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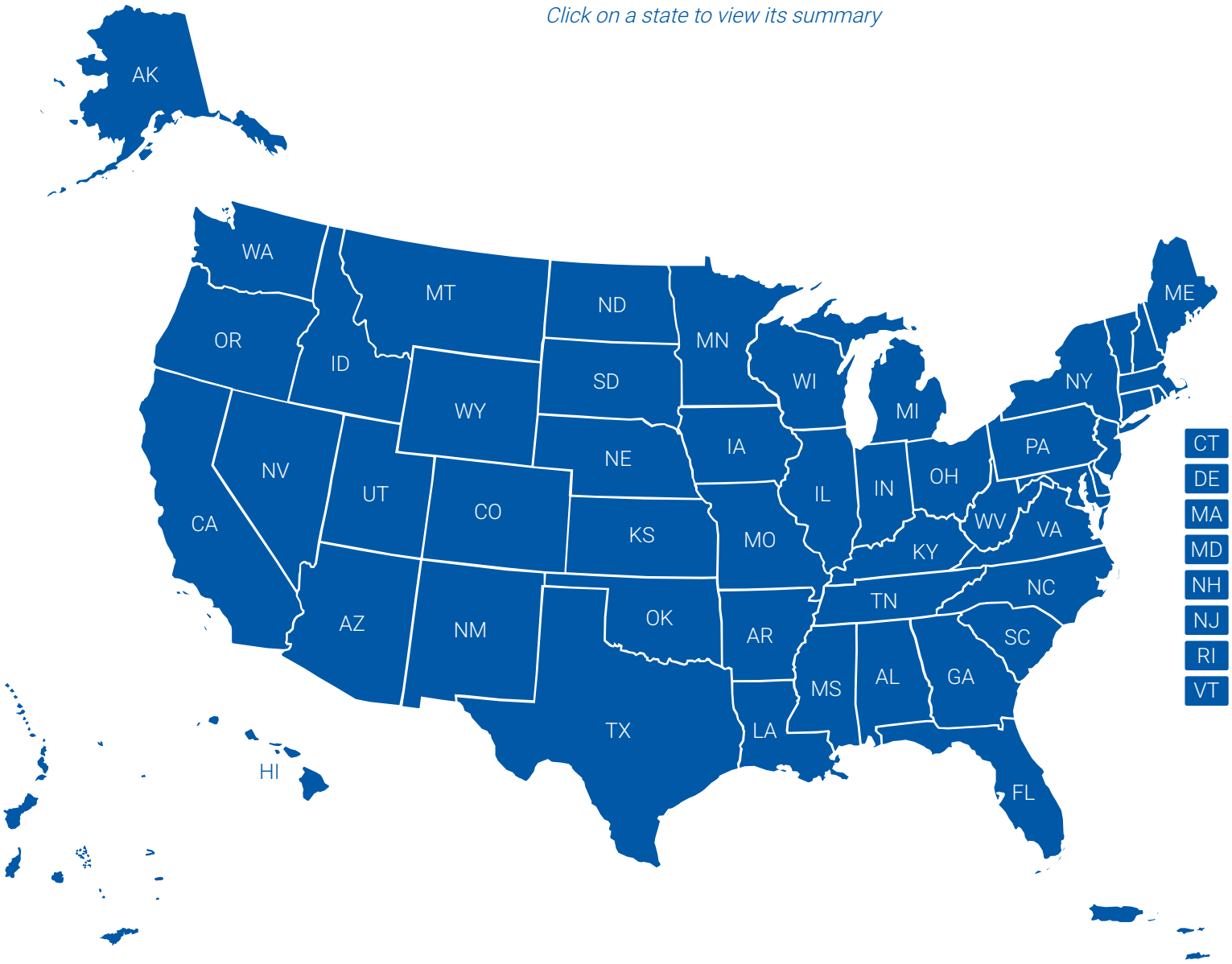
STATE CLIMATE SUMMARIES

The State Climate Summaries provided here were initially produced to meet the demand for state-level climate information in the wake of the Third U.S. National Climate Assessment. This 2022 version provides new information and extends the historical climate record to 2020 for each state. The summaries cover assessment topics directly related to NOAA's mission, specifically historical climate variations and trends, future climate model projections of climate conditions during the 21st century, and past and future conditions of sea level and coastal flooding. Additional background information and links are given below.

SELECT A STATE

Click on a state to view its summary



Western Pacific Islands

Puerto Rico & U.S. Virgin Islands

About the State Climate Summaries

These NOAA State Climate Summaries were originally produced in response to a growing demand for state-level information in the context of the Third National Climate Assessment (NCA) and subsequent sustained activities. This 2022 version represents a new and improved summary for each state that provides more up-to-date information on observed changes in climate, including both long-term trends and extreme weather events relevant to that state. The summaries consist of observed and projected climate change information and focus on aspects that are part of NOAA's mission (mainly characteristics of the physical climate and coastal issues). The NCA activities derive from the U.S. Global Change Research Act (GCRA) of 1990. One of the activities spelled out in the Act is a quadrennial assessment that "analyzes current trends in global change, both human-induced and natural, and projects major trends for the subsequent 25 to 100 years." These state climate summaries support NCA activities and, deriving from the charge in the GCRA, contain information both on historical trends and scientific knowledge about potential future trends.

While the datasets and simulations in these state climate summaries are not, by themselves, new (they have been previously published in various sources), these documents represent a targeted synthesis of historical and plausible future climate conditions for each U.S. state.

Each summary consists of a description of the historical climate conditions in the state, as well as that of the climate conditions associated with future pathways of greenhouse gas emissions.

All of the original summaries underwent an anonymous review, with at least two expert reviews completed per state. Each state's 2022 version was revised and reviewed by both

Historical Climate

The description of historical climate conditions for each state is based on an analysis of core climate data (the data sources are described in Technical Details and Additional Information). However, to help understand, prioritize, and describe the importance and significance of different climate conditions, additional input was derived from climate experts in each state, some of whom are authors on these state climate summaries. In particular, input was sought from the NOAA Regional Climate Centers and from the State Climatologists. The historical climate conditions are meant to provide a perspective on what has been happening in each state and what types of extreme events have historically been noteworthy, to provide a context for assessment of future impacts.

Future Scenarios

The future climate scenarios are intended to provide an internally consistent set of climate conditions that can inform analyses of potential impacts of climate change. The scenarios are not intended as projections, as there are no probabilities for their future realization attached. They simply represent an internally consistent climate picture under certain assumptions about the future pathway of greenhouse gas emissions. By "consistent" we mean that the relationships among different climate variables and the spatial patterns of these variables derive directly from the same set of climate model simulations and are therefore physically plausible. The future climate scenarios are based on well-established sources of information. No new climate model simulations or downscaled datasets were produced for use in these state climate summaries.

NOAA Technical Support Unit staff and the appropriate NOAA Regional Climate Center, as well as, in most instances, by the relevant State Climatologist.

Contact NOAA's Technical Support Unit

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