



Climate and Heat Health Task Force

Emergency Preparedness & Response
January 25th 2022



Hosted by The Miami Foundation

Outline

1. Extreme heat risks
2. Current OEM Heat Response Policies
3. Heat Season Campaign
4. CERT Training on Heat Illness
5. Heat and Energy Disruption Risk Scenario
6. Community Resilience Centers
7. Best Practices
8. Breakout Questions

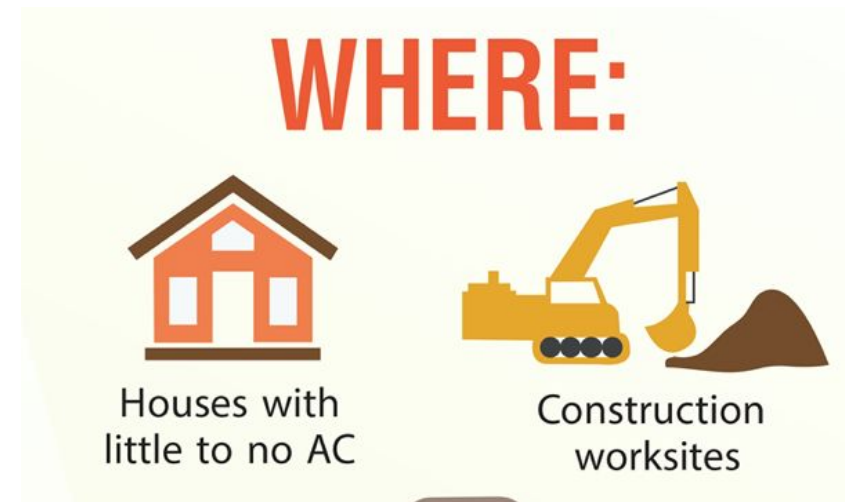
EXTREME HEAT

accelerate & coordinate
efforts



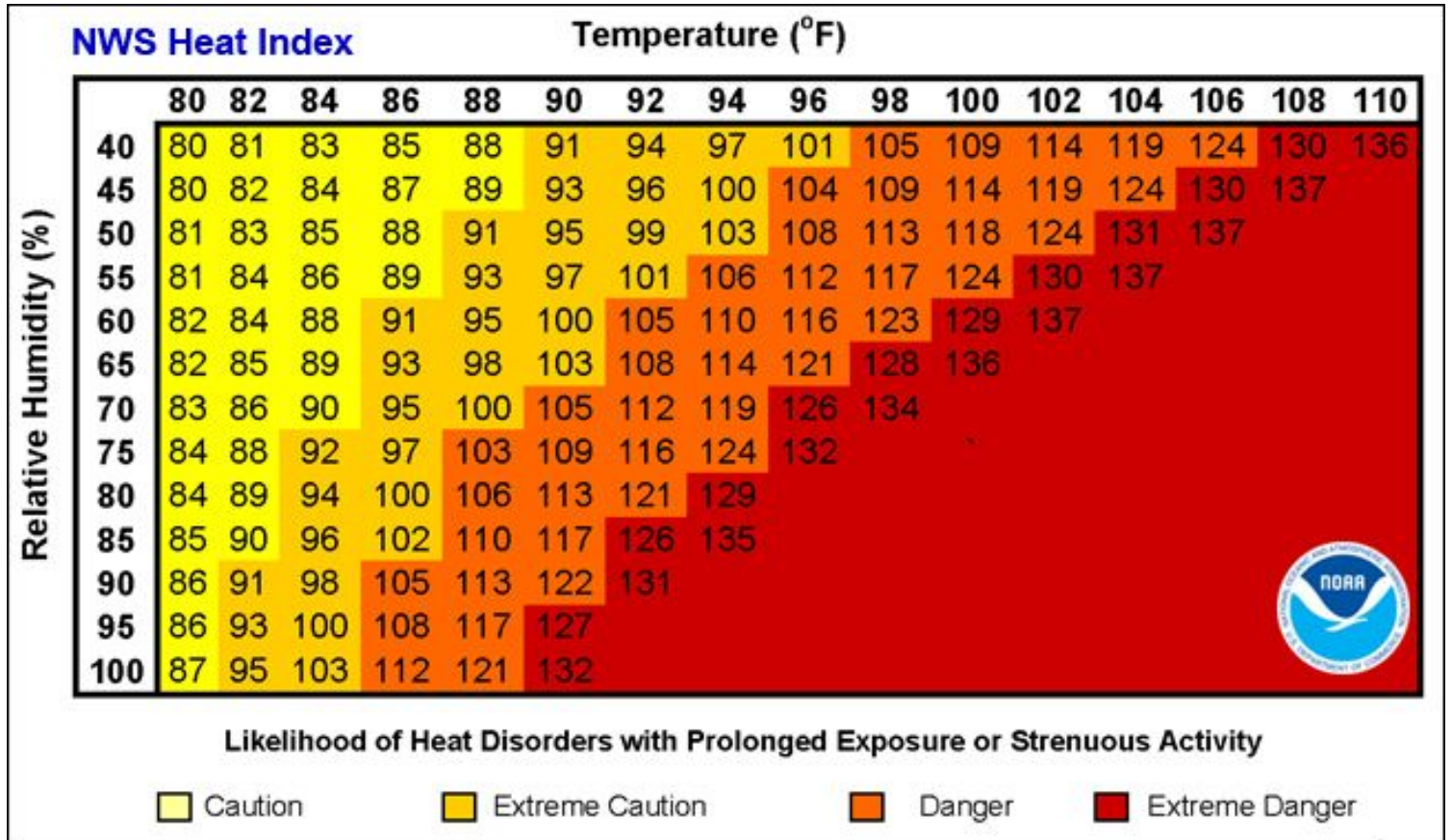
Extreme Heat

- ❖ Heat is the leading weather-related killer in the United States
- ❖ High heat and humidity can lead to heat-related illness, including heat cramps, heat exhaustion and heat stroke
- ❖ High risk groups experience a disproportionate amount of health impacts
- ❖ Most HRIs and deaths are preventable









NWS Heat Index

- ❖ **Heat index** combines ambient temperature and humidity
- ❖ Better measure for heat illness than ambient temperature
- ❖ **Extreme caution** should be taken at heat index values at 90 F and above
- ❖ **Dangerous** heat index begins at 103 F



NWS Heat Advisory Levels

The Office of Emergency Management's procedure for heat is based off of National Weather Service local advisories:

NWS Heat Watch, Warning, Advisory (WWA) for South Florida							
     	<table><tbody><tr><td>Excessive Heat <u>Watch</u></td><td>issued at least 12 hours, but no more than 48 hours, from when the conditions meeting Excessive Heat Warning criteria are forecast with a 50% chance or greater of occurrence</td></tr><tr><td>Heat <u>Advisory</u></td><td>issued within 12 hours of Heat Index values of <u>108 degrees</u> Fahrenheit or higher lasting at least two hours with an 80% change or greater of occurrence</td></tr><tr><td>Excessive Heat <u>Warning</u></td><td>issued within 12 hours of Heat Index values of <u>113 degrees</u> Fahrenheit or higher, lasting at least two (2) hours with an 80% chance or greater of occurrence. The Excessive Heat Warning should normally be in effect for no more than a 24-hour period but may be reissued every 24 hours until the excessive heat event ends</td></tr></tbody></table>	Excessive Heat <u>Watch</u>	issued at least 12 hours, but no more than 48 hours, from when the conditions meeting Excessive Heat Warning criteria are forecast with a 50% chance or greater of occurrence	Heat <u>Advisory</u>	issued within 12 hours of Heat Index values of <u>108 degrees</u> Fahrenheit or higher lasting at least two hours with an 80% change or greater of occurrence	Excessive Heat <u>Warning</u>	issued within 12 hours of Heat Index values of <u>113 degrees</u> Fahrenheit or higher, lasting at least two (2) hours with an 80% chance or greater of occurrence. The Excessive Heat Warning should normally be in effect for no more than a 24-hour period but may be reissued every 24 hours until the excessive heat event ends
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Background: Current Procedure

In the case of either **Excessive Heat Watch** and **Excessive Heat Warning**, automated communications from the OEM are released:

- ❖ Subscribers of Miami-Dade Alerts are notified of conditions
 - >50,000 people registered
- ❖ Alerts are available through sign up on miamidade.gov

Background: Current Procedure

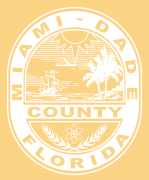
In the case of a **Heat Advisory**, the Office of Emergency Management has the following procedure:

- ❖ OEM's Duty Officer will monitor NWS weather forecasts
- ❖ If conditions worsen, the DO will contact the NWS Lead Forecaster for the following information:
 - Timing of the anticipated extreme heat event
 - Anticipated high temperatures
 - Anticipated Relative Humidity
 - Anticipated Heat Index

Background: Current Procedure

In the case of an **Excessive Heat Warning**, the Office of Emergency Management has the following procedure:

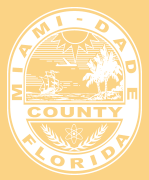
- ❖ The Duty Officer will contact the County Homeless Trust, who will determine whether to open emergency shelters for the homeless
- ❖ Libraries, parks, and recreational spaces identified as cooling sites will be contacted by email about the warning
- ❖ 311 Contact Center and OEM staff will be contacted about the warning as well as open shelters and cooling centers
- ❖ The Fire Rescue Public Information Officer will issue a media release, including actions for people without A/C and cooling centers, which the DO will distribute to county agencies and partners



Heat Season Campaign

- ❖ Miami-Dade's official campaign during hurricane season (May 1 to October 31) set to begin in 2022
- ❖ Goal of enhancing education and response to extreme heat and risks to human health
 - Heat Media day
 - Extreme heat education in schools
 - Targeted communication to at-risk groups and health workers
 - Elevating response to level of hurricanes

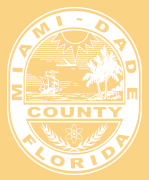




Heat in Disaster Management

- ❖ Incorporate heat into hazard mitigation plan
 - Could access FEMA funding for Task Force initiatives and other heat mitigation
 - Would build off Miami's existing capacity for emergency management





Emergency Notifications

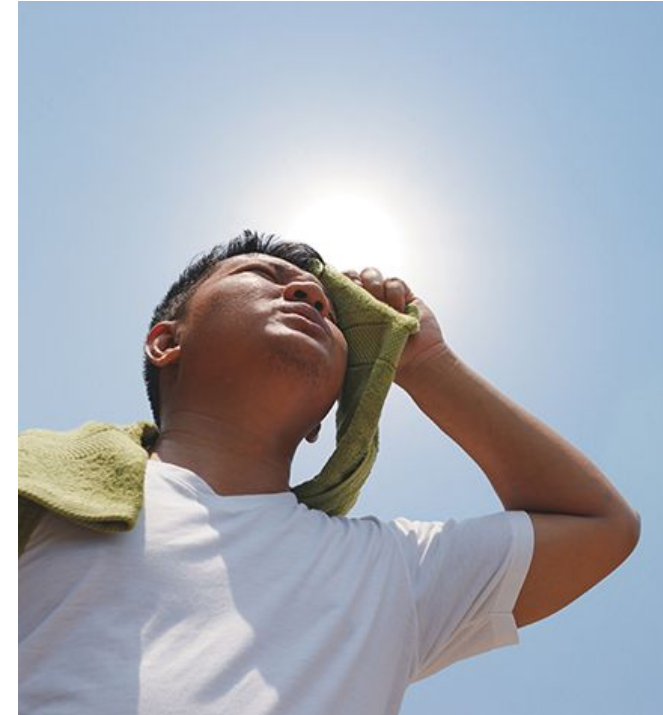
- ❖ Using existing emergency notification systems to advise on dangerous heat
 - Elevates perception of danger due to heat
- ❖ Notifying public before excessive heat warning
 - Current procedure does not warrant direct action until heat index of **113 F**
 - EPA recommends prediction of EHE conditions 1-5 days in advance





Community Emergency Response Team (CERT)

- ❖ Training program to educate volunteers in disaster preparedness and response
- ❖ Open to individuals, businesses, and community groups
- ❖ Currently being reviewed by Heat Officer and Office of Emergency Management to incorporate extreme heat into training
 - Awareness of dangerous heat conditions and vulnerable groups
 - Prevention and recognition of heat-related illness
 - Specific treatment actions for heat cramps, heat exhaustion, and heat stroke



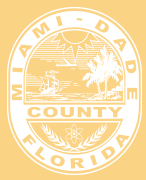


Community Emergency Response Team (CERT)

❖ Volunteers will also receive a kit with additional items for cooling:

- Instant ice pack
- Cooling towels
- Portable mist fan
- Cooling rehab chair
- Sqwincher hydration sticks
- Thermometer
- Water packets
- Electrolyte tablets

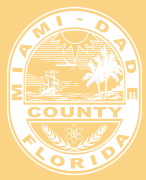




Risk Scenario: Extended Power Outage

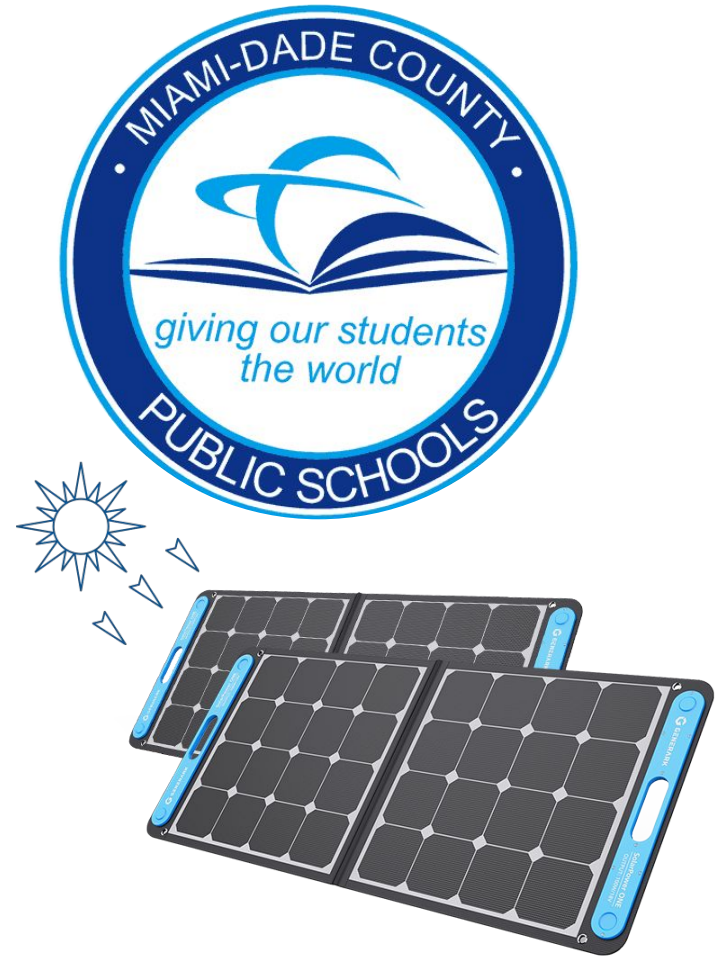
- ❖ Miami experiences **154 days per year** with a heat index above 90 F. Majority of these dangerous heat days coincide with Miami's **hurricane season**
 - Miami is the **most hurricane-prone** city in the US
- ➔ Compound risk of heat-related illness in the case of extended power outage
 - ◆ Miami-Dade county took ~10 days to fully restore power after Irma
 - ◆ Heat illness can develop within hours and escalate quickly
 - ◆ Cooling centers **do not** currently have backup power
 - ◆ Evacuation shelters do not have backup power for cooling

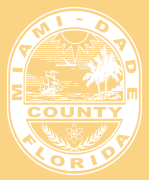




Risk Scenario: Possible Solutions

- ❖ Many evacuation shelters in Miami-Dade are public schools
 - Utilizing public institutions can make mandates and initiatives easier to implement
- ❖ **Solar-powered backup generators** can provide a renewable and clean option for backup energy
 - In-line with County's Climate Action Strategy, MDCPS Clean Energy 2030 and FPL Rate Case Settlement
 - Additional goal of providing backup power to resilience hubs





Community Resilience Hubs

- ❖ Arsht-Rockefeller Foundation Resilience Center partnership with Resilient 305 and Miami-Dade County
 - Network of permanent facilities for multi-hazard preparedness
 - Support local communities by providing targeted education
- ❖ Cooling centers ideal candidates for community resilience hubs
 - Can be retrofit to expand capacity
 - Solar backup power for resilience against extreme heat



Adrienne **Arsht-Rockefeller** Foundation
Resilience Center

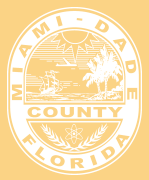




Community Resilience Pods

- ❖ Mobilized, adaptable ‘pods’ to be deployed where disasters occur
 - Extension of resilience centers to reach communities as part of disaster response
- ❖ Previously partnered with OEM to raise awareness of marine pollution
 - Pod at Zoo Miami has cooling station and solar power

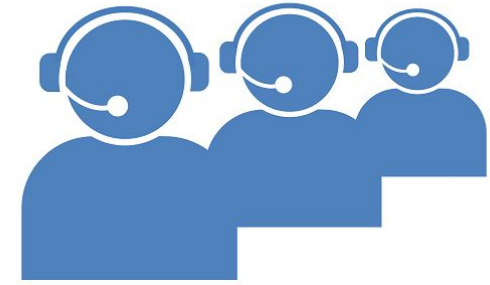


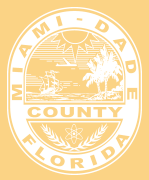


Best Practices for Excessive Heat Event Communication



- ❖ Expand resources for heat education
 - 'Heatline' during heat advisories
- ❖ Ensure wellbeing of vulnerable populations
 - Be a Buddy program for high-risk individuals
- ❖ Coordinate with emergency health services
 - Prompt first responders to ask questions related to HRI during higher heat conditions





Breakout Questions

- ❖ What additional procedures and measures do we need to ensure the safest outcomes in the event of an excessive heat event?
- ❖ Could real time monitoring and reporting (syndromic surveillance) of heat related illnesses be utilized during summer heat for preparedness and response?
- ❖ What do we know about the current perception of the threat of extreme heat in vulnerable groups?
- ❖ What recommendations do you have for engaging and enrolling more active CERT volunteers in the communities that need it the most?