

Meteorological Service Jamaica
Jamaica's Seasonal Climate Outlook September to November 2019

Below-Normal to Near-Normal Rainfall Season Expected

SEASONAL CLIMATE FORECAST PRODUCED BY THE CLIMATE PREDICTABILITY TOOL (CPT)

SUMMARY:

Station	Below (B) %	Normal (N) %	Above (A) %
Jamaica Rainfall Outlook	40	30	30
Jamaica Temperature Outlook	20	30	50

As we approach the peak of the wet season in Jamaica, September to November, rainfall amounts are likely to remain below normal to near normal based on the latest forecast from our computer model. Also, ocean temperatures are likely to remain near average over the next three months. This will result in little or no ocean signals and, therefore, lower forecast confidence. The forecast also indicates that temperatures are most likely to remain warmer than normal for the upcoming three-month period, September to November, based on the latest findings from the seasonal climate forecast model.

Although the forecast indicates below-normal to near-normal rainfall amounts, Jamaicans should brace themselves as the chance of flash flood events during the wet season, is likely. The Meteorological Service will continue to monitor the findings from the models in the upcoming months so as to advise our stakeholders, especially our farmers.

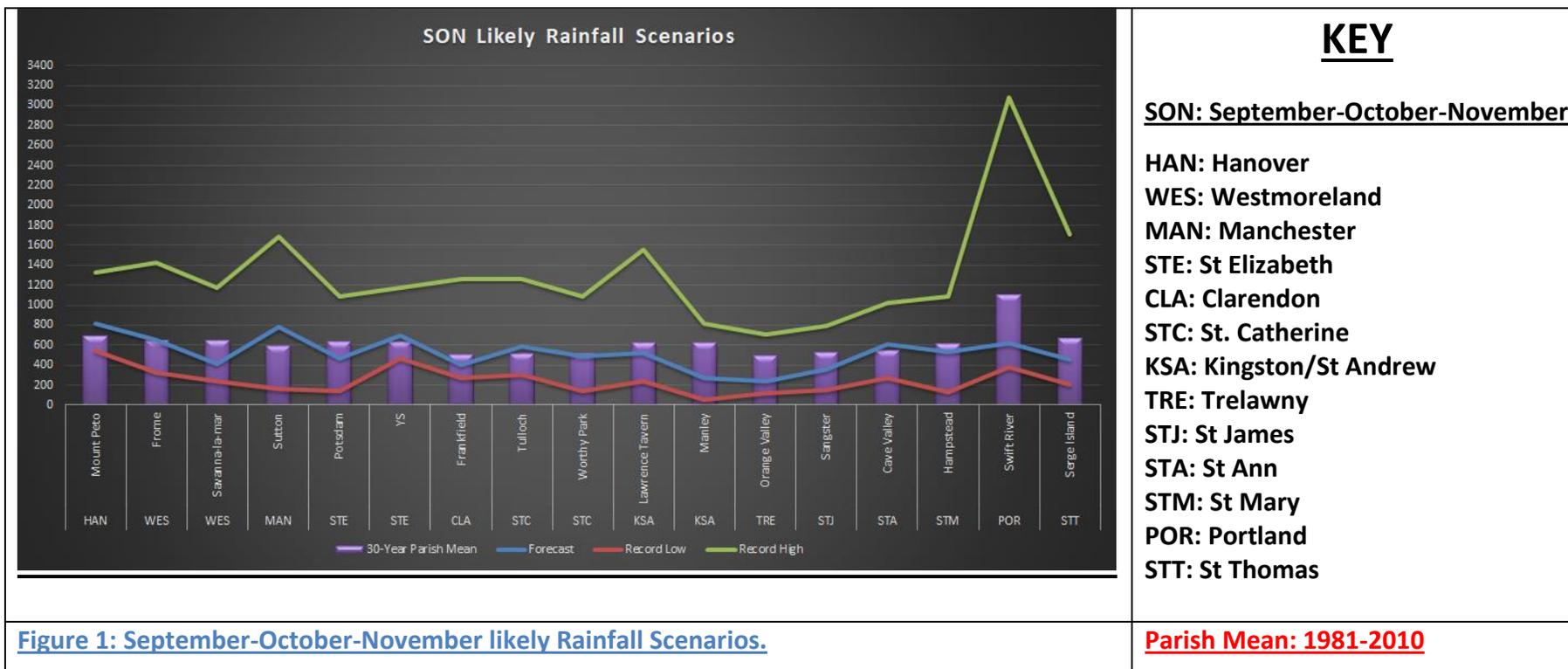
FORECAST VERIFICATION SEPTEMBER TO NOVEMBER 2018

For the same period last year, September-November 2018, the models performed fairly well, with accuracy in the range of 20-87 percentage points. The initial forecast indicated that rainfall was likely to be near normal for the period and based on the findings, most stations recorded below-normal rainfall amounts during the period.

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Seasonal Forecast Outlook September-November 2019 and the Likely Scenarios



KEY

SON: September-October-November

- HAN: Hanover**
- WES: Westmoreland**
- MAN: Manchester**
- STE: St Elizabeth**
- CLA: Clarendon**
- STC: St. Catherine**
- KSA: Kingston/St Andrew**
- TRE: Trelawny**
- STJ: St James**
- STA: St Ann**
- STM: St Mary**
- POR: Portland**
- STT: St Thomas**

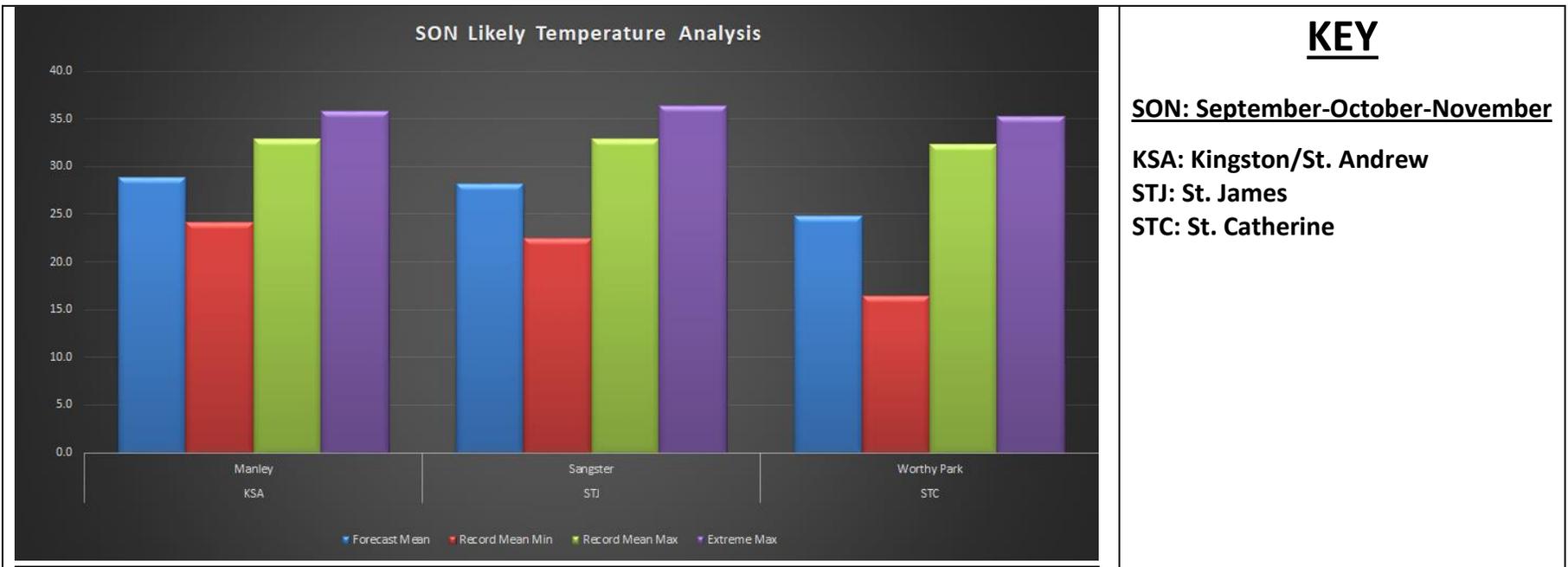
Figure 1: September-October-November likely Rainfall Scenarios.

Parish Mean: 1981-2010

Local Precipitation Outlook Analysis:

From the analysis, of the forecast rainfall pattern for the September to November period indicates a below-normal to near-normal rainfall pattern. From the graph above, most stations are likely to receive near their parish averages. However, Mount Peto and Sutton are likely to experience rainfall amounts greater than their parish means, while Manley and Orange Valley could experience the least amounts of rainfall during the period.

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KEY

SON: September-October-November

KSA: Kingston/St. Andrew
STJ: St. James
STC: St. Catherine

Figure 2: September-October-November likely Temperature Scenarios.

Local Temperature Outlook Analysis:

Over the period of September to November, temperature values are likely to be warmer than normal when compared to the most recent years. The average temperatures are likely to fall between 25 and 29 degrees Celsius. Manley in the southeast is likely to experience the warmest temperatures, while Worthy Park should experience cooler temperatures.

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Background

Human-induced climate change activities and increasing climate variability, as well as other environmental issues such as land degradation, threaten the ability of the nation to meet the needs of its population for food. To address these challenges, it is important to integrate the issues of climate variability and climate change into resource use and developmental decisions.

Decreasing the vulnerability of agriculture to natural climate variability is a key issue for small islands like Jamaica. Introducing seasonal rainfall forecasts into management decisions can reduce this vulnerability of agriculture to droughts and floods. Therefore, short to long term precipitation forecasts as well as drought monitoring products will assist in making critical decisions about the growing seasons for crops as well as irrigation scheduling.

This seasonal rainfall summary is prepared by the Climate Branch of the Meteorological Service Jamaica and takes into account a correlation between the rainfall totals and sea surface temperatures across the Pacific and Atlantic Oceans. The experiment also looks at a number of drivers of rainfall across the region, like El Niño and the North Atlantic Oscillation. Before we can arrive at the forecast, an extensive training period with a minimum of thirty years of data is used to work out the best forecast.

Indices and Definitions

El Niño: A phenomenon in the equatorial Pacific Ocean characterized by a positive sea surface temperature departure from normal (for the 1971-2000 base period) in the Niño3.4 region greater than or equal in magnitude to 0.5°C, averaged over three consecutive months.

La Niña: A phenomenon in the equatorial Pacific Ocean characterized by a negative sea surface temperature departure from normal (for the 1971-2000 base period) in the Niño3.4 region greater than or equal in magnitude to 0.5°C, averaged over three consecutive months.

ENSO (El Niño-Southern Oscillation): An ENSO warm phase refers to an El Niño event, and an ENSO cold phase refers to a La Niña event. As El Niño and the Southern Oscillation are related, the two phrases are often combined as ENSO (El Niño-Southern Oscillation). El Niño and La Niña

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events have now been clearly identified as perturbations of the ocean-atmosphere system. In addition to changes in SSTs, there are typically changes in the strength and direction of the Trade winds.

NAO conditions and the Atlantic Subtropical High: The NAO is the dominant mode of winter climate variability in the North Atlantic region ranging from central North America to Europe and much into Northern Asia. The NAO is a large scale seesaw in atmospheric mass between the subtropical high and the polar low. The corresponding index varies from year to year but also exhibits a tendency to remain in one phase for intervals lasting several years.

APCC: APEC (Asia-Pacific Economic Cooperation) Climate Center: Provides reliable real-time climate prediction system, through a state-of-the-art multi-model climate prediction system utilizing model predictions from member economies.

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