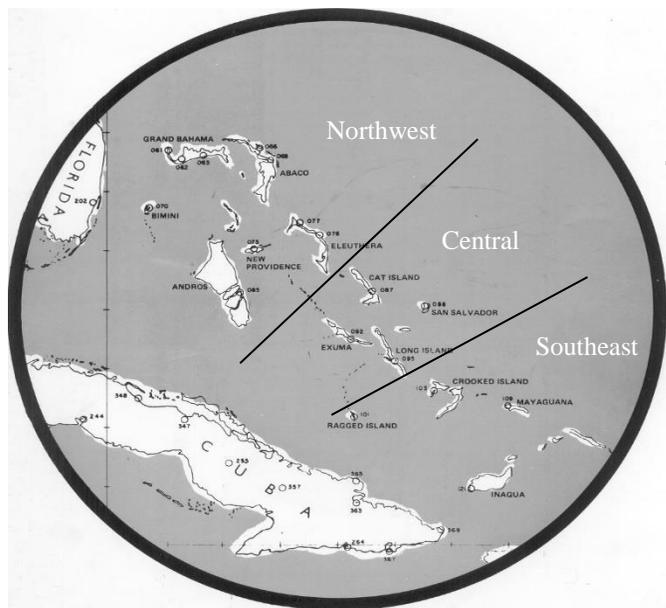




Commonwealth of The Bahamas

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WEATHER LOG

SEPTEMBER, 2021

GENERAL WEATHER SITUATION OVER THE BAHAMAS

The month of September, the peak of the hurricane season, produced eight tropical cyclones one more storm than the month of August. Hurricane Sam was the strongest hurricane so far for this season with maximum winds of 155 mph. Fortunately, The Bahamas was spared a direct hit from all of these storms. The islands however, were affected by ocean swells generated as the storms traversed the wider Atlantic Ocean. The weather condition across The Bahamas was influenced by several low to upper-level troughs or low pressure systems combined with prefrontal or cold front activities. The interaction of these systems with moist and unstable air masses prompted the issuance of numerous Severe Weather Warnings. Even though, there were consistent cloudy to overcast days with scattered showers and thunderstorms, the mean maximum and minimum monthly temperatures were both above average for New Providence. The relative humidity continued a steady fall below average that is, below 80 percent. Rainfall totals for New Providence were significantly above average, while surprisingly, the total sunshine hours for New Providence was above the average. The monthly average wind speed of 4.4 knots was below the mean average speed for this month.

During the first days of September (01st – 04th), an upper-level trough with a weak surface trough triggered pockets of unsettled weather while a high pressure ridge weakened over the area. Two Severe Thunderstorm Warnings were issued between 2:40 pm and 6:10 pm on 01st September for Grand Bahama, Andros, and New Providence along with their adjacent waters. These warnings were discontinued at 5:15 pm. On the 03rd and 04th, a frontal boundary near the Northern Bahamas along with deep layered troughing and a tropical wave in the vicinity of the Southeast Bahamas increased severe weather activity. Severe Thunderstorm Warnings were issued between 9:35 pm 04th September to 1:35 am 05th September for Crooked Island, Acklins, Long Island, and Mayaguana along with their adjacent waters. No advisories were issued for Small Craft Operators. Mariners and Beachgoers were advised to be vigilant for the threat of waterspout activity. The public was advised to limit outdoor activities and remain hydrated as heat indices soared into the triple digits. Residents in flood-prone areas in the Extreme Northwest Bahamas were advised to take necessary precautions during heavy downpours and prolonged rainfall events. High temperatures ranged from the low to mid 90's (°f) and low temperatures ranged from the low 70's (°f) to low 80's (°f) across the Bahamas.

By 05th September through to the 11th, deep layered troughing coupled with streaming, tropical moisture triggered pockets of unsettled weather across portions of the Northwest and Central Bahamas. Severe Thunderstorm Warnings were issued on September 05th for Abaco, Grand Bahama, Eleuthera, Exuma, Cat Island, Long Island, San Salvador, and New Providence along with their adjacent waters between 8:45 am EDT to 8:40 pm EDT. A Severe Thunderstorm Watch was issued for the same date from 8:45 am EDT to 12:45 pm EDT for the northern Berry Islands and East-End, Grand Bahama, followed by other Severe Thunderstorm Warnings on September 06th between 12:00 pm EDT and 6:00 pm EDT for Grand Bahama, The Abacos, The Berry Islands, Andros, New Providence, Eleuthera, and the northern Exuma Cays along with their adjacent waters. Severe Thunderstorm Warnings were issued again on September 08th between 12:25 pm EDT to 2:50 pm EDT for Grand Bahama, Abaco, New Providence, Eleuthera, South Andros, and Cat Island along with their adjacent waters. Meanwhile, a Severe Thunderstorm Watch went into effect for the Berry Islands with their adjacent waters. The final Severe Thunderstorm Warning was issued on Friday, 10th September between 3:56 pm EDT and 5:56 pm EDT for the islands of North Andros, Grand Bahama, and Central Abaco along with their adjacent waters. A weak high pressure ridge pattern continued over the Bahamas as ocean swells generated by Hurricane Larry in the central Atlantic Ocean affected the area. Residents in the Northwest and Central Bahamas were alerted to possible flooding in low-lying and flood-prone areas. Residents and Mariners were advised to remain vigilant for funnel clouds and waterspout activity. Beachgoers were reminded of possible rip currents along east coast beaches. The public was urged to remain hydrated and to limit outdoor activities, as heat indices were expected to reach triple digits. In the Northwest and Central Bahamas the weather was variably cloudy, hot, and humid with widely scattered showers and isolated thunderstorms. Some showers became heavy and thunderstorms strong or severe at times mainly across the Northwest Bahamas. In the Southeast Bahamas weather was partly cloudy, hot and humid with the chance of an isolated shower or thunderstorm, turning mostly fair and warm at night with the slight chance of a shower. A Small Craft Caution went into effect across the Bahamas due to easterly swells generated by Hurricane Larry along Atlantic exposures. High temperatures ranged from the low to mid 90's (°f) and low temperatures ranged from the low 70's (°f) to low 80's (°f) across the Bahamas.

During the week of September (12th – 18th), a frontal boundary just to the north of the area interacted with the northern extent of a tropical wave to create moist and unstable conditions across the Bahamas. As the Tropical wave exited the Southeast Bahamas and the frontal boundary dissipated, they were replaced by streaming tropical moisture associated with Hurricane Nicholas. This moisture enhanced by a surface trough, connected to a developing low pressure well northeast of Abaco, produced inclement weather across The Bahamas. Several Severe Thunderstorm Warnings were issued between Sunday 12th September and Monday 13th September between 1:20 am EDT to 3:00 pm for the islands of New Providence, North Andros, Abaco, Eleuthera, Grand Bahama, Bimini, and the Berry Islands along with their adjacent waters. Two more Severe Thunderstorm Warnings were issued on Thursday, 16th September between 8:30 pm EDT to 11:45 pm EDT for New Providence, North Eleuthera, and the Northern Exuma Cays along with their adjacent waters. A Severe Thunderstorm Watch was issued for North Eleuthera early in the day on Thursday. Residents and Mariners were advised to be alert for possible waterspout and tornadic activity. Beachgoers were advised to limit outdoor activities due to high heat indices that reached the triple digits. A Small Craft Caution went into effect for a short period for the Central and Southeast Bahamas. Mariners were advised to be alert for gusty winds and higher seas in or near heavy showers or thunderstorms, as some showers may become heavy and some thunderstorms strong or severe at times. Weather in the vicinity of the trough was variably cloudy, warm, and humid with few scattered showers and isolated thunderstorms mainly but partly sunny, hot, and humid with isolated showers and thunderstorms elsewhere. High temperatures ranged from the low to mid 90's (°f) and low temperatures ranged from the low 70's (°f) to low 80's (°f) across The Bahamas.

During the third week of September (19th – 25th) multiple layered troughs across and near the Bahamas coupled with moist and unstable air mass triggered pockets of unsettled weather mainly across the Northwest and Central Bahamas. Later in the week, prefrontal activity affected the Northern Bahamas as a frontal boundary slowly sank southward across the Florida Peninsula. Severe Thunderstorm Warnings were issued on Friday 24th and Saturday 25th September between 9:10 pm EDT to 11:10 am EDT and 11:00 am EDT to 7:00 pm EDT respectively for North Eleuthera, North Andros, New Providence, Northern Exuma Cays, Abaco, and Grand Bahama along with their adjacent waters. Mariners and Residents in the Northwest and Central Bahamas were advised to be vigilant for possible funnel clouds and/or tornadic activity. Residents in low-lying and flood-prone areas were advised to exercise caution due to possible localized flooding during heavy and/or prolonged rainfall events. The public was advised to remain hydrated and limit outdoor activities due to high heat indices reaching triple digits. The weather in the Northwest and Central Bahamas was variable cloudy, hot, and humid with widely scattered showers and isolated thunderstorms throughout the night, some showers were locally heavy and thunderstorms strong or severe at times. In the Southeast Bahamas, the weather was partly to mostly sunny and hot with a few passing showers and an isolated thunderstorm. Tropical Storm Peter in the Central Atlantic Ocean generated moderate easterly swells toward Atlantic exposures in The Bahamas. Due to this, a Small Craft Caution went into effect for Central and Southeast Bahamas. High temperatures ranged from the low to mid 90's (°f) and low temperatures ranged from the mid 70's (°f) to low 80's (°f) across The Bahamas.

The last week of September (26th – 30th), a surface trough, followed by a frontal boundary interacted with a moist and unstable air mass that triggered unsettled weather across portions of the archipelago. Later in the week, a high pressure ridge formed north of the area and a surface trough developed across the Central Bahamas. This surface trough coupled with a mid to upper level trough enhanced convective activity throughout the islands. On Sunday, 26th September three Severe Thunderstorm Warnings were issued for Eleuthera, New Providence, Cat Island, and Exuma along with their adjacent waters owing to the interaction of a prefrontal trough with a moist and unstable air mass. Mariners and residents were advised to be on alert for possible waterspouts or possible tornadic activity. Residents were advised that flooding in low-lying and flood-prone areas was likely during heavy downpours or prolonged rainfall events. They were further implored to limit outdoor activities and remain hydrated as heat indices soared to triple digits. Weather was variably cloudy, very warm, and humid with scattered showers and isolated thunderstorms, some showers were locally heavy and thunderstorms strong or severe at times. Small Craft Operators were urged to be on alert for gusty winds, reduced visibility, and higher seas in or near heavy showers and thunderstorms. High temperatures ranged from the mid 80's (°f) to low 90's (°f) and low temperatures ranged from the mid 60's (°f) to low 80's (°f) across The Bahamas.

Tropical Weather Summary

On the foot heels of the formation of seven tropical cyclones in the month of August, a total of eight cyclones formed in the month of September. Five of these storms were tropical and one subtropical, two were hurricanes one of which became a major hurricane.

1. Tropical Storm Mindy began as a broad area of low pressure in the southern Caribbean Sea near the coast of Columbia, South America. This low pressure system moved across the Central American coast of Nicaragua into eastern Honduras, then crossed Belize and the central Yucatan to enter the southern Gulf of Mexico. As the low pressure system developed in the central and eastern Gulf of Mexico, it became better organized. The National Hurricane Center (NHC) issued the first advisory for Tropical Storm Mindy on September 08th, 2021. Mindy made landfall on September 09th across Northern Florida with a maximum wind at 45 mph. It

weakened to a depression before exiting offshore of Georgia's coast. Mindy became extratropical and was absorbed by a cold front on September 10th. This storm was not a threat to The Bahamas.

2. Hurricane Nicholas formed from the northern extension of a tropical wave moving westward over the western Caribbean Sea across Belize, the Yucatan, and towards the Bay of Campeche. In the Southern Gulf of Mexico, it interacted with a surface trough and became better organized. On September 12th the National Hurricane Center named the disturbance Tropical Storm Nicholas. Nicholas was upgraded to a hurricane on September 14th and it made landfall in Southern Texas with maximum sustained winds of 75 mph. The storm was downgraded to a tropical storm as it moved near Galveston Bay, on September 15th it weakened further to a tropical depression. Nicholas became stationary near Marsh Island, Louisiana coast, and became a post-tropical storm. This storm was not a threat to the Bahamas.

3. Tropical Storm Odette started as an area of low pressure near the Southeast Bahamas on September 11th, the disturbance became a storm on September 12th. Odette encountered a hostile environment as it moved northward becoming extratropical on September 18th. The remnants of Odette moved through the western Atlantic Ocean until dissipating on September 27th. Odette was not a threat to the Bahamas.

4. Tropical Storm Peter formed from a tropical wave that moved off the west coast of Africa. After traveling across the Central Atlantic Ocean, the disturbance became more organized with a defined center and deep convection. The National Hurricane Center called it a tropical depression on September 19th. The depression became Tropical Storm Peter on the same day. The storm moved into a more hostile environment with strong wind shear near the northern Leeward Islands. Tropical Storm Peter brought heavy rain showers to the Virgin Islands, Puerto Rico, and the neighboring islands as it moved north and northeast over the Central Atlantic Ocean on September 21st. The system became a tropical depression and further deteriorated to a remnant low pressure system on September 23rd, before dissipating completely on September 29th. Peter was not a direct threat to the Bahamas but produced ocean swells that affect the area.

5. Tropical Storm Rose developed from a tropical wave that came off the western coast of Africa. The tropical wave first formed a low pressure center, became better organized eventually developing into a tropical depression on September 19th. The system continued to develop, on the same day, and was given the name Tropical Storm Rose. Rose entered a hostile environment with high wind shear in the eastern Atlantic Ocean that weakened it to a tropical depression. By 23rd September, Rose became a post-tropical cyclone, it was not a threat to The Bahamas.

6. Hurricane Sam began as a tropical wave over western Africa on September 19th, it transitioned into an organized area of showers and thunderstorms in the far eastern Atlantic Ocean. On 22nd September, the system became a tropical depression moving into favorable environmental conditions. On 23rd September, the depression became Tropical Storm Sam. Within 24 hours, Sam became a category 1 hurricane and rapidly intensified to category 3 status on 25th September. The hurricane intensified to a category 4 storm while moving over the waters of the Central Atlantic Ocean with maximum sustained winds of 150 mph. Sam passed east-southeast of Bermuda as it accelerated north-northwestward into the cooler North Atlantic waters. On October 04th, Sam was downgraded to a category 1 storm. However on 5th October, it became a powerful post-tropical cyclone after it was engulfed by a mid-latitude extra-tropical cyclone. Sam was not a threat to the Bahamas.

7. Subtropical Storm Teresa started in the Central Atlantic Ocean as a non-tropical surface low southeast of Bermuda. The system interacted with an upper-level trough as it moved

northwestwards, and then became better organized with a well-defined center that produced gale-force winds near its northern sector. On September 24th the National Hurricane Center named the system Subtropical Storm Teresa. Teresa was downgraded to Subtropical Depression Teresa when it entered cooler waters with strong wind shear. The system quickly became post-tropical and later weakened to a remnant low pressure system. Teresa was not a threat to the Bahamas.

8. Tropical Storm Victor formed in the far eastern Atlantic Ocean, it began as a tropical wave moving off the coast of western Africa. This wave became a well-organized low pressure system that the National Hurricane Center named Tropical Depression Twenty, on 29th September. The depression further strengthened into Tropical Storm Victor and increased to a peak intensity of 65 mph as it moved northwestward. On 02nd October, Victor encountered a hostile environment and was downgraded to a tropical depression. By 04th October, the depression further weakened to a trough of low pressure over the Central Atlantic. Victor was not a threat to the Bahamas.

General Weather Situation over New Providence for September 2021

The mean maximum daytime temperature of 91.1°F rose 1.2°F above the average for September, the mean minimum nighttime temperature of 76.4°F fell 4.9°F below average. The mean relative humidity was 79.0 percent, just 1.0 percent below the mean monthly average. The total rainfall was 12.03 inches, well above the mean monthly rainfall total of 7.70 inches. The daily average sunshine hours was 7.9, slightly above the mean daily sunshine for the month of 7.5 hours. The winds were predominantly from the east to southeast and north to northeast at an average speed of 4.4 knots, 1.5 knots below the statistical average. The standard deviation for the month was 1.0°F.



Geoffrey Greene
For (Director)