
**Regional Water Quality Control Board
North Coast Region
Staff Summary Report
May 7-8, 2026**

ITEM: 4

SUBJECT: Update on the North Coast Regional Synthesis Report of California's Fifth Climate Assessment (*Dr. Andrew Stubblefield and Dr. Rosemary Sherriff, CalPoly Humboldt*)

BOARD ACTION: This is an informational item; no action will be taken by the Board.

BACKGROUND: California's Climate Change Assessments contribute to the scientific foundation for understanding long-term climate-related vulnerability throughout California. Leveraging diverse expertise and perspectives, new research as a part of California's Fifth Climate Change Assessment (Fifth Assessment) will address current gaps in the state's understanding of climate change impacts and adaptation opportunities. Through a community-driven research process with communities, Tribes, academia, and other partners who are helping drive science to action and inform decision-making at the regional and local levels, the Fifth Assessment is being uniquely developed to support on-the-ground implementation and decision-making at local, regional, Tribal, and state levels, with a focus on the needs of communities most vulnerable to climate change impacts.

California's Climate Assessment is a multi-year research effort with government, academic, Tribal, and community partners to generate new data, original research, and syntheses on the ways climate change impacts California's diverse communities. Senate Bill 1320 (Stern, 2020) calls on the state to advance action-based science by developing California Climate Change Assessments at least every five years. Building on the strong foundation set by previous Assessments, the California Governor's Office of Land Use and Climate Innovation is leading implementation of Fifth Assessment, in partnership with the California Energy Commission, California Strategic Growth Council, and state agencies.

DISCUSSION: The Fifth Assessment uses research to help California communities and the State develop responses to the mounting impacts of climate change. The portfolio includes:

- New data and scenarios projecting future impacts of climate change in California

- Original Climate Research that addresses California-specific research needs and questions related to climate change
- A Tribal Research Grant Program to collaborate on Indigenous knowledges and Tribal expertise, and uplift input from California Native American Tribes throughout the Fifth Assessment process
- Regional, Topical, and Statewide Synthesis Reports that connect this cutting-edge research to the needs and context of regions across the state
- A dedicated, sustained, and equity-centered engagement process to ensure this information drives climate action on the ground

The Climate Assessment Regional Synthesis Reports compile the best available science on climate change and other informational resources at a local scale to help communities understand and develop informed responses to the impacts of climate change in nine regions of the state with similar but different geographic boundaries to those of the nine Regional Water Quality Control Boards. CalPoly Humboldt professors Dr. Rosemary Sherriff and Dr. Andrew Stubblefield are the coordinating lead authors of the North Coast Regional Synthesis Report, the subject of today's presentation. The regional synthesis reports are geographically grouped by county, and the North Coast Report covers Del Norte, Humboldt Lake, Mendocino, Siskiyou, and Trinity Counties. The report includes the following chapters: 1) Climate Science, Historical & Projected Trends; 2) Natural & Working Lands and Waters; 3) Built Systems in the North Coast Region; and 4) Social Systems and Cultural Resources. Though the report is undergoing final editorial review, key findings of the North Coast Report include:

- Marine heat waves have decimated 370 km of North Coast offshore kelp beds, leading to the closure of a \$44 million dollar abalone fishery.
- Humboldt Bay has seen 1 foot of sea level rise since 1970, the highest in the state, and as the rate of sea level rise in Humboldt Bay is accelerating, damage and risks to infrastructure and habitats are prompting adaptation measures.
- While annual precipitation averages are not predicted to change significantly in the North Coast, warming will increase evaporation rates and increase the frequency and severity of droughts.
- Rain is projected to be more concentrated in winter months, with more atmospheric rivers and flooding, and drier fall and spring weather is expected to extend fire seasons and increase fire activity.
- Given the rural character of the region, coupled with relatively fragile infrastructure systems and historic lack of funding, climate-related stressors and impacts will have cascading effects on communities, infrastructure, ecosystems, with economic, environmental, and social impacts.
- On the other hand, the region's Mediterranean-type seasonality, unparalleled biodiversity and endemic species in the region, and its productive and diverse ecosystems and wildlife habitat, provide a kind of "ecological insurance" for climate resilience.
- Further, the region's extensive natural and working landscapes provide opportunities for nature-based solutions and ecological uplift, building resilience to climate impacts.

The Fifth Climate Assessment, and the North Coast Report in particular, will provide important information to inform North Coast Water Board efforts in the future. Recognizing the significance of this effort, the North Coast Water Board's Climate Specialist participated in a technical advisory board, providing input to the report's authors and review of the draft report.

Each of the regional synthesis reports and the other Climate Assessment work products are undergoing final editorial review and are scheduled to be released beginning in Summer 2026. To showcase the Fifth Assessment's research findings, data products and tools, and uplift climate resiliency efforts throughout California in recent years, the Governor's Office of Land Use and Climate Innovation will host a three-day Resilient California Summit at the SAFE Credit Union Convention Center in Sacramento, October 20- 22, 2026. This summit will bring together climate adaptation and resilience practitioners, local and state government, Tribal partners, community organizers, utilities, private firms, and academia. Participants will learn about new research findings produced through the Fifth Assessment, discuss innovative climate resilient projects, and share strategies to connect climate science, policy, and action.

Today's presentation by Dr. Rosemary Sherriff and Dr. Andrew Stubblefield will provide an overview of the climate science and physical changes projected for the North Coast, with a focus on impacts on water resources and the natural and working lands of the region and highlight North Coast opportunities and recommended strategies for adaptation and resilience to the impacts of climate change.

RECOMMENDATION: N/A

SUPPORTING DOCUMENTS:

- [Climate Assessment, Science, and Research - Office of Land Use and Climate Innovation](https://lci.ca.gov/climate/icarp/climate-assessment/) (https://lci.ca.gov/climate/icarp/climate-assessment/)
- [California's Fifth Climate Change Assessment Update - Staff Report](https://sgc.ca.gov/wp-content/uploads/08_Staff-Report_2026.02.25.pdf) (https://sgc.ca.gov/wp-content/uploads/08_Staff-Report_2026.02.25.pdf)
- [California's Fourth Climate Change Assessment North Coast Region Report](https://www.energy.ca.gov/sites/default/files/2019-11/Reg_Report-SUM-CCCA4-2018-001_NorthCoast_ADA.pdf) (https://www.energy.ca.gov/sites/default/files/2019-11/Reg_Report-SUM-CCCA4-2018-001_NorthCoast_ADA.pdf)
- [Resilient California Summit](https://resilientcaliforniasummit.org/) (https://resilientcaliforniasummit.org/)