## **Commonwealth of The Bahamas**

DEPARTMENT OF METEOROLOGY



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## WEATHER LOG OCTOBER 2024

## GENERAL WEATHER SITUATION OVER THE BAHAMAS

During the first week of October  $(01^{st} - 05^{th})$ , surface high pressure dominated the weather with light breezes and elevated temperatures. However, later in the week, a developing low pressure offshore of the Carolinas dragged a frontal boundary southward into The Bahamas through the weekend. A slight mid to upper level troughing enhanced pockets of showers across the islands. The Bahamas Department of Meteorology (BDM) issued a Special Weather Statement Concerning Significant Marine and Land Impacts Associated with Tropical Systems at 3:00 pm EDT on Friday, 04th October 2024. Large to moderate swells were expected to create dangerous maritime conditions on the weekend through Tuesday as Hurricane Kirk interacted with a gale-force low pressure system east of Bermuda. The forecast highlighted the potential impacts of high seas, strong gusty winds, heavy to severe rainfall and the risk of flash flooding across the Northern, Northwest, and Central Bahamas. There was a marginal risk for rip currents for all areas along Atlantic exposures. The public was urged to remain hydrated, wear protective and loose clothing, sunglasses and sunscreen, and seek shaded or air-conditioned spaces during peak sunshine hours due to the Bahamas' high heat and UV indices. The high temperatures ranged from the low to mid 90's°F and the low temperatures from the mid 70's°F to low 80's°F across The Bahamas.

As the second week of October  $(06^{th} - 12^{th})$  came around, high pressure ridge over the island chain and streaming tropical moisture enhanced isolated pockets of showers and thunderstorms over the Bahamas. A Special Weather Statement was reissued by the BDM at 3 pm Monday, 07th October 2024, for the potential for hazardous marine and severe weather conditions likely during the week. By mid-week, tropical moisture and instability increased over portions of the Northern, Northwest, and Central Bahamas as a low pressure system in the eastern Gulf of Mexico, aided with ample moisture from Tropical Cyclone Milton in the southwestern Gulf of Mexico, moved over or near the Northern Bahamas. Additionally, before this happened, a low pressure trough attached to a frontal boundary deepened into a low pressure system across the Northern Bahamas. However, it had a low percentage of tropical development over the Northern Bahamas, triggering convective activity across much of the Northern, Northwest, and Central Bahamas as it moved eastward. At 11:30 am EDT Tuesday, 07th October 2024, the BDM issued the final Special Weather Statement of Land and Marine Impacts Associated with Hurricane Milton and a weak low pressure system, followed by Alert #1 on Hurricane Milton stating a Tropical Storm Watch was in effect for the Northern Bahamas. These islands included Grand Bahama, Bimini, and Abaco, along with their adjacent cays and surrounding waters. Rain bands associated with major Hurricane Milton produced bouts of unsettled weather across much of The Bahamas through Friday. Severe weather activity was expected to trigger potential waterspout and tornadic activity with the likelihood of flash flooding in low-lying and flood-prone areas during heavy or prolonged rainfall. As Milton became a post-tropical cyclone to the northeast of The Bahamas, it dragged a cold front/frontal boundary through the islands and the All Clear was given for Bimini, Grand Bahama, and Abaco. However, a Gale Watch and hazardous marine conditions kept mariners in port across the Northern and

Northwest Bahamas. Beachgoers and swimmers were urged to exercise caution due to the hazardous marine conditions and for their safety to remain onshore. There was the possibility of coastal flooding and rip currents along Atlantic coastlines and beaches due to high surf and moderate to large swells. The high temperatures ranged from the mid 80's°F to mid 90's°F and the low temperatures from the upper 60's°F to low 80's°F across The Bahamas.

By the third week in October (13<sup>th</sup> -19<sup>th</sup>), a frontal boundary dissipated near the Southeast Bahamas and Turks and Caicos Islands as a surface trough supported showers and thunderstorms across the archipelago. A high pressure system to the north of the area produced moderate to fresh breezes and streaming moisture. At the same time, a multi-layered disturbance maintained pockets of unsettled weather ahead of a cold front approaching the Northern Bahamas by late Wednesday. On Thursday, the front became quasi-stationary between the Northwest and Central Bahamas. On Friday, a Gale Watch was in effect for the entire Bahamas through the weekend, as the AL94 tropical disturbance kept a strong pressure gradient around the Southeast Bahamas. By noon Saturday, Tropical Storm Oscar formed east of the Turks and Caicos Islands. Oscar was quickly updated to a hurricane by 6 pm EDT as it moved towards the east, triggering a Hurricane Warning for the Turks and Caicos Islands and the Southeast Bahamas (Mayaguana, Inagua, Crooked Island, Ragged Island, Acklins, and Long Cay). Compact Hurricane Oscar moved westward toward Great Inagua, and all mariners were urged to seek safe harbour and remain in port. A frontal boundary near the Central Bahamas produced strong gusty winds and the threat of funnel cloud or waterspout activity. Flooding was likely in the Northern and Northwest Bahamas, especially in low-lying and flood-prone areas during prolonged or heavy rainfall. Dangerous sea swells affect exposed islands' northern and eastern coastlines, and swimmers or beachgoers were urged to remain onshore. The start of spring tide caused minor to moderate coastal flooding and field flooding in or along marshlands. The high temperatures ranged from the low 80's°F to low 90's°F and the low temperatures from the low 70's°F to low 80's°F across The Bahamas.

During the fourth week in October  $(20^{th} - 26^{th})$ , small and compact Hurricane Oscar moved westward and across southern Great Inagua, passing just south of Matthew Town with hurricane-force winds extending outward up to 5 miles from the center and tropical storm force winds extending outward to 45 miles from the center. Oscar was moving westward at nearly 12 mph, with maximum sustained winds near 85 mph with higher gusts. Hurricane-force winds affected Inagua through late Saturday morning and tropical storm-force winds affected the island through late afternoon. Rainfall amounts of 2 to 4 inches with isolated maxima of up to 6 inches were expected to produce significant flooding and a storm surge of 2 to 4 feet along the coast. The tornadic activity was likely during the system's passage due to heavy downpours and strong to severe thunderstorms. The BDM updated a hurricane and Tropical Storm Warnings and Watches with the Southeast Bahamas remaining under a Hurricane Warning except for Mayaguana and the Turks and Caicos Islands were downgraded to a Tropical Storm Warning. A Gale Watch was in effect for the Northern, Northwest, and Central Bahamas, as a stationary front enhanced showers across the Central Bahamas. As Oscar moved across eastern Cuba and exited its northern coasts, it became post-tropical and moved between Long Island and Crooked Island. All warnings were discontinued, and the final All Clears were given at 2 pm EDT Tuesday. Several weak frontal boundaries passed through the Bahamas along with a westward-moving tropical wave that increased showery activity. However, a high pressure system over the area maintained primarily stable and dry conditions for the Northern and Northwest Bahamas. Elsewhere, there was a high risk of flooding in the Central and Southeast Bahamas due to heavy and prolonged rainfall exasperated by spring tides during the high tide cycle. Motorists and pedestrians were urged to exercise extreme caution while traversing coastal roadways along northern and eastern shorelines. The Glass Window Bridge in North Eleuthera often suffers from overtopping waves and sea spray that may cause coastal inundation and reduced visibility. A special Weather Statement was issued by the BDM for strong winds to Gale-force winds at 6 pm EDT Friday, 25th October 2024, for the entire Bahamas and Turks and Caicos Islands. The high temperatures ranged from the mid 80's°F to low 90's°F and the low temperatures from the upper 60's°F to upper 70's°F across The Bahamas.

The final days of October  $(27^{th} - 31^{st})$  had a building high pressure system over the area and a stalled frontal boundary near the Windward Passage that generated breezy to windy conditions as another cold front moved through by mid-week. A Special Weather Statement was issued by the BDM on strong to Gale-Force winds on Monday,  $28^{th}$  October 2024 at 4 pm EDT. Beachgoers in the Northern and Northwest Bahamas were advised to exercise caution due to a moderate risk of rip currents and to refrain from entering the water, as in the Central and Southeast Bahamas. By Tuesday, the additional influence of tropical moist air from the west triggered increased showers and isolated thunderstorms. A Gale Watch was in effect for the entire Bahamas, so mariners were urged to remain in port and beachgoers to refrain from entering the water due to life-threatening rough surf, high seas, large swells and rip currents. Motorists and pedestrians were urged to exercise extreme caution when traversing along northern and eastern shorelines due to coastal erosion, sea spray, and overtopping waves, especially along or near the

Glass Window Bridge in Eleuthera. The high temperatures ranged from the mid 80's°F to upper 80's°F and the low temperatures from the mid 60's°F to upper 70's°F across The Bahamas

## **General Weather Situation Over New Providence for October 2024**

The mean maximum daytime temperature  $(86.2^{\circ}F)$  fell  $0.8^{\circ}F$  below the normal average, and the mean minimum nighttime temperature  $(76.4^{\circ}F)$  rose  $1.9^{\circ}F$  above the normal average. The total rainfall was 8.95 inches, 2.45 inches above the mean average. The monthly mean relative humidity (76.0 percent) was three percent below the long-term mean. The daily average sunshine hours (6.6) was an hour below the 30-year norm. Wind speed averaged 13.9 knots, which was 6.8 knots above the 30-year average. The wind direction blew from the northeast through the east across the Bahamas. The standard deviation for the month was  $1.3^{\circ}C$ , the same as the norm.

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Geoffrey Greene For (Director)

<u>Supplementary</u> BDM – Bahamas Department of Meteorology

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