A satellite image of Earth showing a large, well-defined hurricane over the Atlantic Ocean. The hurricane has a clear eye and a dense, swirling cloud structure. The surrounding ocean is dark blue, and the landmasses of North and South America are visible in the background.

Significant Weather Impacts 2022 Turks and Caicos Islands

CMC63 • November 23, 2022

Dr. Holly Hamilton
Director of Meteorology
Turks and Caicos Islands Airport Authority
Turks and Caicos Islands

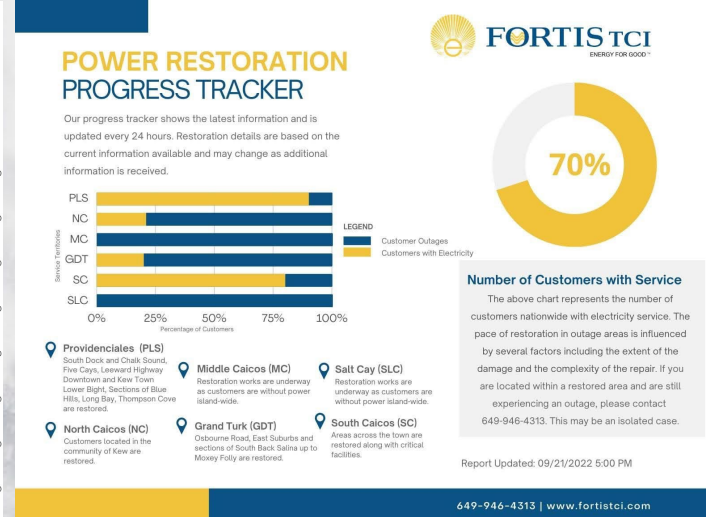
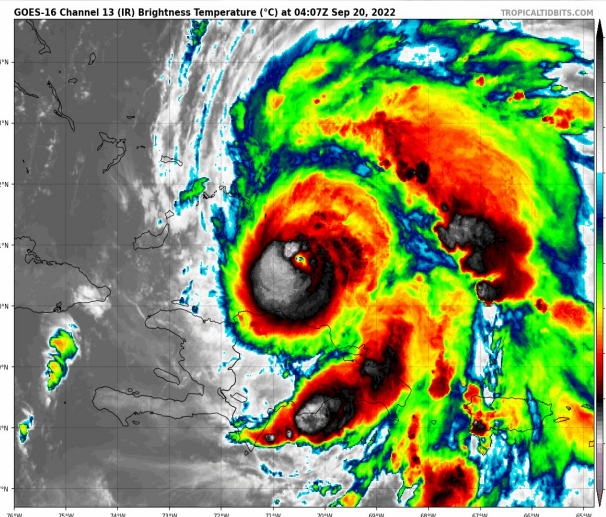
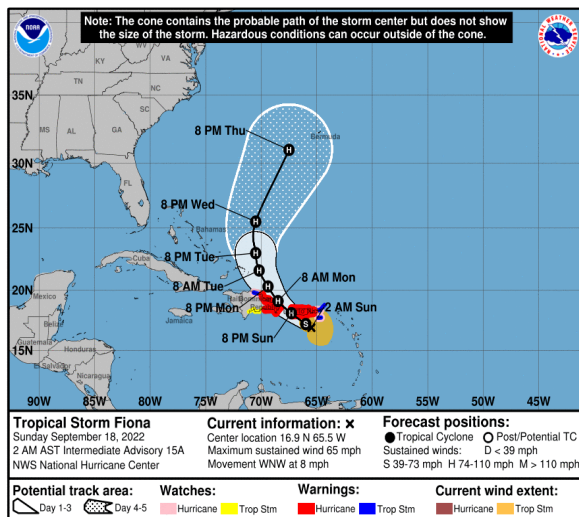
Turks and Caicos Islands

2022 Hurricane Season – Impacts



One (1) storm impacted the TCI in 2022, namely Fiona. Fiona impacted the TCI as a Cat3 hurricane on 19 to 20 September

The easternmost islands were the hardest hit. There was minimal damage to the western islands.

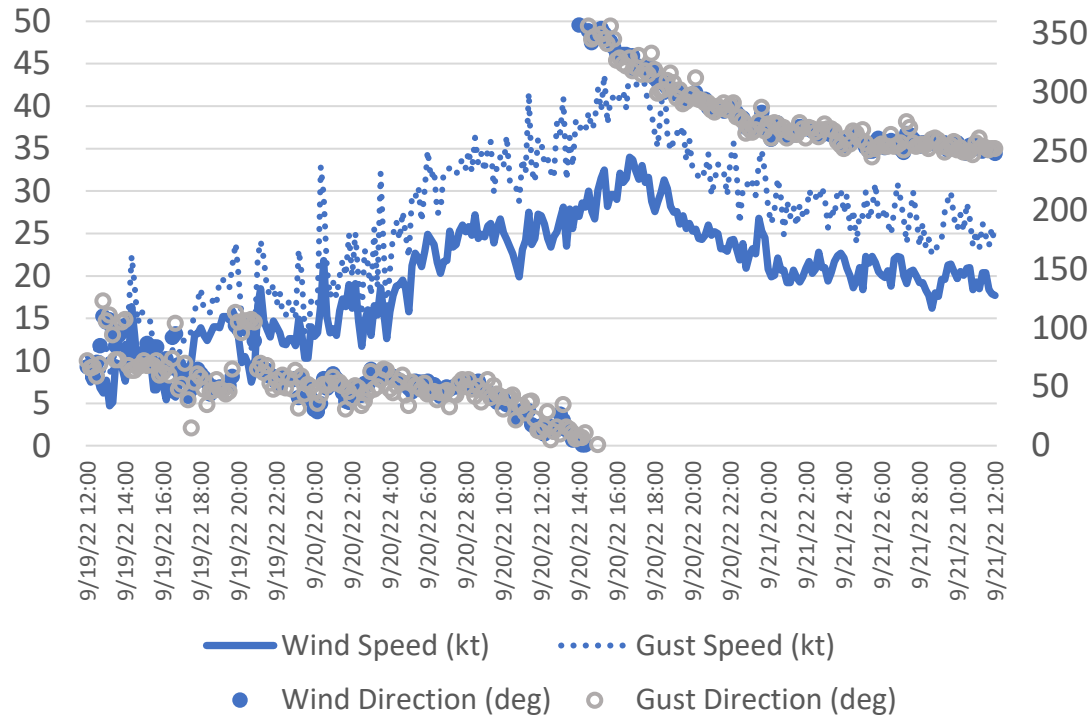


2 AM AST Sunday Sep 18 2022 NHC Official Track Forecast (left) and GIF of Fiona from 0412Z to 0517Z Sep 20 2022 (right)

Turks and Caicos Islands

2022 Hurricane Season – Impacts

Wind measurements from Station #78114
Providenciales International Airport



One (1) storm impacted the TCI in 2022, namely Fiona. Fiona impacted the TCI as a Cat2/Cat3 hurricane on 19 to 20 September

The easternmost islands were the hardest hit. There was minimal damage to the western islands.

Tropical storm conditions experienced in Providenciales and North Caicos. Hurricane conditions in Grand Turk, Salt Cay, South and Middle Caicos

There were no fatalities or injuries

Wind speed (kt) and wind direction (degrees) recorded at Providenciales International Airport from 12 PM Sep 19 2022 to 12 PM Sep 21 2022

Turks and Caicos Islands

2022 Hurricane Season – Impacts



2022 Hurricane Season – Best Practices

TCIAA Tropical Weather Advisory
 Valid until 1000AM EDT 18 September 2022

...THE BAHAMAS DEPARTMENT OF METEOROLOGY HAS ISSUED A HURRICANE ALERT FOR THE TURKS AND CAICOS ISLANDS...

- Citizens are advised to prepare for possible tropical storm conditions beginning Monday evening.
- A west-northwestward motion at a similar forward speed is expected to begin later today, followed by a turn toward the northwest by Sunday evening.
- Fiona is forecast to strengthen while moving near Puerto Rico and the Dominican Republic through Monday
- There is still some uncertainty in the track forecast once Fiona passes Puerto Rico. The Department of Meteorology and DDME will continue to monitor forecasts for the storm.

POSSIBLE IMPACTS
 Wind: Tropical storm force winds are possible Monday evening
 RAIN: 4 to 6 inches with isolated maximum up to 8 inches
 SURF: Swells generated by Fiona will reach the Turks and Caicos Islands by Sunday evening.

COORDINATES	LAT: 16.6° N - LON: 64.1° W
LOCATION	611 miles SE of GDT, Turks and Caicos Islands
MOVEMENT	Towards W at 8 MPH
MAX SUSTAINED WINDS	60 MPH

Download DDME ALERT Mobile App in your App store and stay informed #BeProactive #BePrepared #BeInformed

Began producing local products once Bahamas Dept of Meteorology issued a Hurricane Alert on September 17

TCIAA Met and DDME established issuance times for local Tropical Advisory (10 am and 4 pm) (more frequent while TCI was being impacted)

TCIAA Tropical Weather Advisory
 Valid until 0400 PM EDT 19 September 2022

...FIONA MAKES LANDFALL IN THE DOMINICAN REPUBLIC...
 ...HURRICANE WARNING IS IN EFFECT FOR THE TURKS AND CAICOS ISLANDS...

- As Fiona moves away from land, more significant strengthening is expected while it moves over the western Atlantic.
- The center of Fiona is forecast to pass near or to the east of the Turks and Caicos on Tuesday.

POSSIBLE IMPACTS
 WINDS: Hurricane conditions are expected in the Turks and Caicos on Tuesday.
 RAINFALL: 4 to 6 inches with isolated maximum of up to 8 inches. Rainfall is expected to be heavier in the more eastern islands. These rains will cause localized flooding of roads, properties, and communities.
 SURF: Swells generated by Fiona are beginning to affect the Turks and Caicos Islands. These swells will continue to spread westward across the southwestern Atlantic toward the central and northwestern Bahamas and the US east coast through midweek. These conditions could cause life-threatening surf and rip current conditions.

COORDINATES	LAT: 18.8° N - LON: 69.0° W
LOCATION	230 miles SE of GDT, Turks and Caicos Islands
MOVEMENT	Towards NW at 8 MPH
MAX SUSTAINED WINDS	90 MPH

Download DDME ALERT Mobile App in your App store and stay informed #BeProactive #BePrepared #BeInformed

Examples of Tropical Weather Advisory Key Messages Product

2022 Hurricane Season – Best Practices

Began producing local products once Bahamas Dept of Meteorology issued a Hurricane Alert on September 17

TCIAA Met and DDME established issuance times for local Tropical Advisory (10 am and 4 pm) (more frequent while TCI was being impacted)

Push Notifications through DDME Alert App and DDME Social Media outlets

App download: A total of 3202 new downloads were recorded between September 1 to 24, 2022. On 17th Sept, the most download per day recorded at 936 downloads (day of first press conference).

NEOC Press Conference briefings livestreamed on Facebook

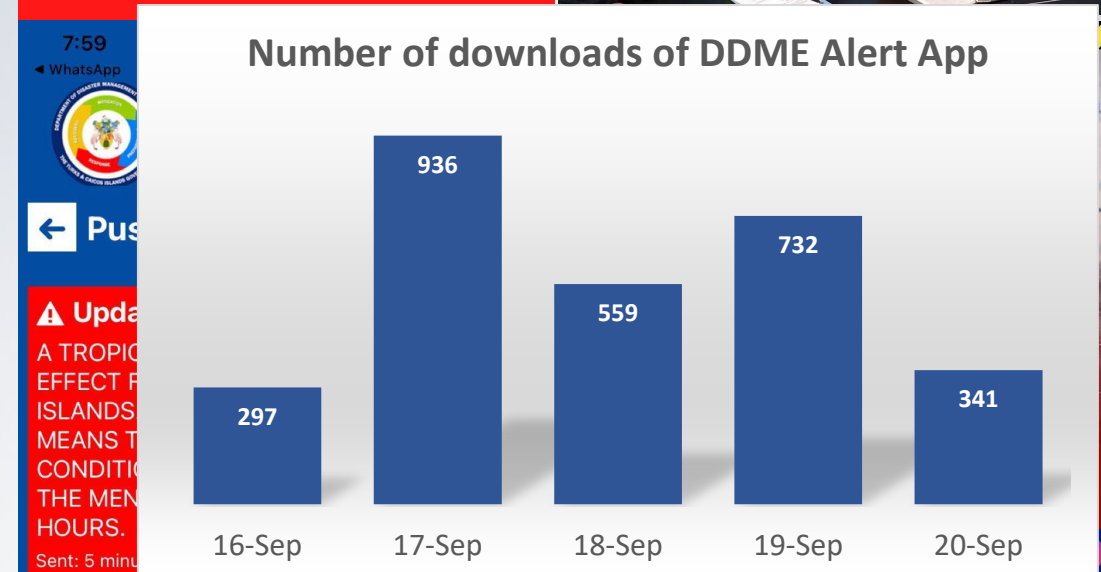


JOINT PRESS CONFERENCE ANNOUNCEMENT #3 HURRICANE FIONA

Monday 19 September 2022
10:00 AM

Join the National Emergency Operations Center today on Facebook Live, through the DDME's Facebook Page.

TUNE IN AND BE INFORMED.



Examples of communication practices and messaging used during Fiona

2022 Hurricane Season – Challenges



PUBLIC ADVISORY

The public is hereby being cautioned that the shelter-in-place advisory remains activated for the Turks and Caicos Islands.

The National Emergency Operations Center (NEOC) has been in contact with the Bahamas Met Office who advises that the weather conditions in the Turks and Caicos Islands remain unstable with intermittent gusts of heavy winds and rains still being experienced. This is expected to continue for the next 6 to 8 hours. Therefore, despite the perceived improvements to weather conditions, the all clear will not be issued at this time.

The public is again asked to remain indoors, on all islands, as it is not safe to travel on roadways, especially where there are fallen power lines and cables.

Prior to the issuance of an all clear, an operational clear must first be given to the utility companies to secure their network infrastructure for the safety of the public.

The public is urged to act responsibly and to continue to heed the Department of Disaster Management and Emergency's advisories.

End

www.gov.tc/ddme

Download DDME Alert



Challenges/Limitations:

Delay in messaging

Issuance of the “All Clear”

Lack of (reliable) equipment

Loss/lack of data

Suggestions to overcome or improve the situation:

Automating data retrieval

Developing a national weather observing network

Developing a website for the weather service