

NATIONAL AGROMET BULLETIN



Issued by the
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Highlights for February 2016

- ✚ **Wet conditions reported for some northwestern and northeastern stations.**
- ✚ **Above normal rainfall is forecast for most stations for late April into May.**
- ✚ **Above normal temperatures forecast to continue through May 2016.**

Weather Summary for the month of February 2016

During the month of February the weather was dominated by a combination of High Pressure Ridges, Troughs and Cold Fronts.

During the month, Sangster in the northwest recorded 200.5 mm of rainfall, while Norman Manley in the southeast recorded 9.7 mm of rainfall. Manley received less than half the mean rainfall for the month of February while Sangster received more than 3 times the mean rainfall for the month of February based on the thirty year (1971-2000) rainfall means. There were nine (9) rainfall days reported for Sangster Airport while Manley Airport reported six (6) rainfall days.

The highest maximum temperature recorded for Norman Manley Airport was 32.4°C (17th February) meanwhile Sangster Airport reported 32.1°C (24th February).

Standardized Precipitation Index (SPI)

The Standardized Precipitation Index (SPI), developed by T.B. McKee, N.J. Doesken, and J. Kleist in 1993, is based only on precipitation. One unique feature is that the SPI can be used to monitor conditions on a variety of time scales namely 1- month, 3-month, 6-month, 9-month and 12-month periods. This temporal flexibility allows the SPI to be useful in both short-term agricultural and long-term hydrological applications.

KEY

SPI Value	Category	SPI Value	Category
-0.5 to -0.7	Abnormally Dry (30%tile)	0.5 to 0.7	Abnormal Wetness (70%tile)
-0.8 to -1.2	Moderate Drought (20%tile)	0.8 to 1.2	Moderate Wetness (80%tile)
-1.3 to -1.5	Severe Drought (10%tile)	1.3 to 1.5	Severe Wetness (90%tile)
-1.6 to -1.9	Extreme Drought (5%tile)	1.6 to 1.9	Extreme Wetness (95%tile)
-2.0 or less	Exceptional Drought (2%tile)	2.0 or more	Exceptional Wetness (98%tile)

Table 1. Rainfall and Drought Analyses for Selected Stations

Parish	Station	February Monthly Total (mm)	Percent of 30 year Mean (%)	SPI for January
Hanover	Mount Peto	263	238	2.16
Westmoreland	Sav-La-Mar	70	87	0.09
Westmoreland	Frome	71	87	-0.46
Manchester	Sutton	63	99	0.15
St. Elizabeth	Y.S. Estates	83	74	-0.57
St. Elizabeth	Potsdam	78	119	-0.68
Clarendon	Beckford Kraal	79	137	0.74
St. Catherine	Tulloch	91	105	-0.58
St. Catherine	Worthy Park	79	118	-0.97
Trelawny	Orange Valley	180	305	0.66
St. James	Sangster	201	326	0.89
St. Ann	Cave Valley	76	129	-0.73
St. Mary	Hampstead	369	316	1.55
Portland	Shirley Castle	686	184	-0.35
St. Thomas	Serge Island	30	40	0.80
KSA	Langley	232	156	-0.60
KSA	Manley Airport	10	46	-0.03

Standardized Precipitation Index Discussion

One station, Mount Peto in Hanover reported exceptional wetness and Hampstead in St. Mary reported extreme wetness at the end of February. Wet conditions were reported for another four stations. In contrast Worthy Park in St. Catherine reported moderate drought conditions, which was the worst level of drought reported for this month and six other stations reported abnormally dry conditions. February represents the mid-point of the dry season. Although the island received above normal rainfall activity for the month, and especially over sections of northwestern and northeastern parishes, dry conditions were reported over sections of eastern and central parishes as shown in figure 1 (see below).

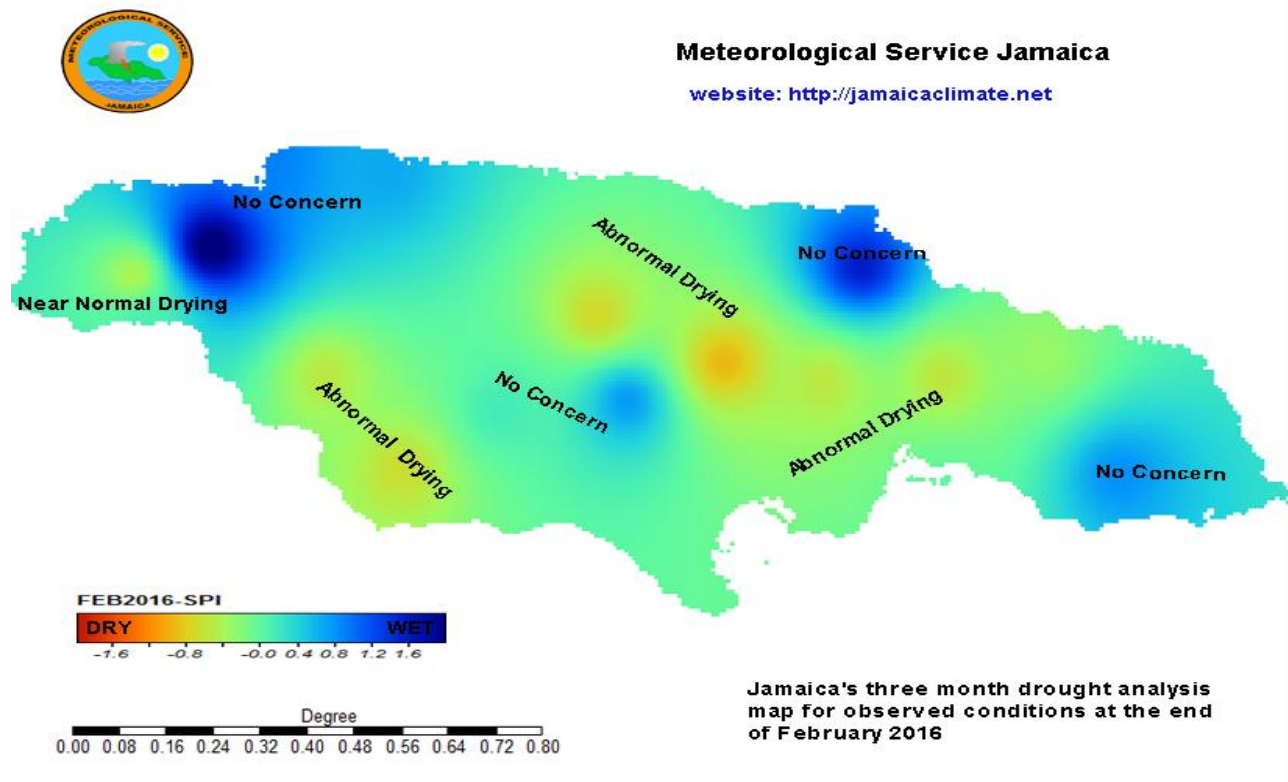


Fig.1 Station drought condition for February 2016



Precipitation Outlook – March to May 2016

As we approach what is considered the early rainfall season for 2016 (April-June), the models are indicating an increase in the forecast rainfall amounts across most areas for the period March to May 2016.

This will likely ease some of the current dry patches currently affecting sections of eastern and central parishes. The rains could however start late April into early May and therefore the dry conditions in some areas would still be an issue especially for the agricultural sector until the rains arrive.

Table 2. Climate Predictability Tool (CPT) Outlook MAM 2016.

Stations	Below (B) %	Normal (N) %	Above (A)%
Manley (Kingston)	25	30	45
Sangster (St. James)	25	30	45
Sav. (Westmoreland)	25	35	40
Beckford (Clarendon)	25	30	45
Serge Island (St. Thomas)	25	30	45
Cave Valley (St. Ann)	25	35	40
Tulloch Estate (St. Catherine)	25	35	40
Y.S. Estate (St. Elizabeth)	25	35	40
Hampstead (St. Mary)	20	30	50
Orange Valley (Trelawny)	25	35	40
Langley (Kingston)	25	30	45
Mount Peto (Hanover)	20	30	50
Shirley Castle (Portland)	25	35	40



Suttons (Manchester)	30	20	50
Potsdam (St. Elizabeth)	25	30	45
Frome (Westmoreland)	30	15	55
Worthy Park (St. Catherine)	25	30	45
Jamaica	25	30	45

Key

- A: Above normal rainfall means greater than 66 percentile of the rank data
- N: Near normal rainfall means between 33 and 66 percentile of the rank data
- B: Below normal rainfall means below 33 percentile of the rank data

Drought Forecast – May 2016

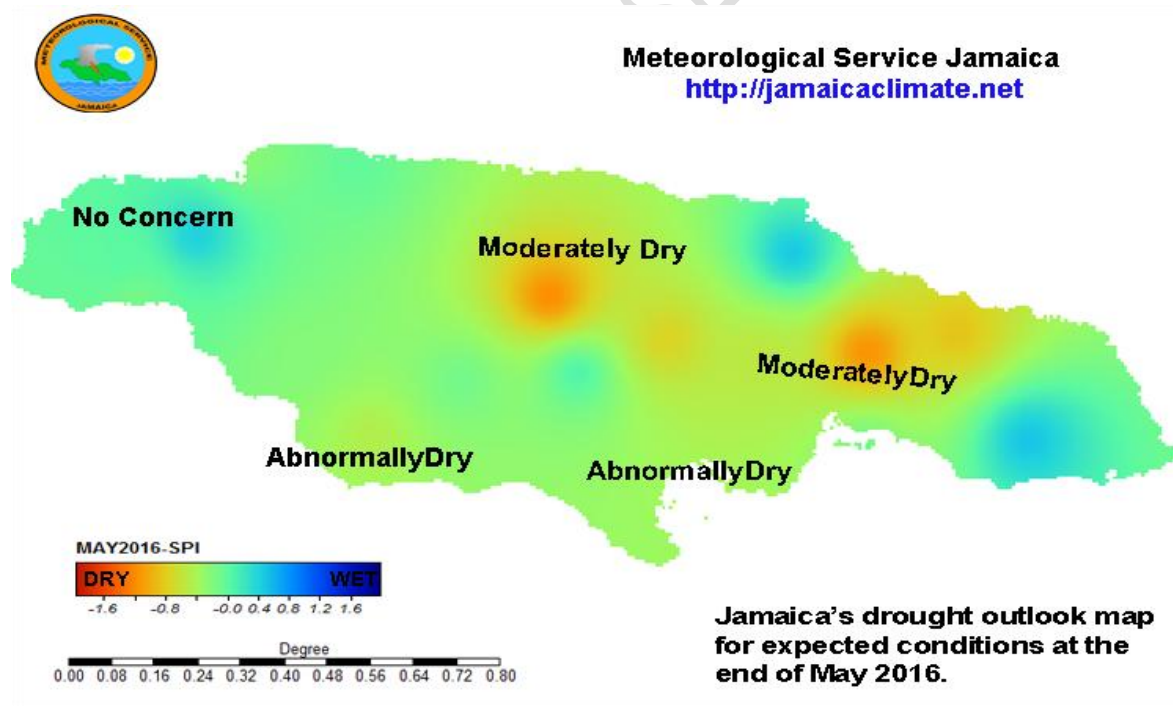


Fig.2 Expected drought conditions by end of May 2016

Although the current projections indicate an increase in rainfall through the end of May, and despite an increase in rainfall over some areas during February, the expectations are for below to near normal rainfall across the island for the period March into April. Therefore, drought conditions are expected to continue over sections of some eastern and central parishes until the early rainfall season begins.

Temperature Forecast – March to May 2016

Location	Below (B) %	Normal (N) %	Above (A) %
Jamaica Temperature Outlook	10	15	75

Summary and Expected Agricultural Impacts

As Jamaica approaches the end of the dry season, the precipitation forecast through May shows above normal levels for most stations, with sections of western parishes to benefit the most.

With the El Nino phenomenon expected to weaken (according to the forecast models), an increase in rainfall for Jamaica during the first rainfall season (April-June) should benefit those areas still experiencing dry/drought conditions.

With the island receiving below normal rainfall for the greater portion of last year, which resulted in a deficit in rainfall and which has carried over into early 2016, constant drought monitoring will therefore needs to be continued especially for eastern and central parishes to ensure that our critical and sensitive sectors such as agriculture which depends heavily on rainfall can continue alleviation activities until the early rainfall season begins in earnest.