

**MDSCO-2026-02**

# **Maryland Climate Bulletin**

## **February 2026**

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This publication is available from:  
<https://mdsco.umd.edu/ClimateInfo/Bulletin.php>



## Summary

Statewide averages indicate that February 2026 was colder and drier than normal (i.e., 1991-2020 averages). Regionally, monthly mean temperatures were between 26 and 37°F, maximum temperatures were in the 36–46°F range, and minimum temperatures were between 16 and 27°F. Monthly total precipitation was in the 1.4–3.6 inches range.

### *Maryland Regional Features (Figures 1-5, C1, and D1)*

- The mean temperature was colder than normal in the entire state, particularly in eastern Caroline and Queen Anne’s counties (4.8–5.2°F below), and parts of Harford, Cecil, Kent, Queen Anne’s, Caroline, Talbot, Dorchester, and Worcester counties (3.0–3.6°F below).
- The maximum temperature was colder than normal across the state, too, notably in eastern Queen Anne’s County (6.5–7.0°F below), parts of Harford, Cecil, Kent, Queen Anne’s, Caroline, Talbot, and Dorchester counties (5.5–6.5°F below), and parts of Harford, Baltimore, Talbot, and Dorchester counties (4.5–5.5°F below).
- The minimum temperature was also colder than normal throughout the state, especially in western Garrett County (3.6–4.8°F below), eastern Caroline County (3.6–4.2°F below), Wicomico, Somerset, and Worcester counties (3.6°F below), and parts of Harford, Cecil, Kent, Queen Anne’s, Caroline, Talbot, and Dorchester counties (3.0–3.6°F below).
- Precipitation was below normal over the majority of the state, particularly over Garrett County (2.2–2.4 inches deficit), western Allegany County (0.8–1.2 inches deficit), and parts of Frederick, Montgomery, Carroll, Howard, Baltimore, Harford, Cecil, Kent, and Queen Anne’s counties (0.8–1.0 inches deficit). Garrett County received 50–60% less precipitation than normal for the month, while Frederick, Montgomery, Carroll, Howard, Baltimore, Harford, Cecil, Kent, and Queen Anne’s counties got between 30 and 40% less than normal. Above-normal precipitation largely occurred in eastern Caroline and Dorchester counties, as well as parts of Wicomico, Somerset, and Worcester counties, with southern Somerset and Worcester counties receiving 15 to 20% more precipitation than normal; slightly above normal precipitation also occurred in eastern Washington County.
- Drought conditions improved by the end of February as the extent of Severe Drought conditions diminished from ~43% to ~2% of the state. The area affected by drought conditions decreased by ~6%, with portions of Garrett, Kent, and Talbot counties, and the whole of Queen Anne’s and Caroline counties under no drought conditions. The extent of Abnormally Dry conditions decreased by ~10, but the extent of Moderate Drought conditions increased by ~46%, respectively, by the end of February. Severe Drought conditions were confined to portions of northern Allegany, Washington, Carroll, and Baltimore counties. In contrast, Moderate Drought conditions covered southeastern Maryland, the coastal plains on the western side of the Bay, the Piedmont, and western Maryland to half of Garrett County; the extent of Severe Drought conditions decreased with a similar increase in the extent of Moderate Drought.



### *Maryland Climate Divisions (Figures 6-7, B1, and B2)*

- All the climate divisions were colder than normal, with Climate Division 5, Northeastern Shore, having the largest departure from normal (4.9°F below). All but one of the climate divisions were drier than normal, with Climate Division 8, Allegheny Plateau, having the largest deviation from normal (1.85 inches deficit); Climate Division 1, Southeastern Shore, was the only one with above-normal precipitation.
- The statewide mean temperature and precipitation have been colder and drier than normal for the past three months, but it has been like that since October 2025. The statewide mean temperature over the past three months has consistently been colder than normal (3.6, 3.7, and 3.3°F below). The statewide precipitation deficit over the past three months was the largest in December 2025 (1.74 inches), followed by smaller deficits in January (0.56 inches) and February (0.51 inches).

### *Extreme daily temperatures, precipitation, and growing degree days (Figures 8-9)*

- Statewide minimum daily temperatures from January 1 to February 28 indicated the number of freezing days with minimum temperatures equal to or colder than 32°F was five days above normal (50 vs. 45) with two fewer freezing spells (i.e., two or more consecutive freezing days) than normal (3 vs. 5); however, the maximum duration of the spells was thirteen days longer than normal (36 vs. 23). The number of days with minimum temperatures equal to or below 28°F was six days above normal (40 vs. 34), with a normal number of spells (6); the maximum duration of the spells was ten days longer than normal (24 vs. 14). Similarly, the number of days with minimum temperatures at or below 24°F was six days above normal (29 vs. 23), with a normal number of spells (5); the maximum duration of the spells was three days longer than normal (12 vs. 9).
- Statewide daily total precipitation from January 1 to February 28 showed that the number of days with extreme precipitation (at least 0.64 inches –the 95th percentile in 1951–2000) was normal (3). The number of dry spells (two or more consecutive days with daily precipitation of no more than 0.04 inches) was two fewer spells than normal (6 vs. 8); the longest duration of the dry spells was ten more days longer than normal (20 vs. 10).

### *Historical Context (Figure 10, Tables A1 and A2)*

- Statewide mean, maximum, and minimum temperatures in February 2026 (32.9, 41.6, 24.2°F) were below their (1895-2025) long-term means, but very far from their coldest records of 21.9, 31.9, and 11.5°F set in 1934, 1979, and 1934, respectively.



- Statewide mean, maximum, and minimum temperatures indicated that February 2026 was the forty-ninth, forty-first, and fifty-sixth coldest February since 1895, respectively. Among the counties, Caroline County had its twenty-ninth coldest mean temperature and Queen Anne's its thirtieth; Queen Anne's also had its twenty-fourth coldest maximum temperature, and Kent its twenty-sixth; Wicomico had its thirty-fourth coldest minimum temperature on record, and Worcester its thirty-sixth.
- Statewide precipitation in February 2026 (2.25 inches) was below its (1895-2025) long-term mean and very far from its driest record of 0.51 inches set in 2009. Statewide, this was the forty-fourth driest February since 1895. Among the counties, Garrett County had its thirteenth driest February on record, and Cecil County its nineteenth.

#### *Century-Plus Trends, 1895-2026 (Figures 11, 12)*

- Statewide mean temperature and heating degree days in February showed significant trends: a warming trend (4.3°F/century) and a decreasing heating trend (−123.3°FDD/century). On the other hand, statewide precipitation had a non-significant drying trend (−0.31 in/century).
- Regionally, February mean temperatures indicated significant warming trends in the entire state. Notably, between portions of northern Montgomery, Howard, and Anne Arundel counties and the southern portions of Frederick, Carroll, and Baltimore counties, and over the northern parts of Harford and Cecil counties (4.8– 5.0°F/century).
- Regionally, February precipitation had drying trends over much of the state. However, significant drying trends were found only over Cecil County and portions of Harford, Kent, and Queen Anne's counties, as well as small parts of Somerset, Wicomico, and Dorchester counties (around −0.6 in/century). Non-significant wetting trends were found over Garrett County (around 0.4 in/century).

#### *Chesapeake Bay Sea Surface Temperatures (Figures 13, 14, 15, E1)*

- Sea surface temperatures in the Chesapeake Bay in February 2026 were in the 31–34°F range. Regionally, they were colder than their 2007-2020 mean everywhere, notably in the waters of the Pocomoke Sound, northern and middle Potomac River, and the Chincoteague Bay (6–7°F below); the waters of Eastern Bay, Chester River, and northern Lower Basin (5.5–6.5°F below); the waters of the Tangier Sound (6°F below), and the rest of the Lower Basin (4–5.5°F below). The all-basin mean temperature of 33.3°F in February was below the 2007-2020 base period mean (38.6°F), and it was the coldest February in the 20-year dataset (2007-2026).



- Following the severe freeze in early-to-mid February 2026, the Chesapeake Bay presented fast ice in sheltered inlets north of Baltimore on the 4th and 9th of the month, and in inlets south of Baltimore, and along the Potomac and Little Choptank rivers on the 4th. High ice coverage, between 90–99%, was present from the mid Lower Basin, around the Little Choptank River, up to the Upper Basin, in the northern Potomac River, and in inlets along the Eastern Shore in the Lower Basin on the 4th; 70–90% ice coverage appeared along the majority of the Potomac River and south of Tilghman Island at the mouth of the Choptank River on the same date. High ice coverage, between 90–99%, was also present in the Upper Basin, along the Potomac River, and along the Eastern Shore down to the Tangier and Pocomoke sounds; 70–90% ice coverage was present in most of the Middle Basin. The southern part of the main channel of the Lower Basin had an ice concentration of less than 10% on the 4th and was ice-free on the 9th.



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## 1. Introduction

The Maryland Climate Bulletin is issued by the Maryland State Climatologist Office (MDSCO), which resides in the Department of Atmospheric and Oceanic Science at the University of Maryland, College Park. It documents the surface climate conditions observed across the state in a calendar month and is issued in the second week of the following month.

Maryland's geography is challenging, with the Allegheny and Blue Ridge mountains to the west, the Piedmont Plateau in the center, the Chesapeake Bay, and the Atlantic Coastal Plain to the east. The range of physiographic features and the state's eastern placement within the expansive North American continent contribute to a comparatively wide range of climatic conditions.

The bulletin aims to document and characterize monthly surface climate conditions in the state, situating them within the context of regional and continental climate variability and change, to help Marylanders interpret and understand recent climate conditions.

The monthly surface climate conditions for February 2026 are presented via maps of key variables, such as average surface air temperature, maximum surface air temperature, minimum surface air temperature, total precipitation, and their anomalies (i.e., departures from normal); they are complemented by drought conditions for the state, as given by the U.S. Drought Monitor in Section 3. Statewide and climate division averages for the month are compared using scatter plots in Section 4. Extreme cold daily minimum temperatures and precipitation are presented from the analysis of daily statewide averaged temperatures and precipitation in Section 5. Monthly statewide averages are placed in the historical context using box-and-whisker plots in Section 6. Century-plus trends in statewide air temperature, heating degree days, precipitation, and state maps of air temperature and precipitation are presented in Section 7. Maps of monthly sea surface temperature (SST) in the Chesapeake Bay are presented in Section 8, along with basin averages and their annual evolution for the month; these are complemented by maps of maximum ice coverage. Ancillary statewide, climate division, and county-level information for air temperatures and precipitation are provided in tables and plots in Appendices A and B; climatology and variability maps are included in Appendices C and D, along with the percentage of normal precipitation and normalized anomalies; mean and variability of the sea surface temperatures in the Chesapeake Bay are displayed in Appendix E.

## 2. Data and Methods

Surface air temperatures, total precipitation, and degree-days data in this report are from the following sources:

- NOAA Monthly U.S. Climate *Gridded* Dataset at 5-km horizontal resolution (NClimGrid – Vose et al., 2014) for 1895-present. Available in preliminary status at: <https://www.ncei.noaa.gov/data/nclimgrid-monthly/access/>  
Data was downloaded on March 10, 2026.



- NOAA Monthly U.S. Climate *Divisional* Dataset (NClimDiv – Vose et al., 2014) for 1895-present. Available in preliminary status (v1.0.0-20260305) at:  
<https://www.ncei.noaa.gov/pub/data/cirs/climdiv/>  
Data was downloaded on March 9, 2026.
- NOAA area averages of daily temperatures and precipitation dataset (nClimGrid–Daily –Durre et al., 2022) for 1951-present. Available in a preliminary status, v1.0.0, at:  
<https://www.ncei.noaa.gov/products/land-based-station/nclimgrid-daily>  
Data labeled as “scaled” was downloaded on March 6, 2026.

Drought conditions are from the U.S. Drought Monitor website:

<https://droughtmonitor.unl.edu/Maps/MapArchive.aspx>

Data and sources for the Chesapeake Bay are the following:

- Satellite-based sea surface temperatures from NOAA’s CoastWatch Program. The data was made available by the Program’s [East Coast Node](#). This satellite-based sea surface temperature data uses data from the Advanced Very High Resolution Radiometer (AVHRR) on the European MetOp satellites, and the Visible Infrared Imaging Radiometer Suite (VIIRS) on the U.S. SNPP and NOAA JPSS satellites. In creating this product, nighttime overpasses for the U.S. East Coast are used, thereby avoiding daytime solar heating of the ocean surface and the associated warm bias in the data. In particular, the acquired product consists of monthly sea surface temperature data for the Chesapeake and Delaware Bays, with a nominal horizontal resolution of 750 m from 2007 to the present. This product is available at:  
<https://eastcoast.coastwatch.noaa.gov/data/avhrr-viirs/sst-ngt>  
Data was downloaded on March 2, 2026.
- A shapefile of watersheds for the state from the Maryland Department of the Environment and the Department of Natural Resources: the Maryland Watersheds – 8 Digit Watersheds. It contains 138 separate watersheds, identified with an 8-digit numeric code from which three are on the main stem of the Chesapeake Bay: the Upper Chesapeake Bay (code: 02139996; from the mouth of the Susquehanna River to northern side of the mouth of the Gunpowder River), the Middle Chesapeake Bay (code: 02139997; from the Gunpowder River to the mouth of the Chester River), and the Lower Chesapeake Bay (code: 02139998; from the south side of the mouth of the Chester River to the mouth of the Potomac River), which in turn are used to create a one-watershed shapefile for the entire basin. These four watersheds are used to create area-averaged sea surface temperatures for the Bay. The shapefile and associated files are available at:  
<https://data.imap.maryland.gov/datasets/maryland::maryland-watersheds-8-digit-watersheds/about>

Ice conditions in the Chesapeake Bay are from the U.S. National Ice Center website:

<https://usicecenter.gov/Products/MidAtlanticHome>



Some definitions:

*About climate and climatology.* Weather and climate are closely related, but they are not the same. Weather represents the state of the atmosphere (temperature, precipitation, etc.) at any given time. On the other hand, climate refers to the long-term average of weather elements. If the average period is long enough, we can start to characterize the climate of a particular region.

It is customary to follow the World Meteorological Organization (WMO) recommendation and use 30 years for the average. The 30-year average weather data is traditionally known as Climate Normal (Kunkel and Court, 1990) and is updated every ten years (WMO, 2017). Establishing a climate normal, or climatology, is important because it allows one to compare a specific day, month, season, or even another normal period with the current normal. Such comparisons characterize anomalous weather and climate conditions, climate variability and change, and help define extreme weather and climate events (Arguez et al., 2012). The current climate normal, or simply the climatology, is defined for the period 1991–2020.

It should be noted that the satellite-based sea surface temperature data set has a short temporal coverage of 20 years, from 2007 to the present, which prevents the calculation of its current climate normal (1991-2020). Instead, the 2007-2020 mean will be used without referring to it as a climatology.

*About the anomalies:* Anomalies for a given month (e.g., February 2026) are the departures of the monthly value from the corresponding month's 30-year average (i.e., from the average of 30 Februaries) during 1991-2020. When the observed monthly value exceeds its climatological value, it is referred to as above normal (e.g., warmer than normal or wetter than normal) or a positive anomaly. In contrast, when this value is smaller than its climatological value, it is referred to as below normal (e.g., colder than normal or drier than normal) or a negative anomaly. In the case of the sea surface temperature anomalies, they are calculated with respect to their 2007-2020 mean.

*About variability.* The monthly standard deviation of a climate variable measures its dispersion relative to its monthly mean and assesses its year-to-year, or interannual, variability. Anomalies are sometimes compared against that variability to identify extremes in the climate record. When anomalies are divided by the standard deviation, they are referred to as standardized anomalies.

*About freezing days.* Freezing temperatures affect people's health, comfort, and livelihood by impacting crops, livestock, infrastructure, water, and energy resources, etc. Here, freezing temperatures are tracked by the count of days when daily minimum temperatures are below 32°F, 28°F, and 24°F (originally used to categorize agricultural impacts USDA, 2024) and by their consecutive occurrence. When these conditions persist for two or more consecutive days, they define freezing day spells. These threshold values correspond to the 28th, 19th, and 12th percentiles of statewide daily minimum temperature for the period 1951–2000.



*About degree days.* Degree days represent the difference between the daily mean temperature (calculated by averaging the high and low temperatures) and a predefined base temperature. Since energy demand is cumulative, degree-day totals are typically calculated on a daily, monthly, seasonal, and annual basis.

- *Heating and cooling degree days.* These are used to get a general idea of the amount of energy required to warm or cool buildings. The base temperature used for this purpose is 65°F, which is considered tolerable for human comfort (CPC, 2023).

*About extreme precipitation.* This is defined as the number of days per year on which statewide-averaged daily total precipitation is equal to or greater than 0.64 inches. This threshold value represents the 95th percentile of statewide averaged daily total precipitation for 1951-2000.

*About the dry day spells.* A dry day is defined as a day with precipitation below 0.04 inches. These conditions are referred to as dry spells if they persist for two or more consecutive days. The number and duration of dry spells are particularly important during the vegetation period (Tschurr et al., 2020).

*About NOAA's Climate Divisions.* The term “climate division” refers to one of the eight divisions in the state that represent climatically homogeneous regions, as determined by NOAA: <https://www.ncei.noaa.gov/access/monitoring/dyk/us-climate-divisions>

The eight climate divisions in Maryland are:

- Climate Division 1: Southeastern Shore. It includes the counties of Somerset, Wicomico, and Worcester.
- Climate Division 2: Central Eastern Shore. It includes the counties of Caroline, Dorchester, and Talbot.
- Climate Division 3: Lower Southern. It includes the counties of Calvert, Charles, and St. Mary's.
- Climate Division 4: Upper Southern. It includes the counties of Anne Arundel and Prince George's.
- Climate Division 5: Northeastern Shore. It includes the counties of Kent and Queen Anne's.
- Climate Division 6: North Central. It includes the counties of Baltimore, Carroll, Cecil, Frederick, Harford, Howard, Montgomery, and the city of Baltimore.
- Climate Division 7: Appalachian Mountains. It includes the counties of Allegany and Washington.
- Climate Division 8: Allegheny Plateau. It includes Garrett County.

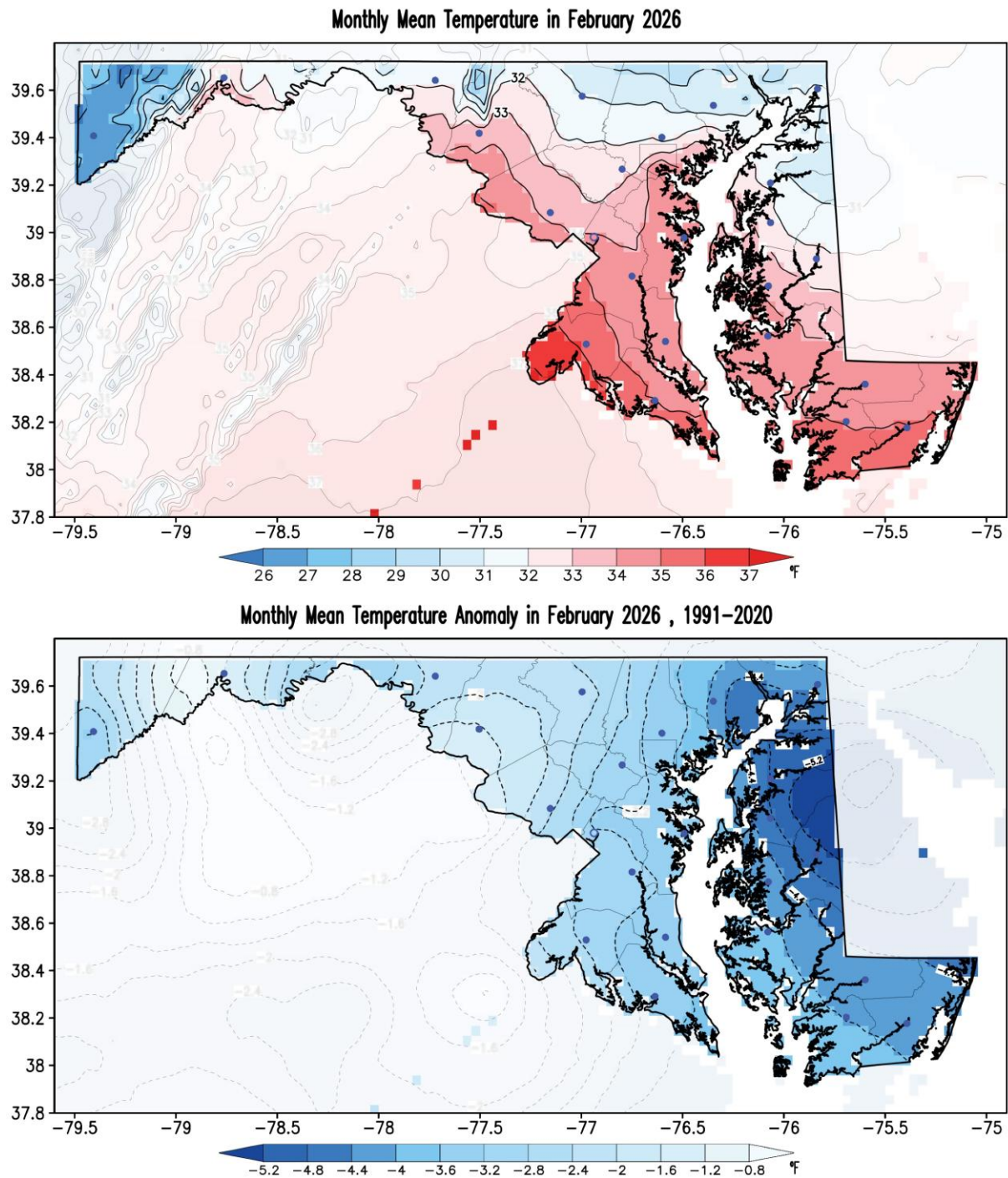


Note that these Climate Divisions do not correspond with the *Physiographic Provinces* in the state, as the former follow county lines. Climate Division 8 follows the *Appalachian Plateau Province*, Climate Division 7 follows the *Ridge and Valley Province*; however, Climate Division 6 includes the *Blue Ridge and the Piedmont Plateau provinces*, Climate Divisions 3, 4, and a portion of 6 include the *Upper Coastal Plain Province*, and Climate Divisions 1, 2, 5, and a portion of 6 include the *Lower Coastal Plain (or Atlantic Continental Shelf) Province*.



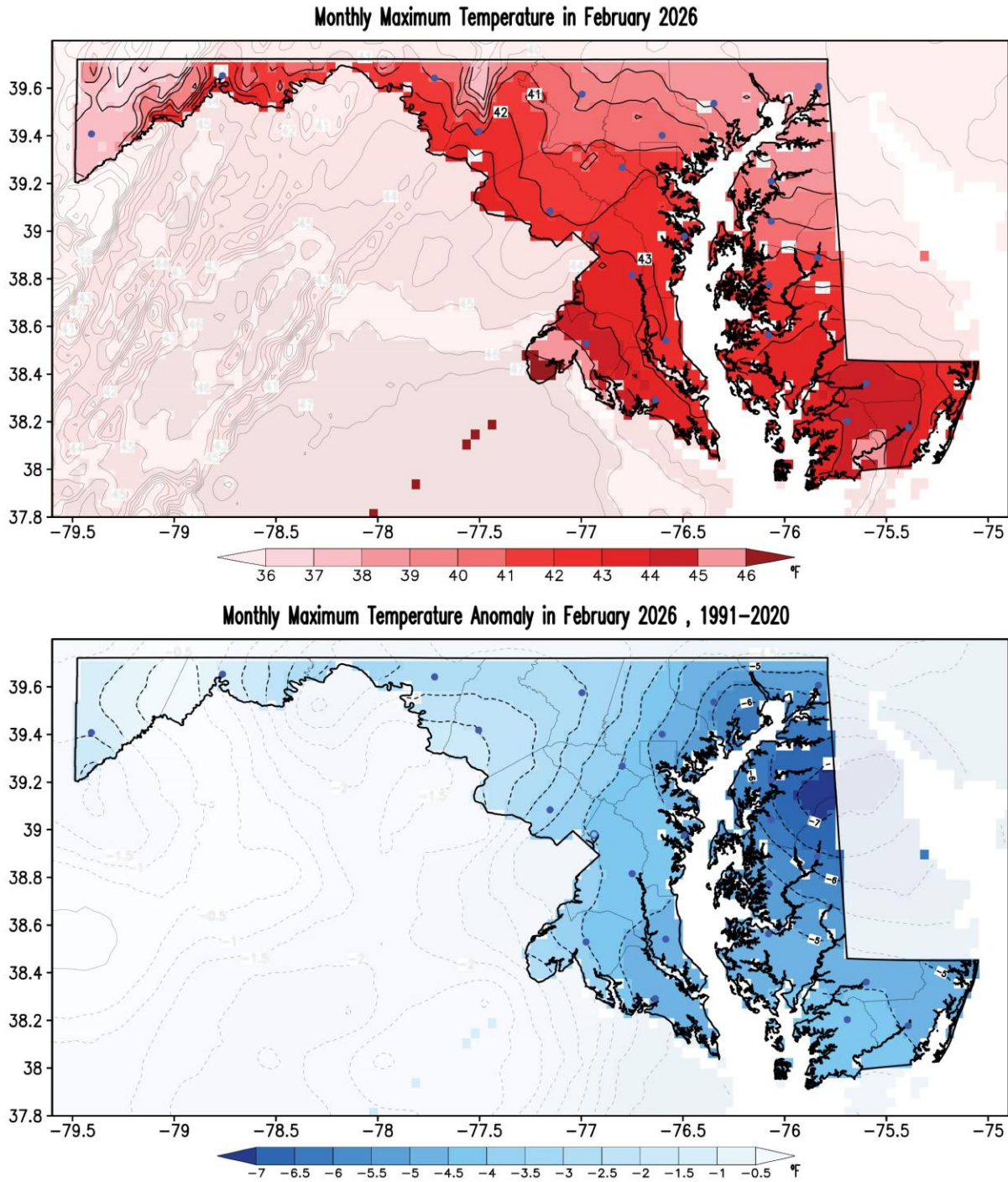
### 3. February 2026 Maps

#### A. Mean Temperatures



**Figure 1.** Monthly mean surface air temperature (top panel) and its anomaly with respect to the 1991-2020 climatology (bottom panel) for February 2026. Temperatures are in °F following the color bar. Blue/red shading in the temperature map shows temperatures below/above 32°F. Blue shading in the anomaly map marks colder than normal conditions. Note shading outside the state has been washed out to facilitate focus on Maryland. Filled blue circles mark the county seats.

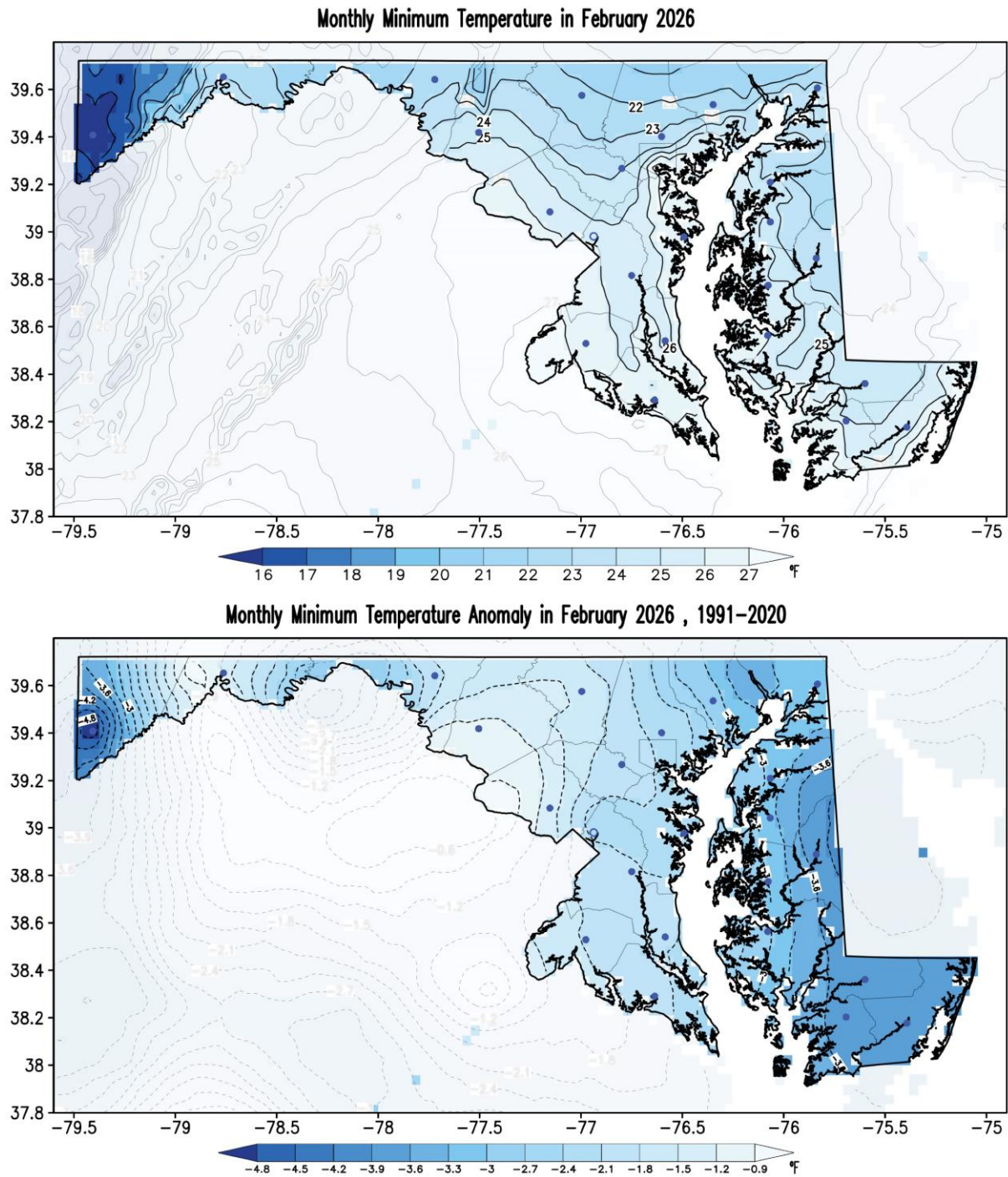
B. Maximum Temperatures



**Figure 2.** Monthly maximum surface air temperature (top panel) and its anomaly with respect to the 1991-2020 climatology (bottom panel) for February 2026. Temperatures are in °F following the color bar. Blue shading in the anomaly map marks colder than normal conditions. Note shading outside the state has been washed out to facilitate focus on Maryland. Filled blue circles mark the county seats.

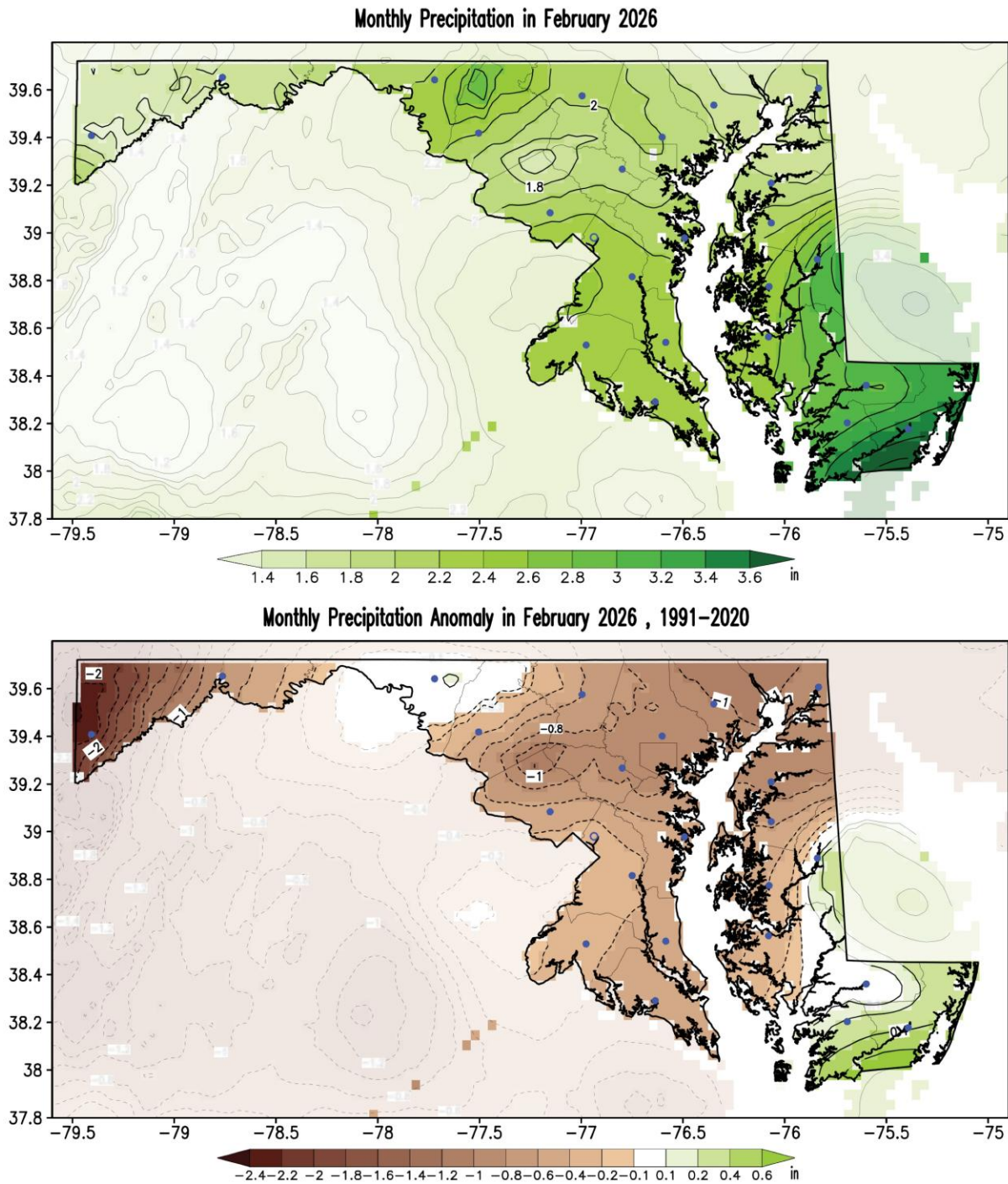


C. Minimum Temperatures



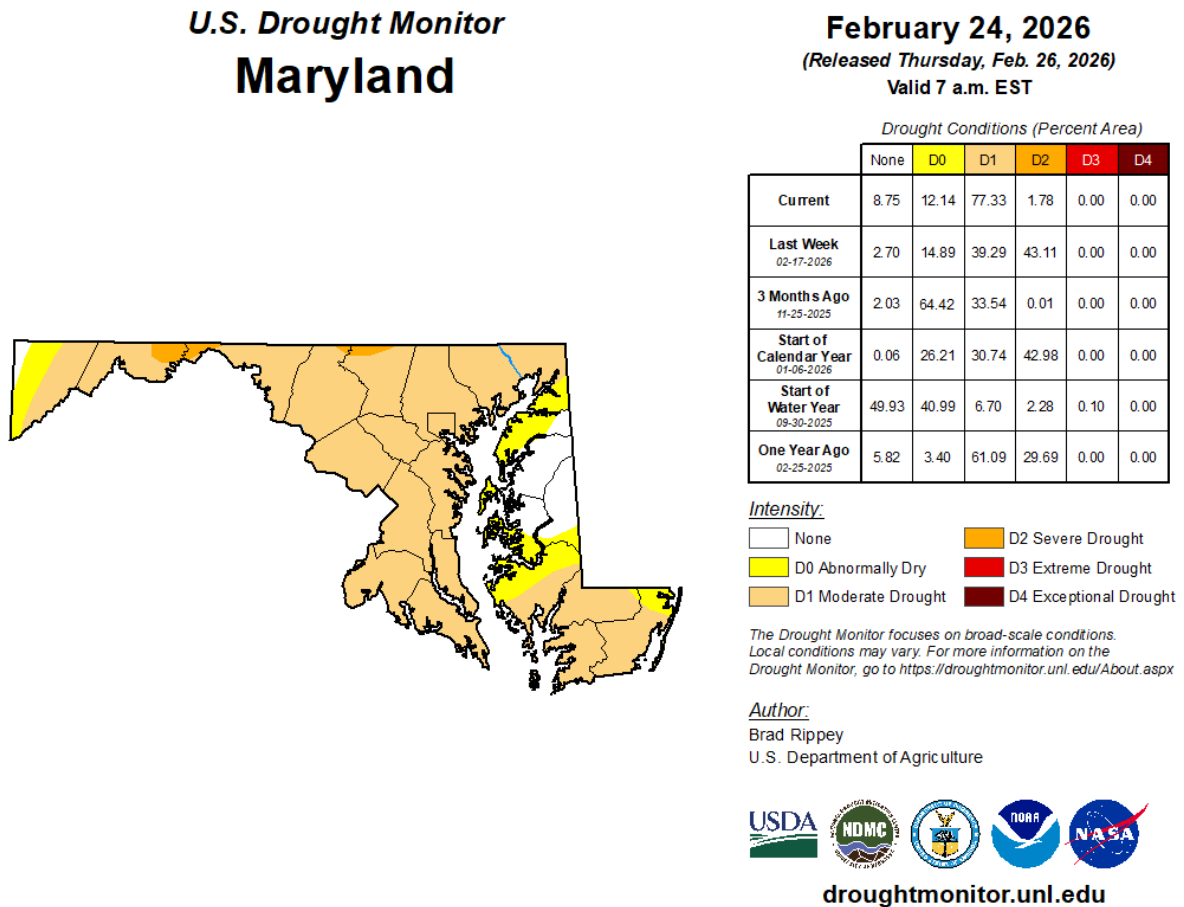
**Figure 3.** Monthly minimum surface air temperature (top panel) and its anomaly with respect to the 1991-2020 climatology (bottom panel) for February 2026. Temperatures are in °F following the color bar. Blue shading in the anomaly map marks colder than normal conditions. Note shading outside the state has been washed out to facilitate focus on Maryland. Filled blue circles mark the county seats.

D. Precipitation



**Figure 4.** Monthly total precipitation (top panel) and its anomaly with respect to the 1991-2020 climatology (bottom panel) for February 2026. Precipitation is measured in inches, as indicated by the color bar. Brown/green shading in the anomaly map indicates drier/wetter than normal conditions. Note shading outside the state has been washed out to facilitate focus on Maryland. Filled blue circles mark the county

E. Drought

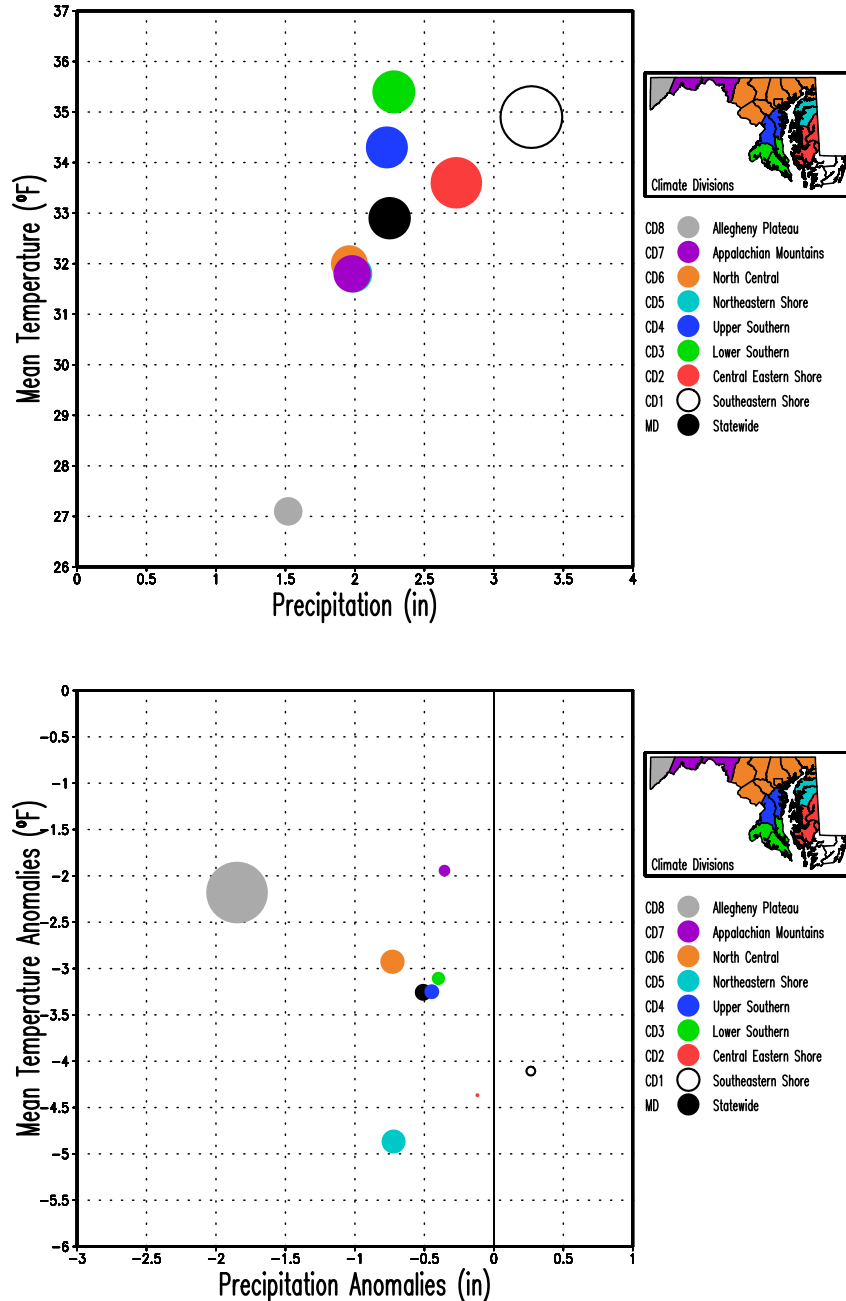


**Figure 5.** Drought conditions as reported by the U.S. Drought Monitor on February 24, 2026. Drought conditions improved with respect to the end of January, as the extent of Severe Drought conditions diminished by 41%, and the extent of all drought conditions diminished by 6%. Yellow shading indicates abnormally dry regions; light orange shading shows regions under a moderate drought, and dark orange shows regions under severe drought. Numbers in the table indicate the percentage of the state covered under the particular drought category at the time (in the left column). Areas shown in yellow (Abnormally Dry) indicate land that is going into or coming out of drought. Light orange areas (Moderate Drought) highlight land that may experience a low water supply and crop and pasture damage. Dark orange areas (Severe Drought) show land with water shortages and an increased likelihood of crop and pasture losses. Current conditions can be monitored on the [U. S. Drought Monitor website](https://droughtmonitor.unl.edu/). If interested, you can help monitor drought conditions by submitting a report of your local soil conditions through the National Drought Mitigation Center’s Drought Impact Toolkit by using the [Condition Monitoring Observer Reports](#) system.



## 4. February 2026 and DJF 2025-26 Statewide and Climate Divisions Averages

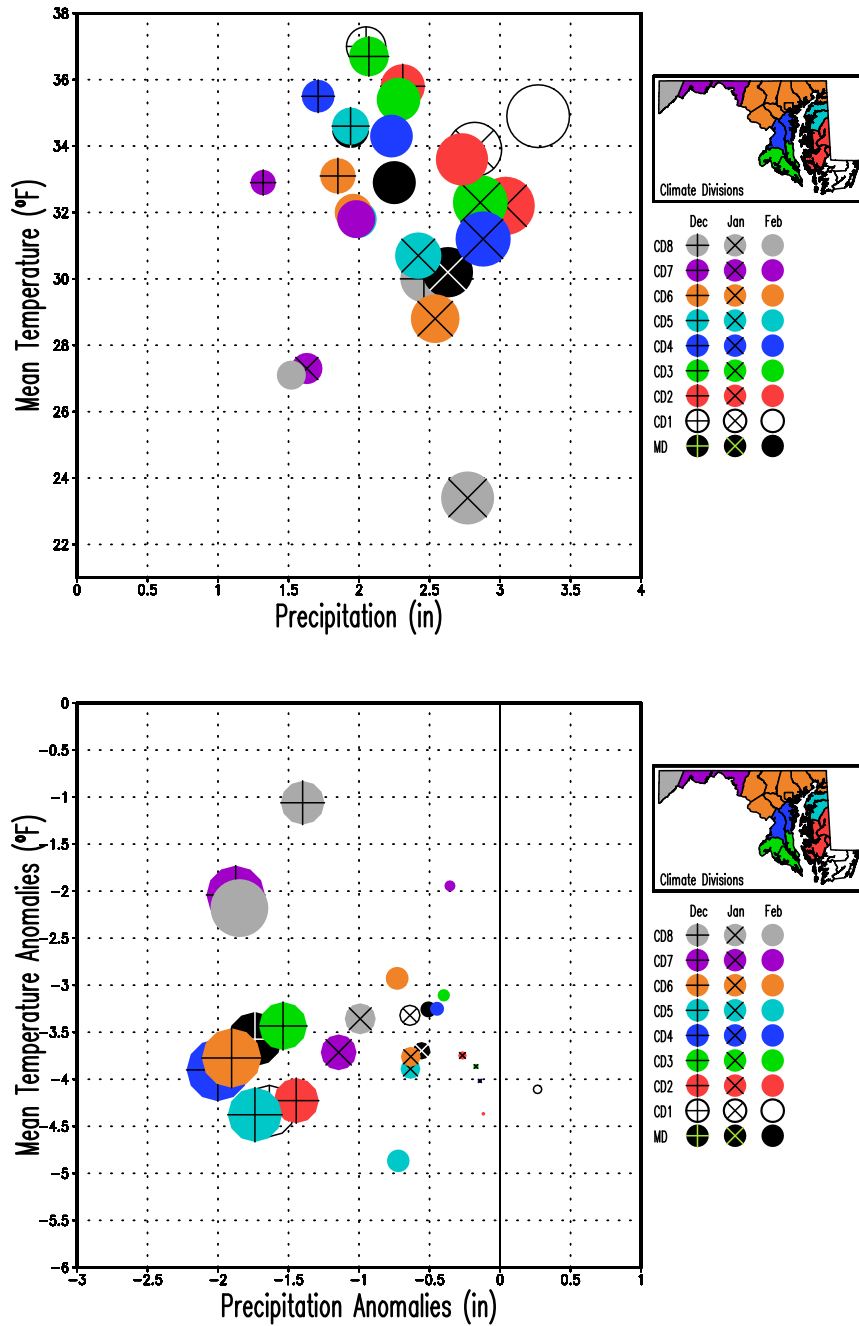
### A. February 2026 Scatter Plots



**Figure 6.** Scatter plots of Maryland (statewide) and Climate Divisions (CD#) monthly mean surface air temperature vs. total precipitation for February 2026. The upper panel displays the mean temperature and total precipitation, while the bottom panel displays their anomalies relative to the 1991-2020 climatology. Temperatures are in °F and precipitation is in inches. The size of the circles is proportional to the total precipitation scaled down by the maximum precipitation (3.27 inches in CD1, top panel) and by the maximum precipitation anomaly (|−1.85| inches in CD8, bottom panel) among the nine regions. Note that the color of the filled circles corresponds to the color in the Climate Divisions according to the inset map.



B. December 2025 – February 2026 Scatter Plots

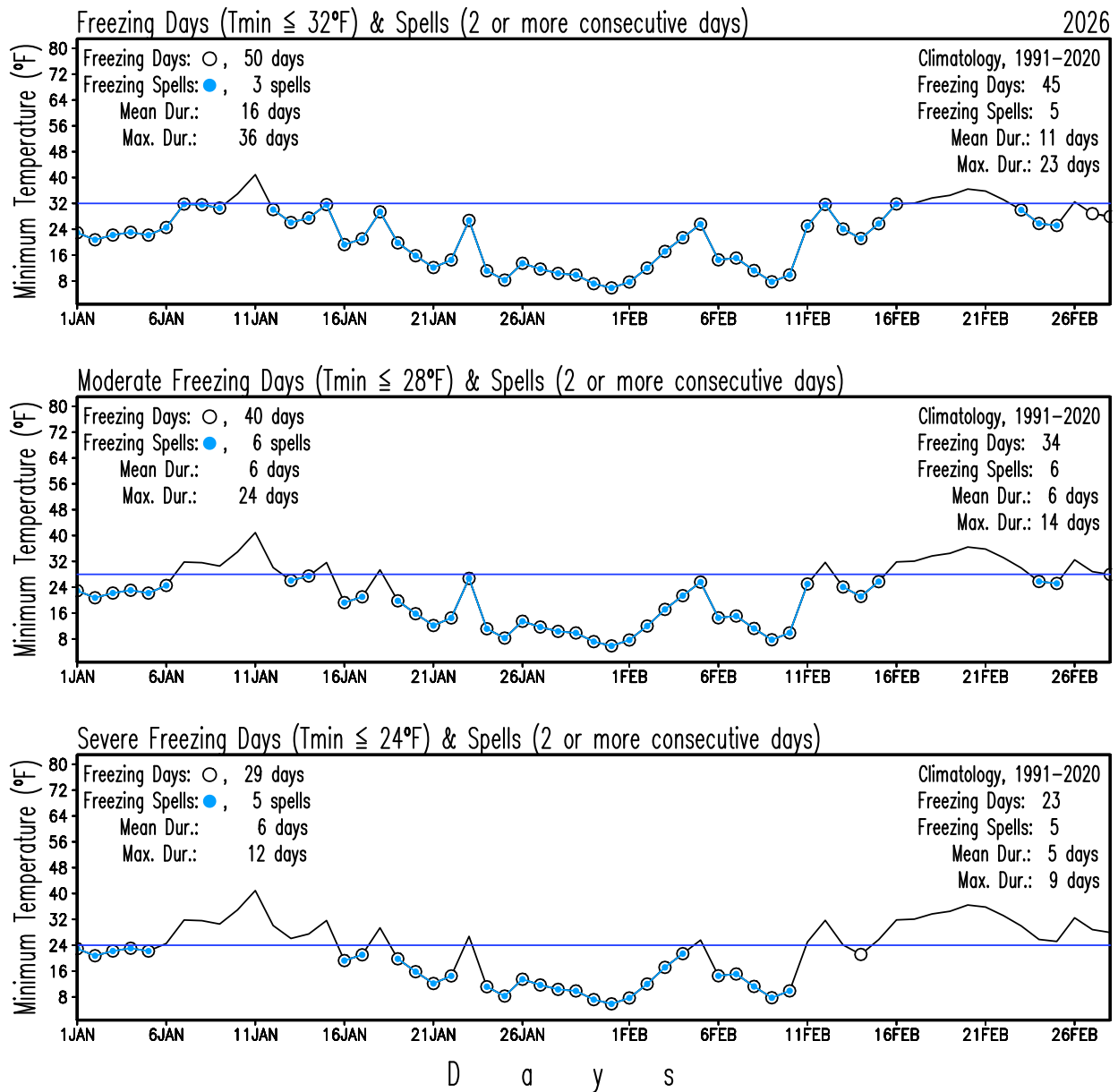


**Figure 7.** Scatter plots of Maryland (statewide) and Climate Divisions (CD#) monthly mean surface air temperature vs. total precipitation for December 2025, January and February 2026. The upper panel displays the mean temperature and total precipitation, while the bottom panel shows their anomalies relative to the 1991-2020 climatology. Temperatures are in °F, and precipitation is in inches. The size of the circles is proportional to the total precipitation scaled down by the maximum precipitation (3.27 inches in CD1 in February, top panel) and by the maximum precipitation anomaly (|-2.00| inches in CD4 in December, bottom panel) among the nine regions and three months. February is displayed with filled circles only, while January and December are displayed with superposed multiplication and addition signs, respectively.



## 5. Extremes in Statewide Averages

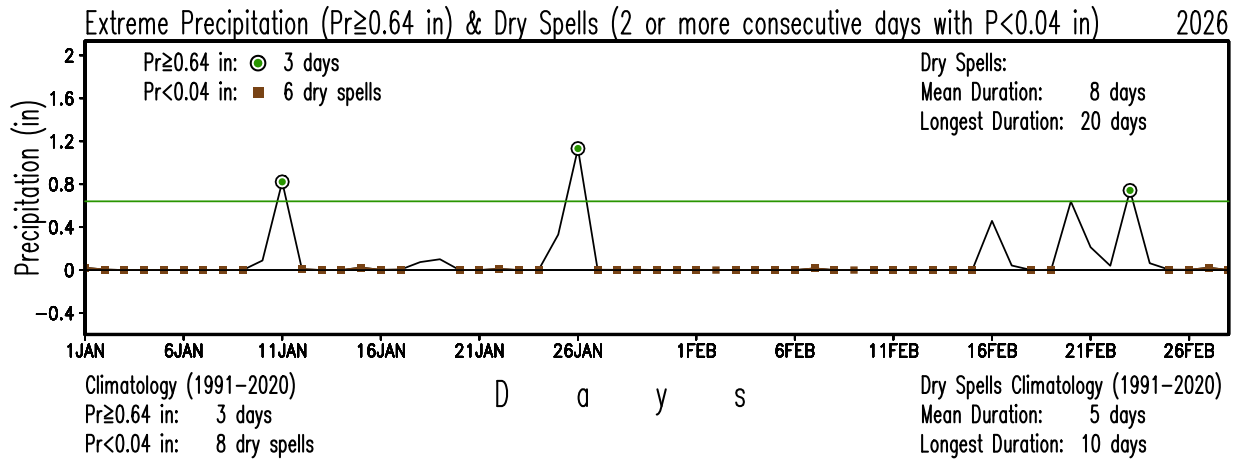
### A. Freezing Days



**Figure 8.** Maryland (statewide) number of freezing days, and their consecutive occurrence for the period January 1 – February 28, 2026. The panels show freezing days in open circles and spells of freezing days in blue-filled circles from statewide daily minimum temperatures. The upper panel displays freezing days and spells when statewide daily minimum temperatures are equal to or below 32°F. The middle panel shows freezing days and spells when statewide daily minimum temperatures are equal to or lower than 28°F. The lower panel shows freezing days and spells when statewide daily minimum temperatures are equal to or below 24°F. The blue line in each panel marks the threshold temperatures of 32°F, 28°F, and 24°F for each case. Figures at the county and climate division levels, as well as summary tables, are available on the [MDSO website](#).



B. Extreme Precipitation and Dry Spells

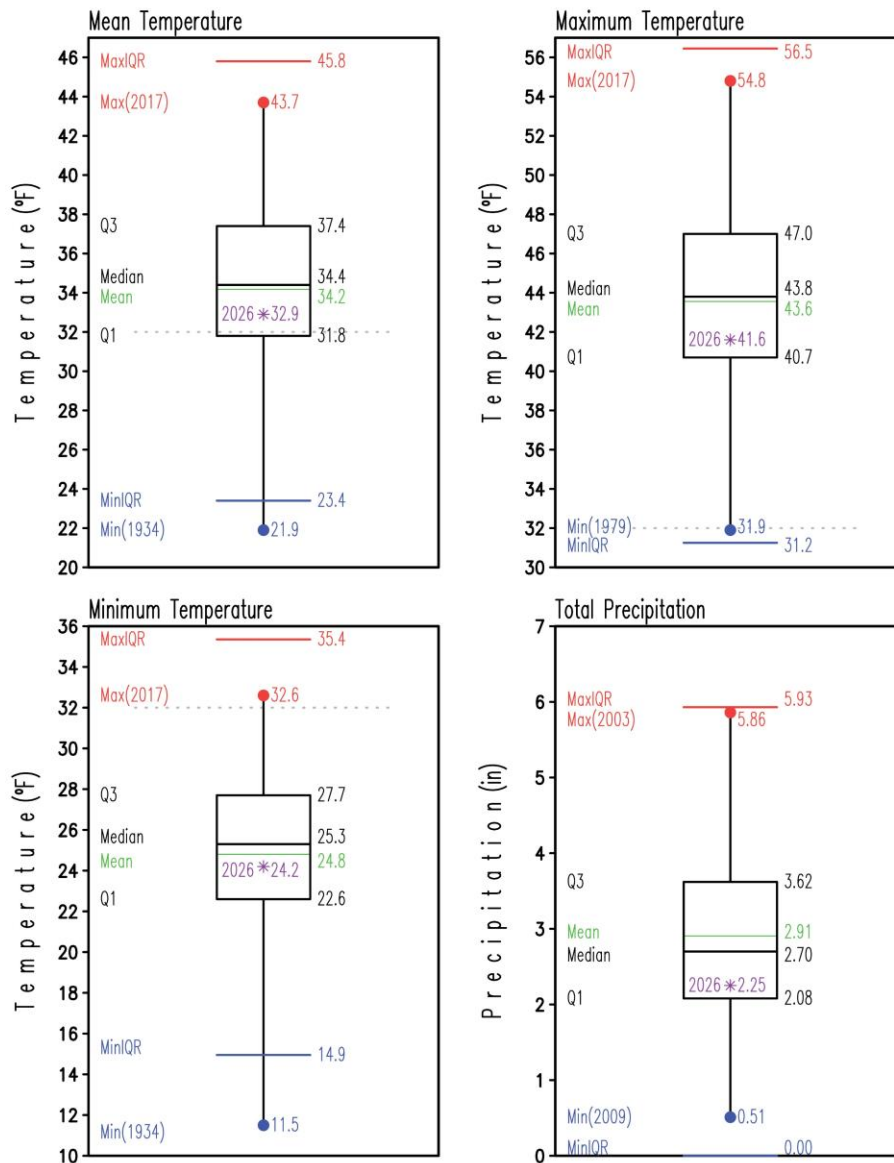


**Figure 9.** Maryland (statewide) number of days with extreme precipitation and dry spells for the period January 1 – February 28, 2026. Days with extreme precipitation (precipitation equal to or larger than 0.64 in) are identified by green-filled circles. Dry spells (consecutive days with daily total precipitation less than 0.04 in) are shown by brown-filled squares. Both extremes are identified from the statewide total daily precipitation. Figures at the county and climate division levels, as well as summary tables, are available on the [MDSCO website](#). The displayed precipitation peaks highlight the winter storms that affected the state. Snow totals by event can be seen on the Recent Event Snow Maps page of the [Baltimore/Washington Weather Forecast Office](#).



## 6. February 2026 Statewide Averages in the Historical Record

### A. Box and Whisker Plots

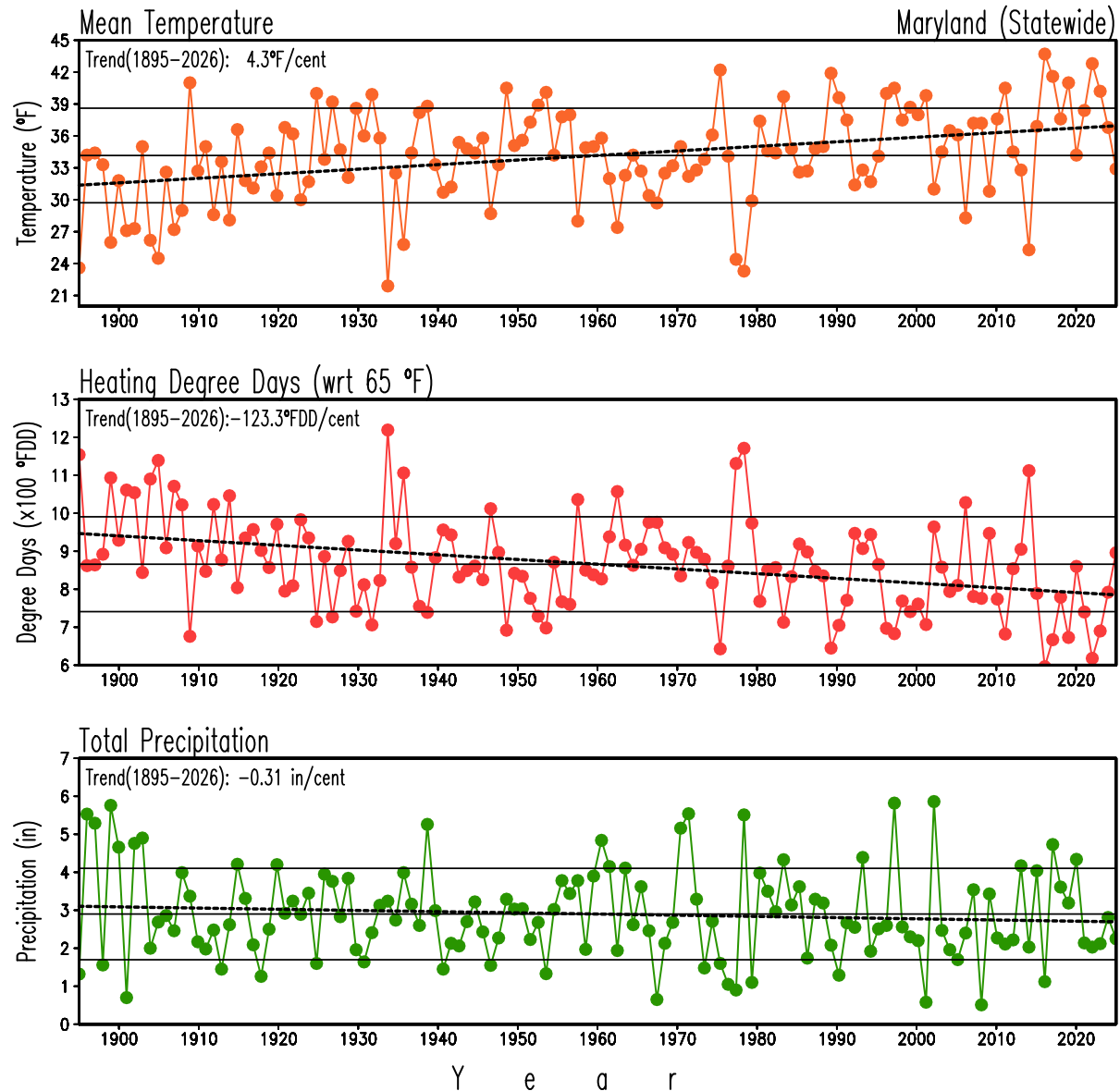


**Figure 10.** Box and Whisker plots of Maryland (statewide) monthly mean (upper left), maximum (upper right), minimum (lower left) surface air temperatures, and total precipitation (lower right) for February for the period 1895-2025. Conditions for February 2026 are represented by the label and asterisk in purple. Statistics for the period 1895-2025 are labeled at the left side of each box and whisker plot, and their values are at their right. Temperatures are in °F, and precipitation is in inches. The mean is the green line within the box, while the median is the black line within the box. The lower (Q1) and upper (Q3) quartiles, indicating the values of the variable that separate 25% of the smallest and largest values, are the lower and upper horizontal black lines of the box, respectively. For reference, the 32°F temperature is displayed with a horizontal dotted, gray line. The blue and red dots mark the minimum and maximum values in the period at the end of the whiskers; the year of occurrence is shown in parentheses. The blue and red horizontal lines represent extreme values defined by  $Q1-1.5 \times (Q3-Q1)$  and  $Q3+1.5 \times (Q3-Q1)$ , respectively.



## 7. 1895-2026 February Trends

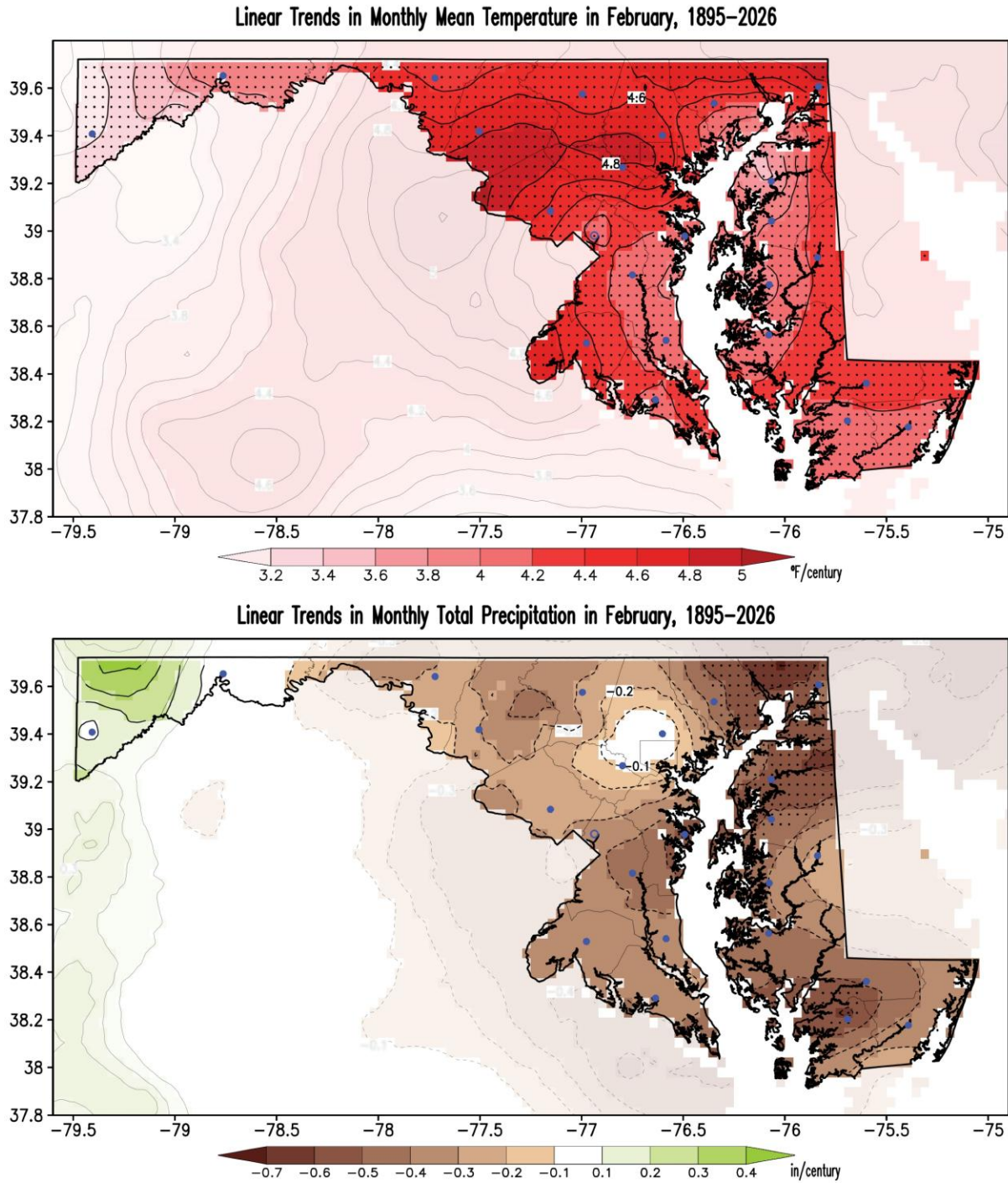
### A. Statewide Averages in Mean Temperature, Heating Degree-Days, and Precipitation



**Figure 11.** Maryland (statewide) mean surface air temperature, heating degree days, and precipitation in February for the period 1895-2026. Temperature is in °F, degree-days are in °F degree-days (°FDD), and precipitation is in inches. The thin, continuous black lines in each panel display the long-term means (34.2°F, 865.8°FDD, and 2.90 in, 1895-2026), and the double thin, continuous gray lines indicate the standard deviation (4.4°F, 124.9°FDD, and 1.20 in) above/below the long-term mean. The thick dashed black lines show the long-term linear trend. The warming temperature trend (4.3°F/century) and the decreasing heating degree-days trend (−123.3°FDD/century) are statistically significant at the 95% level (*Student’s t-test* –Santer et al. 2000) but not the drying precipitation trend (−0.31 in/century).



B. Temperature and Precipitation Maps

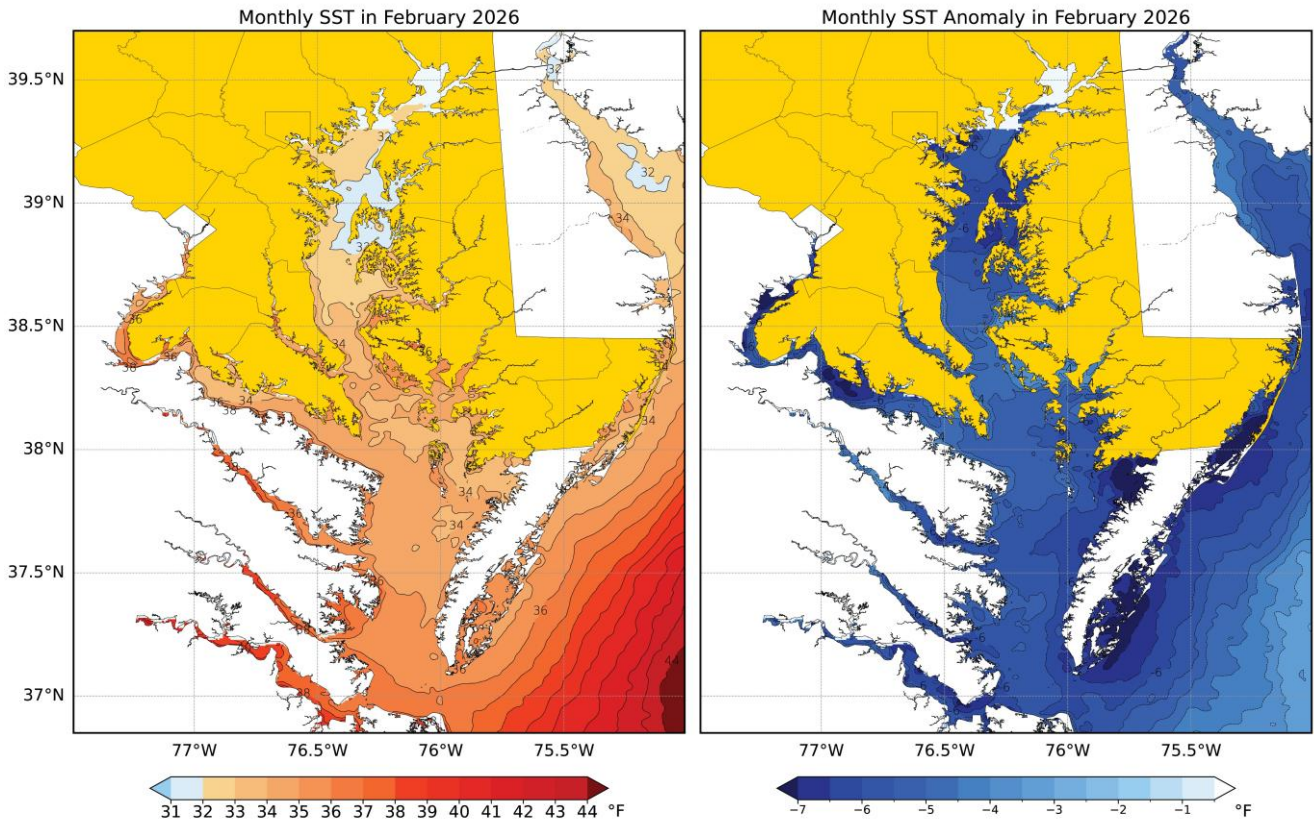


**Figure 12.** Linear trends in surface air mean temperature and precipitation in February for the period 1895–2026. Temperatures are in °F/century, and precipitation is in inches/century following the color bars. Red shading in the temperature map marks warming trends. Brown/green shading in the precipitation map shows drying/wetting trends. Stippling in the maps indicates regions where trends are statistically significant at the 95% level (*Student’s t-test* –Santer et al. 2000). Note that shading outside the state has been washed out to facilitate focus on Maryland. Filled blue circles mark the county seats.



## 8. Chesapeake Bay’s Sea Surface Temperatures and Ice

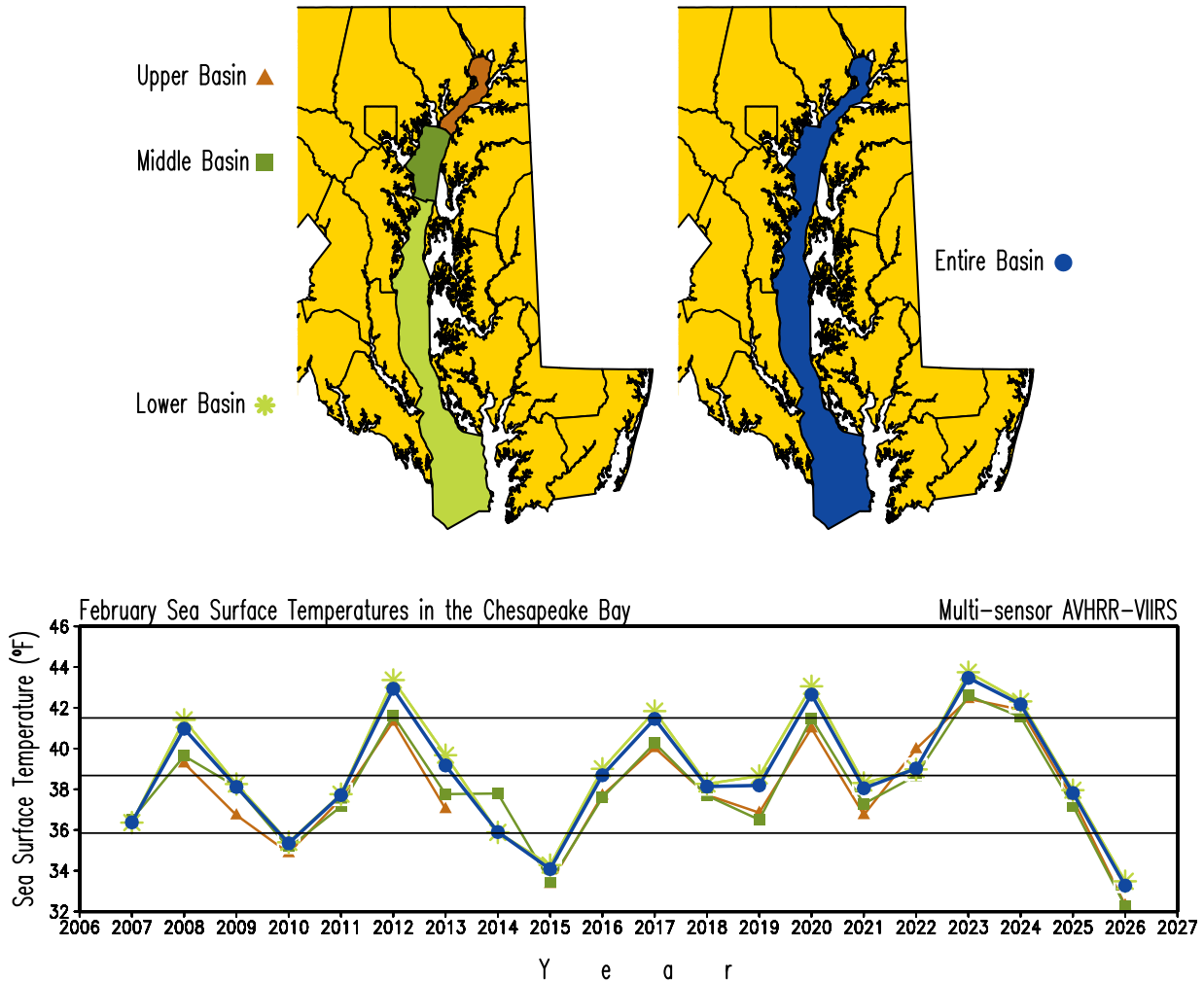
### A. Sea Surface Temperature Maps



**Figure 13.** Monthly sea surface temperature (left panel) and its anomaly (right panel) in the Chesapeake Bay and surrounding coastal areas in February 2026. Temperatures are in °F, following the color bar; blue/orange on this map mark temperatures below/above 32°F. Blue shading in the anomaly map marks colder temperatures than the 2007-2020 mean. For clarity, the temperatures and their anomalies have been smoothed using a 9-point spatial smoother applied four times. Note that Maryland has been shaded yellow to facilitate focus on the state waters.

B. Upper, Middle, Lower, and Entire Basins Sea Surface Temperature Averages

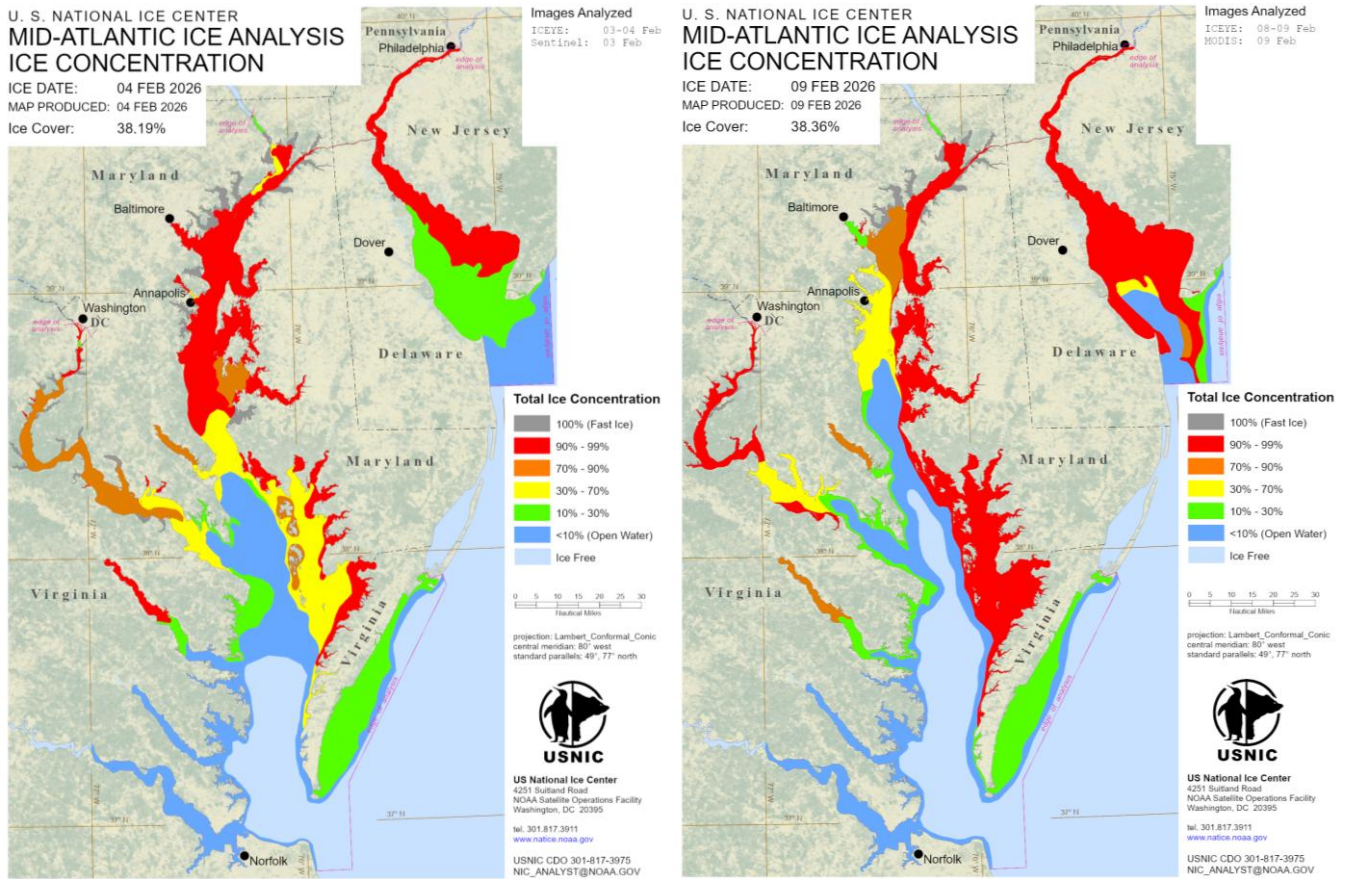
Sea Surface Temperatures in the Chesapeake Bay in February, 2007–2026



**Figure 14.** Watersheds in the Chesapeake Bay (top panel) and their area-averaged sea surface temperatures in February for the period 2007-2026 (bottom panel). Temperatures are in °F. The color of the lines corresponds to the color of the watersheds in the Bay, as indicated on the maps: Brown for the Upper Bay, dark green for the Middle Bay, light green for the Lower Bay, and Navy Blue for the Entire Bay. The mean temperature for the Entire basin in February 2026 was 33.3°F, while for the Upper, Middle, and Lower basins was 32.3, 32.3, and 33.5°F, respectively. The thin, continuous black line in the lower panel displays the 2007-2026 mean for the Entire Basin (38.7°F), and the double thin, continuous gray lines indicate the standard deviation (2.8°F) above/below the long-term mean. The 2007-2026 mean temperatures for the Upper, Middle, and Lower basins in February were 38.0, 38.0, and 38.9°F, respectively, while their standard deviations were 2.7, 2.6, and 2.9°F, respectively.



C. Ice in the Bay Maps



**Figure 15.** Maximum ice coverage in February 2026 in the Chesapeake and Delaware bays as tracked by the U. S. National Ice Center on February 4 (left) and 9 (right). As indicated by the color legend, gray-shaded areas mark waters where fast ice was present, red-shaded areas mark waters with up to 90–99% of ice coverage, orange-shaded areas mark waters with 70–90% of ice coverage, yellow-shaded areas mark waters with 30–70% of ice coverage, green-shaded areas mark waters with 10–30% of ice coverage, dark blue-shaded areas mark waters with less than 10% of ice coverage, and light blue-shaded areas mark ice-free waters. Updated ice conditions in the Bay and outlooks are available on the [USNIC website](https://www.natice.noaa.gov).



## Appendix A. February 2026 Data Tables: Statewide, Climate Divisions, and Counties

### A. Mean Temperature and Precipitation

Region	Mean Air Temperature (°F)	Rank (#)	Region	Total Precipitation (in)	Rank (#)
Statewide	32.9	49	Statewide	2.25	44
Climate Division 1	34.9	34	Climate Division 1	3.27	71
Climate Division 2	33.6	34	Climate Division 2	2.73	64
Climate Division 3	35.4	50	Climate Division 3	2.28	47
Climate Division 4	34.3	44	Climate Division 4	2.23	47
Climate Division 5	31.8	32	Climate Division 5	1.99	33
Climate Division 6	32.0	53	Climate Division 6	1.96	36
Climate Division 7	31.8	64	Climate Division 7	1.98	52
Climate Division 8	27.1	55	Climate Division 8	1.52	13
Allegany	31.7	70	Allegany	1.68	45
Anne Arundel	34.2	43	Anne Arundel	2.11	39
Baltimore	31.6	46	Baltimore	1.96	34
Baltimore City	33.5	46	Baltimore City	1.99	32
Calvert	34.5	39	Calvert	2.26	46
Caroline	32.4	29	Caroline	2.88	66
Carroll	31.3	57	Carroll	2.02	47
Cecil	30.7	35	Cecil	1.72	19
Charles	35.9	52	Charles	2.33	52
Dorchester	34.3	36	Dorchester	2.66	59
Fredrick	32.7	68	Fredrick	2.20	52
Garrett	27.2	56	Garrett	1.52	13
Harford	30.7	39	Harford	1.70	20
Howard	32.7	55	Howard	1.90	28
Kent	31.7	32	Kent	1.81	25
Montgomery	33.9	58	Montgomery	1.99	39
Prince George's	34.4	47	Prince George's	2.31	50
Queen Anne's	32.0	30	Queen Anne's	2.08	35
Saint Mary's	35.2	40	Saint Mary's	2.23	41
Somerset	35.2	33	Somerset	3.23	69
Talbot	33.7	33	Talbot	2.46	49
Washington	32.0	59	Washington	2.26	67
Wicomico	34.5	34	Wicomico	3.04	65
Worcester	35.0	33	Worcester	3.46	75

**Table A1.** Monthly mean surface air temperature (left) and total precipitation (right) at Maryland (statewide), climate division, and county levels for February 2026. Temperatures are in °F, and precipitation is in inches. The rank is the position the variable for February 2026 occupies among the 132 Februaries, after the 132 values have been arranged from lowest to highest using the *standard competition ranking method*. The closer to 132 the rank is, the larger (i.e., the warmer/wetter) the value of the surface variable is in the record; similarly, the closer to 1 the rank is, the smaller (i.e., the colder/drier) the value of the surface variable is in the record.



## B. Maximum and Minimum Temperatures

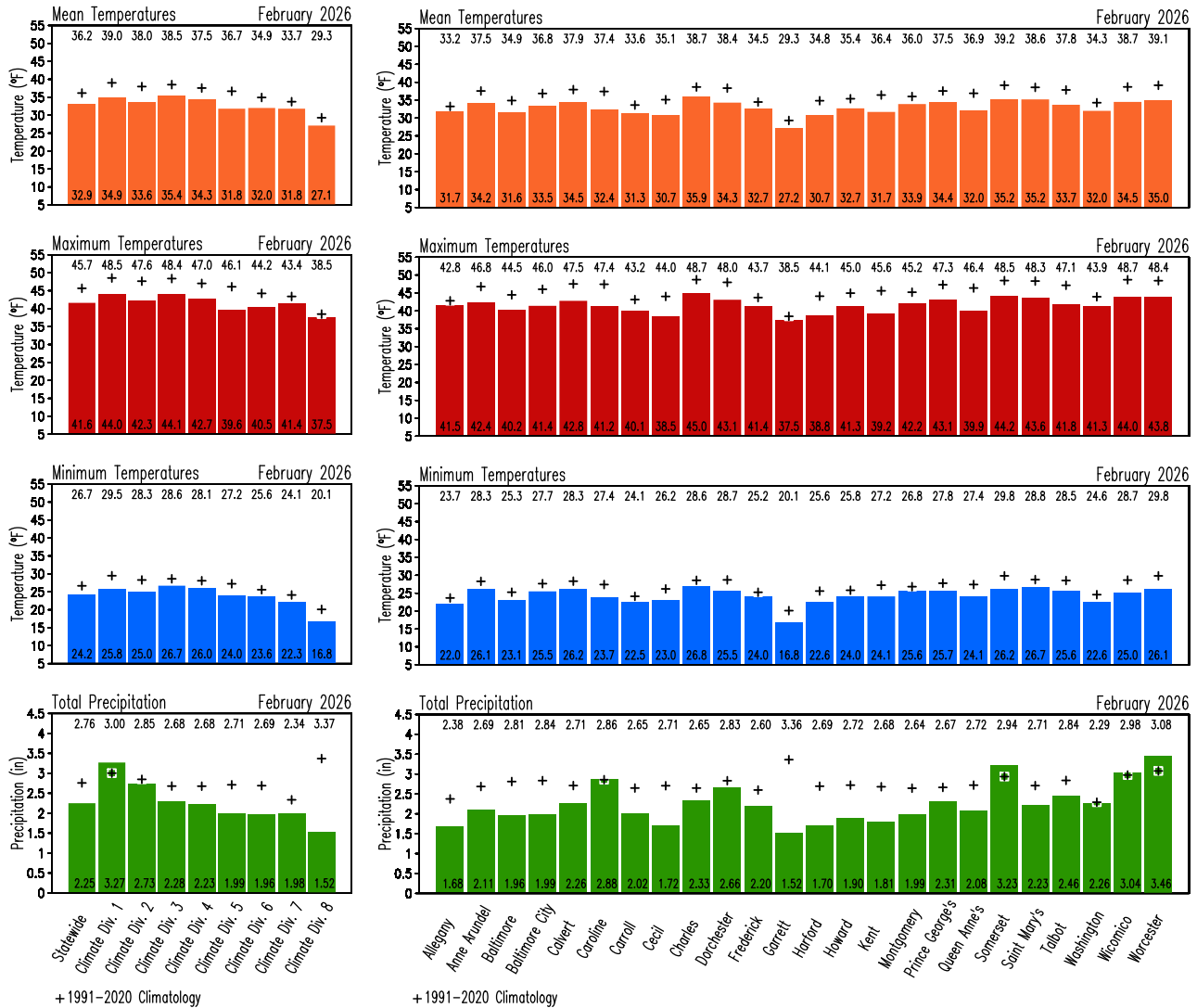
Region	Maximum Air Temperature (°F)	Rank (#)	Region	Minimum Air Temperature (°F)	Rank (#)
Statewide	41.6	41	Statewide	24.2	56
Climate Division 1	44.0	36	Climate Division 1	25.8	36
Climate Division 2	42.3	34	Climate Division 2	25.0	41
Climate Division 3	44.1	38	Climate Division 3	26.7	57
Climate Division 4	42.7	36	Climate Division 4	26.0	57
Climate Division 5	39.6	25	Climate Division 5	24.0	40
Climate Division 6	40.5	48	Climate Division 6	23.6	57
Climate Division 7	41.4	62	Climate Division 7	22.3	64
Climate Division 8	37.5	66	Climate Division 8	16.8	47
Allegany	41.5	63	Allegany	22.0	70
Anne Arundel	42.4	37	Anne Arundel	26.1	57
Baltimore	40.2	40	Baltimore	23.1	57
Baltimore City	41.4	39	Baltimore City	25.5	56
Calvert	42.8	33	Calvert	26.2	54
Caroline	41.2	28	Caroline	23.7	38
Carroll	40.1	54	Carroll	22.5	63
Cecil	38.5	30	Cecil	23.0	51
Charles	45.0	45	Charles	26.8	62
Dorchester	43.1	37	Dorchester	25.5	39
Fredrick	41.4	65	Fredrick	24.0	68
Garrett	37.5	66	Garrett	16.8	46
Harford	38.8	31	Harford	22.6	51
Howard	41.3	47	Howard	24.0	60
Kent	39.2	26	Kent	24.1	40
Montgomery	42.2	53	Montgomery	25.6	65
Prince George's	43.1	38	Prince George's	25.7	57
Queen Anne's	39.9	24	Queen Anne's	24.1	41
Saint Mary's	43.6	33	Saint Mary's	26.7	54
Somerset	44.2	39	Somerset	26.2	37
Talbot	41.8	32	Talbot	25.6	44
Washington	41.3	60	Washington	22.6	60
Wicomico	44.0	38	Wicomico	25.0	34
Worcester	43.8	35	Worcester	26.1	36

**Table A2.** Monthly maximum (left) and minimum (right) surface air temperatures at Maryland (statewide), climate division, and county levels for February 2026. Temperatures are in °F. The rank is the position the variable for February 2026 occupies among the 132 Februaries, after the 132 values have been arranged from lowest to highest using the *standard competition ranking method*. The closer to 132 the rank is, the larger (i.e., the warmer) the value of the surface variable is in the record; similarly, the closer to 1 the rank is, the smaller (i.e., the colder) the value of the surface variable is in the record.



## Appendix B. February 2026 Bar Graphs: Statewide, Climate Divisions, and Counties

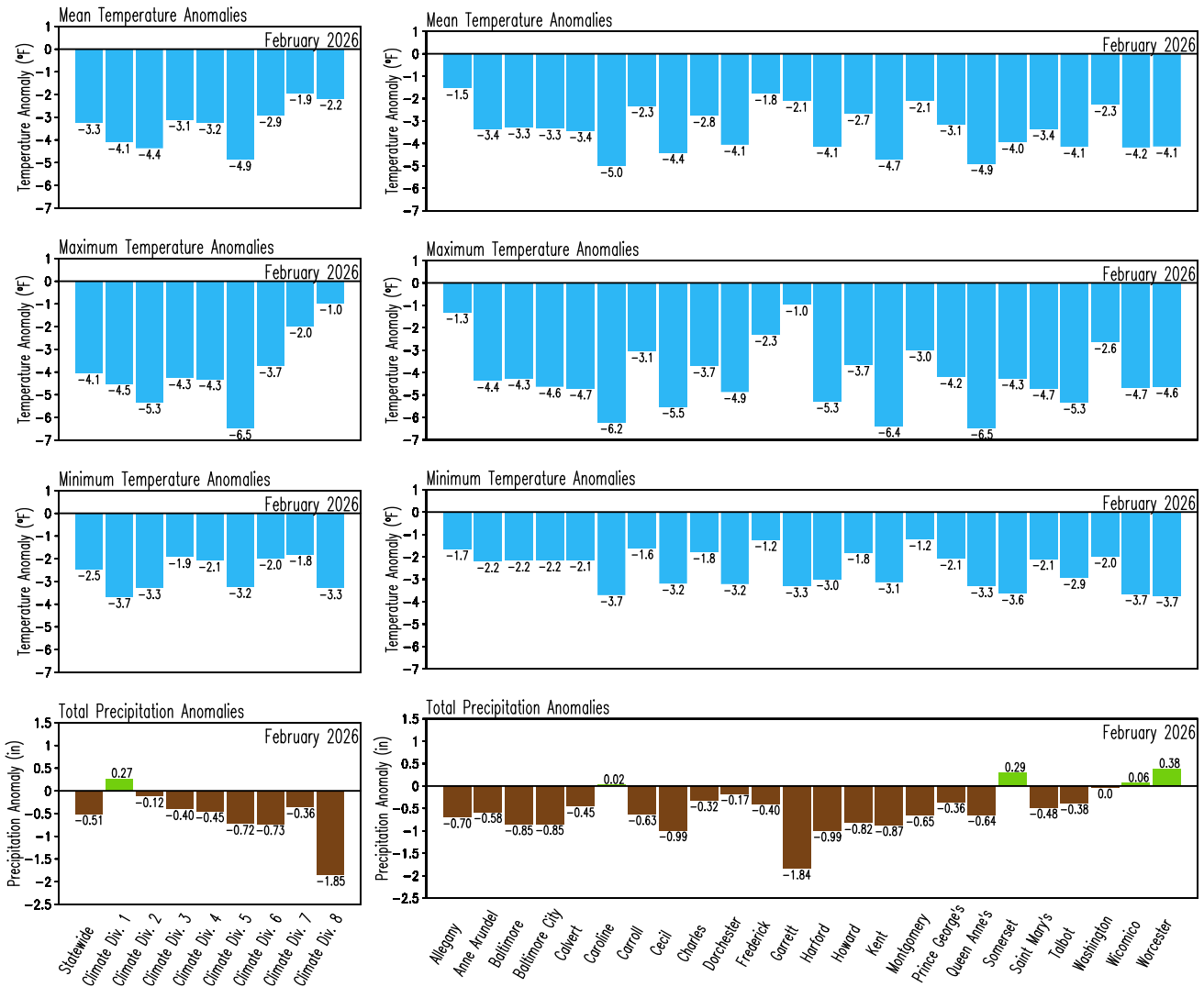
### A. Temperatures and Precipitation



**Figure B1.** Monthly surface variables for Maryland in February 2026. Color bars represent the variables as follows: mean surface air temperature (orange), maximum surface air temperature (red), minimum surface air temperature (blue), and total precipitation (green) at statewide and climate division (left column), and county (right column) levels. Temperatures are in °F, and precipitation is in inches. The numbers at the base of the bars indicate the magnitude of the variable for February 2026. For comparison, the corresponding 1991-2020 climatological values for February are displayed as black addition signs, and their magnitudes are shown at the top of the panels.



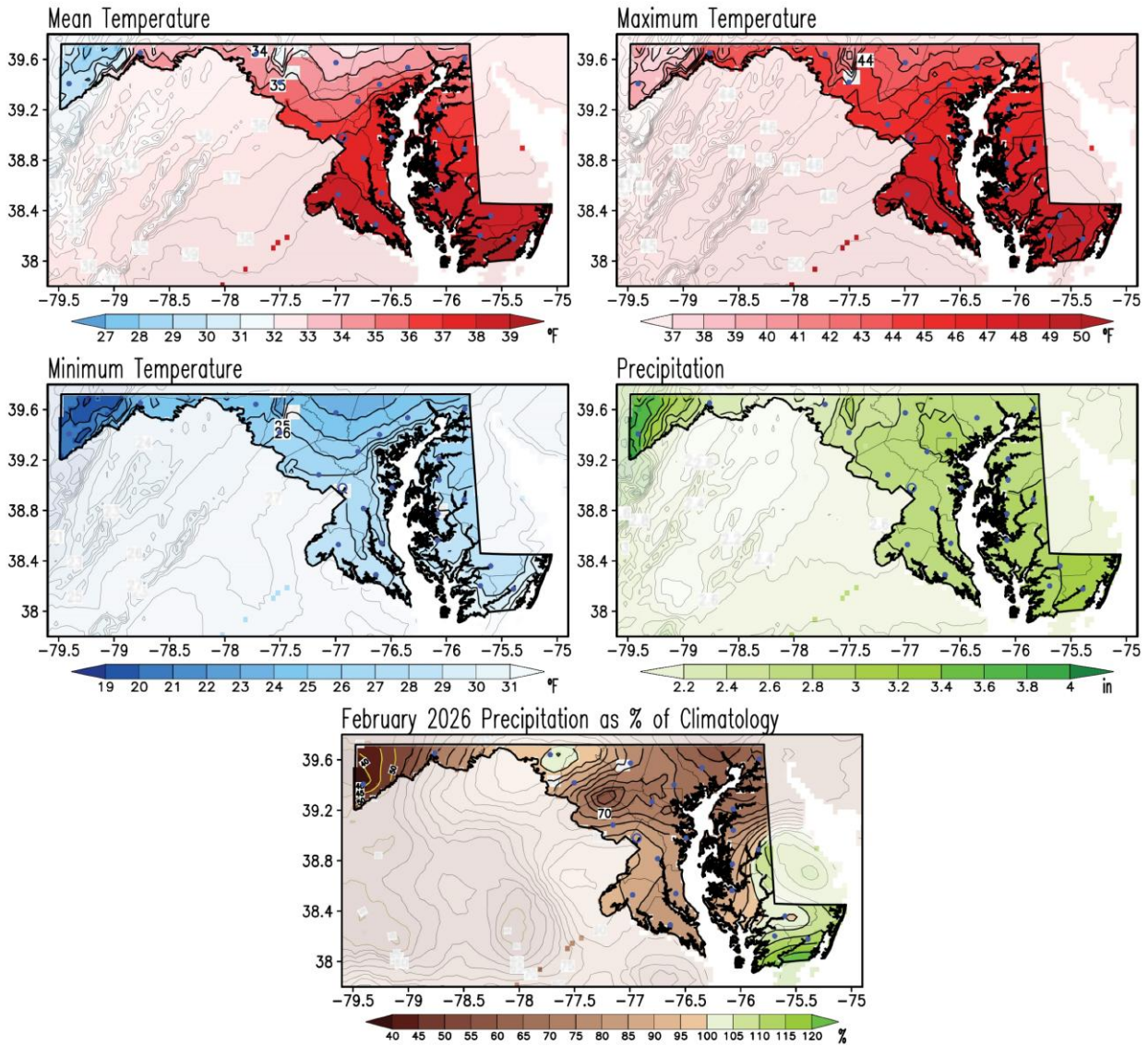
B. Temperatures and Precipitation Anomalies



**Figure B2.** Anomalies in the monthly surface variables for Maryland in February 2026. Anomalies are with respect to the 1991-2020 climatology. Blue color represents negative (colder than normal) anomalies for mean surface air temperature (upper row), maximum surface air temperature (second row from top), and minimum surface air temperature (third row from top), while brown/green color indicates negative/positive (drier/wetter than normal) anomalies in total precipitation (bottom row) at statewide and climate division (left column) and county (right column) levels. Temperatures are in °F, and precipitation is in inches. The numbers outside the bars indicate the magnitude of the anomaly for February 2026.



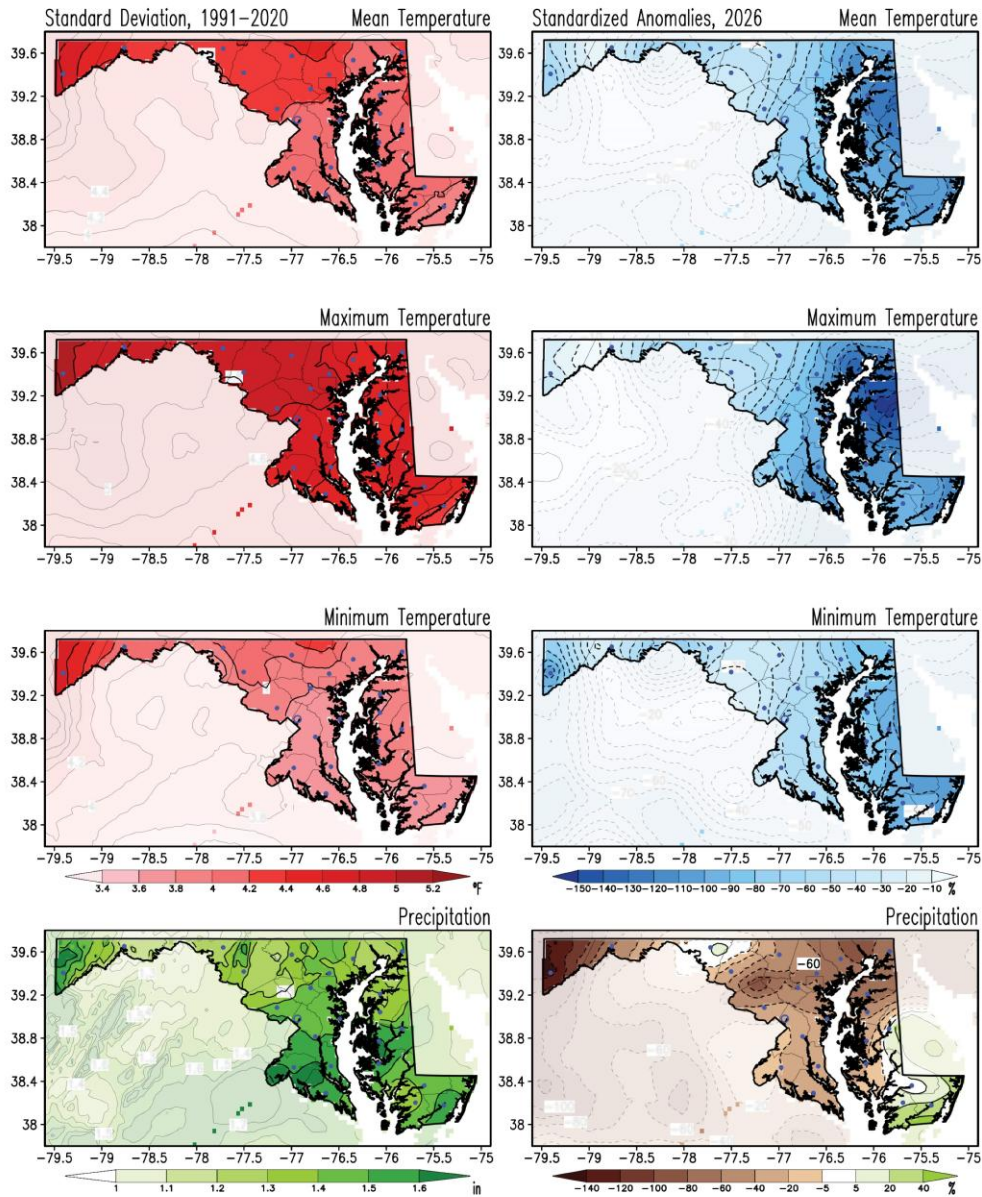
## Appendix C. February 1991-2020 Climatology and February 2026 Precipitation as Percentage of Climatology Maps



**Figure C1.** February climatology of the monthly mean, maximum, and minimum surface air temperatures, and total precipitation for the period 1991-2020 (upper and middle rows), and precipitation in February 2026 as a percentage of climatology (bottom row). Temperatures are in °F, and precipitation in inches according to the color bars. This is the current climate normal against which the February 2026 conditions are compared to obtain the February 2026 anomalies (from Figures 1 to 4). Precipitation as a percentage is calculated by dividing the total precipitation (from Figure 4) by the climatology (from the middle right panel) and multiplying that ratio by 100, so the units are expressed as a percentage of the climatology (%); the brown/green shading in this map indicates drier/wetter than normal conditions, and yellow isolines are for percentages equal to or less than 50%. Note that shading outside the state has been washed out to facilitate focus on Maryland. Filled blue circles mark the county seats.



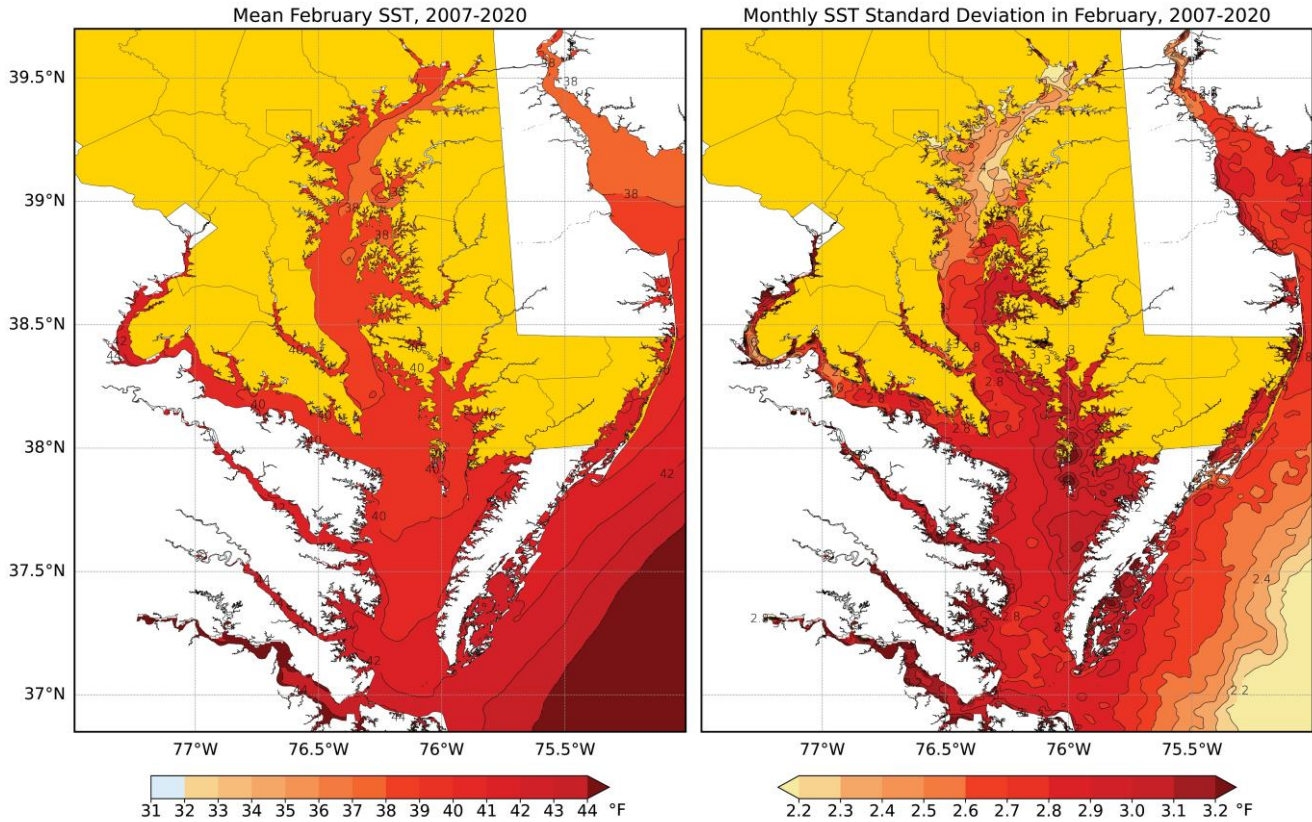
## Appendix D. February Standard Deviation and February 2026 Standardized Anomalies Maps



**Figure D1.** Standard deviation for February and standardized anomalies of temperatures and precipitation for February 2026. Standard deviations for monthly mean, maximum, and minimum surface air temperatures and total precipitation were obtained from the 1991-2020 period (left column). Anomalies for February 2026 (right column) are obtained as a percentage of the standard deviations. The standard deviations for temperature are in °F, and those for precipitation are in inches according to the color bars. Blue shading in the anomaly temperature maps marks colder than normal conditions; brown/green shading in the anomaly precipitation map marks drier/wetter than normal conditions. The standardized anomalies are obtained by dividing the raw anomalies (from Figures 1 to 4) by the standard deviation (from left column panels) and multiplying the ratio by 100; hence, units are in percent (%). Note that shading outside the state has been washed out to facilitate focus on Maryland. Filled blue circles mark the county seats.



## Appendix E. 2007-2020 Mean and Standard Deviation of Sea Surface Temperature Maps in February



**Figure E1.** Mean (left panel) and standard deviation (right panel) of sea surface temperatures in the Chesapeake Bay and surrounding coastal areas in February for the period 2007-2020. The mean and standard deviation of the temperatures are in °F according to the color bars. The mean temperature map is the current mean against which the February 2026 conditions are compared to obtain the February 2026 anomalies (from Figure 13). For clarity, the mean and standard deviation of the temperature have been smoothed using a 9-point spatial smoother, applied four times. To facilitate comparison between the mean February map (left panel) and the February 2026 map (Figure 13, left panel), the shading schemes are the same. Note that Maryland has been shaded yellow to facilitate focus on the state waters.

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