

NOAA's State Climate Summaries for the National Climate Assessment: A Resource for Decision Makers

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About the State Summaries

The NOAA State Climate Summaries were produced in response to a growing demand for state-level information in the context of the National Climate Assessment (NCA). They 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).

- Written by NCA Technical Support Unit
- Input from Regional Climate Centers and State Climatologists
- Extensive review process:
 - Informal internal and external reviews
 - NOAA-required external anonymous review
- Presented in PDF and web format

Content

- Geographical and climatological overview
- Description of historical physical climate and coastal issues, noteworthy past events
- Temperature and precipitation projections
- General information about potential future impacts of climate change
- Primary data are from NOAA's Climate Divisional Dataset (nClimDiv), NOAA's Global Historical Climatology Network-Daily (GHCN-D), and CMIP5 climate model simulations
- Selected state-specific data and graphics

A Tool for Decision Makers

- Targeted for decision makers and informed non-scientists
- Temperature and precipitation projections are presented in order to provide a context for the assessment of future impacts
- Web component will allow users to explore data, methods, analyses, and climate change information specific to their state
- Potential exists for continued updates

Products

- Document content
- Supplemental online material
- Metadata
- Data and image files

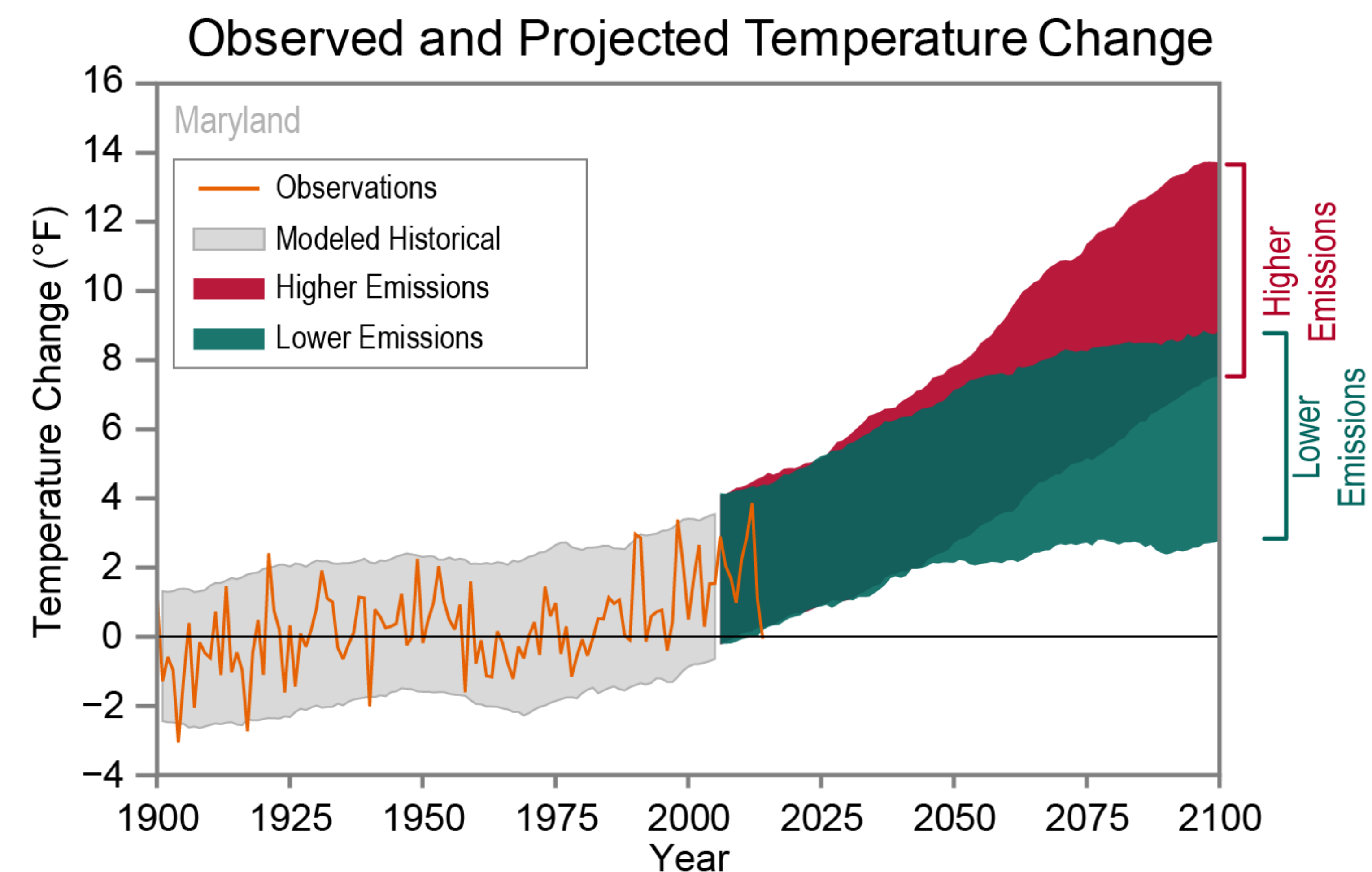


Figure 1: Observed and projected changes (compared to the 1901–1960 average) in near-surface air temperature for Maryland. Observed data are for 1900–2014. Projected changes for 2006–2100 are from global climate models for two possible futures: one in which greenhouse gas emissions continue to increase (higher emissions) and another in which greenhouse gas emissions increase at a slower rate (lower emissions). Temperatures in Maryland (orange line) were warmest in the early 1930s, coolest in the 1960s, and within the most recent decade on record have exceeded levels of the 1930s. Source: CICS-NC and NOAA/NCEI.

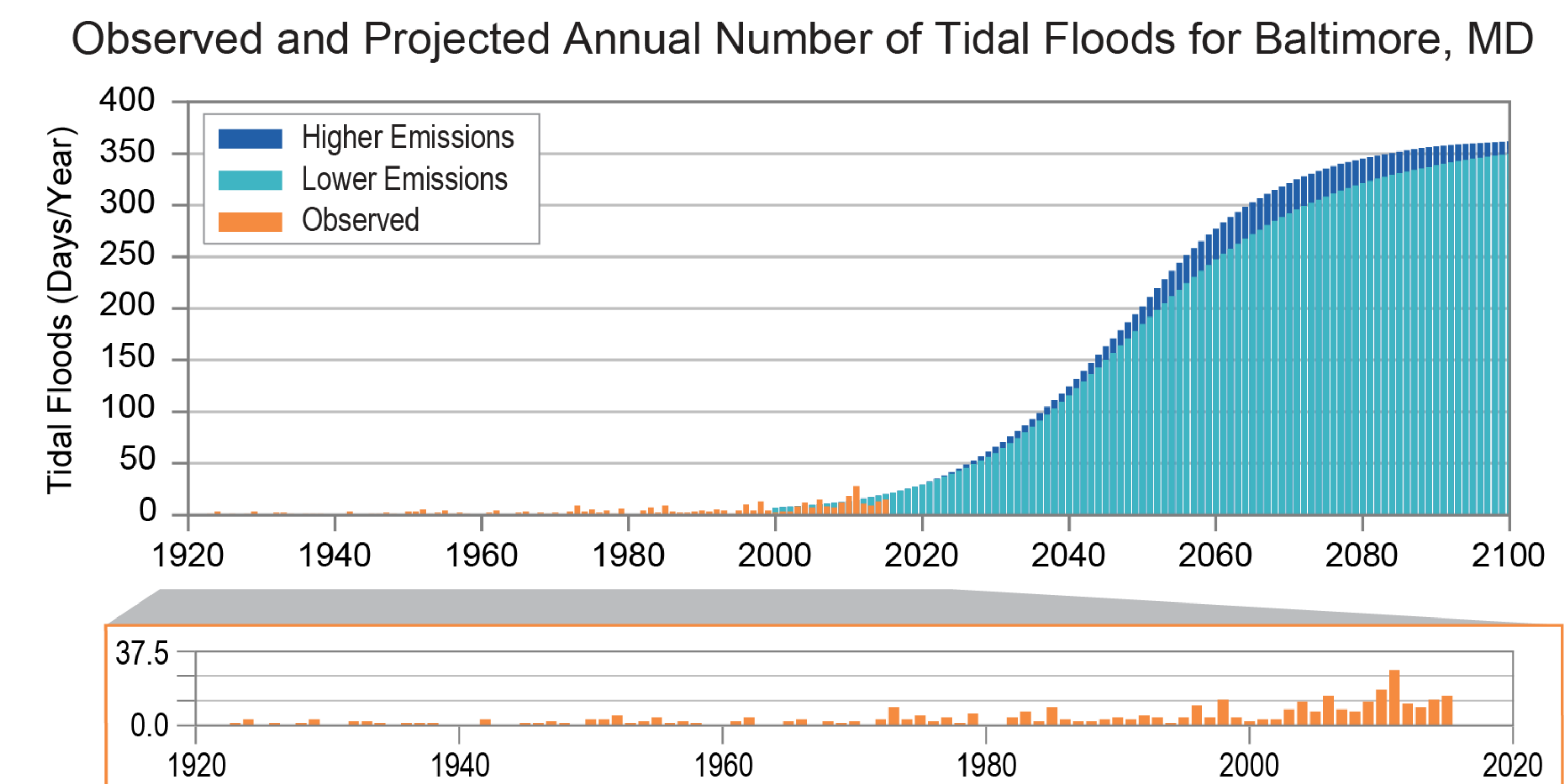


Figure 4: Number of tidal flood days per year for the observed record (orange bars) and projections for two possible futures: lower emissions (light blue) and higher emissions (dark blue) per calendar year for Baltimore, Maryland. The greatest number of tidal flood days occurred in 2011 at Baltimore. Projected increases are large even under a lower emissions pathway. Near the end of the century, under a higher emissions pathway, some models (not shown here) project tidal flooding nearly every day of the year. Source: NOAA/NOS.

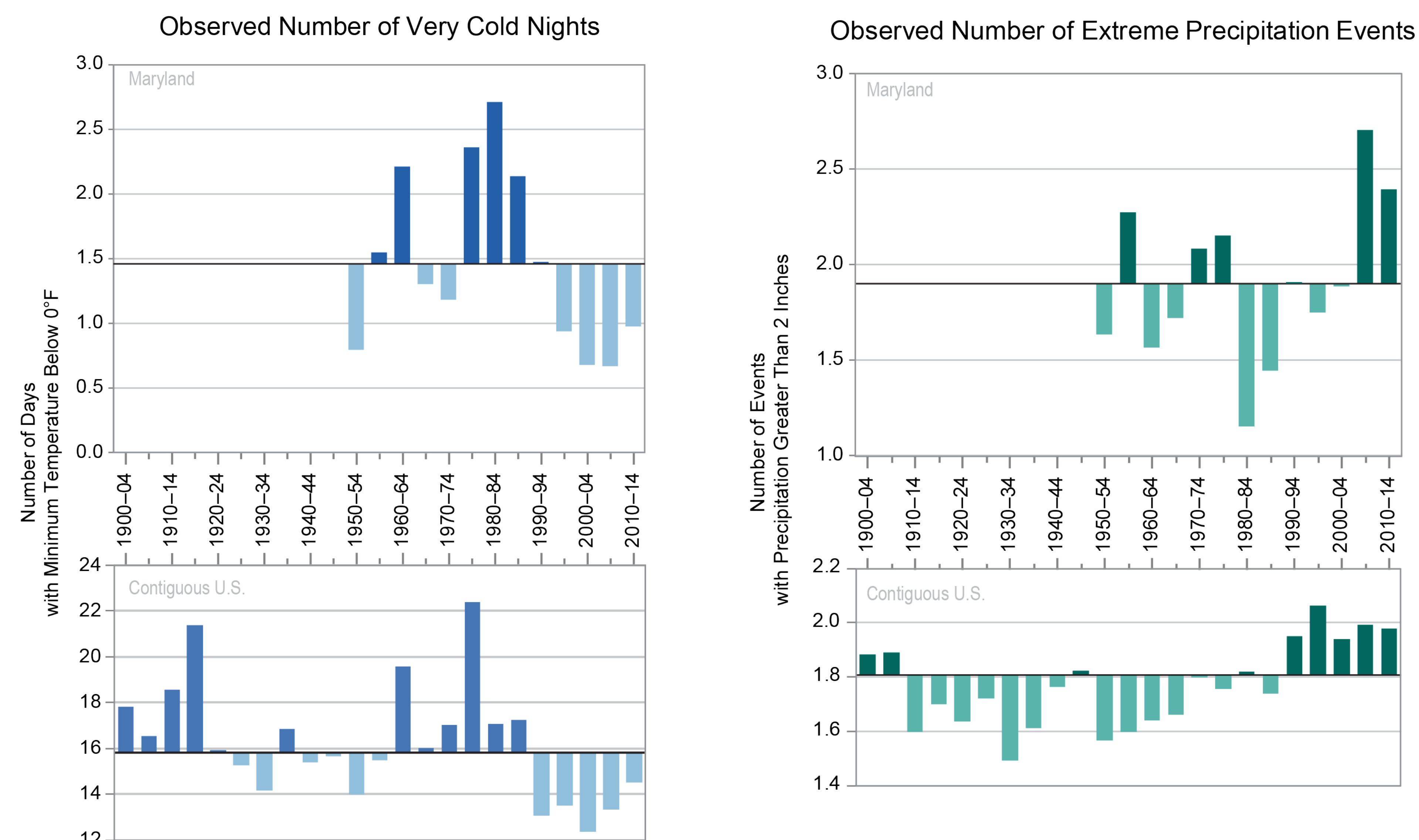


Figure 2: The observed number of very cold nights for Maryland and the contiguous United States. The dark horizontal line represents the long-term average. Maryland has experienced a downward trend in the number of very cold nights since the middle of the 20th century. Source: CICS-NC and NOAA/NCEI.

Figure 3: The observed number of extreme precipitation events for Maryland and the contiguous United States. The dark horizontal line represents the long-term average. The number of extreme precipitation events in Maryland has been above average during the last 10 years. Source: CICS-NC and NOAA/NCEI.

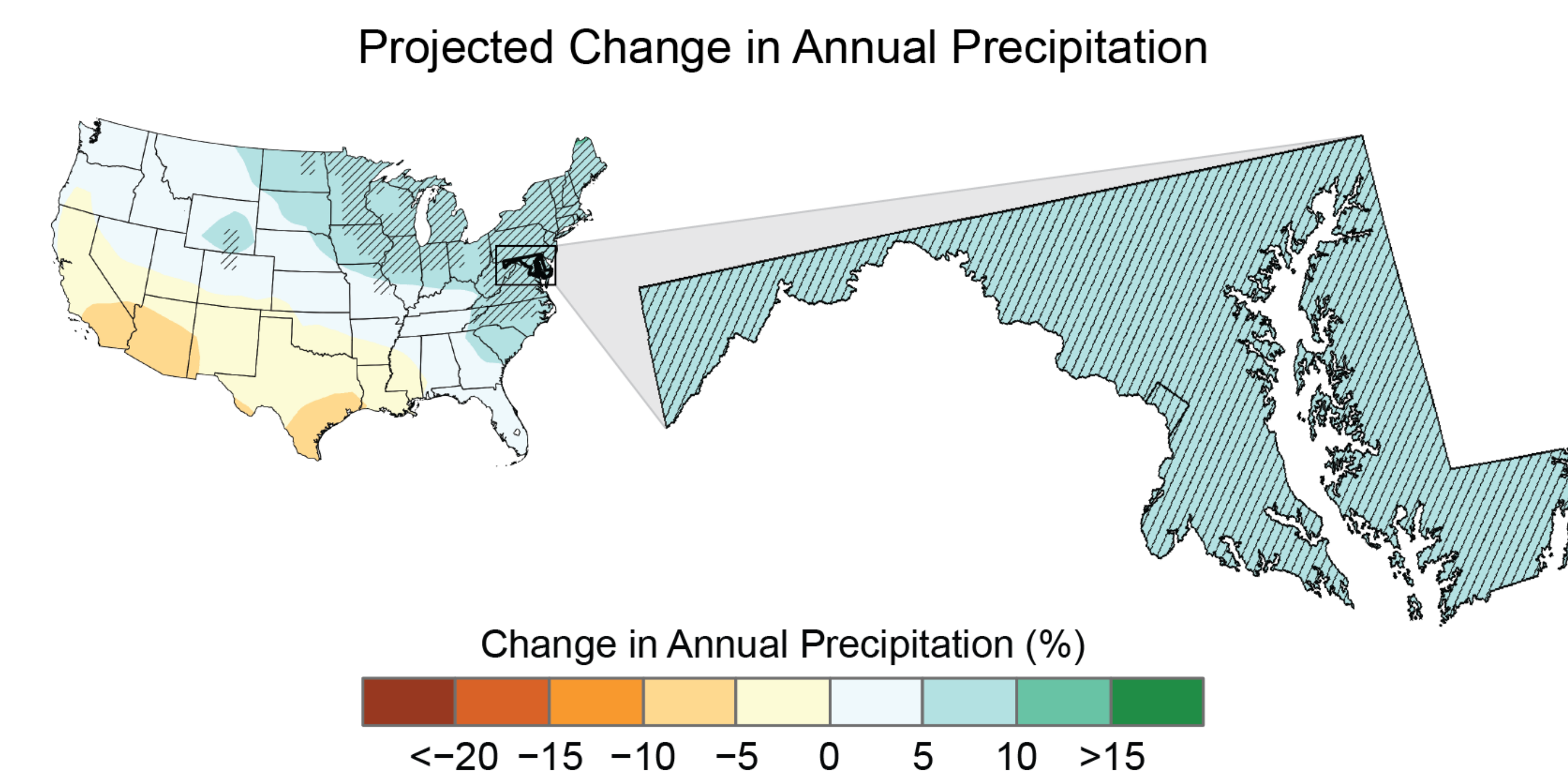


Figure 5: Projected change in annual precipitation (%) for the middle of the 21st century relative to the late 20th century under a higher emissions pathway. Hatching represents portions of the state where the majority of climate models indicate a statistically significant change. Annual precipitation is projected to increase in Maryland. Source: CICS-NC, NOAA/NCEI, and NEMAC.

<http://stateclimatesummaries.globalchange.gov>