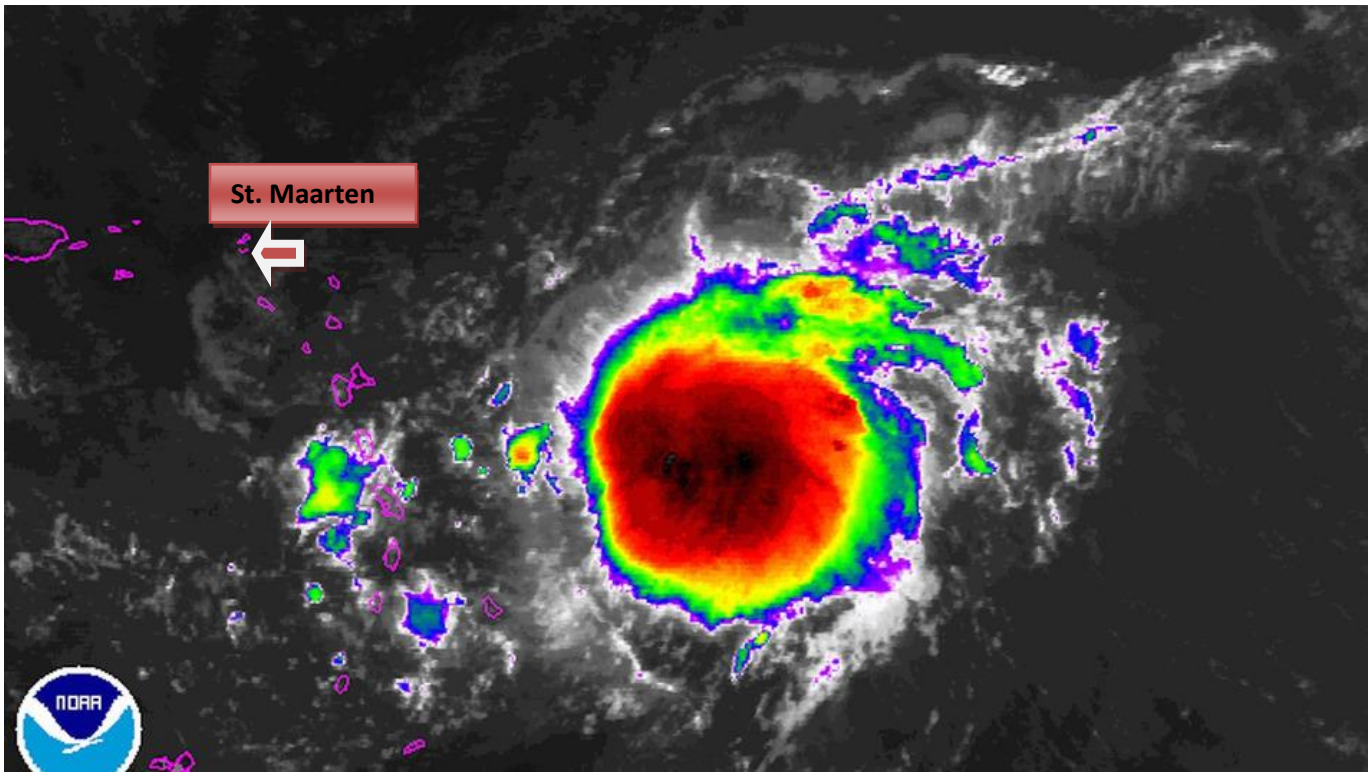
Climatological Summary 2015

&

~ Hurricane Season Review ~

Tropical Storm Erika: Wednesday August 26th as it approached the Eastern Caribbean



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Published by:

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Introduction

The country of St Maarten is located in the extreme north east section of the Eastern Caribbean. It is part of an island which is approximately 37 square miles shared by two countries. French St. Martin to the north and Dutch St. Maarten to the south which occupies 16 square miles. The island is relatively flat but has a central range with various peaks. Pic Paradise on the French side is the highest point (1400ft) on the island.

The Princess Juliana International Airport (TNCM) is located on the south western strip of St. Maarten at latitude 18.02^{o} north and longitude 63.06^{o} west.

ISLAND CLIMATOLOGY

Based on records (1981-2010) at Princess Juliana International Airport (PJIA), the normal annual rainfall is approximately 1170mm or 46 inches. Like many other Caribbean islands the driest months are from January to June while the wettest months are from July to November. December, May and June can be considered as transition months since they can be either dry or wet.

The driest month on record is March while the wettest is November. On average there are about 145 rain days a year with April having the least (8 days) and November the most (15 days). Rainfall during December to April can be attributed mainly from old frontal boundaries or shear lines dipping southwards from north east United States while the rainfall during May and June are often from upper level trough interactions and from July onwards, rainfall is mostly from tropical cyclones.

The normal daily average temperature is about 27^{o}C or 81^{o}F, the normal maximum and minimum temperatures are 32^{o}C and 23^{o}C respectively. August and September are the warmest months while February is the coolest.

On average St. Maarten receives approximately 250 hours of sunshine monthly and 8 to 10 hours daily. The months with the most sunshine hours are March and April and the least hours are recorded in November.

The Meteorological Department of St. Maarten (MDS) — most commonly referred to as the Met. Office — is a scientific organization that operates 24 hours a day, all year round, monitoring and continuously keeping watch of the weather conditions across the island.

Our aim is to protect life and property, by providing reliable meteorological services in support of the social and economic development of the country through monitoring and predicting weather & climate, using up-to-date technology to enable optimal utilization of resources. We issue appropriate weather forecasts and warnings for St. Maarten, its adjacent waters and air space.

The vision of the Meteorological Department of St. Maarten is to achieve excellence in meteorological science, and the provision of quality weather and climate services.


OUR
TASKS
Produce Monthly Climate Outlooks & bulletins
Maintain National, Regional & International Standards/ Policies
Compile & Analyze Meteorological & Climate Data
Monitor weather conditions 24 hours daily/ all year round
Observe, Record & Transmit Surface/ Upper Air Data
Produce Aviation Forecasts & Flight Folders
Produce Public & Marine weather forecasts
Issue Special reports/warnings for tropical storms & other hazardous weather phenomena.

2015 Hurricane Season

The 2015 Atlantic Hurricane Season was slightly below average as was predicted. NOAA's latest prediction was for a below-average season with 6-10 named storms, 1-4 hurricanes with 0-1 major hurricanes. Actually, there were 11 named storms, 4 hurricanes with 2 major hurricanes. Two storms, Danny and Joaquin became major hurricanes. Major hurricanes are those reaching categories 3 and above. Two storms (Danny and Erika) tracked through the Caribbean Region.

The leading climatic feature which accounted for the below average activity in the Atlantic Basin this year was the El Niño phenomenon. El Niño produces strong vertical wind shear, combined with increase atmospheric stability, strong sinking motion and dry conditions across the Atlantic. This suppresses tropical storm and hurricane formation and strength.

Local Effects

The 2015 hurricane season, left no noticeable impacts on the island of St. Maarten. The Hurricane Season started with a few tropical waves passing through the area with no significant rainfall.

On Saturday August 22nd a tropical storm WATCH was issued for the island due to the approach of TS Danny. However, Danny became disorganized before it got to the local area and the watch was discontinued on Monday August 24th. The maximum wind speed recorded during that time was 31 knots or 36 mph and no significant rainfall was measured.

On Tuesday August 25th, a tropical storm WATCH was issued once again for the island since TS Erika was heading to the Leeward Islands. On Wednesday 26th , the WATCH was upgraded to a tropical storm WARNING. After meandering east of the Leeward Islands, Erika passed about 98 miles south of St. Maarten on Thursday August 27th. A maximum wind gust of 46 kt. / 53 mph was recorded on that day and all warnings were discontinued later that evening.

For the rest of the season, there was no notable impact on the island by tropical cyclones. Compared to 2014, this year was a quiet season for St. Maarten.

Summary

Below is a recap of the 2015 Atlantic Hurricane Season and in relation to its effects on St. Maarten.

	Storm Name	Active Dates	Highest Category	Min. Pressure (mbar)	Max. Winds		Local Effects	Observed Rainfall (mm)	Observed Winds Gusts	
					Kt.	Mph			Kt.	Mph
	Ana	May 8 - 11	Tropical Storm	998	52	60	None	-	-	-
1	Bill	Jun. 16 - 18	Tropical Storm	997	52	60	None	-	-	-
2	Claudette	Jul. 13 - 14	Tropical Storm	1003	43	50	None	-	-	-
3	Danny	Aug. 18 - 24	Major Hurricane Cat. 3	960	100	115	None	3.2	31	36
4	Erika	Aug. 25 - 29	Tropical Storm	1001	45	52	None	5.9	46	53
5	Fred	Aug. 30-Sept. 6	Hurricane Cat.1	986	74	85	None	-	-	-
6	Grace	Sept. 5 - 9	Tropical Storm	1002	52	60	None	-	-	-
7	Henri	Sept. 8 - 11	Tropical Storm	1003	43	50	None	-	-	-
8	TD Nine	Sept. 16 - 19	Tropical Depression	1006	30	35	None	-	-	-
	Ida	Sept. 18 - 27	Tropical Storm	1001	43	50	None	-	-	-
	Joaquin	Sept. 28 – Oct. 7	Major Hurricane Cat. 4	931	135	155	None	-	-	-
	Kate	Nov. 9 - 12	Hurricane Cat. 1	980	65	75	None	-	-	-

Overview of the Storms formed in the 2014 Hurricane Season

Tropical Storm Ana (May 8th to 11th)

Ana originated from a non-tropical low pressure system on May 6th along the southeast coast of Florida. It then moved slowly north and by May 8th had acquired sufficient deep convection to be designated a subtropical storm. Ana continued moving north northwestward and made landfall along the northeastern coast of South Carolina on May 10th, causing minor wind damage, some beach erosion and one (1) death in North Carolina. On May 11th the cyclone turned northeastward and degenerated into a remnant low off the United States coast.

Tropical Storm Bill (June 16th to 18th)

Tropical Storm Bill formed over the far northwestern Gulf of Mexico on June 16th and made landfall along the Texas coast. Bill produced heavy rains and flooding as it moved across eastern Texas and Oklahoma. On June 18th Bill begun to lose organization and became a remnant low. Bill caused two deaths as a result of flooding in Oklahoma.

Tropical Storm Claudette (July 13th to 14th)

Claudette became a tropical storm at 1200 UTC on July 13th and reached its maximum intensity at 1800 UTC that same day about halfway between Bermuda and Cape Cod. It then moved toward the northeast over the cooler waters of the North Atlantic where strong wind shear gradually separated the center from the thunderstorm activity. The cyclone became a remnant low on July 15th and was absorbed by a frontal system near Newfoundland.

Major Hurricane Danny (August 18th to 24th)

Danny developed from a vigorous tropical wave that moved off the coast of Africa on August 14th. As it moved across the Atlantic it became better organized and by August 18th it was classified as a Tropical Depression. The depression strengthened into a tropical storm 6 hours later. Danny continued to move westwards however was surrounded by Saharan dust, but managed to strengthened into a hurricane on August 20th . By August 23rd Danny's intensity began to decrease due to the intrusion of dry air. As Danny moved through the southern Leeward Islands on August 24th it degenerated into an open wave.

Tropical Storm Erika (August 25th to 29th)

Erika originated from a tropical wave which crossed the African coast on August 21st. It became a tropical storm on August 24th about 900 miles east of the Lesser Antilles where the environment was conducive for some strengthening. However by August 25th northerly shear began to affect the system along with some dry mid-level air which inhibited its intensification. On August 26th there was some slight increase in the convection but later that day the center became exposed once again. Early August 27th the cyclone reached its maximum intensity of 45 knots as it passed north of Guadeloupe. Erika continued to the northeast into the Caribbean Sea on August 28th and over Haiti the following day, between Cuba and the Bahamas on August 30th and turned into the eastern Gulf of Mexico on August 30th and September 1st. Erika then moved over Florida on September 2nd and lost its identity the next day over Georgia.

Torrential rains from tropical storm Erika inflicted significant casualties (30 deaths) and damage on the Caribbean island of Dominica. Also, 574 persons on that island were left homeless by the storm. In Haiti, one person died due to a mud slide after Erika had dissipated as a tropical cyclone.

Hurricane Fred (August 30th September 6th)

Fred formed from a tropical wave that emerged from the African West Coast on August 29th and quickly developed into a tropical depression the following day. The cyclone reached a tropical storm strength 6 hours after genesis and a hurricane on August 31st. After this, unfavourable conditions caused Fred to begin to loose intensity and continued to do so in the days following. The cyclone degenerated on September 6th southwest of the Azores. Fred was blamed for 9 deaths at sea near the coast of Africa.

Tropical Storm Grace (September 5th to 9th)

Grace formed from a well-organized westward moving tropical wave that left the coast of Africa on September 3rd. A burst of convection early on September 5th resulted in the formation of a depression and six hours later it became a tropical storm. Grace strengthened as it moved over warm waters and reached its peak intensity on September 6th. Thereafter, it moved over cooler waters and with a combination of factors the cyclone gradually weakened into a tropical depression on September 8th, which degenerated to a trough on September 9th east of the Lesser Antilles.

Tropical Storm Henri (September 8th to 11th)

Henri was a weak and short-lived storm of non-tropical origin that formed well southeast of Bermuda. After becoming a tropical storm on September 9th, the cyclone strengthened despite the strong shear and dry air then reached its peak intensity of 45 kt. On September 10th it began to accelerate northward and became distorted on September 11th degenerating into a trough over the far north Atlantic.

Tropical Depression Nine (September 16th to 19th)

Tropical Depression Nine was a relatively short-lived tropical cyclone that remained over the open waters of the central tropical Atlantic Ocean. Tropical Depression Nine formed from a strong tropical wave that crossed the west coast of Africa on September 10th . Cloudiness and thunderstorms associated with the wave increased on September 13th. The increase in convection resulted in the formation of a broad area of low pressure west-southwest of the Cape Verde Islands. The next day, the convection became better organized, to the point that the system nearly became a tropical cyclone, however late that day the convection became significantly less organized, apparently due to the entrainment of dry mid-level air. On September 15th, the convection began to gradually increase leading to formation of a tropical depression on September 16th about 1100 miles west of the Cape Verde Islands. This increase was short-lived due to strong shear and dry air nearby. The depression turned to the west northwest and dissipated east of the northern Leeward Islands on September 19th .

Tropical Storm Ida (September 18th to 27th)

Ida was formed from a tropical wave which moved off the coast of Africa on September 13th . By September 15th it became a well-defined area of low pressure and a tropical depression on September 18th west southwest of Cape Verde Islands. Westerly shear caused Ida to intensify very slowly and it reached a maximum peak of 45 kt by September 21st . The cyclone slowed down and meandered over the central Atlantic for several days. Most of the convection had dissipated and the cyclone became a remnant low on September 27th .

Major Hurricane Joaquin (September 28th to October 7th)

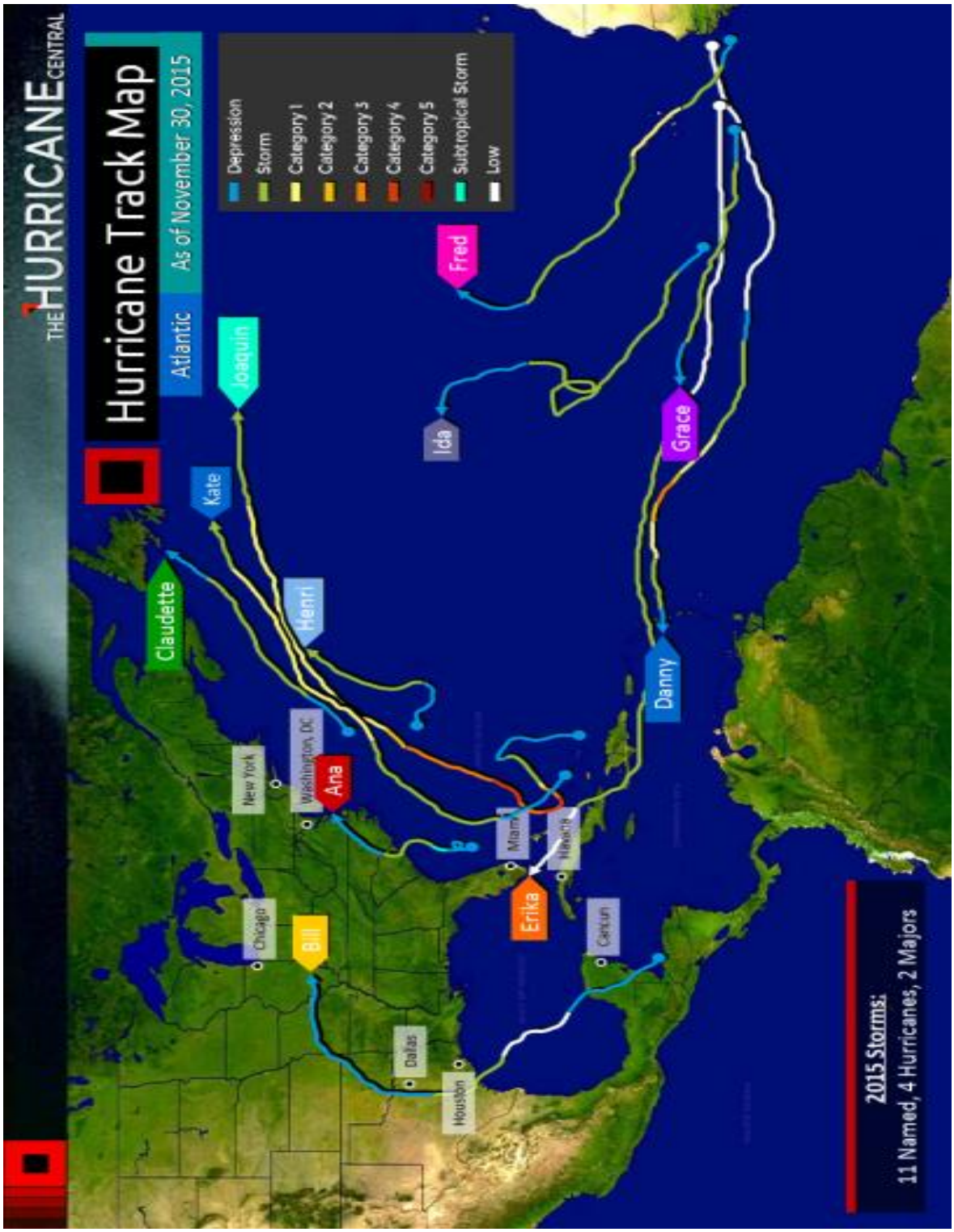
The formation of Joaquin was non-tropical, it started off as a weak mid to upper level low developing over the far eastern Atlantic which then moved westwards and amplified over the central Atlantic; northeast of the Leeward Islands on September 19th . The feature continued to move west for several days gradually acquiring vertical depth. By September 26th Satellite images indicated a small well defined center. The low was displaced to the northwest with a small area of disorganized thunderstorms and showers for another day. Deep convection developed near the center on September 28th and it became a tropical depression then. Further Strengthening occurred and it became a tropical storm the next day. There was some rapid intensification and on September 30th Joaquin became a hurricane. Joaquin continued to strengthen, reaching its peak in intensity as a 120-kt category 4 hurricane on October 2nd .

Joaquin took the lives of 34 people—all at sea—including the 33 crewmembers of the cargo ship El Faro, which sunk during the storm northeast of Crooked Island. Joaquin is the strongest October hurricane known to have affected the Bahamas since 1866.

Hurricane Kate (November 9th to 12th)

Kate was a late-season tropical cyclone that became a category 1 hurricane while moving east northeastward over the north Atlantic. The development of Kate began with a small area of disturbed weather associated with a poorly defined tropical wave which moved across the west coast of Africa on October 30th . Strong westerly wind shear prevailed over the tropical Atlantic, and the thunderstorm activity associated with the westward-moving wave remained very limited and disorganized. The area of cloudiness and showers increased, when the disturbance was near the Lesser Antilles on November 5th. After that time, an area of low-level cyclonic vorticity separated from the wave and moved toward the west-northwest across the northeastern Caribbean Sea and Puerto Rico, while the wave continued westward toward Central America. Shower activity associated with the area of vorticity became concentrated northeast of Hispaniola on November 7th, but there were no signs of a circulation. A sharp increase in organization occurred later that day, and a tropical depression formed on November 8th just to the north of the Turks and Caicos Islands. It became a tropical storm on November 9th near the central Bahamas and intensified to a hurricane by November 11th . Kate encountered strong shear and transformed to an extratropical cyclone on November 12th .

2015 Atlantic Hurricane Season Storm Track



Map compliments "The Hurricane Central"

2015 Climate Data

Rainfall

The total rainfall recorded at the Princess Juliana International Airport, for the year 2015 was **495.4 mm or 19.5 inches**. This amount was the lowest annual rainfall recorded since 1953 (over 60 years). The normal annual rainfall is about 1026mm - 1274 mm/40 - 50 inches (1981-2010). This total was more than 50% below the normal range.

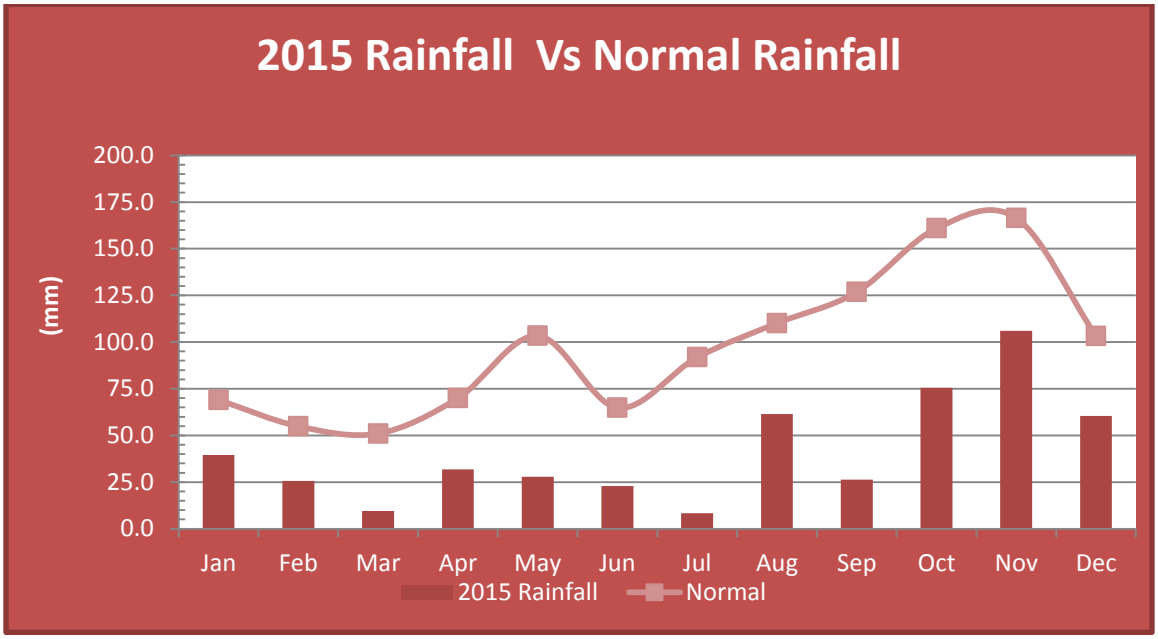


Fig. 1

November was the *wettest month* of the year, with a total of 106.1 mm or 4.2 inches; while the *driest month* was **July** with 8.4 mm or 0.3 of an inch of rainfall. The *wettest day* of the year was **October 25th**, when 37.2 mm or 1.5 inches was recorded which was as a result of instability associated with a frontal boundary across the area.

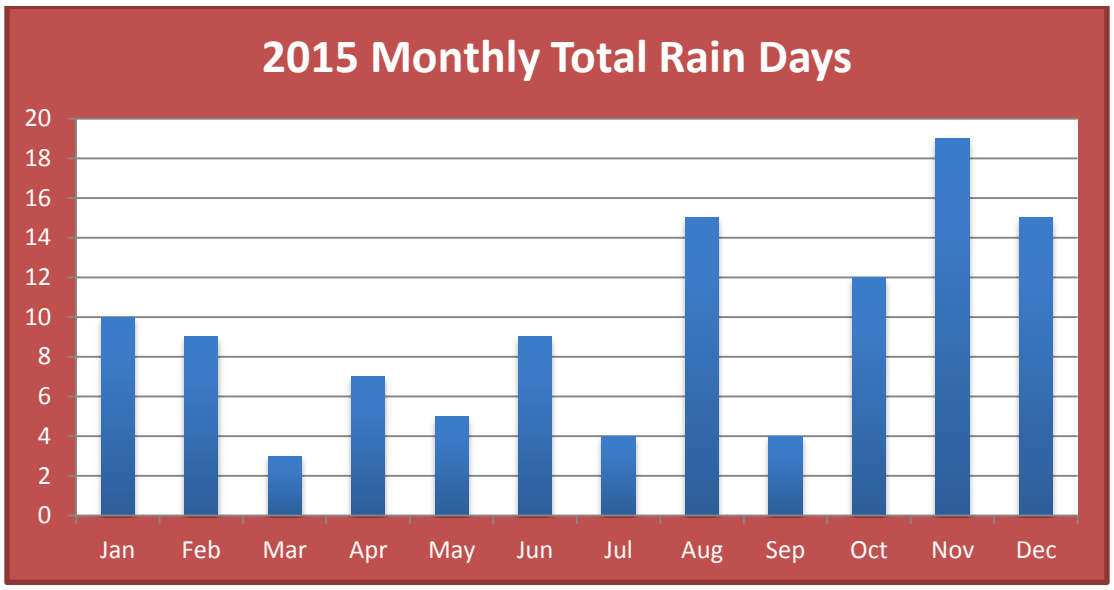
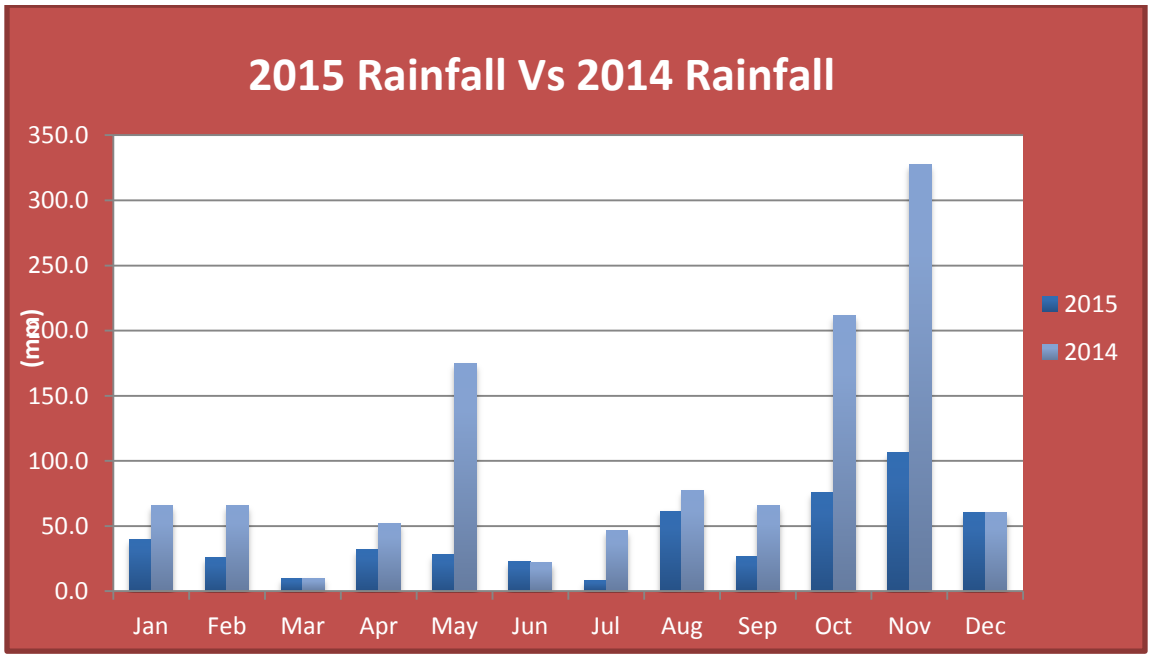


Fig. 2

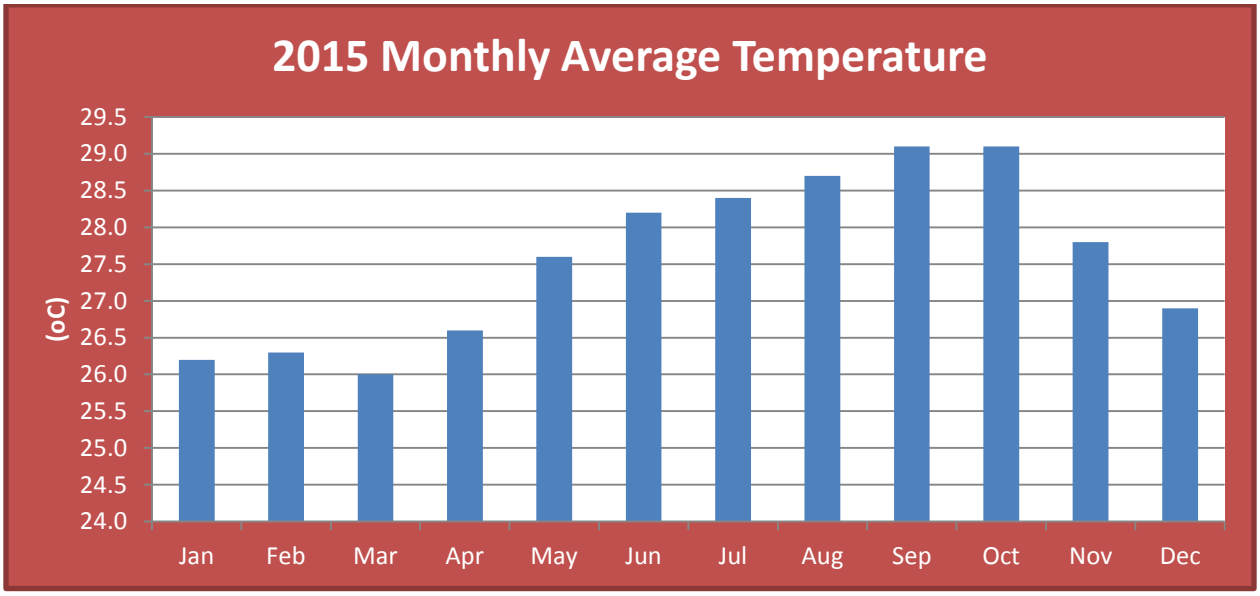
A rain day is considered any day which records 1.0 mm or more of rainfall. Normally there are approximately 145 rain days in a year on St. Maarten. For 2015, there were 112 rain days with the month of November having the most (19 days) followed by August and December with fifteen (15) days each.

Many records were broken in 2015. March was the driest since 1983 and slightly drier than 2014. May was the driest since 1999 and exceptionally drier than May 2014. July was the driest on record and was drier than July 2014. September was the driest since 1986 and was drier than September 2014. Overall 2015 was exceptionally dry becoming the driest year on record.

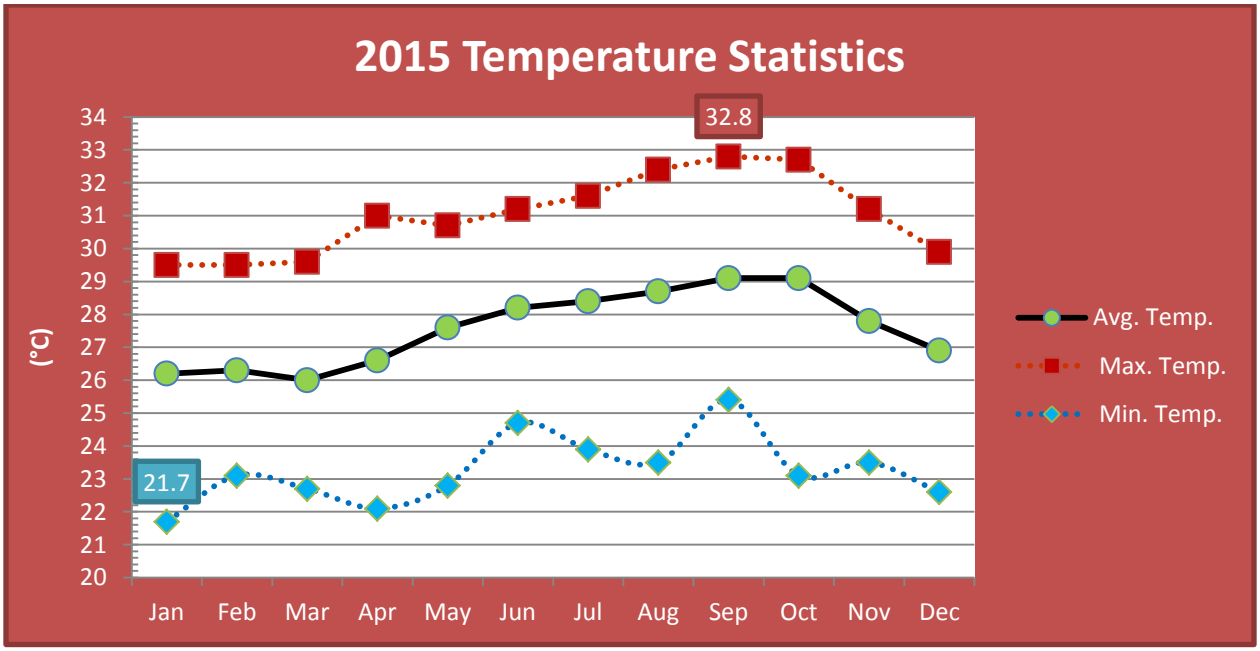


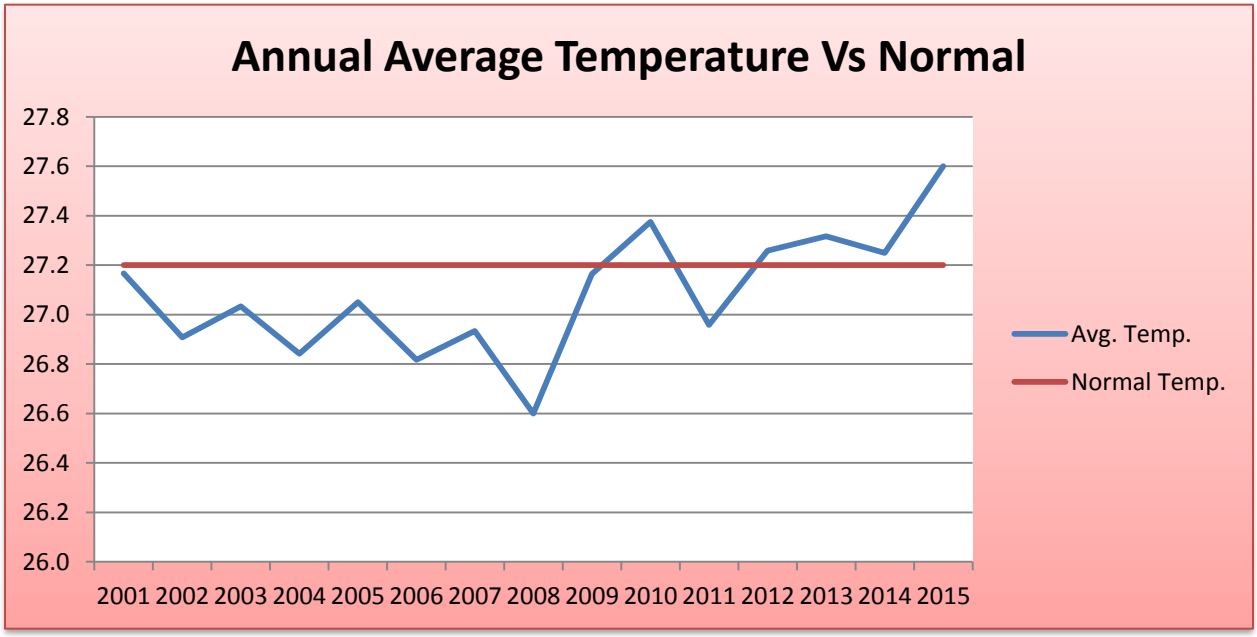
Temperature

The average temperature recorded in 2015 was **27.6** °C (82 °F) which was above normal. The 30-year normal (1981-2010) is 27.2°C. September and October were the warmest months with an average temperature of 29.1°C (84°F) while March was the coolest month with and average temperature of 26.0°C (79°F). There was a variation of about 3.1°C between the warmest and coolest months.



The highest daily *temperature* recorded in 2015 was **32.8 °C (91 °F)** and was recorded on September 22nd while the lowest daily *temperature* was recorded on January 12th as **21.7°C (71 °F)**. The difference between the maximum and minimum temperatures recorded was **11.1°C.**



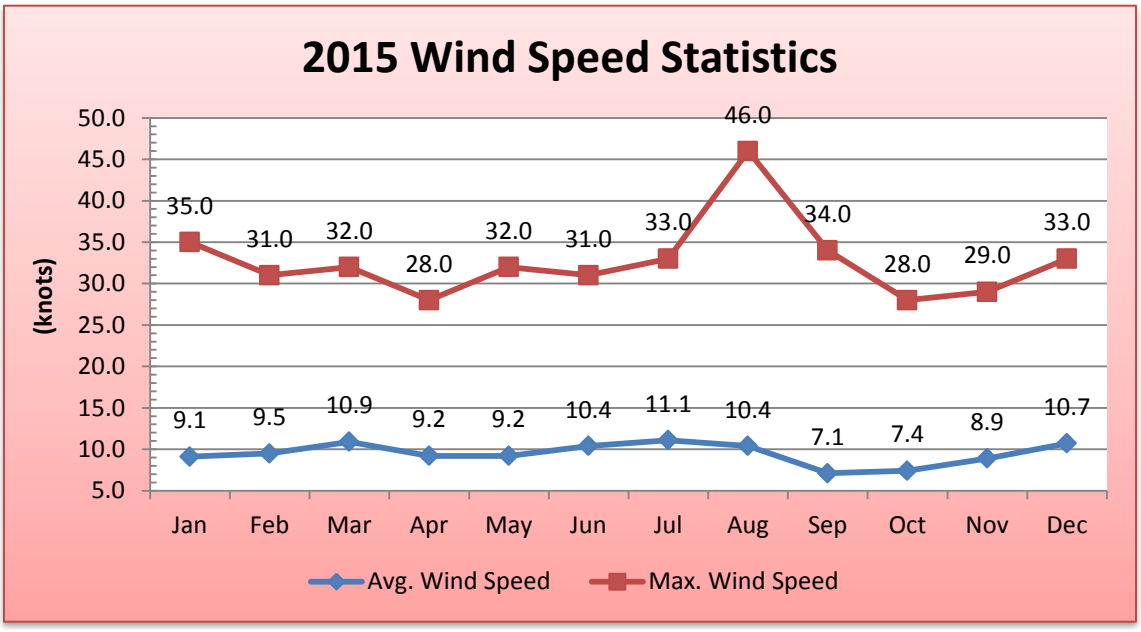


Annual Average temperature for the past 15 years has been below normal most of the time and becoming near normal to above normal in the most recent years.

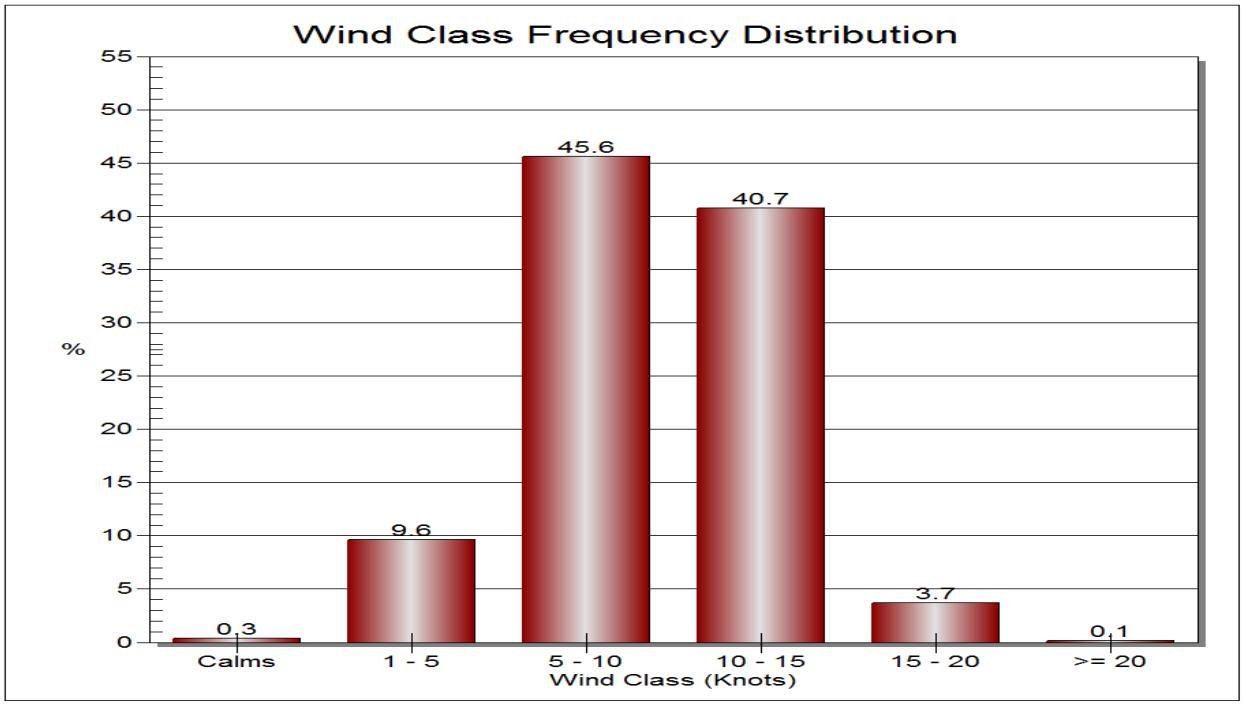
Wind

Surface wind at the Princess Juliana International Airport for 2015 was generally from the east at an average speed of **9.4 knots** (10 mph) which was near normal compared to the 30-year average (1981-2010). The *highest monthly average wind speeds were recorded in* **July** as 11 knots (13 mph); while **September** had the *lowest monthly average wind speeds* at 7 knots (8 mph).

The *highest wind gust* for the year occurred on August 27th at a speed of 46 knots (53 mph). This was during the passage of tropical Storm Erika as it passed approximately 98 miles south of St. Maarten.



This following wind analysis was derived using the average hourly wind speeds and direction from 1st January to 31st December 2015.



Approximately 46% of the time in 2015 wind speeds at Juliana were between 5 and 10 knots.

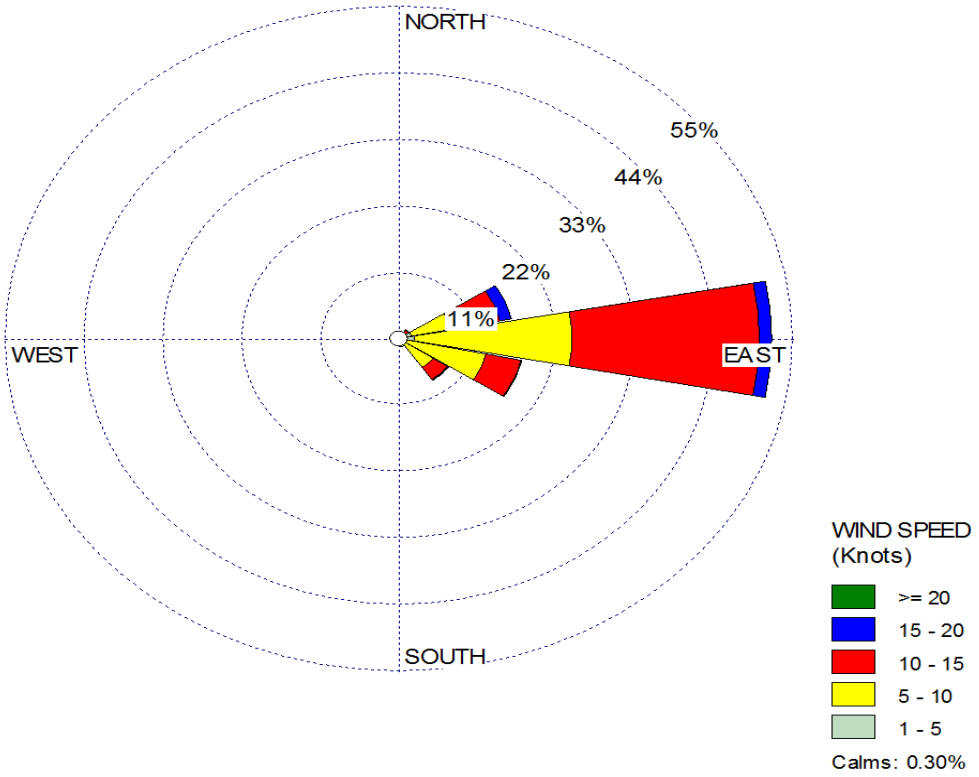
Approximately 41% of the time wind speeds were between 10 and 15 knots.

Approximately 10% of the time wind speeds were between 1 and 5 knots.

Approximately 4% of the time wind speeds were between 15 and 20 knots.

and less than 1% of the time speeds were either greater than 20 knots or calm.

2015 Wind Rose



52% of the time winds came from the **East**. (79-101 degrees)

18% of the time winds came from the East southeast. (101-123 degrees)

16% of the time winds came from East northeast. (56-79 degrees)

9% of the time winds came from the South East. (123-146 degrees)

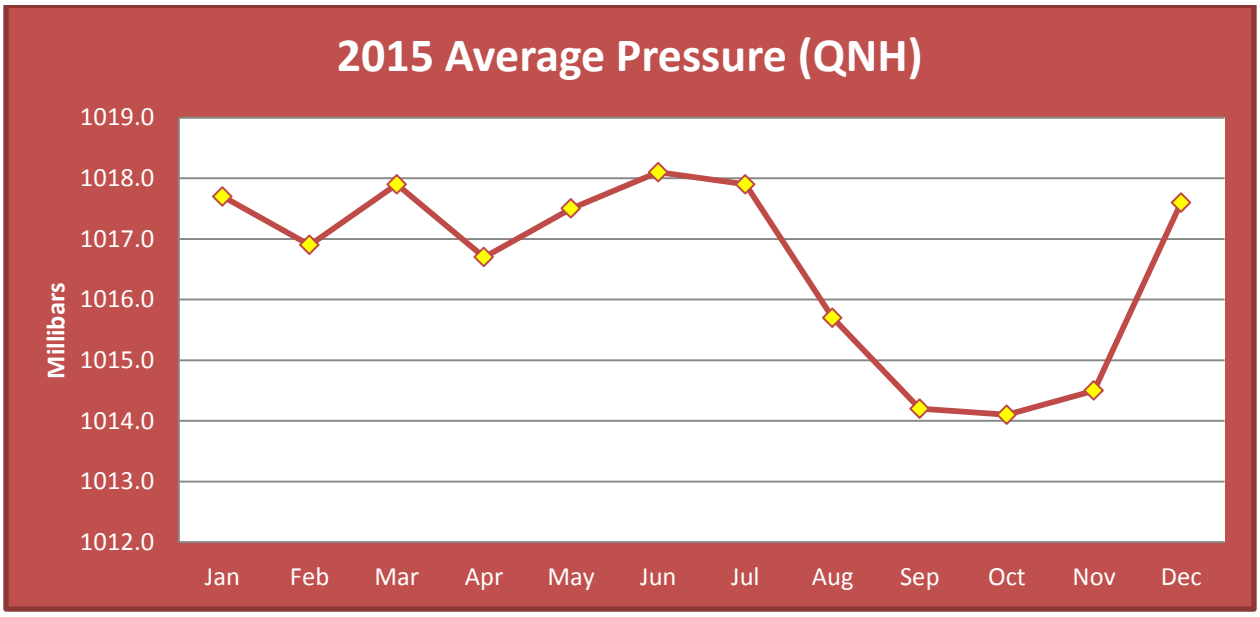
2% of the time winds came from the South southeast. (146-168 degrees)

2% of the time winds came from the North East. (33-56 degrees)

Winds came from other directions less than 1% of the time.

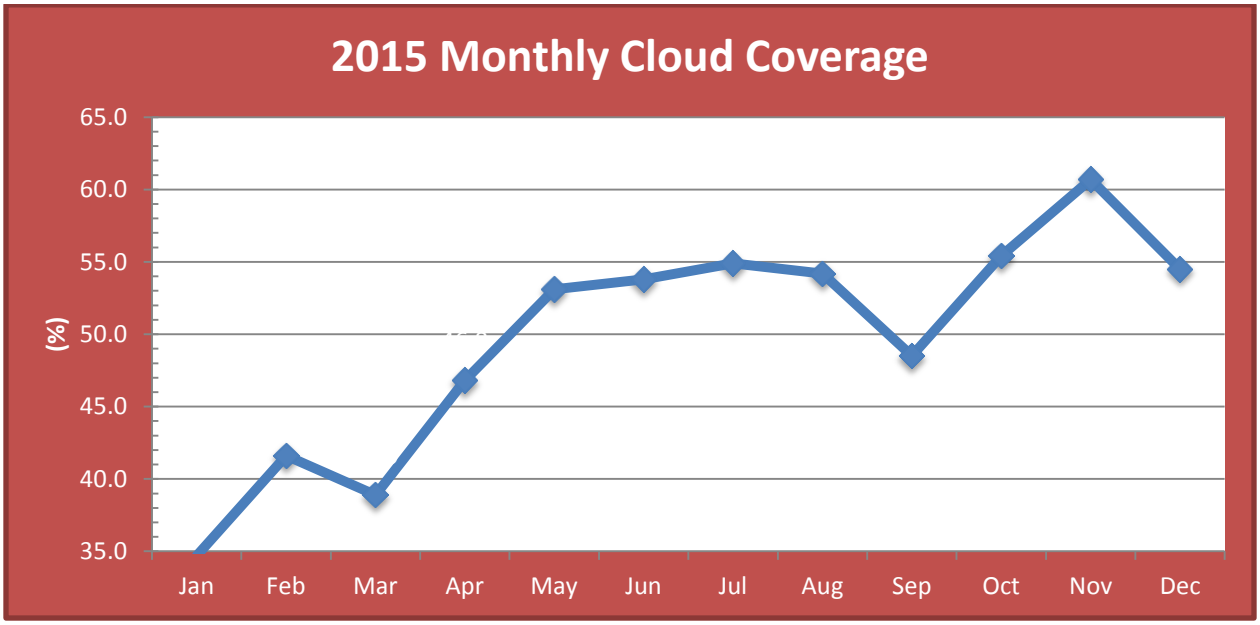
Air Pressure

At the Princess Juliana International the average Mean Sea-Level Pressure for 2015 was **1016.5 millibars**. The Highest daily average was recorded on June 24th as 1020.9 mb while the lowest daily average of 1009.3 mb occurred on October 1st .



Cloud Cover

The average cloud cover for St. Maarten over the past year as recorded at the Princess Juliana International Airport was 49.8 %. The *highest monthly average cloud cover* was 60.7 % during the month of **November** while **January** had the *lowest value* of 34.7 %.

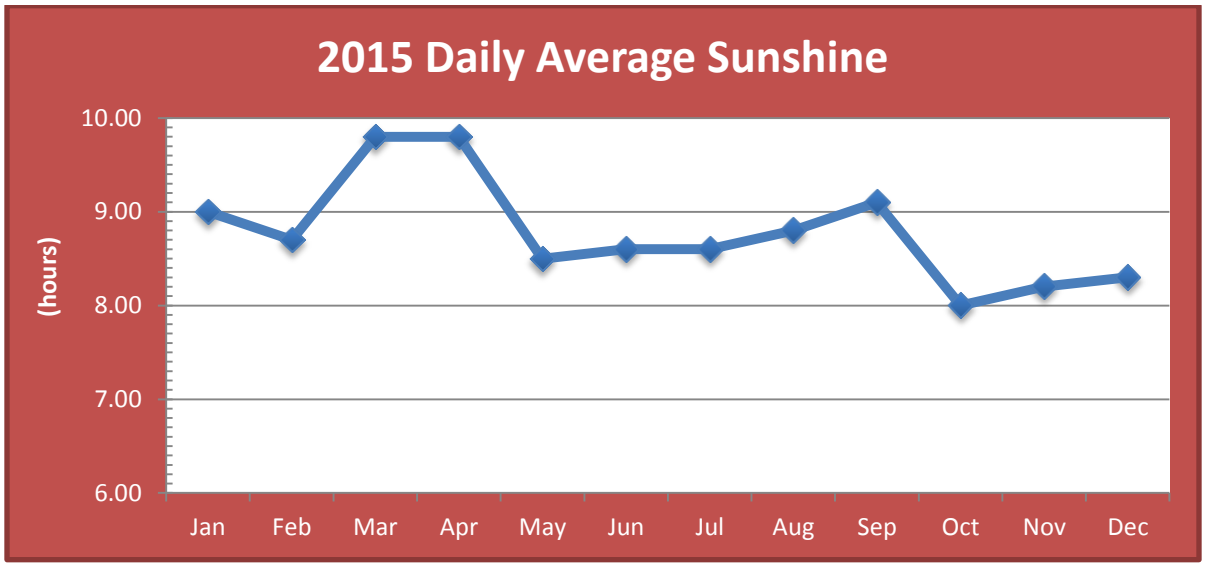


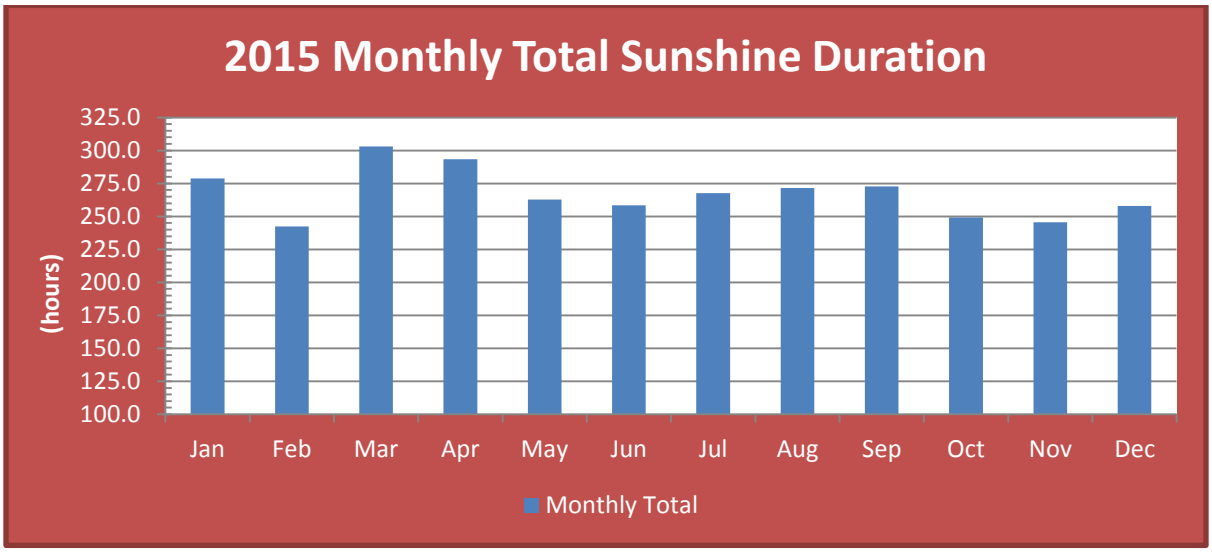
Sunshine Duration

Approximately 72% of possible sunshine was recorded at the surface at the Princess Juliana International Airport, that is, 3204.0 hours out of a possible 4443.1 hours. The *average daily sunshine duration* was **8 hours 48 minutes**.

March received the most hours of sunshine in 2015, while **February** received the least. Daily average sunshine was the highest in the months of March and April; 9 hours and 48 minutes per day; while the lowest average was recorded in the month of October as 8 hours 2 minutes per day.

Maximum daily sunshine hours was recorded on **April 21st** as 11 hours 54 mins. On **October 8th** just 54 minutes of sunshine was recorded due to cloudy to overcast skies.





Statistic Summary

Below is a recap of the 2015 climate data, in terms of averages, extremes, and totals:

Rainfall		
Total Rainfall for the year	495.4 mm	19.5 inches
Wettest Month	106.1 mm/4.2 in	November
Driest Month	8.4 mm/0.3 in	July
24-hr Maximum Rainfall	37.2 mm/1.5 in	October 25th
Number of Rain Days (with 1.0+ mm)	112 days	
Number of Heavy Rain Days (with 10.0+mm)	7 days	
Temperature		
Average Air Temperature	27.6 °C	82 °F
Absolute Maximum Temperature	32.8 °C/ 91 °F	*September 22nd*
Absolute Minimum Temperature	22.1 °C/ 72 °F	*January 12th*
Warmest Month	29.1°C/84 °F	*September & October*
Coolest Month	26.0°C/79 °F	*March*
Average Relative Humidity	72 %	
Wind & Pressure		
Average Wind Speed	9.4 knots	10 mph
Average wind Direction	95 degrees	*East*
Maximum Wind Gust	46 knots/79 mph	*August 27th*
Most frequent category speed	5-10 knots	*46%*
Average Air Pressure	1016.6 mbs.	
Clouds & Sunshine		
Average Cloud Coverage	49.8 %	
Average Daily Sunshine Duration	8 hours : 48 minutes	
Monthly Maximum Sunshine	*March*	
Month Minimum Sunshine	*February*	
Daily Maximum Sunshine	*11 hrs. 54 min.*	*April 21st*
Daily Minimum Sunshine	*54 min.*	*October 8th*

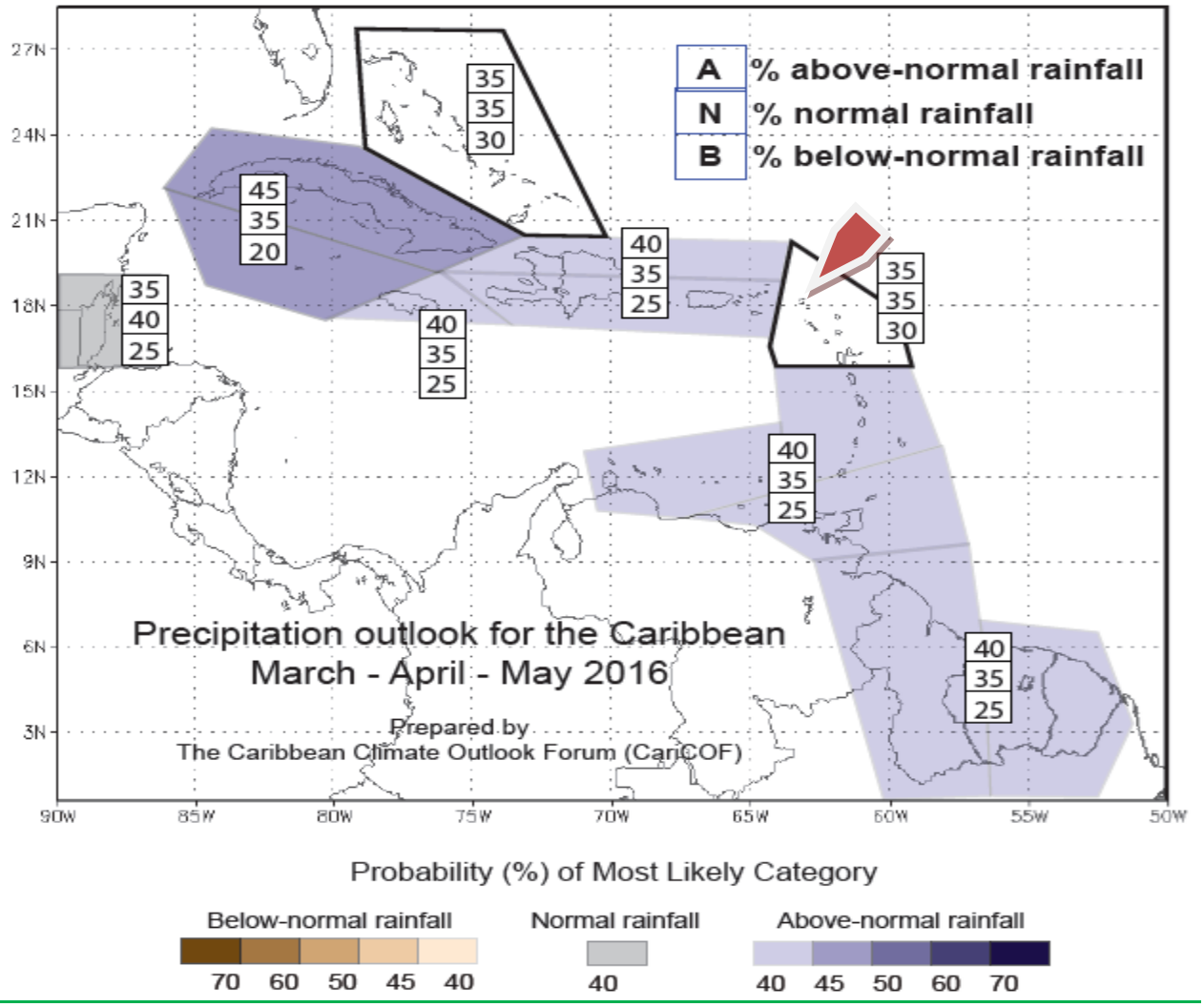
Conclusion

This report provides a summary of all the meteorological data recorded at the Princess Juliana International Airport during the year 2015. The data was collected from various meteorological parameters under regulations stipulated by the World Meteorological Organization (WMO). These elements include rainfall, relative humidity, atmospheric pressure, wind speed and direction, cloud cover and sunshine duration among others.

The Meteorological Department St. Maarten (MDS) records and compiles climatological data for use in research in a number of fields and institutions. Records go as far back as the 1950's in certain parameters. Requests for data must be put in writing through the Department Head.

Outlook for 2016

Rainfall Outlook for Mar-Apr-May 2016



Rainfall for the next three (3) months March-April-May 2016 is expected to be near normal for the northeast Caribbean. Normal rainfall for this season ranges between 162.5 mm – 262.0 mm or 6-10 inches. Based on historical data, the current state of the weather and some subjective input, St. Maarten is likely to experience **near normal Rainfall** during the next three (3) months. There is a **35%** chance of being ***Above Normal*** (more than 262.0 mm); a ***35%*** chance of being ***Near Normal*** (between 162.5 mm and 262.0 mm); and a **30%** chance of being ***Below Normal*** (less than 162.0 mm).

Note that the area indicated by the red arrow is the northeast Caribbean Region.

List of Cyclone names for 2016 Tropical Atlantic Hurricane Season

- ALEX
- BONNIE
- COLIN
- DANIELLE
- EARL
- FIONA
- GASTON
- HERMINE
- IAN
- JULIA
- KARL
- LISA
- MATTHEW
- NICOLE
- OTTO
- PAULA
- RICHARD
- SHARY
- TOBIAS
- VIRGINIE
- WALTER

BE PREPARED!!!

BE ALERT!!!

BE READY!!!

Be reminded that it only takes one storm to impact our island to make it an active season for us. Therefore, Everyone should prepare for every season, regardless of how much activity is predicted.

Appendix

Stages of Tropical Cyclone Development

Below are the decisive factors (criteria) for the various development stages for tropical cyclones:

Stage	Criteria
Tropical disturbance	A discrete system of clouds, showers, and thunderstorms that originates in the tropics and maintains its identity for 24 hours or more.
Tropical wave	A type of trough of low pressure or tropical disturbance that moves generally from east to west, typically embedded in the tropical easterlies. They are also sometimes called easterly waves.
Tropical Depression	A tropical disturbance that has developed a closed circulation (counterclockwise winds blowing around a center of low pressure in the Northern Hemisphere). Tropical depressions contain maximum sustained (1-minute) winds of 38 mph (62 km/h or 33 knots) or less.
Tropical Storm	A well-organized warm-core tropical cyclone that has maximum sustained (1-minute) winds of 39-73 mph (63-118 km/h or 34-63 knots). Once a system reaches tropical storm status, it is given a name by the National Hurricane Center (located in Miami, Florida).
Hurricane	A warm-core tropical cyclone that has maximum sustained (1-minute) winds of at least 74 mph (119 km/h or 64 knots). Hurricanes are categorized by the Saffir-Simpson Scale (*see next page*).
Extra-tropical Cyclone	A cyclone that is no longer tropical in origin, which usually means the system moves away from the tropics and moves toward the poles. An extra-tropical cyclone has no wind speed criteria and may exceed hurricane force.
Subtropical Cyclone	A closed circulation, low-pressure system that has characteristics of both tropical and extra-tropical cyclones. Subtropical cyclones typically have a radius of maximum winds occurring relatively far from the center (usually more than 60 nautical miles), and generally have a less symmetric wind field and distribution of convection (clouds and thunderstorms).
Post-tropical Cyclone	A former tropical cyclone that no longer possesses sufficient tropical characteristics to be considered a tropical cyclone. Post-tropical cyclones can, however, continue carrying heavy rains and high winds.

Saffir-Simpson Hurricane Scale

The Saffir-Simpson Hurricane Wind Scale is a 1 to 5 rating based on a hurricane's sustained wind speed. This scale estimates potential property damage. Hurricanes reaching Category 3 and higher are considered major hurricanes because of their potential for significant loss of life and damage.

	Category	Max. Sustained Winds			Effects
		mph	km/h	knots	
	1	74 - 95	119 - 153	64 - 82	**Minimal Damage**
	2	96 - 110	154 - 177	83 - 95	**Moderate Damage**
Major	**3**	111 - 129	178 - 208	96 -112	**Extensive Damage**
	4	130 - 156	209 - 251	113 - 136	**Extreme Damage**
	5	157+	252+	137+	**Catastrophic Damage**

Watches & Warnings

Tropical Storm Watch

Issued when tropical storm conditions (sustained winds of 39-73mph, 63-118 km/h, or 34-63 knots) are *possible* within the specified area within the next 48 hours (2 days).

Tropical Storm Warning

Issued when tropical storm conditions (sustained winds of 39-73mph, 63-118 km/h, or 34-63 knots) are *expected* somewhere within the specified area within the next 36 hours (1.5 days).

Hurricane Watch

Issued when hurricane conditions (sustained winds of 74+ mph, 119+ km/h, or 64+ knots) are *possible* within the specified area within the next 48 hours (2 days).

Hurricane Warning

Issued when hurricane conditions (sustained winds of 74+ mph, 119+ km/h, or 64+ knots) are *expected* within the specified area within the next 36 hours (1.5 days).

Note: Hurricane preparedness activities become difficult once winds reach tropical storm force, therefore, hurricane watches & warnings are issued well in advance of the anticipated onset of tropical-storm-force winds.

Published by:

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