



# Climate and Heat Health Task Force

Public Outreach and Education - Heat Season  
Campaign Planning

December 7, 2021

Hosted by The Miami Foundation

# Agenda

1. Overview Presentation 10:30-10:50
  - Extreme Heat and Communication Background
  - Review of Current Actions
  - Best Practices
  - Heat Season Campaign Planning
2. Breakout Sessions 10:50 - 11:50
3. Breakout group summaries 11:50 - 12:00

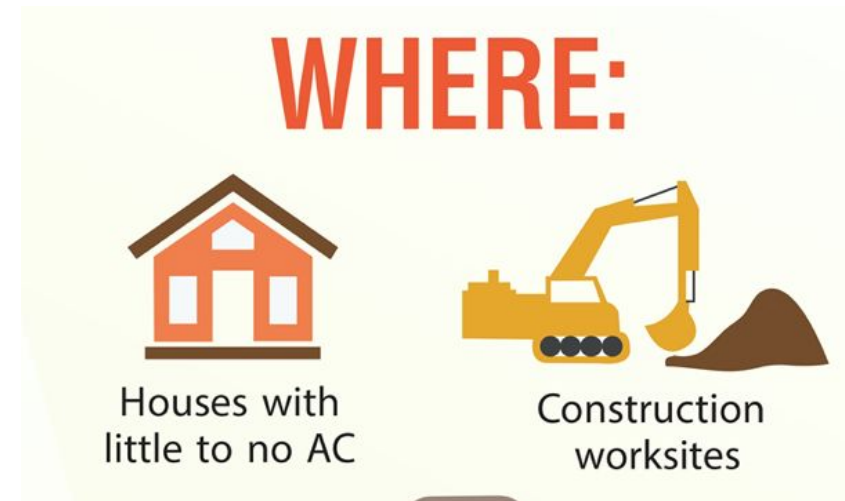
## EXTREME HEAT

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



# Background: Currently in Miami

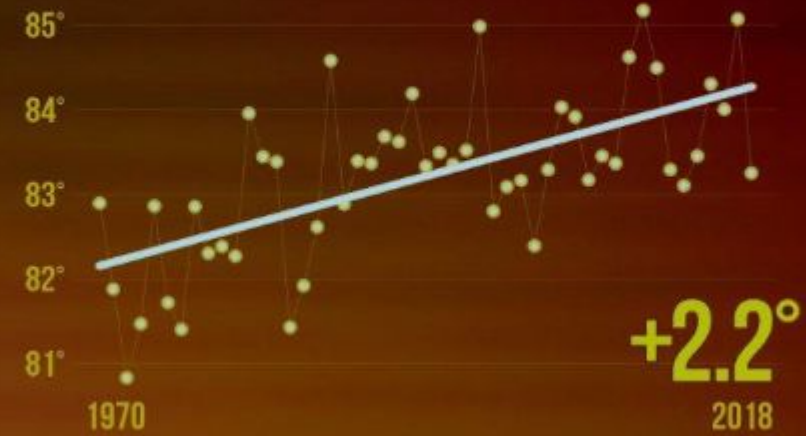
**DAYS ABOVE 90°** **77 MORE DAYS**



Day count based on data of change since 1970. Source: NOAA, etc.

CLIMATE CENTRAL

**SUMMERS ARE GETTING HOTTER**  
**MIAMI**



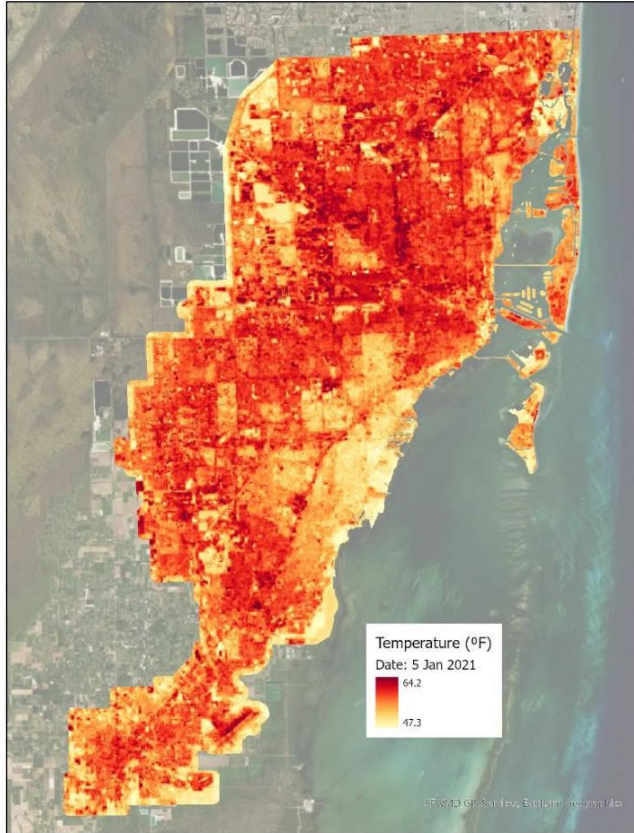
Source: temperature data from NOAA, etc.

CLIMATE CENTRAL

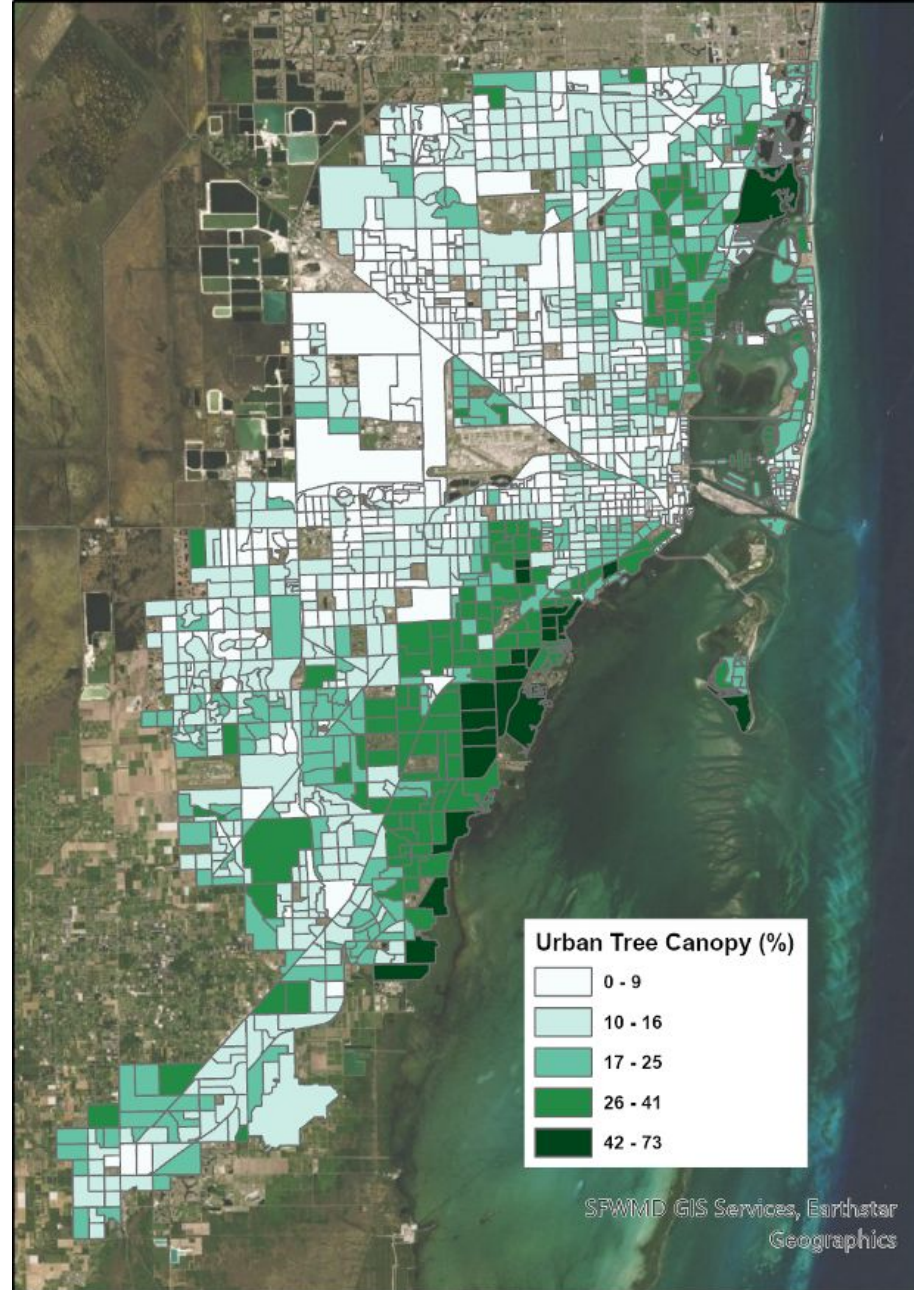
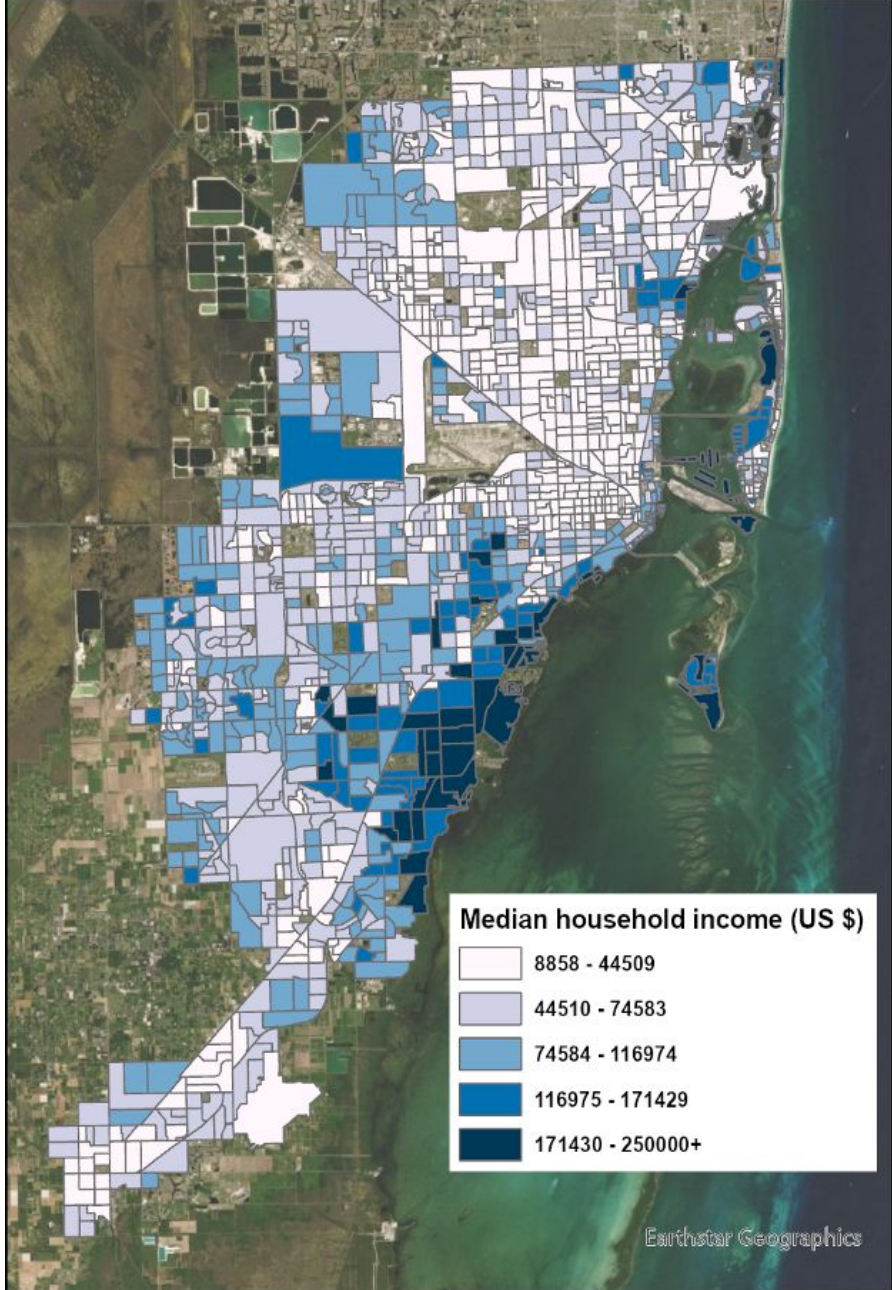
**+2.2°**

Risks to human health and wellbeing are **INCREASING**

# Background: Currently in Miami

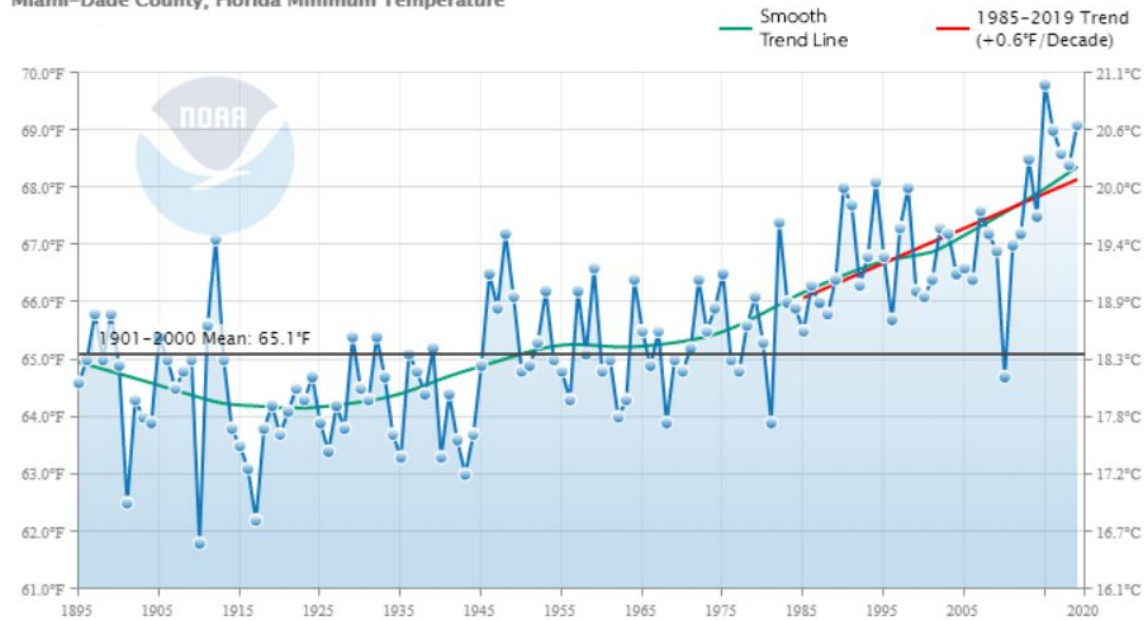


Heat risks are **elevated** in urban environments



# Background: Future of Miami

Miami-Dade County, Florida Minimum Temperature



MIAMI-DADE COUNTY				
Heat Index above	Historical (1971-2000)	By midcentury (2036-2065)	By late century (2070-2099)	By late century, if we limit warming to 2°C (2070-2099)
90°F -----	154 days	187 days	200 days	183 days
100°F -----	41 days	134 days	166 days	115 days
105°F -----	7 days	88 days	138 days	60 days
Off the Charts	0 days	1 days	14 days	0 days

## Heat Index Above 90°F



Outdoor workers become more susceptible to heat-related illness.

## Heat Index Above 100°F



Children, elderly adults, pregnant women, and people with underlying conditions are at heightened risk of heat-related illness.

## Heat Index Above 105°F



Anyone could be at risk of heat-related illness or even death as a result of prolonged exposure.

## Heat Index Off the Charts



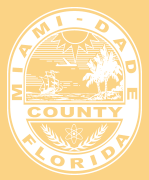
Undetermined: any level of exposure is presumed extremely dangerous for all people and likely to result in heat-related illness or even death.



# Public Outreach & Education

Why is outreach and education important?

- ❖ Increases ability of public to make informed decisions to protect themselves and those around them
- ❖ Increases public awareness and support of heat risk reduction efforts and policies



# Public Outreach & Education

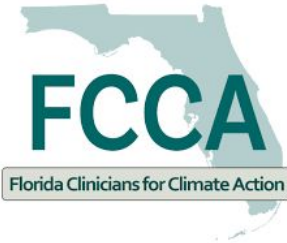
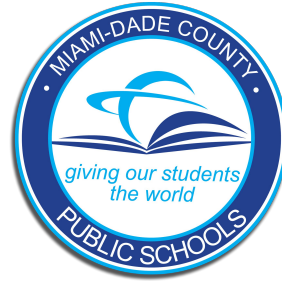
Inform public on facts

Educate public on appropriate preparedness and response

Elevate the **perception** and **reaction** to heat, *to that of a hurricane*, in order to lower the risk of health impacts and decrease mortality



MIAMIBEACH



cc Collaboration is a critical asset



# Audience: Vulnerable Populations

Older Adults  
(Aged 65+)



Infants and  
Children



Chronic  
Conditions



Pregnant  
Women



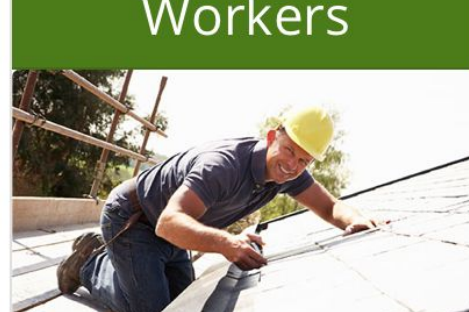
Low Income



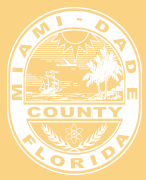
Athletes



Outdoor  
Workers



One way of  
educating does  
**NOT** fit all



# Message Consistency

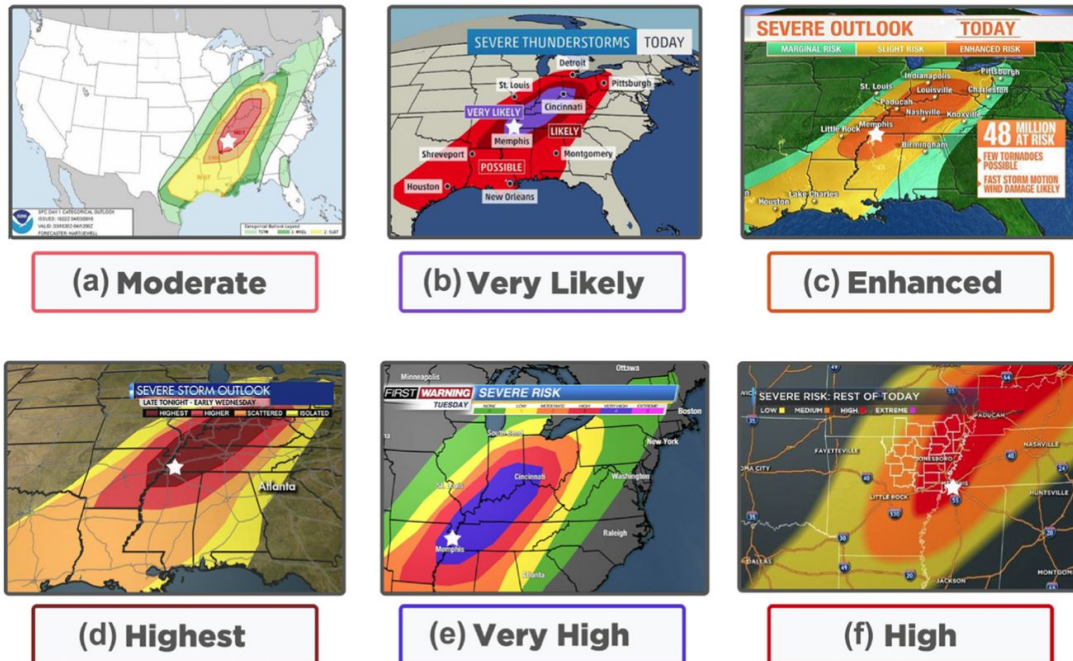
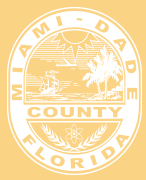


Fig. 3. A variety of Convective Outlook graphical designs that differ from the Storm Prediction Center's graphic by using different colors, risk language, and spatial risk contours. The star indicates Memphis, Tennessee, across all graphics for comparison purposes. All graphics were taken from the 2000 UTC run of the Storm Prediction Center's Day 1 Convective Outlook on 3 April 2018.

Persuasive outcomes are affected by:

1. Content
2. Structure
3. Style

One way of educating does **NOT** fit all, but there is still a need for **message consistency**



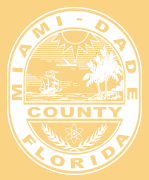
# Older Adults

Older Adults  
(Aged 65+)



- ❖ **Unique barriers:** Gaps in risk perception are evident among caregivers and older adults
  - “Heat is **NOT** a risk to **MY** health”, but they know age is a risk factor
  - Caregivers associate heat related illness with *outdoor* activity
  - Surprised about medication and thermoregulation
  - AC was not considered as an important preventative measure
  - Utilizing fans incorrectly with windows closed

Lane, K., Wheeler, K., Charles-Guzman, K., Ahmed, M., Blum, M., Gregory, K., ... & Matte, T. (2014). Extreme heat awareness and protective behaviors in New York City. *Journal of urban health*, 91(3), 403-414. [https://drive.google.com/file/d/1jyh-ZlgFA0TGbt8\\_4BKw5mdiTvKjJ6-x/view?usp=sharing](https://drive.google.com/file/d/1jyh-ZlgFA0TGbt8_4BKw5mdiTvKjJ6-x/view?usp=sharing)



# Older Adults

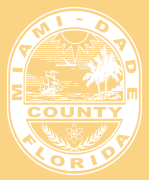
Older Adults  
(Aged 65+)



## ❖ Communication ideas:

- Motivate protective behaviors
- Emphasize that extreme heat can be deadly
- Hot indoor environments are dangerous during extreme heat
- AC is a life-saving intervention (if it is accessible / can be afforded)

Lane, K., Wheeler, K., Charles-Guzman, K., Ahmed, M., Blum, M., Gregory, K., ... & Matte, T. (2014). Extreme heat awareness and protective behaviors in New York City. *Journal of urban health*, 91(3), 403-414. [https://drive.google.com/file/d/1jyh-ZlgFA0TGbt8\\_4BKw5mdiTvKjJ6-x/view?usp=sharing](https://drive.google.com/file/d/1jyh-ZlgFA0TGbt8_4BKw5mdiTvKjJ6-x/view?usp=sharing)



# Current Actions: Extreme Heat Toolkit

## Communications Tools:



Partner with Schools



Create Heat Health PSAs



Prioritize workforce education and training



Enhance Data on Health Outcomes



Create Neighborhood Heat Ambassador Program



Communicate heat warnings/advisories

## Engagement Tools:



Support regulations for workers' rights



Integrate Heat into Plans



Establish Public/Private Partnerships



Develop & Maintain Networks



Complete Heat Action Plan

# Practique SEGURIDAD a Donde Qu

Las muertes relacion  
son evitables. Prote  
de los impactos de



weather.



MIAMI-DADE PARKS, RECREATION  
AND OPEN SPACES DEPARTMENT

2. Tell a story about a time you felt hot when you were not at summer camp.

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3. What is your favorite way to cool down when you feel hot? You can write or draw your answer.

4. What would you build or create to help stay cool during the summer? You can write or draw your answer in the space below.



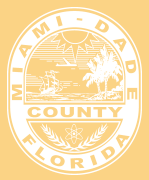
## En el Interior

Revise a los ancianos,  
enfermos y aquellos sin  
acondicionador de aire.

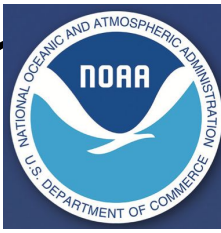


## Al Aire Libre

Limite actividades extenuantes  
al aire libre, busque sombra,  
y manténgase hidratado.



# NOAA Best Practices for Risk Communication and Behavior



1. Have an informed plan
2. Speak to their interests, not yours
3. Explain the risk
4. Offer options to reduce risk
5. Work with trusted sources and the public
6. Test messages or products; evaluate performance
7. Use multiple ways to communicate

## EXTREME HEAT

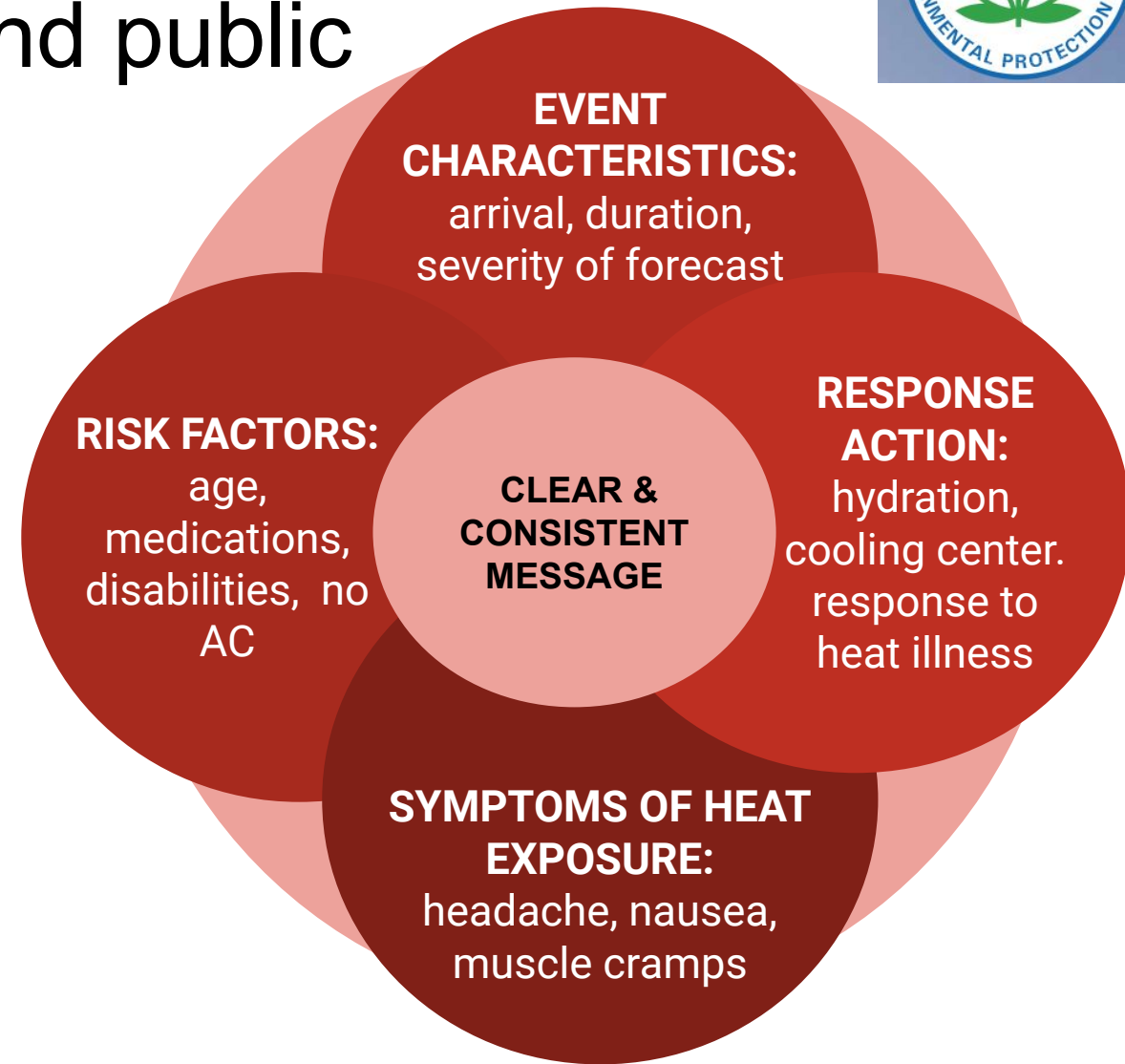
accelerate & coordinate efforts





# Increase and improve Excessive Heat Event (EHE) notification and public education

- ❖ A formal system is necessary for notifying public about EHE
  - TV, radio, newspaper, health alert network
  - Additionally: EHE information distributed in fliers, magazines, civic group literature at start of & throughout heat season



Excessive Heat Event (EHE) - summertime weather that is substantially hotter and/or more humid than average for a location at that time of year (EPA, 2006)



# Communicating Heat Risks

## NWS Heat Index

## Temperature (°F)

Relative Humidity (%)	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	136
45	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137	
50	81	83	85	88	91	95	99	103	108	113	118	124	131	137		
55	81	84	86	89	93	97	101	106	112	117	124	130	137			
60	82	84	88	91	95	100	105	110	116	123	129	137				
65	82	85	89	93	98	103	108	114	121	128	136					
70	83	86	90	95	100	105	112	119	126	134						
75	84	88	92	97	103	109	116	124	132							
80	84	89	94	100	106	113	121	129								
85	85	90	96	102	110	117	126	135								
90	86	91	98	105	113	122	131									
95	86	93	100	108	117	127										
100	87	95	103	112	121	132										

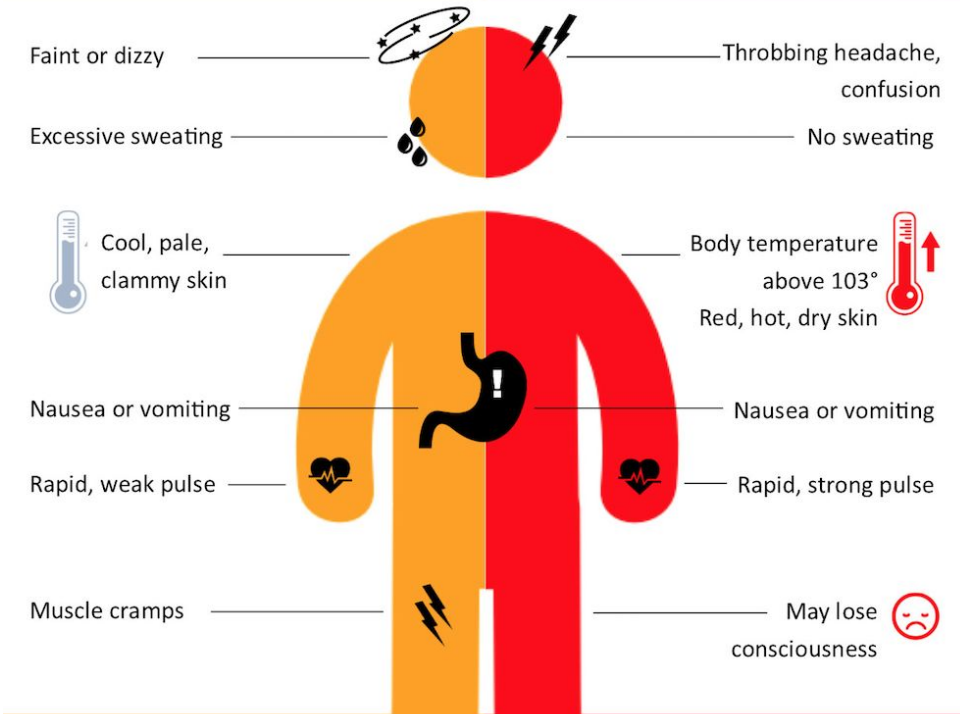


### Likelihood of Heat Disorders with Prolonged Exposure or Strenuous Activity

- Caution
- Extreme Caution
- Danger
- Extreme Danger

Classification	Heat Index	Effect on the body
Caution	80°F - 90°F	Fatigue possible with prolonged exposure and/or physical activity
Extreme Caution	90°F - 103°F	Heat stroke, heat cramps, or heat exhaustion possible with prolonged exposure and/or physical activity
Danger	103°F - 124°F	Heat cramps or heat exhaustion likely, and heat stroke possible with prolonged exposure and/or physical activity
Extreme Danger	125°F or higher	Heat stroke highly likely

## HEAT EXHAUSTION OR HEAT STROKE



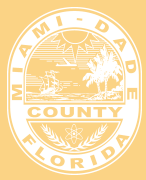
- Get to a cooler, air conditioned place
- Drink water if fully conscious
- Take a cool shower or use cold compresses

- CALL 9-1-1**
- Move person to cooler place
  - Cool using cool cloths or bath
  - Do not give anything to drink

@NWSSacramento  
weather.gov/Sacramento



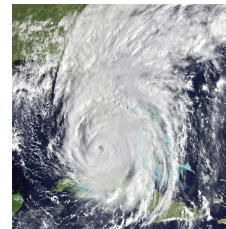
@SacramentoOES  
SacramentoReady.org

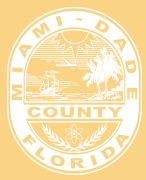


# Increase and improve EHE notification and public education

- ❖ Heat Media day
  - Provide information about Countywide EHE notification and response program
  - Explain heat health and impacts
  - Maintains media interest to keep EHE in public eye

*How do we conduct hurricane preparation communications?*



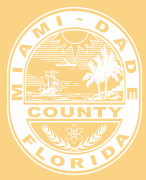


# Increase and improve EHE notification and public education

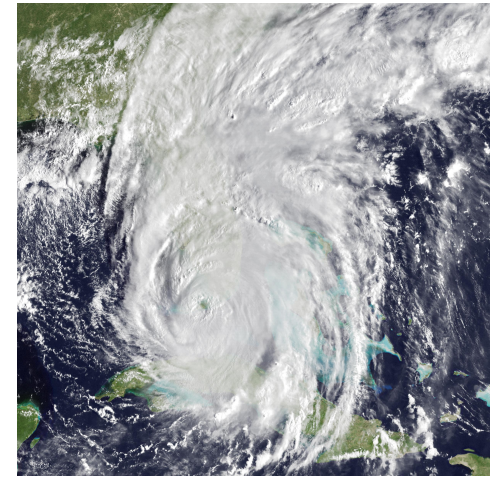


- ❖ EHE education programs in schools
  - Teaches children (vulnerable population)
  - Central messages hopefully repeated & adopted in households
  
- ❖ EHE education aimed at
  - Health practitioners
  - Local emergency management personnel & first responders
  - Outdoor workers
  - Caretakers of older adults, very young
  - Very young, pregnant women
  - Those with physical & mental disabilities
  - People recreating outside, drinking/smoking



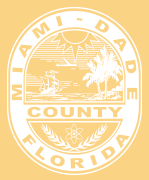


# Heat Season Campaign Planning



- ❖ Heat response to level of hurricanes
- ❖ Public communication and media event
- ❖ Targeted communication to priority audiences
- ❖ Consistent messaging through all outlets and different partners





# Breakout Room Questions

What are good campaigns for public outreach and education that you've seen and learned from?

What are some of the best ways to reach the following more vulnerable populations:

- ❖ Older Adults, Caretakers of Older Adults
- ❖ Pregnant Women & Young Children
- ❖ Those with mental, physical disabilities & Chronic Conditions
- ❖ Those recreating outside - sports and parties
- ❖ Those in substandard housing and/or who cannot afford AC
- ❖ Homeless

How do we test our messaging in a cost effective, efficient way before large-scale deployment?



# Thank YOU!!!!

Register for more workshops at <https://miamifoundation.org/extremeheat/>

Provide more suggestions to: [resilience@miamifoundation.org](mailto:resilience@miamifoundation.org)