

# **Hurricanes and Severe Weather**

Hurricane season is June 1 to Nov. 30. Should weather on Florida's Space Coast take a turn for the worse, Kennedy Space Center employees can rely on these critical resources to keep them connected and informed.



An image taken from NASA's Terra satellite on Oct. 7, 2016, shows Hurricane Matthew covering the entire state of Florida. The storm hit Kennedy Space Center as a Category 3 hurricane. Photo credit: NASA's Goddard MODIS Rapid Response Team

## **Information Resources**

The NASA SAFE App delivers safety and security updates straight to your mobile device. Simply download the app from the Google Play or Apple App store and turn on alerts for Kennedy.

The Kennedy weather website, <u>KSCWeather.ksc.</u> <u>nasa.gov</u>, is your one-stop shop for weather information related to Kennedy Space Center and Cape Canaveral Space Force Station. The site has a link to the 45th Weather Squadron web page where you can find daily and weekly planning forecasts for the Space Coast, and you can also find links to the local National Weather Service Office, the National Oceanic and Atmospheric Administration (NOAA) Storm Prediction Center, and the National Hurricane Center.

For emergency updates on Kennedy, <u>nasa.gov/ken-nedy/status</u> is the go-to website for the latest storm news, the center's operational status, links to the

National Hurricane Center, shelter and roadway information, and more.

Kennedy also provides telephone hotlines for people to hear the latest operational status update and other pertinent data direct from the EOC.

Toll Free: 1-866-572-4877 Local: 321-861-7900

#### **Hurricane Conditions**

The hurricane condition (HURCON) is an alert scale that signifies when specific preparations should be made for an approaching hurricane. It's important to understand that the onset of sustained winds occurs earlier than landfall, which is when the center of the storm reaches land.

Kennedy's HURCON actions are as follows:

**HURCON IV:** 72 hours prior to 50-knot sustained winds. This initial notification and preparation phase includes implementing organization-specific checklists, ensuring all government-owned vehicles and General Services Administration vehicles are fully fueled, and confirming Rideout Team (ROT) personnel.

**HURCON III:** 48 hours prior to 50-knot sustained winds. Primary actions include securing facilities, property and equipment, as well as briefing and deploying the ROT.

**HURCON II:** 24 hours prior to 50-knot sustained winds. All securing actions are completed or terminated; non-ROT personnel are released and ROT personnel are sheltered.

**HURCON I:** 12 hours prior to 50-knot sustained winds. Kennedy remains closed, all perimeter gates closed, ROT is sheltered at designated locations.

# THE ROAD TO ALL CLEAR

## **Emergency Teams**

The Emergency Decision Team (EDT) and NASA Emergency Management Officer (NEMO) work to-

gether closely when dealing with a storm. The EDT, which includes the center director, Kennedy senior management, and contractor senior management, comes together when a hurricane threat is determined by the NEMO. The NEMO activates and leads the Emergency Operations Center.

# **Emergency Operations Center (EOC)**

The EOC is the focal point for coordinating hurricane preparation and response. Each organization at Kennedy has a point of contact — called an emergency coordinator or hurricane coordinator — who is responsible for ensuring and confirming to the EOC that checklists are being followed. During a hurricane, the EOC operates out of a central location — on the second floor of the Launch Control Center (LCC). The LCC is the only building on Kennedy property that is rated to withstand a Category 5 hurricane.

## **Kennedy Weather Office**

Kennedy's Weather Office takes the storm information provided by the 45th Weather Squadron and the National Hurricane Center and uses their experience and expertise to provide tropical cyclone briefings to the Emergency Decision Team, focusing on time of arrival of winds, storm surge, and expected impacts. The Kennedy Weather Office also coordinates with NEMO to develop HURCON recommendations.

#### 45th Weather Squadron

The 45th Weather Squadron dedicates a weather officer to the center's EOC. The weather officer evaluates forecast and model data provided by the National Hurricane Center and interprets this information to help assess impacts to the 144,000acre spaceport.

# **Ride-Out Team (ROT)**

The ROT, which comprises 100-120 people, resides at the center for the duration of the storm. The team's job is to keep essential infrastructure operational and perform initial damage assessment. As soon as the storm passes, the ROT does a windshield survey, making observations from a vehicle. The ROT addresses the immediate issues before handing off to the Damage Assessment and Recovery Team.

## **Disaster Assessment and Recovery**

The Disaster Assessment and Recovery Team (DART) takes over where the ROT leaves off. The DART comprises the minimum number of essential personnel required to appropriately



Emergency Operations Center

assess damage, restore essential services and infrastructure, and return the center to normal safe operating conditions following a storm. The team is organized by Emergency Support Function in accordance with Federal Emergency Management Agency (FEMA) standards.

# **Emergency Support Function (ESF)**

The ESF is an organizational structure that groups support, resources, and services into functional areas that are most likely to be needed for hurricane planning, response, and recovery. The organizational structure includes representatives from: Facilities/Utilities and Logistics; Protective Services; Medical/Environmental; Communication; NASA Public Affairs; and Spaceport Integration. ESF coordinators report to the DART chief and may be responsible for multiple ESF teams. These representatives serve as much more than points of contact; they are decision makers who are subject to recall by the EOC.

## **Reopening the Center**

The EDT, NEMO and DART chiefs determine when to safely reopen parts – or all – of the center. With the center director's concurrence, the NEMO will declare "all clear."

# **STORM PLAN**

Kennedy's Tropical Storm and Hurricane Operations plan was created to protect employees and facilities when sustained winds of 50 knots or greater are predicted. The publication (KDP-KSC-P-3006) is a living document. It is regularly updated based on lessons learned by the organizations and teams that most directly deal with preparation and execution of the detailed procedure. The plan's purpose is to produce a coordinated response to a hurricane, with checklists providing basic guidelines for each organization's required actions.

National Aeronautics and Space Administration

John F. Kennedy Space Center Kennedy Space Center, FL 32899

www.nasa.gov