



Climate and Hydrology Monthly Report for Puerto Rico and the US Virgin Islands

Valid for August 2024

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Tropical Storm Ernesto

Please refer to the [Preliminary Report](#) for Tropical Cyclone Ernesto.





August Climate Summary for Primary Climate Sites

San Juan Area

Highest: **95 °F** on the 15, 18th
Lowest: **77 °F** on the 14th
Average: 85.8 °F (**+2.3**; above normal)
Rain Total: 9.16" (**+2.87**; above normal)

Days with $T_{\max} \geq 90\text{F}$: 30
Nights with $T_{\min} \geq 80\text{F}$: 24
Days with Rain ($\geq 0.01\text{"}$): 24

Rankings:

1st warmest
17th wettest

Remarks:

2nd Warmest overall

St. Thomas

Highest: **92 °F** on the 27th
Lowest: **74 °F** on the 14th
Average: 84.2 (**-0.05**; below normal)
Rain Total: 7.96"

Days with $T_{\max} \geq 90\text{F}$: 18
Nights with $T_{\min} \geq 80\text{F}$: 19
Days with Rain ($\geq 0.01\text{"}$): N/A

Rankings:

22nd warmest
4th wettest

Remarks:

St. Croix

Highest: **93 °F** on the 23rd
Lowest: **76 °F** on the 1st
Average: 85.1 °F (**+1.7**; above normal)
Rain Total: Not available

Days with $T_{\max} \geq 90\text{F}$: 27
Nights with $T_{\min} \geq 80\text{F}$: 14
Days with Rain ($\geq 0.01\text{"}$): N/A

Rankings:

5th warmest

Remarks:

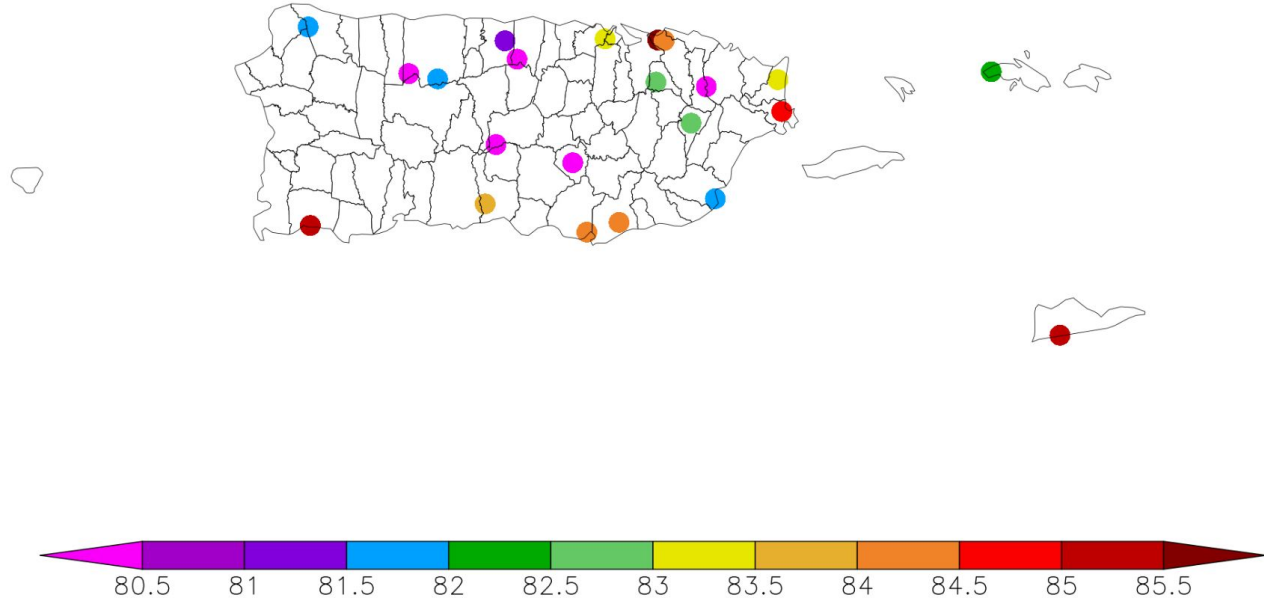
Unavailable precipitation data for St. Croix due to technical problems with the equipment



Observed Temperature

Link to generate the latest [ACIS Climate Maps](#)

Temperature (F)
8/1/2024 - 8/31/2024

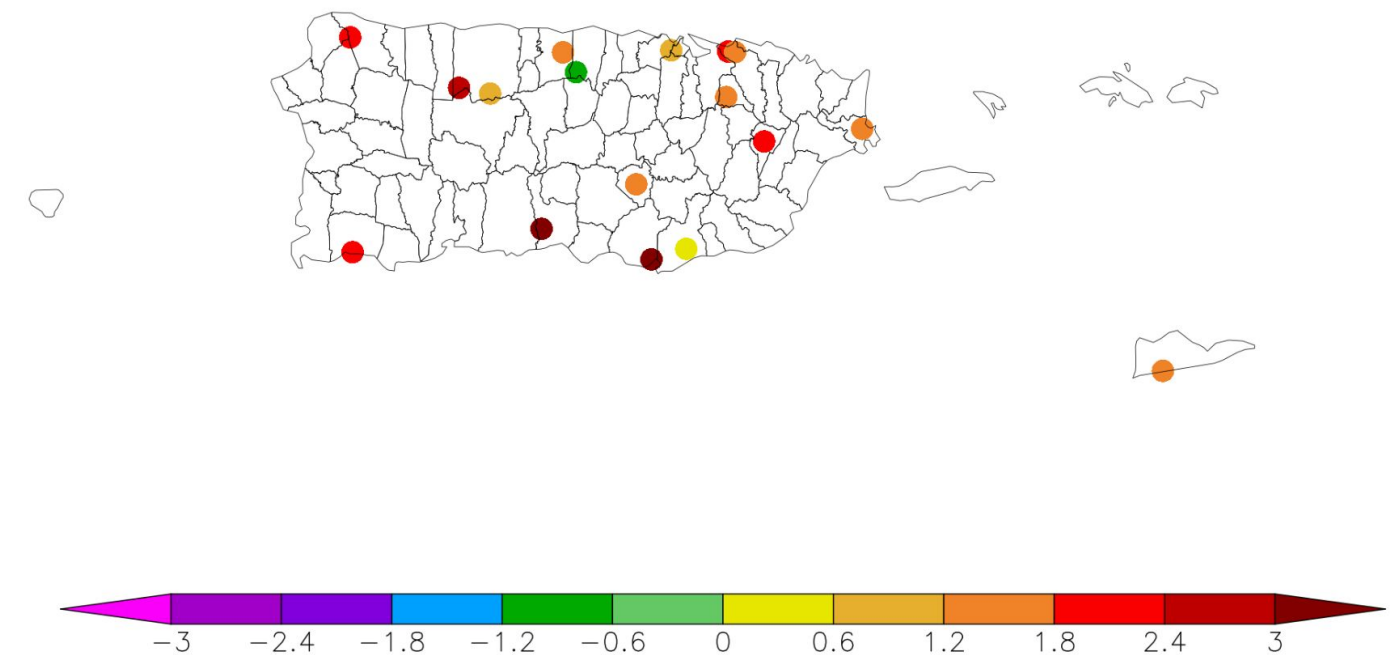


Generated 9/6/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

- Temperatures across the majority of the local sites have been mostly above normal, with only one station below normal. The COOP station with the highest daily maximum temperature was Fajardo with 96F.

Departure from Normal Temperature (F)
8/1/2024 - 8/31/2024



Generated 9/6/2024 at HPRCC using provisional data. NOAA Regional Climate Centers

Image Captions:
 Left - Observed Average Temperature for Puerto Rico and US Virgin Islands (COOP)
 Right - Departure from normal temperature for Puerto Rico and US Virgin Islands (COOP)
 Data Courtesy High Plains Regional Climate Center/NWS COOP Stations.

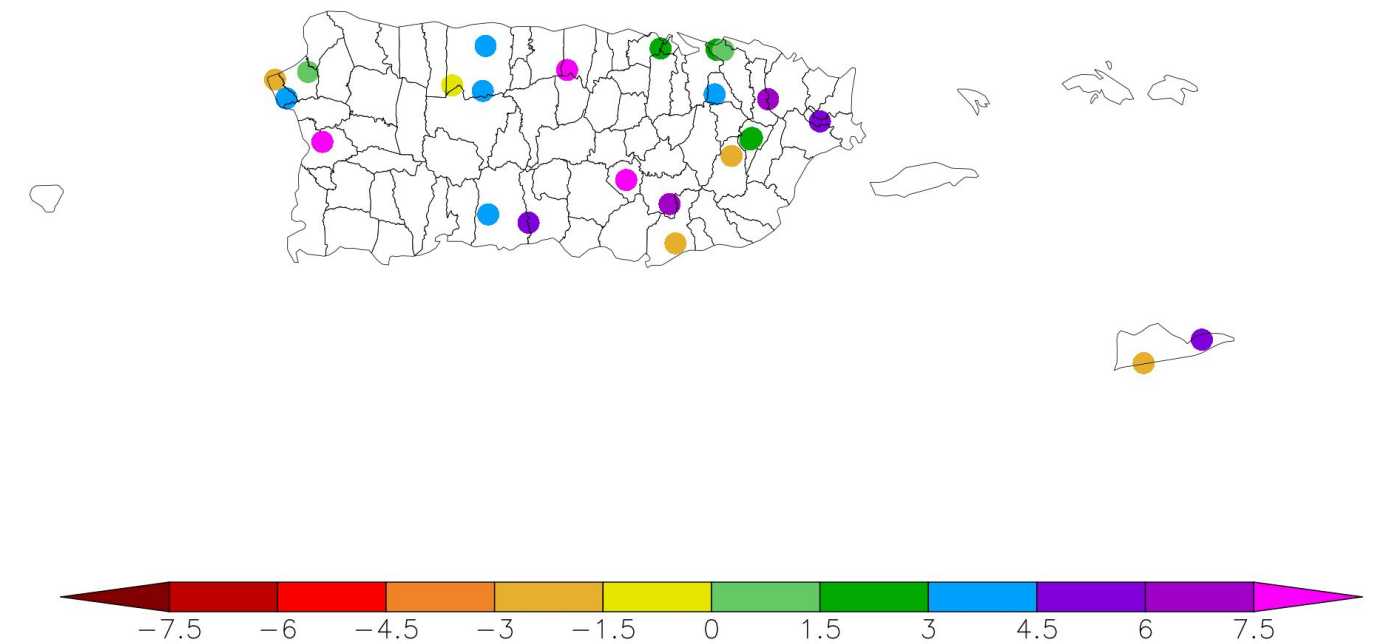
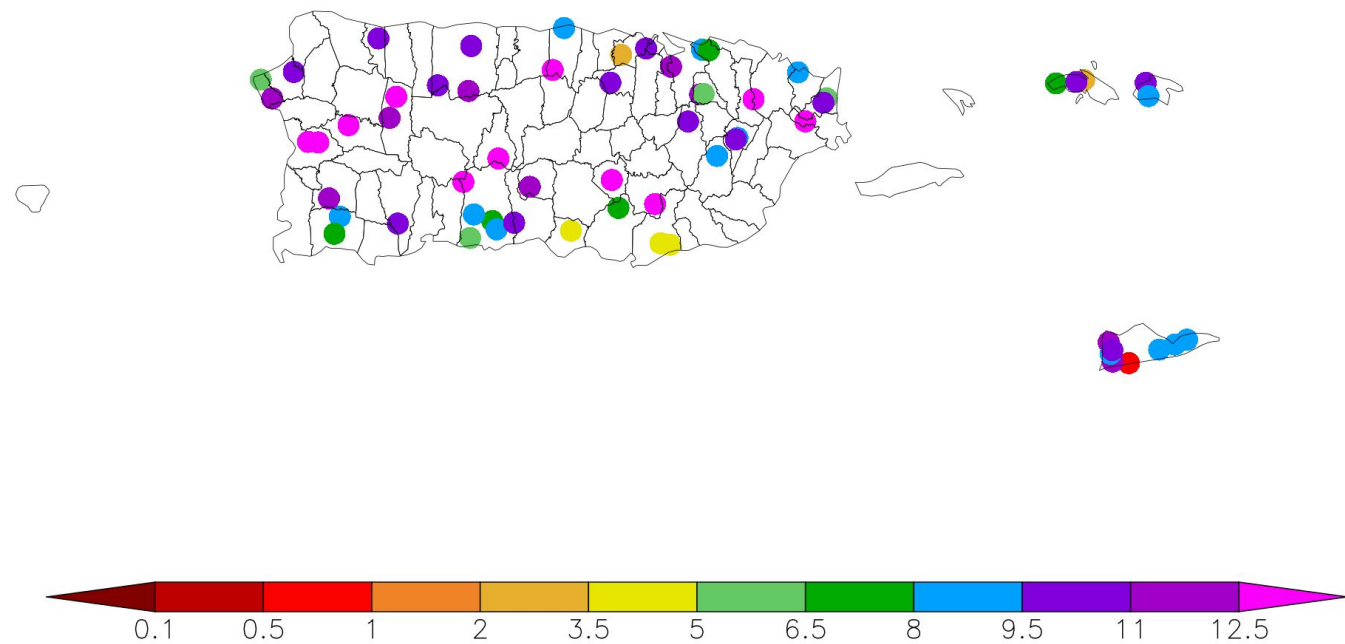


Observed Rainfall

Link to generate the latest [ACIS Climate Maps](#)

Precipitation (in)
8/1/2024 – 8/31/2024

Departure from Normal Precipitation (in)
8/1/2024 – 8/31/2024



Generated 9/2/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

Generated 9/2/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

- Many stations in the east and west of PR, and northern USVI ended with more than 5 inches of accumulation. However, most stations also ended drier than normal. The COOP station with the highest monthly rainfall accumulation was Hacienda Constanza in Mayaguez, with 20.99”.

Image Captions:

Left - Observed Precipitation for Puerto Rico and US Virgin Islands (COOP & CoCoRaHS)
 Right - Departure from normal Precipitation for Puerto Rico and US Virgin Islands (COOP & CoCoRaHS)

Data Courtesy High Plains Regional Climate Center/NWS COOP Stations.



Estimated Rainfall

Estimated Rainfall was obtained from [NWPS](#) (Puerto Rico); and COOP, RAWs, and [CoCoRaHS](#) stations (U.S. Virgin Islands)

- Tropical Cyclone Ernesto, along with other events in the month, were responsible for areas collecting over 20 inches in the interior and west, and around El Yunque.
- Most of Puerto Rico collected 10 to 15 inches, with lesser amounts observed in the southern most, and extreme northern coast of Puerto Rico.
- The island of St. Croix received 5 to 8 inches in the west, while the western sections collected over a foot of rain.
- Across St. Thomas, rainfall accumulation ranged from 8 to nearly 12 inches.
- In St. John, amounts were in the order of 8 to 9 inches of rainfall.

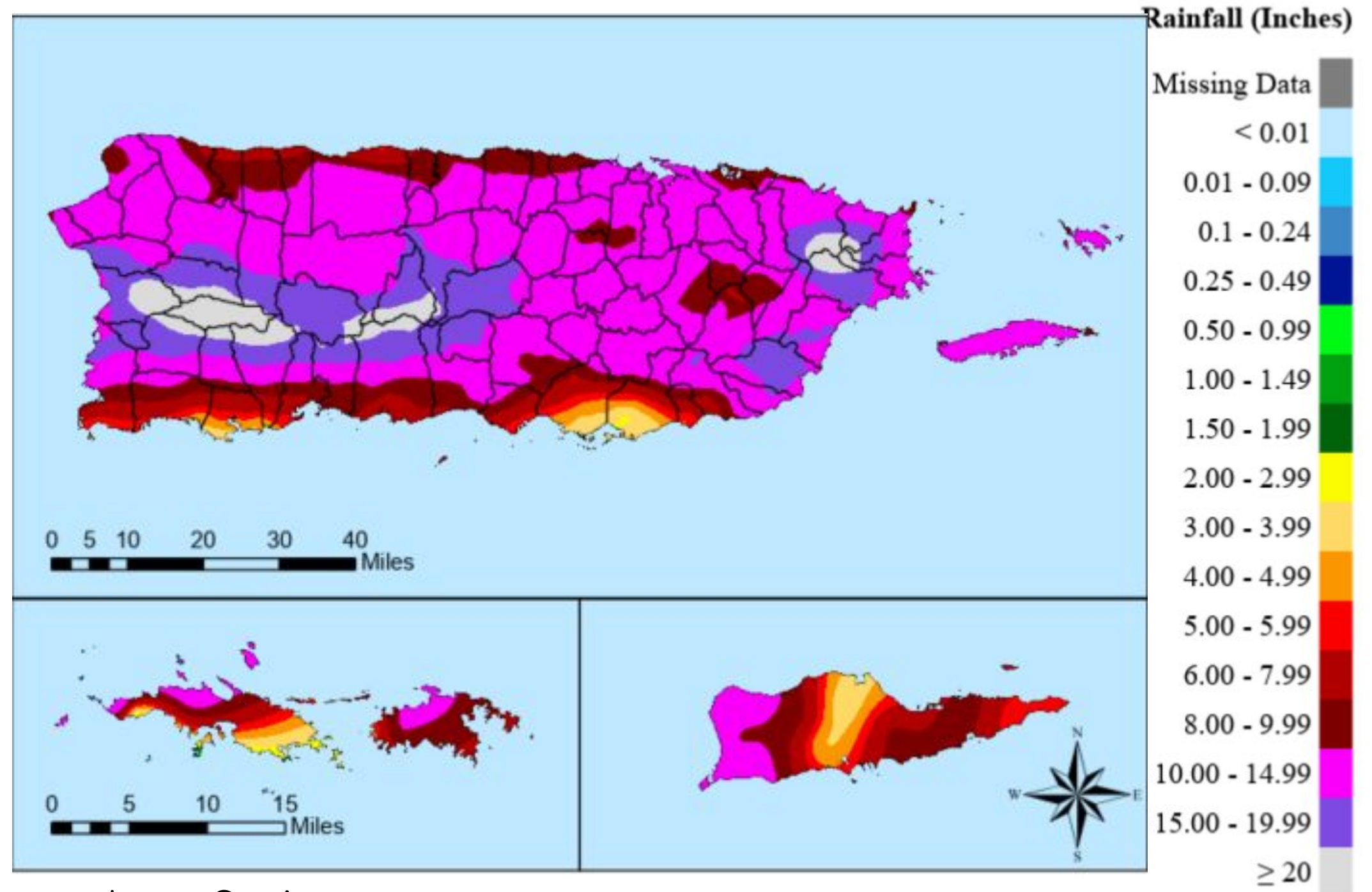


Image Captions:
Estimated Rainfall for the month of August. This map is courtesy of the NWS SJU GIS Team.



Departure from Normal Rainfall

Estimated Departure from normal was obtained from [AHPS](#)

- Most of Puerto Rico ended above normal, with the exception of portions of Salinas, Guayama and Arroyo.
- The west of Puerto Rico observed a surplus of more than 8 inches, while most of the area experienced a superavit of 3 to 8 inches.

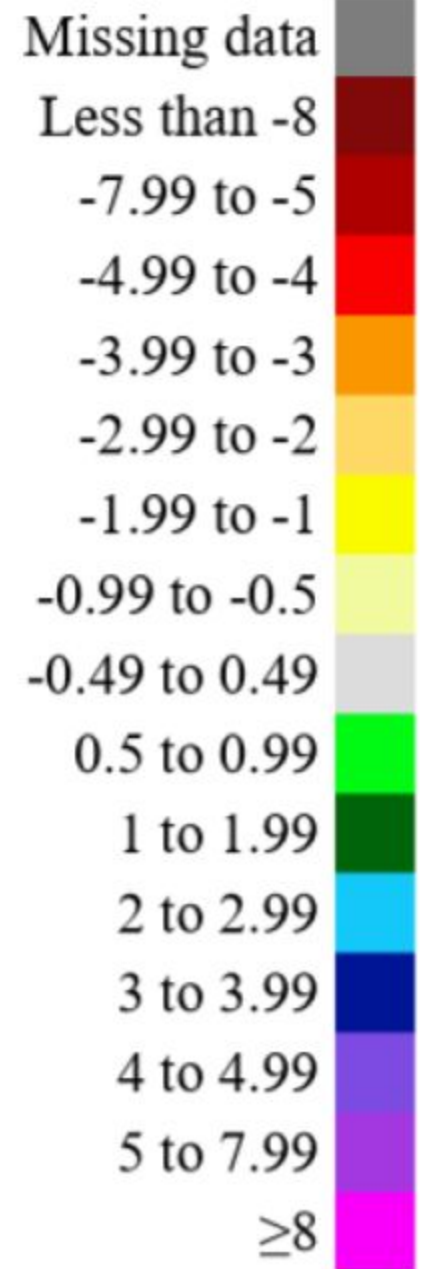
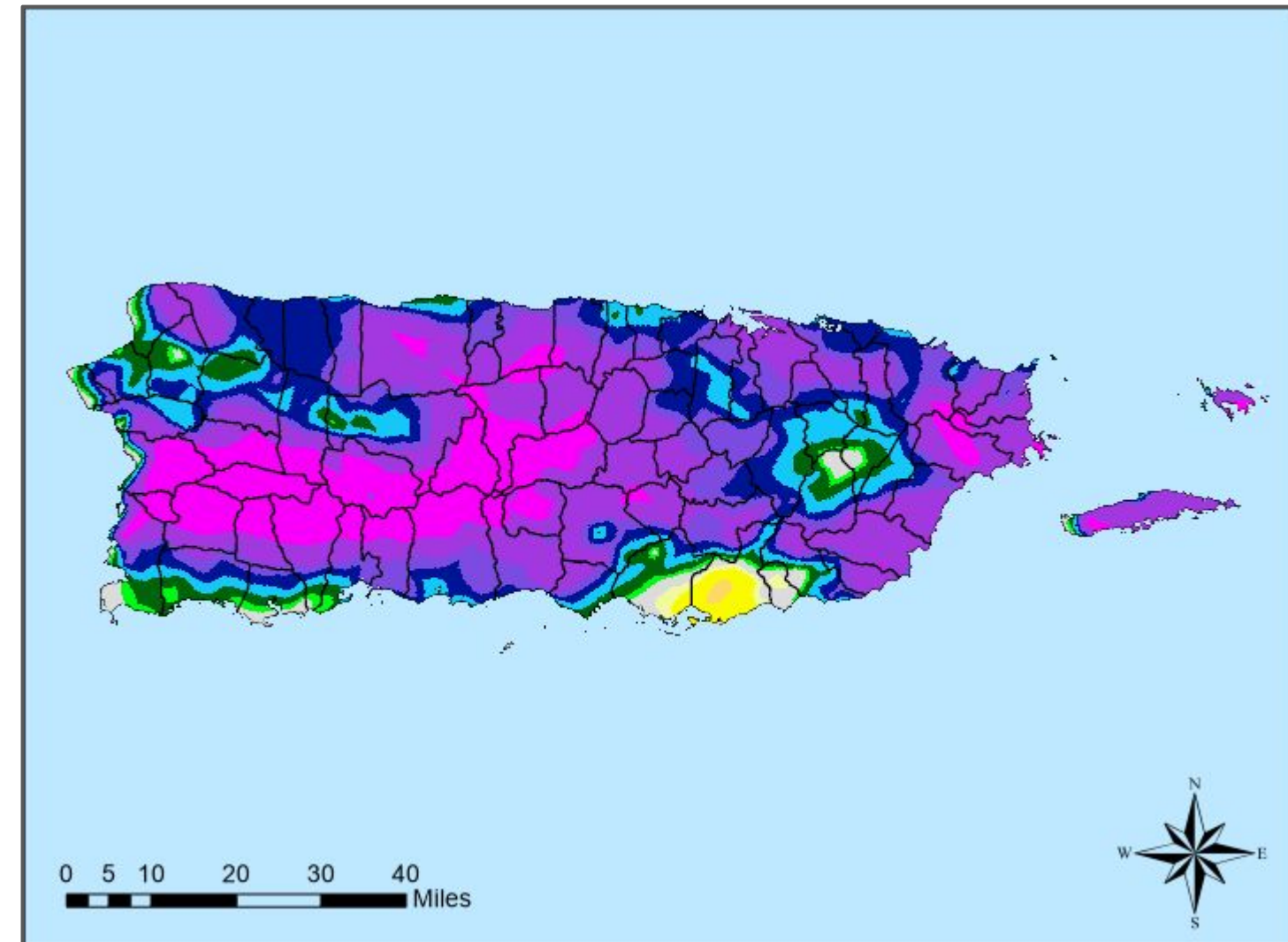


Image Captions:
Estimated Departure from Normal Rainfall for Puerto Rico during the month of August. This map is courtesy of the NWS SJU GIS Team.
*NWPS does not provide rainfall departure from normal for the USVI.



Hydrologic Conditions and Impacts

The latest soil monthly streamflow for Puerto Rico can be found on [WaterWatch](#)

- The 28-day average streamflow from the USGS river gauge network indicates most streamflows running above to much above normal. For Reservoir levels, click [here](#).
- Small hail was reported in Mayagüez on August 29th.

Non-Routine Hydrologic Products Issued	Products issued for the month
Hydrologic Outlooks (SJUESFSJU)	1
Flood Watches (SJUFFASJU)	1
Flood Warnings (SJUFLWSJU)	12
Flash Flood Warnings (SJUFFWSJU)	21
Urban/Small Stream Flood Advisories (SJUFLSSJU)	48
Local Storm Reports (SJULSRSJU)	176

Latest Monthly Average Streamflow from USGS

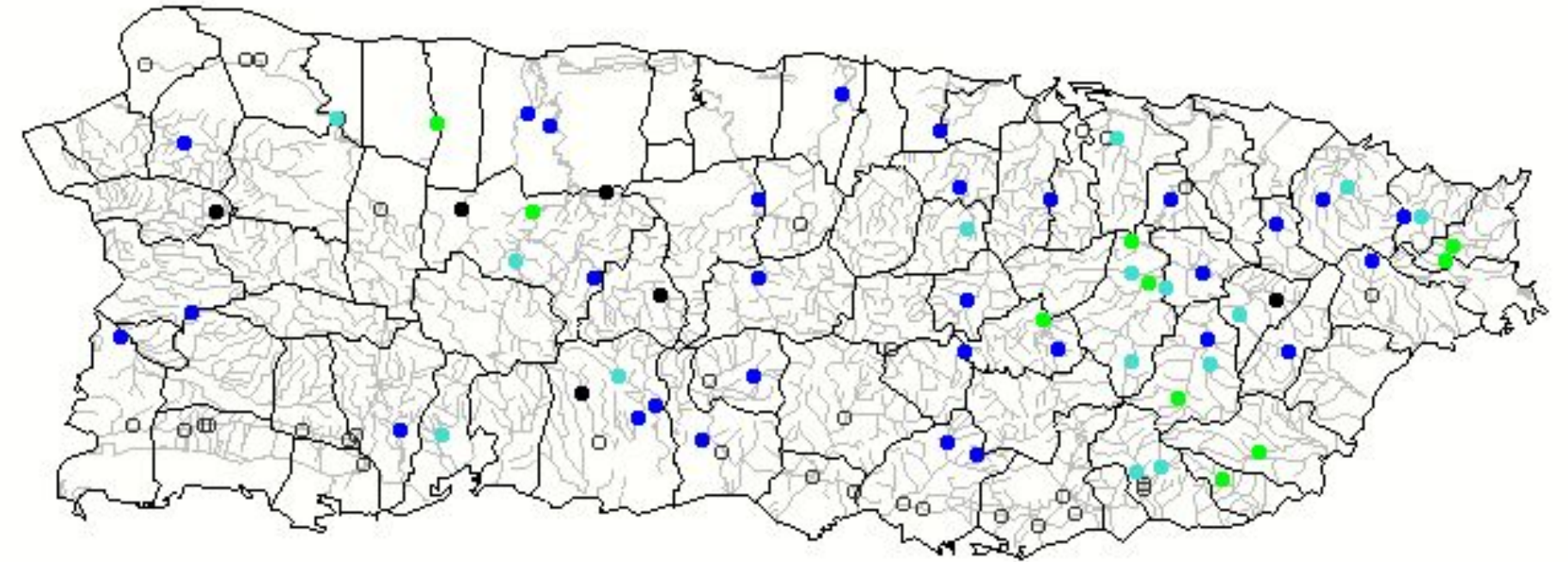


Image Caption: August 2024 compared to historical november streamflows for Puerto Rico.

Explanation - Percentile classes							
●	●	●	●	●	●	●	○
Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High	Not-ranked



Soil Saturation

The latest soil moisture information for Puerto Rico can be found on [PRAGWATER](#)

The latest data retrieved from PRAGWATER indicates generally saturated soils across most of the region. Drier conditions are observed across the southern plains, and the north-northwest coast.

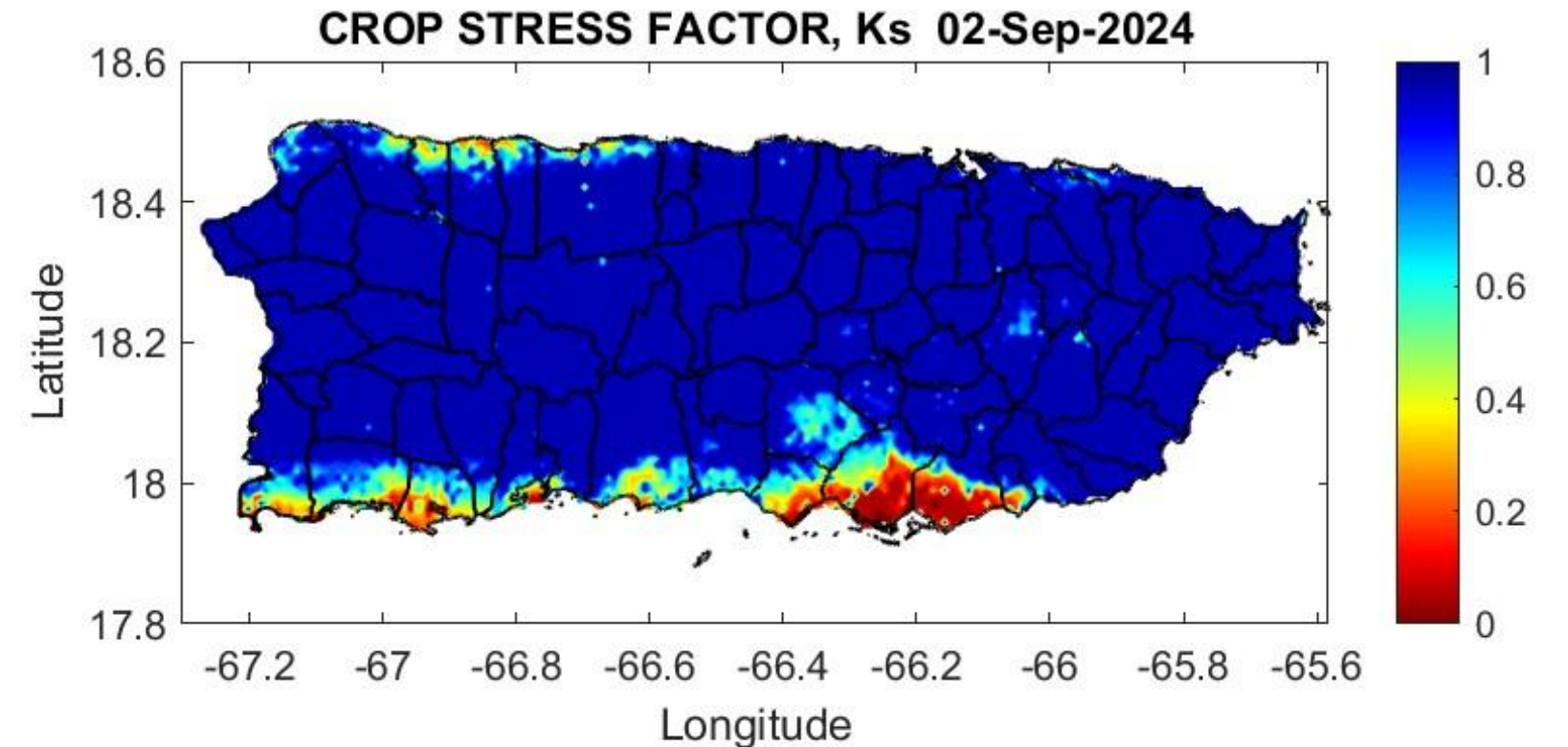
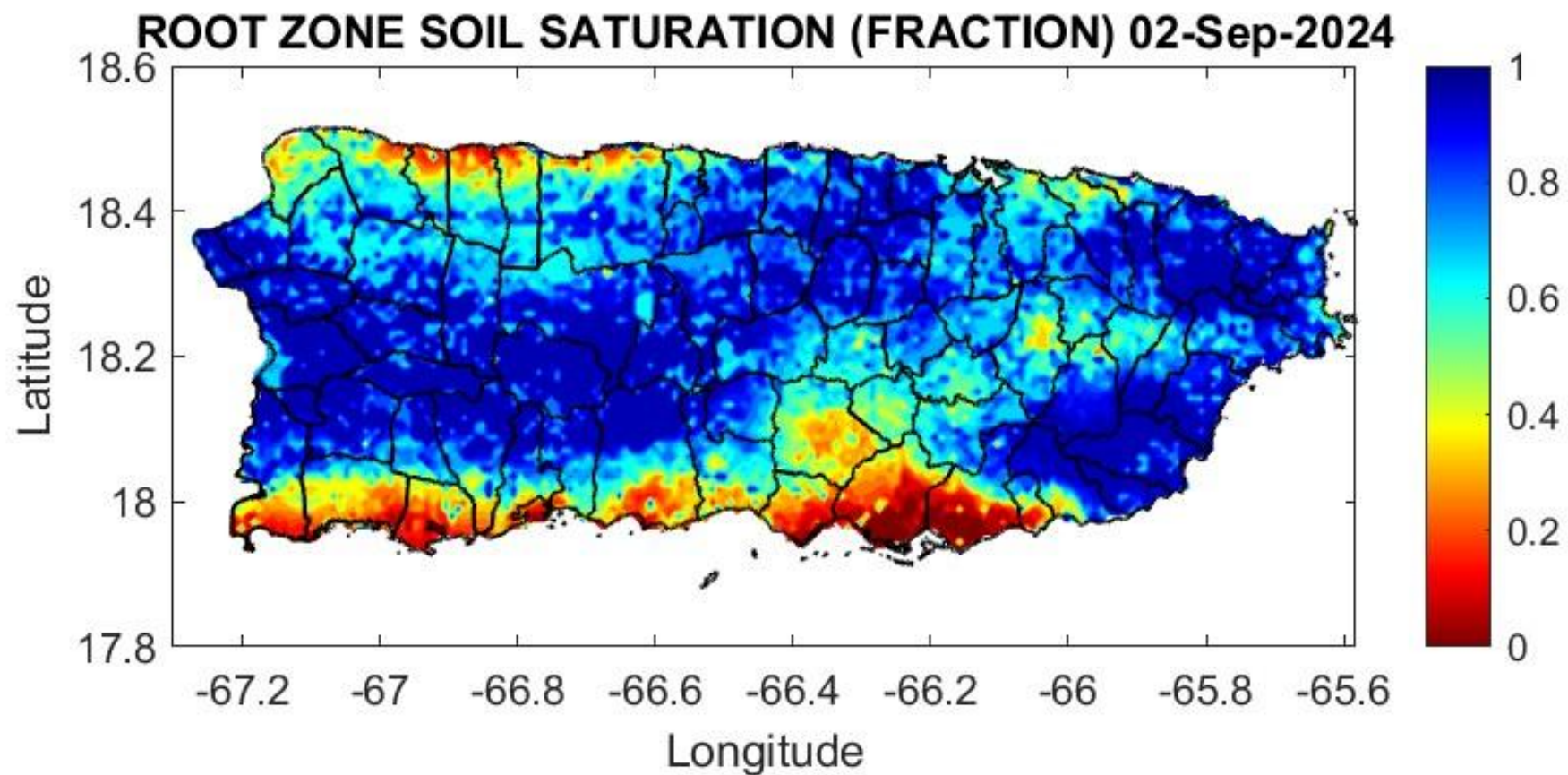


Image Caption: (Left) Crop Stress Factor for Puerto Rico. (Right) Root Zone Soil Saturation Fraction. (Valid: Sep 2nd) Soil saturation: 1=Saturated. Crop Stress Factor: 0=high



U.S. Drought Monitor

Link to the [latest U.S. Drought Monitor](#) for the Caribbean

DROUGHT CONDITIONS : The territories are drought free.

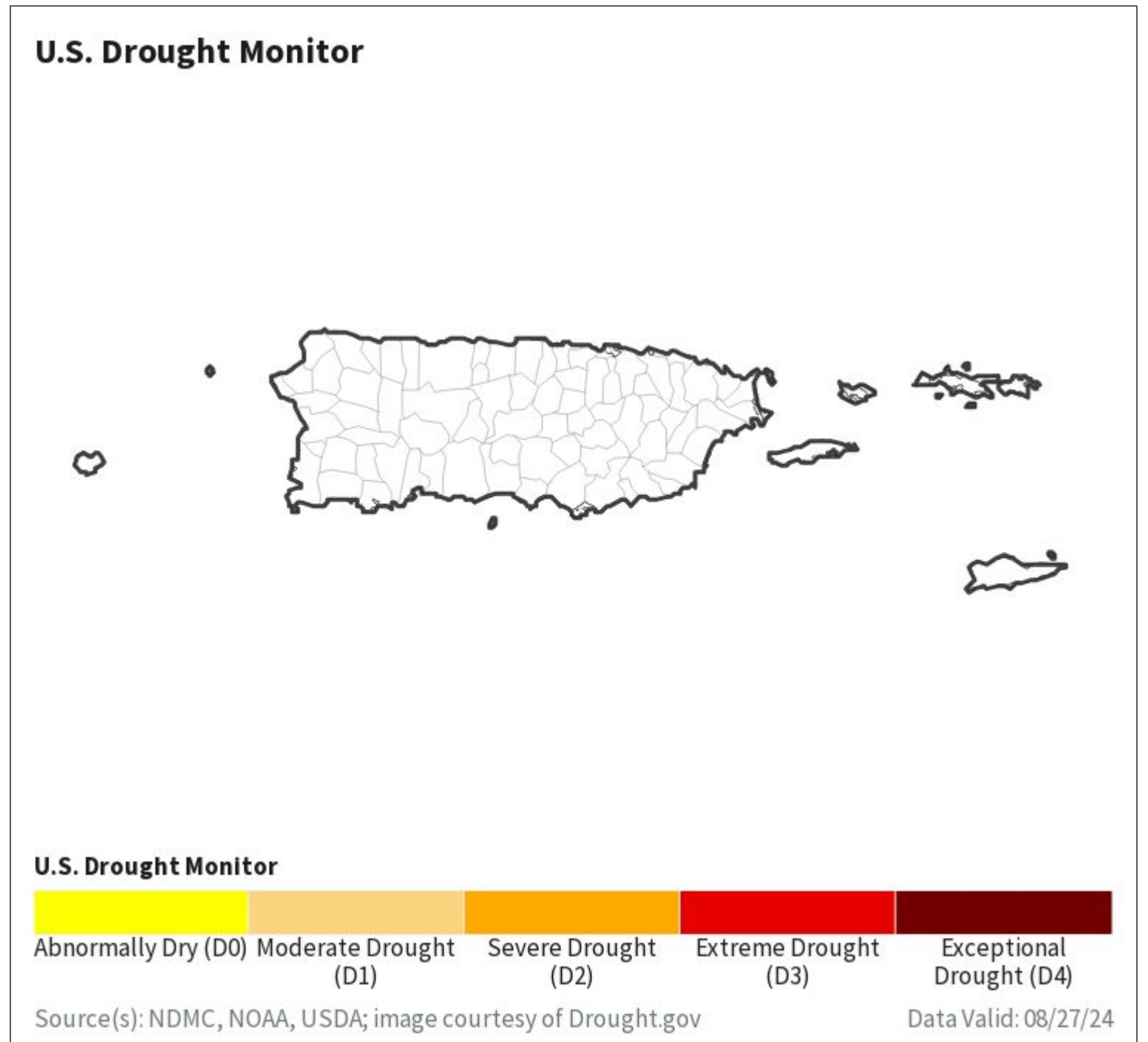


Image Caption: U.S. Drought Monitor valid 8am EDT Aug 27th.



Recent Change in Drought Intensity

Link to the latest [4-week change map](#) for the Caribbean

Four Week Drought Monitor Class Change.

- No changes were noticed from previous month.

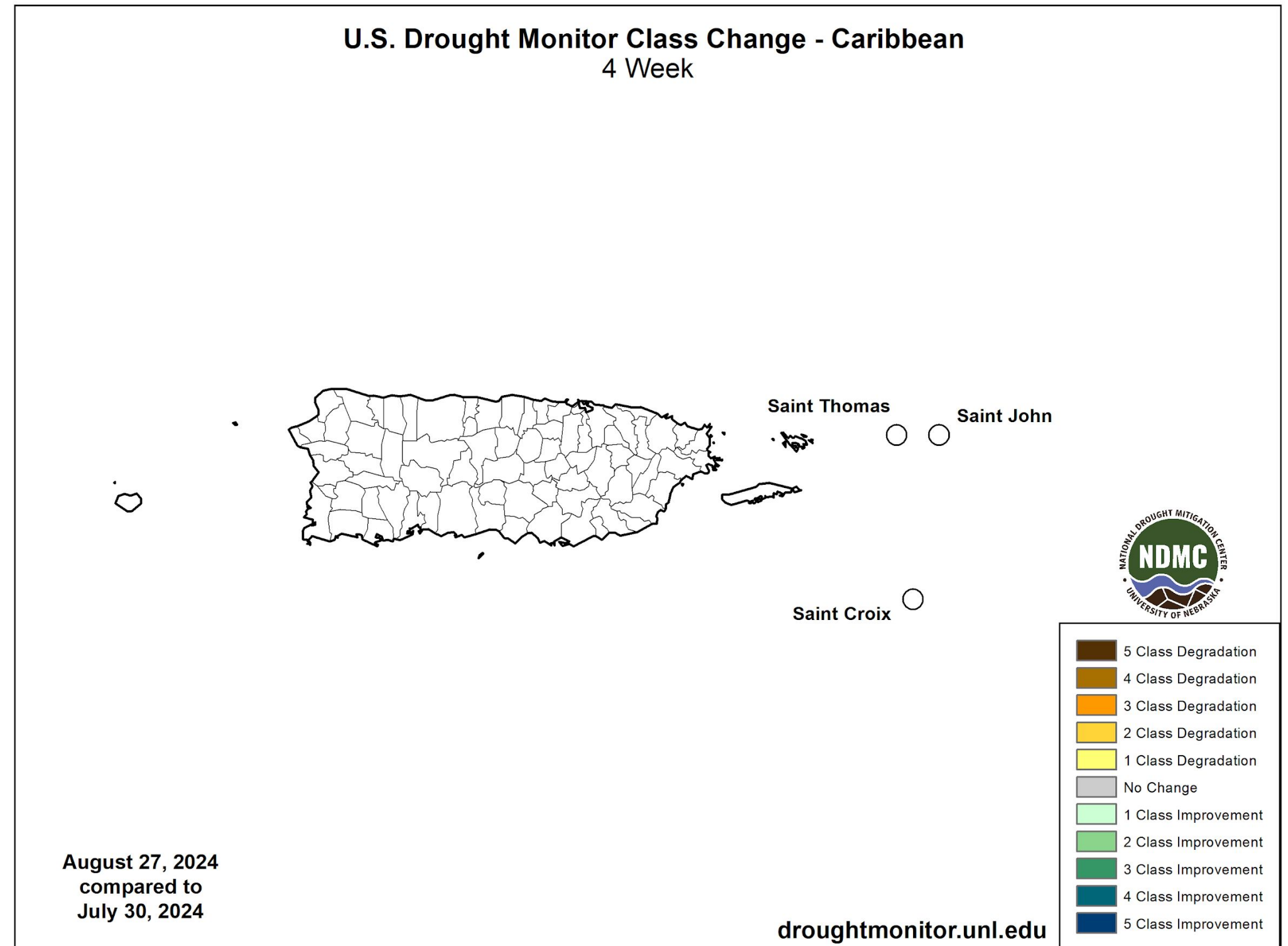


Image Caption: U.S. Drought Monitor 4-week change map valid 8am EDT August 27th, 2024.



Long-Range Precipitation Outlook

The latest monthly and seasonal outlooks can be found on the [CPC homepage](#)

- The **North American Multi-Model Ensemble (NMME)** shows a chance higher than 50% of above normal precipitation into the fall and early winter months (September-October-November) across the Caribbean.

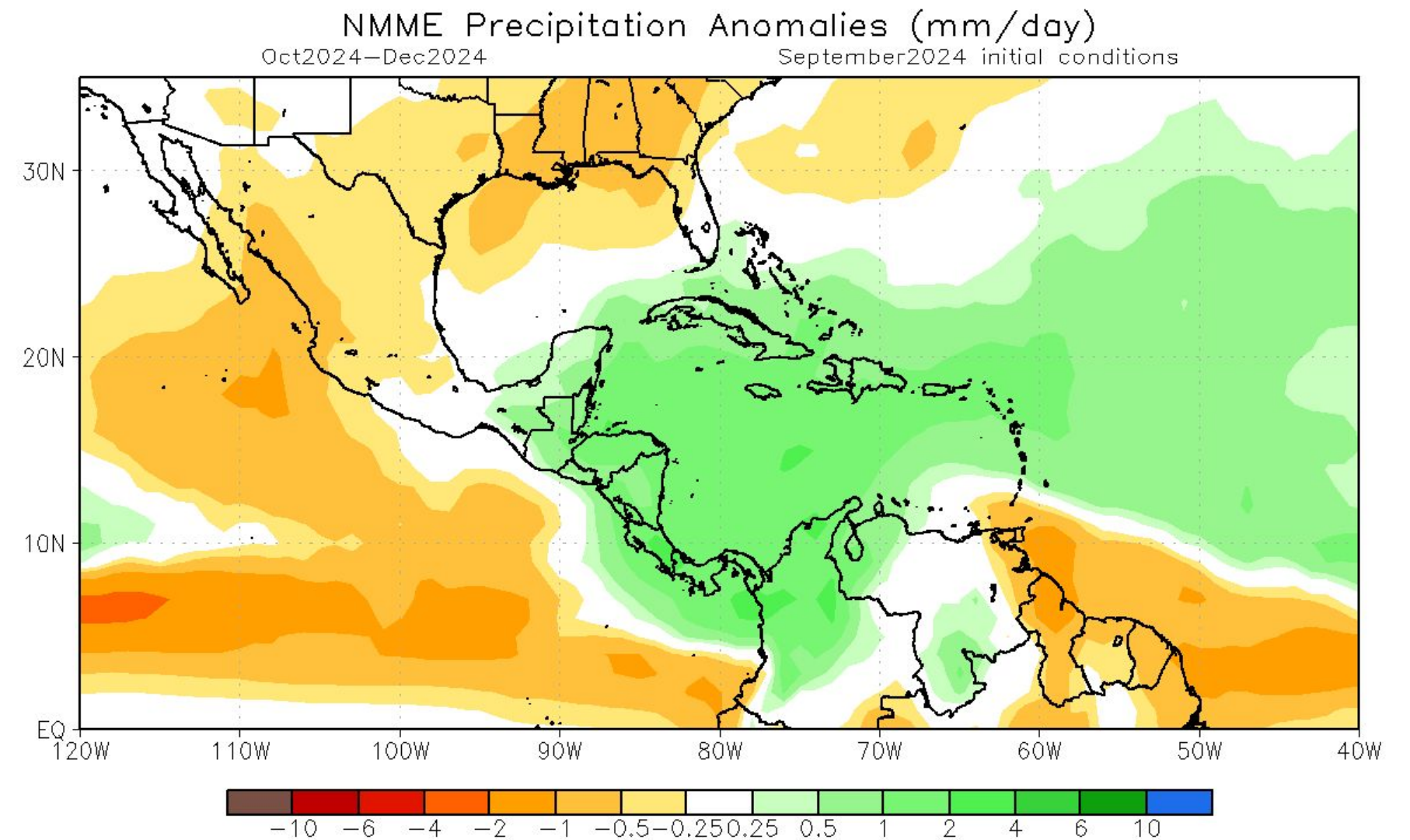


Image caption: NMME precipitation forecast issued September 2024. Valid October-November-December 2024.



Long-Range Temperature Outlook

The latest three-months temperature outlook can be found on the [CPC homepage](#)

- Based on the **North American Multi-Model Ensemble (NMME)**, there is a $\geq 70\%$ chance of observing above normal temperature for the period of October-November-December 2024. The temperatures are forecast to be nearly $1\text{-}2^{\circ}\text{C}$ ($1.8\text{-}3.6^{\circ}\text{F}$) above normal.

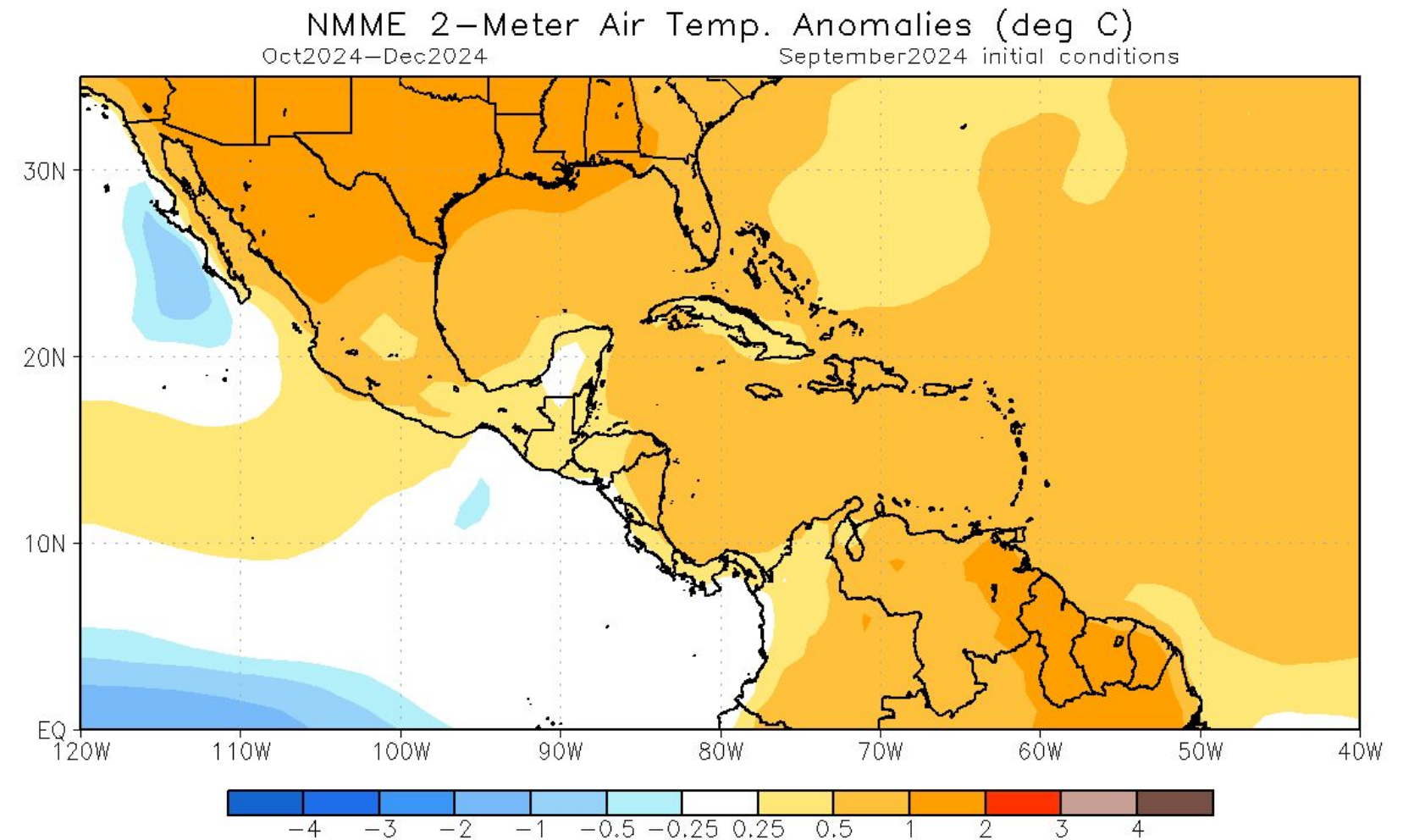


Image caption: NMME temperature forecast issued September 2024. Valid October-November-December 2024.



Long Range Drought Outlook

The latest monthly and seasonal outlooks can be found on the [CPC homepage](#)

- Based on the expected conditions, no additional drought is expected to develop in Puerto Rico in the upcoming three months.

Seasonal (3-Month) Drought Outlook for August 31, 2024–November 30, 2024

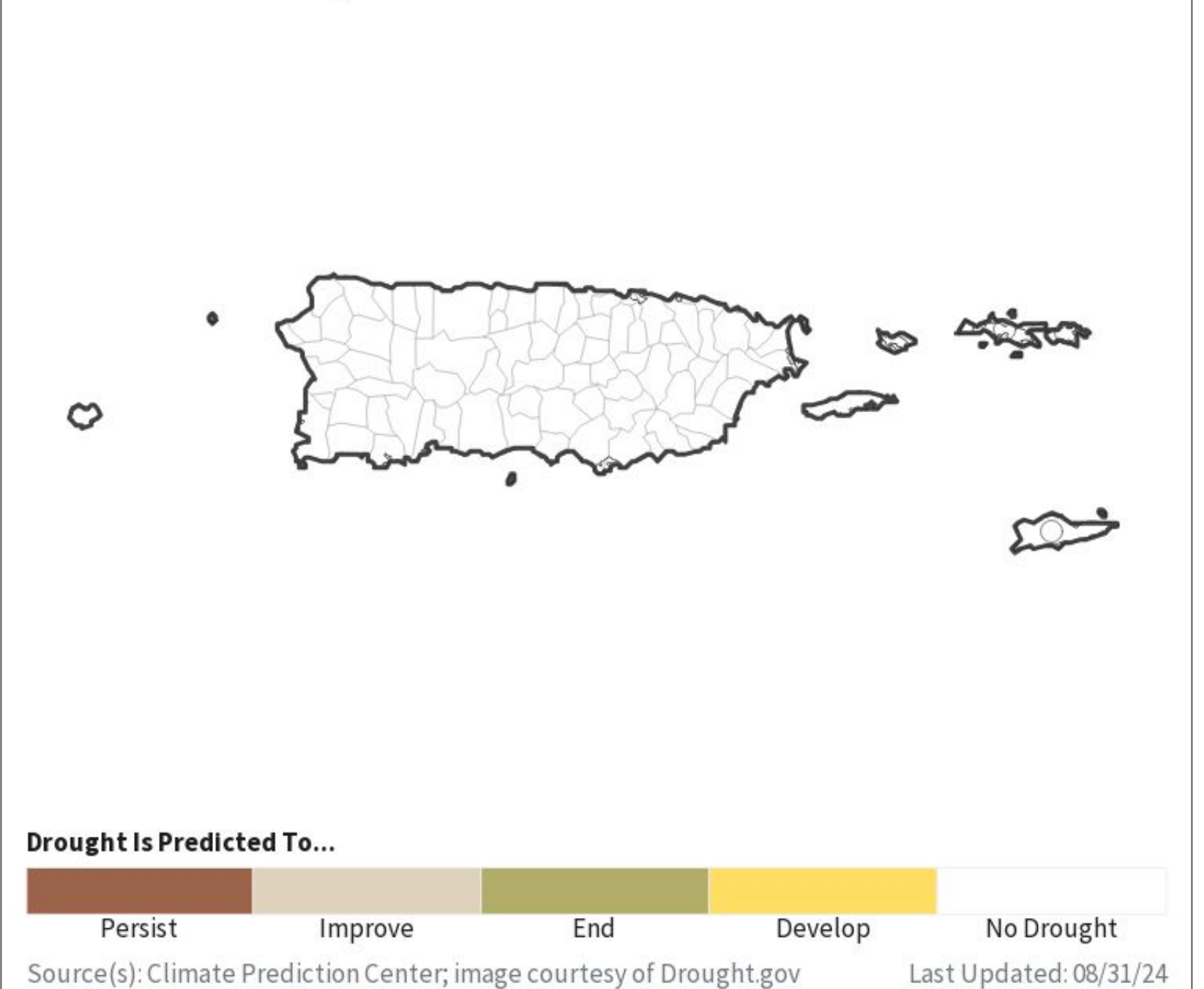


Image Caption: U.S. Seasonal Drought Outlook Valid for August 31st, 2024.