites, social media, postcards, billboards, radio, television, and in-person events such as town hall meetings, as appropriate. Throughout all outreach activities, the County and CDTF members will make reasonable efforts to provide multilingual outreach in culturally appropriate formats.

In addition to the outreach efforts outlined above, the County remains committed to fostering strong relationships with its tribal communities and governments to ensure their involvement in drought and water shortage preparedness discussions. To support this commitment, the County will continue proactive engagement with tribes throughout the DRP implementation process. As part of this effort and at the request of the Sherwood Valley Band of Pomo Indians, the County held a government-to-government consultation in March 2025 to discuss water supply reliability challenges specific to the tribe, as well as ongoing and potential conservation efforts to improve water supply reliability throughout the County, like oak woodland restoration (**Section 3.1.2**). This meeting provided valuable insight into the tribe's ongoing water supply concerns and broader regional water-related efforts. The County intends to continue these critical discussions with tribal communities throughout implementation of this DRP. Future outreach efforts may include maintaining tribal representation in the **CDTF** and facilitating government-to-government consultations upon tribal request.

[22] https://www.mendocinocounty.gov/government/mendocino-county-water-agency/drought-water-conservation
[23] https://www.mendocinocounty.gov/government/drought-funding
[24] https://www.mendocinocounty.gov/departments/water-agency/drought-water-conservation/drought-resilience-plan

7 IMPLEMENTATION CONSIDERATIONS

The Mendocino County DRP will be implemented through a collective effort among MCWA, other County departments, and local agencies, including members of the CDTF. A standalone document, the DRP will be implemented in conjunction with other State, County, and local planning documents, including, but not limited to, the following:

- Mendocino County MJHMP;
- Mendocino County Community Wildfire Protection Plan;
- California State Hazard Mitigation Plans;
- Mendocino County General Plan;
- Emergency Operations Plans;
- City and water supplier planning documents; and
- Ukiah Valley Basin GSP.

The DRP is designed to complement and strengthen existing planning initiatives within the County, reinforcing efforts in areas such as hazard mitigation and wildfire management.

Because the County is not a water supplier and does not have an annual budget for water supply reliability and resiliency projects, successful implementation of this DRP is dependent on collaboration and coordination between the County and local entities to achieve meaningful improvements in water supply resiliency. The County's primary role in the implementation of this DRP is to facilitate education and coordination, provide access to drought resiliency and mitigation resources, and support domestic well owners and State Small Water Systems in identifying and pursuing opportunities to improve their water supply reliability and resiliency.

Oversight of these efforts will be managed by MCWA at the County level, while the lead agency (or agencies) responsible for implementing specific response actions will vary based on the current drought stage, the response required, and direction from the County BoS. The lead agency (or agencies) responsible for the implementation of each drought response action are described in detail in **Table 9** of **Section 5.2**. **Figure 22** below presents a simplified schematic illustrating the lead agency (or agencies) responsible for implementation during each drought response stage, with MCWA coordinating the overall implementation of the DRP.

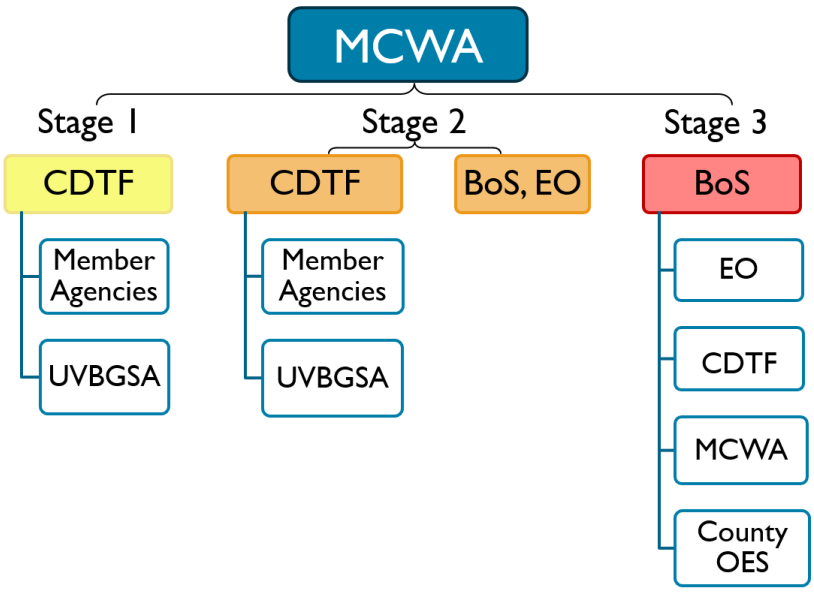


Figure 22. County Agencies Overseeing Implementation

7.1 Adaptive Management, Transparency, and Accountability

The DRP will be implemented in an adaptive manner, with periodic assessments and updates as needed to account for new information and evolving conditions throughout the County. Updates to the DRP may be prompted by factors such as the availability of new data, adjustments to response actions based on past drought events, or CDTF discussions regarding agency roles, response actions, and triggers. Following a drought or water shortage event, it is expected that the CDTF will assess the effectiveness of the DRP's drought response triggers and actions to identify potential updates that could improve water supply reliability for future droughts.

Any updates to this DRP and implementation of its outlined actions are subject to funding and resource availability. In the event that updates to the DRP are identified as necessary, MCWA will work with the County Grants Unit to identify and secure the necessary funding required for updating the DRP. **Section 7.2** provides details on potential funding sources for future DRP updates.

7.2 Funding Opportunities and Assistance Programs

The California Constitution mandates that the State reimburse local agencies and school districts for certain costs incurred in complying with State mandates. As such, if the Commission of State Mandates determines that SB 552 contains costs mandated by the State, reimbursement for costs to comply with SB 552 will be provided to local agencies and school districts for those costs. However, until that determination is made, counties and local agencies are required to cover the costs associated with the implementation of SB 552 through applying existing funding, developing alternative funding sources, or leveraging available federal and State funding opportunities.[8]

The DWR Guidebook suggests that in order to maximize funding for DRP updates and implementation, including response actions, the CDTF should coordinate with regional entities, such as the UVBGSA, to optimize resources within the County and discuss funding strategies at each standing meeting.[8] To assist counties in this effort, DWR outlines several State and federal funding opportunities in the DWR Guidebook that counties and local agencies may pursue in order to support DRP implementation. Examples of State and federal programs available to counties and/or agencies that may be applicable to Mendocino County include:

- **State Assistance Programs**
  - DWR: DWR provides grants and loans for projects related to drought relief, planning and implementation, and direct technical assistance.
  - SWRCB: SWRCB provides grants and loans for projects related to drought resiliency and emergency response efforts, including, but not limited to the Countywide and Regional Funding Program, emergency financial assistance programs, funding incentives for regionalization and consolidation projects, emergency drought funding, and direct technical assistance.
  - Governor's Office of Planning and Research: The Integrated Climate Adaptation and Resiliency Program (ICARP) Grant Programs provides grants for projects related to local, regional, and tribal adaptation planning and resilience needs.
- **Federal Assistance Programs**
  - USDA: The Rural Development Program provides financing options and technical assistance to rural communities to develop drinking water and waste systems.
  - U.S. Bureau of Reclamation: The WaterSMART program provides grants to water purveyors for planning and implementation projects related to water supply reliability and drought resilience.[8]

Additional funding opportunities available to the County, local agencies, State Small Water Systems, and domestic well owners are detailed on the County Drought Funding webpage[25], as outlined in **Section 5.2.8**. While the MCWA will collaborate with the County Grants Unit to regularly update this webpage with new opportunities, it is important to note that the list of potential funding sources on the webpage, in this DRP, and as identified by DWR in the DWR Guidebook is not exhaustive.

Local agencies responsible for implementing response actions, along with other stakeholders, are encouraged to explore further funding options through the California Grants Portal[26] for State funding and GRANTS.GOV[27] for federal funding. Additionally, the California Financing Coordinating Committee website[28] provides information on State, federal, nonprofit, and other funding programs to help identify additional opportunities. At both the State and federal levels, all grants and funding opportunities are subject to budget constraints, shifting legislative priorities, and other changing directives, influencing the availability, allocation, and eligibility criteria for funding.

[25] https://www.mendocinocounty.gov/government/drought-funding
[26] https://www.grants.ca.gov/
[27] https://grants.gov/
[28] https://www.cfcc.ca.gov/

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