



UNIVERSITY OF CALIFORNIA
Agriculture and Natural Resources

Cooperative Extension

UCCE Lake Water and Climate Change Program

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Mendocino and Lake

UCCE Lake Water and Climate Change Program

Mission

Provide research-based guidance, education, and support to communities, water users, and stakeholders in Lake County.

The program promotes sustainable water management, supports adaptation to climate variability, and encourages collaboration to protect water resources for current and future generations.

UCCE Lake Water and Climate Change Program



WATER
QUANTITY



WATER
QUALITY



CLIMATE
CHANGE

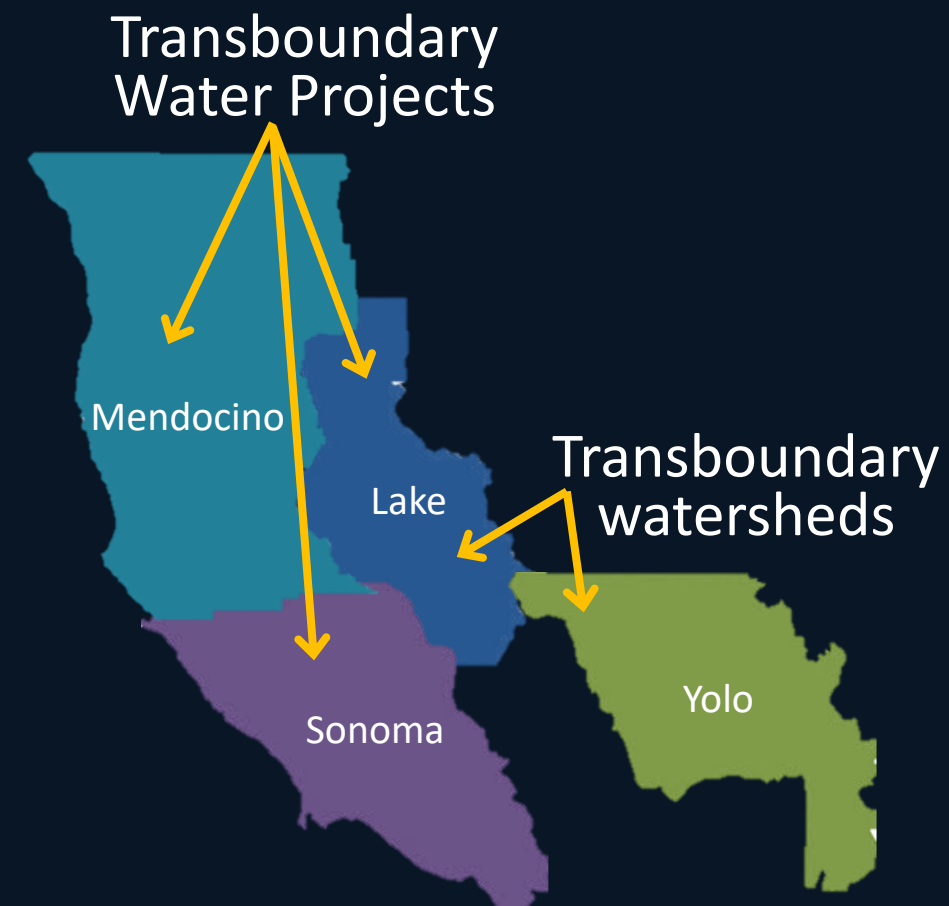
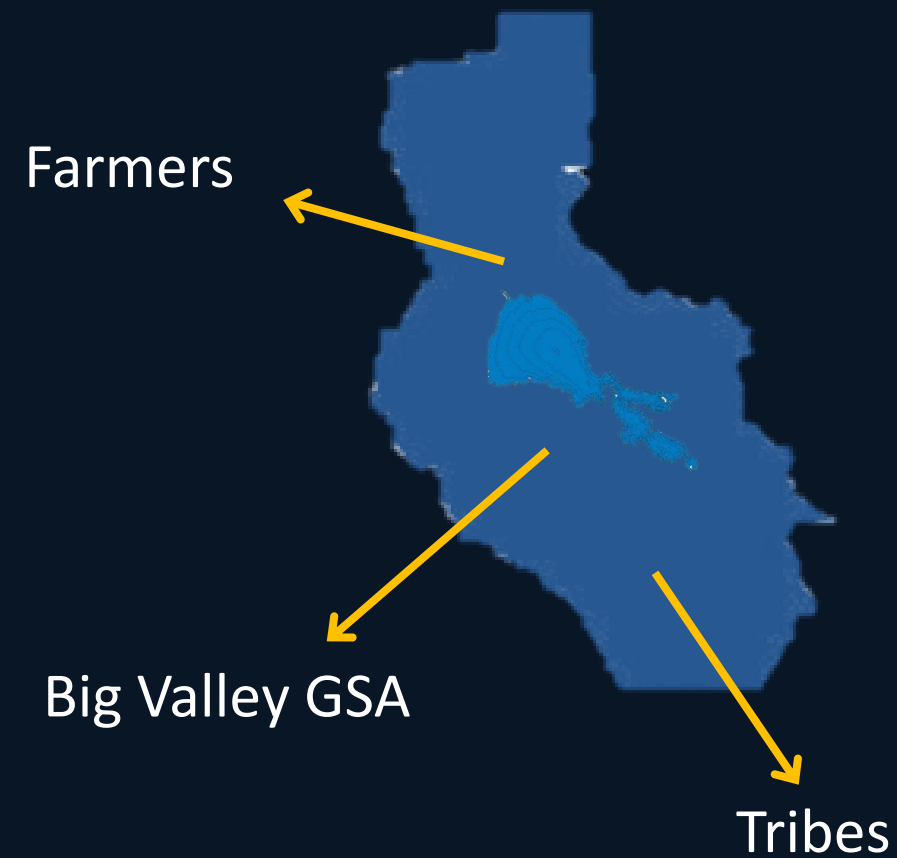
Geographic Scales Effort

Local

County

Regional

State





Portfolio of Activities

Local Engagement: Educational Events and Farm Visits

- ✓ Small Farmers Conference
- ✓ Organic Day
- ✓ Grape and Olive/Pear Day
- ✓ Strategies for Drought Resilience in Agriculture
- ✓ Irrigation Scheduling Workshop





Portfolio of Activities

Tribal Engagement

Middletown Rancheria: Water and Climate Needs Assessment
Support Water and Climate Programs within Tribes



**The Middletown Rancheria
Pomo Indians of California
Climate Change and Natural
Resources Needs Assessment**



Scotts Valley Tribe: STEM Tribal Youth Day



SCOTTS VALLEY BAND OF POMO INDIANS TRIBAL YOUTH DAY

JULY 17-18, 2025 | 9AM TO 4PM

AT UC HOPLAND RESEARCH AND EXTENSION CENTER
(SHIPPEY HALL, 4070 UNIVERSITY RD, HOPLAND, CA 95449)



Come and join us for a 2-day cross-cultural learning exchange with the University of California Cooperative Extension and local Native leaders!

July 17th (Day 1): Come learn alongside UC researchers and educators working with local communities on issues related to agriculture and natural resources.

July 18th (Day 2): Come join us for an intergenerational knowledge sharing day with Native researchers, cultural fire practitioners, fisheries biologists, basket weavers, and elders working in Tribal land stewardship and resilience.

Portfolio of Activities

Support to Lake Water Agencies and GSAs

Support Lake Water Resources Department and STANTEC in efforts related to Lake County DRP

Support Big Valley GSA and Lake Water Resources on SGMA projects

MENDOCINO COUNTY DROUGHT RESILIENCE PLAN

The Drought Resilience Plan (DRP) aims to facilitate water shortage preparedness for small water systems and domestic wells owners in drought events.

DROUGHT MITIGATION STRATEGIES

Over the past decade, several drought planning actions and mitigation efforts have been undertaken in the County in response to droughts, these include:

1. Monitoring Programs

The California Statewide Groundwater Elevation Monitoring (CASGEM) Program and Ukiah Valley Groundwater Sustainability Agency (UVGSA) are initiatives that support data collection, long-term groundwater monitoring, sustainability planning, and assessment of droughts on water resources.

2. Creation of Water Authorities and Planning Frameworks

The Ukiah Valley Water Authority (UVWA), a Joint Powers Authority, was established through the consolidation of multiple water agencies to improve regional water management, optimize resource sharing, and enhance emergency water interconnections.

3. Emergency Regulations and Agreements

In response to severe drought conditions, the County adopted emergency water conservation rules in 2014 requiring a 20% reduction in water use and use of local water shortage contingency plans. In 2020–2022, the County and City of Ukiah undertook emergency water hauling to support the water shortages in Fort Bragg and Mendocino.

4. Water Education

Mendocino County collaborates with local agencies to develop Drought and Water Conservation Education initiatives, providing the public with essential resources on water conservation.

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

Short-term Response Actions

Short-term response actions are designed to address the immediate impacts of dry events in response to drought triggers. Drought response triggers are designed to address varying levels of water shortages and are structured into stages of increasing severity:

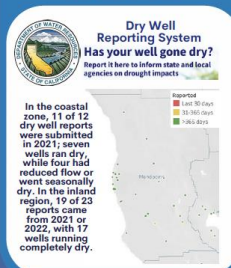
Stage 1) Water Shortage Monitoring, Stage 2) Water Shortage Warning, and Stage 3) Severe and Emergency Water Shortage

Response Triggers

Dry Well Reports

The Dry Well Reporting System collects data on well outages and connect well owners with drought aid resources.

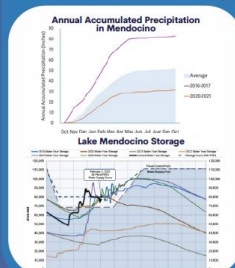
Since reporting is voluntary, dry well report summaries likely underestimate the actual number of dry wells. Reporting a dry well helps improve data accuracy and response efforts.



Water-Year

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.

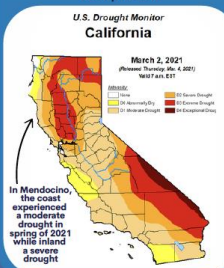
Coastal indicator - Precipitation
Inland indicator - Reservoir Storage



U.S. Drought Monitor

This indicator identifies regions experiencing drought conditions and is used to guide the declaration of drought emergencies in the country.

The Drought Monitor highlights areas in the state experiencing drought intensity: none, dry, moderate, severe, extreme, and exceptional.



Drought Stages and Short-term Actions

Drought Stage	COASTAL REGION		INLAND REGION		COUNTY	Actions
	Dry Well Reports	Current Year Hydrology	Dry Well Reports	Current Year Hydrology	U.S. Drought Monitor	
1) Water Shortage Monitoring	Less than 4 reports over any three-month period	Two-year precipitation total is 80% or more of average	Less than 4 reports over any three-month period	Lake Mendocino total storage is greater than 70% of total target water supply curve	None; OR D0 Abnormally Dry	Track drought response triggers; Convene meetings, coordination and partnership with County Drought Task Force, UVGSA, and Nongovernmental Organizations; Identification and pursuit of funding; Implementation of mutual aid agreements, outreach
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	D3 Moderate Drought; OR D2 Drought-Severe for less than 8 consecutive weeks	Community engagement and outreach; Identification and pursuit of additional funding; Voluntary water cutbacks; Temporary ordinances
3) Severe and Emergency Water Shortage	12 or more reports over any three-month period	Two-year precipitation total is less than 50% average	6 or more reports over any three-month period	Lake Mendocino total storage is less than 45% of total target water supply curve	D2 Severe Drought for 8 or more consecutive weeks; OR D3 Extreme; OR D4 Exceptional	County emergency proclamation; Seek state and federal emergency declarations; Emergency/interim water supplies (filling stations, water hauling, bottled water)

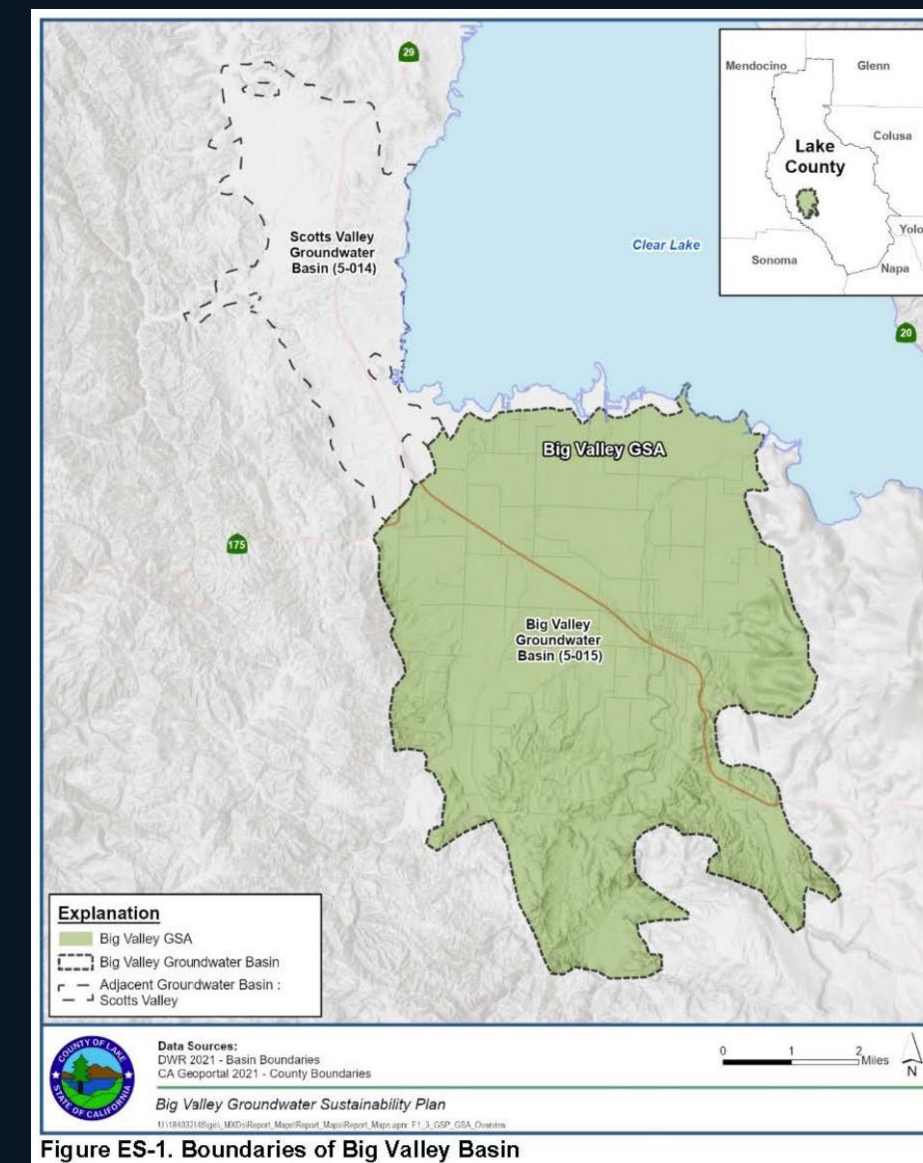


Figure ES-1. Boundaries of Big Valley Basin

Portfolio of Activities

Research Project: An integrated Decision Support Framework to analyze the hydrologic, environmental and social resilience of Scott Dam Removal

Project funded by
CIWR (California
Institute of Water
Resources) and
USGS

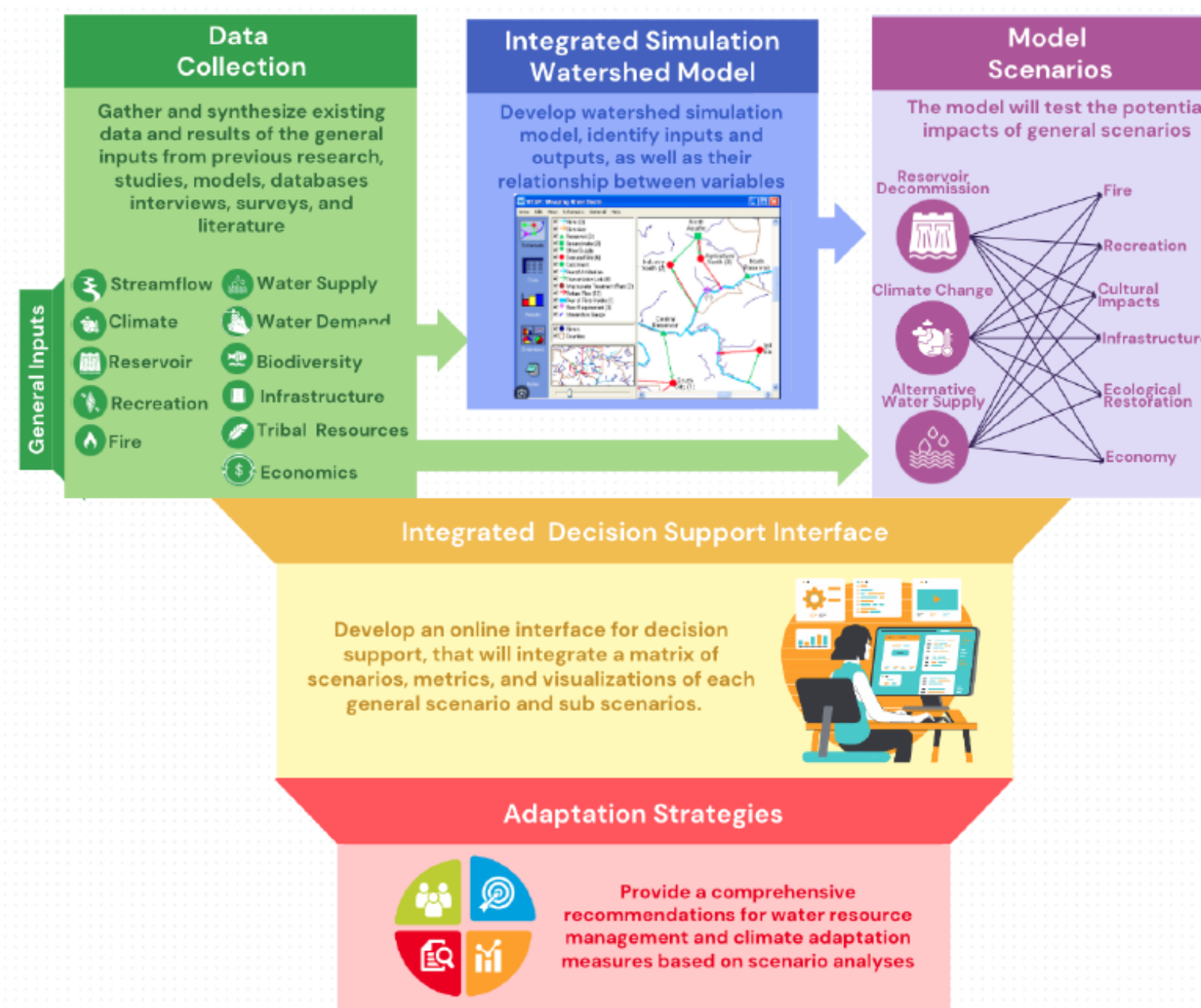


Figure 2. Project Flow Diagram of Scope of Work



Portfolio of Activities

California Water Course

A bilingual (En/Sp) program for entry level water professionals

WELL Program

Water Education for Elected Latino Leaders

CALIFORNIA WATER COURSE



OBJECTIVE:

To learn relevant and applied knowledge about water in California.

TARGET AUDIENCE:

Any person interested in water issues and solutions, including water advocates, community leaders and entry level professionals.

IN PERSON MEETINGS:

- Aug 23th
- Sep 27th
- and Oct 25th

GRADUATION: Oct 25th 2025

AUGUST
2025
SATURDAY
2nd

CERTIFICATE OF COMPLETION:

Awarded at the end of the course.



REGISTER NOW!



watermanagement.ucdavis.edu/californiawatercourse



Want to know more...

Visit the UCCE Water and Climate Program Website

<https://ucanr.edu/site/water-resources-management>

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Projects

Upcoming Events 2025

Grape and Olive Day

July 30th, 2025



Science on Tap: Water, Fire, and Soil

August 14th, 2025



Past Events

Scotts Valley Tribal Youth Stem Day

July 17th and 18th, 2025



Drought Resilience in Agriculture

March 18th, 2025



Presentations

Print

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Strategies for Drought Resilience in Agriculture

Weather, Climate, and Droughts: Trends and Tools	Laura E. Garza-Díaz, Ph.D. UCCE Water Resources Management Advisor	March 18th, 2025. Jill's Market Garden, Lower Lake, CA.
Challenges in Irrigation Scheduling, Automation, and Dry Farming in Vineyards	Christopher Chen, Ph.D. UCCE Viticulture Advisor	

Mendocino Drought Resilience Plan

2nd Public Meeting for the Mendocino Drought Resilience Plan	Laura E. Garza-Díaz, Ph.D. UCCE Water Resources Management Advisor	February 24, 2025. Fort Bragg, CA.
1st Public Meeting for the Mendocino Drought Resilience Plan	Laura E. Garza-Díaz, Ph.D. UCCE Water Resources Management Advisor Andree Lee, EKI Environment and Water	September 05, 2024. Ukiah, CA.

Other Events

Current water supply status and climate preparedness strategies for orchards and vineyards	Laura E. Garza-Díaz, Ph.D. UCCE Water	<i>Pear and Grape Field Day, 2024</i>	May 28th, 2024. Campo Vida, Hopland CA.
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Thank you!

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