

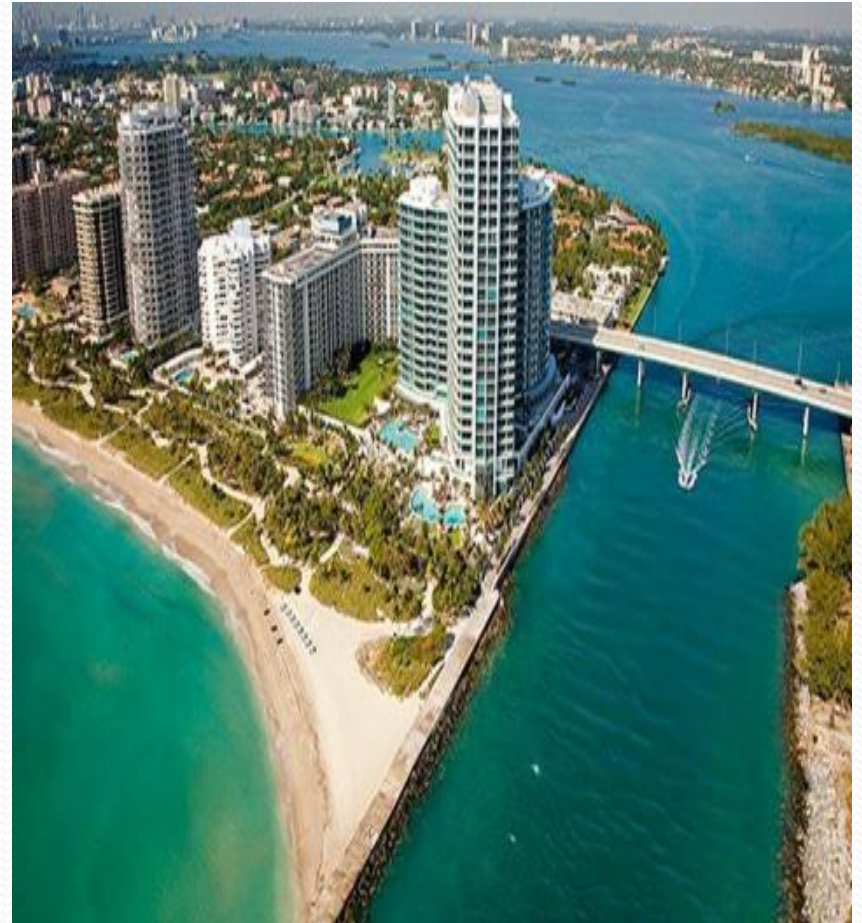
Partnership and Coordination with Emergency Management

WMO Workshop



Miami-Dade County Overview

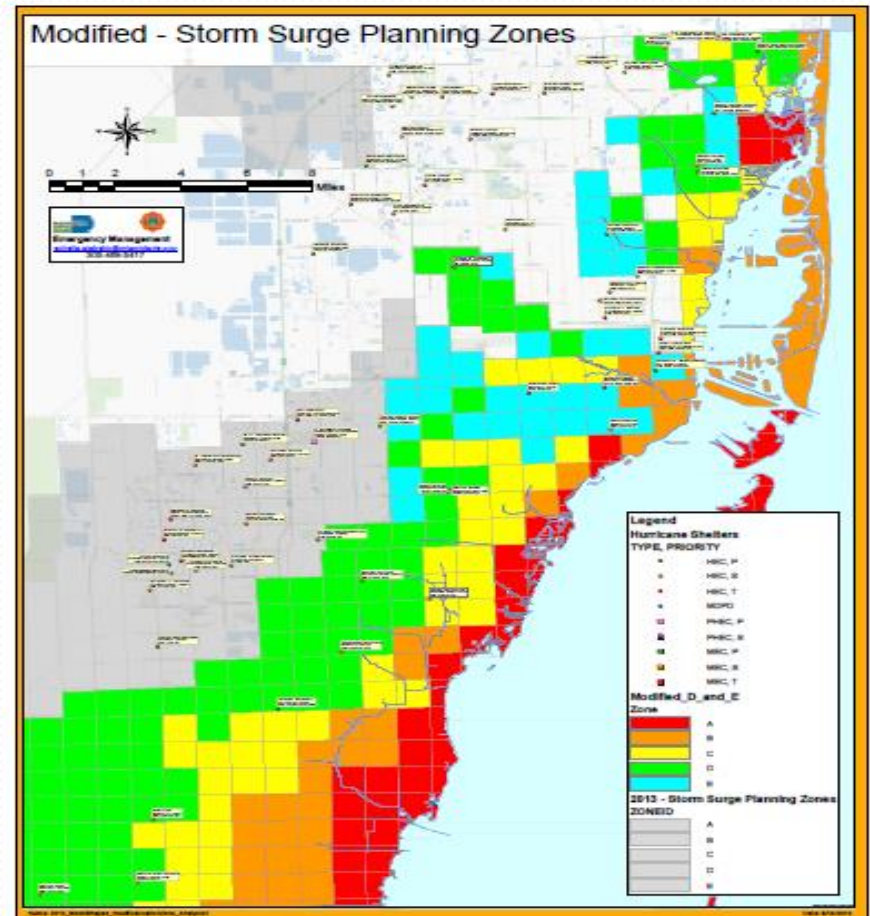
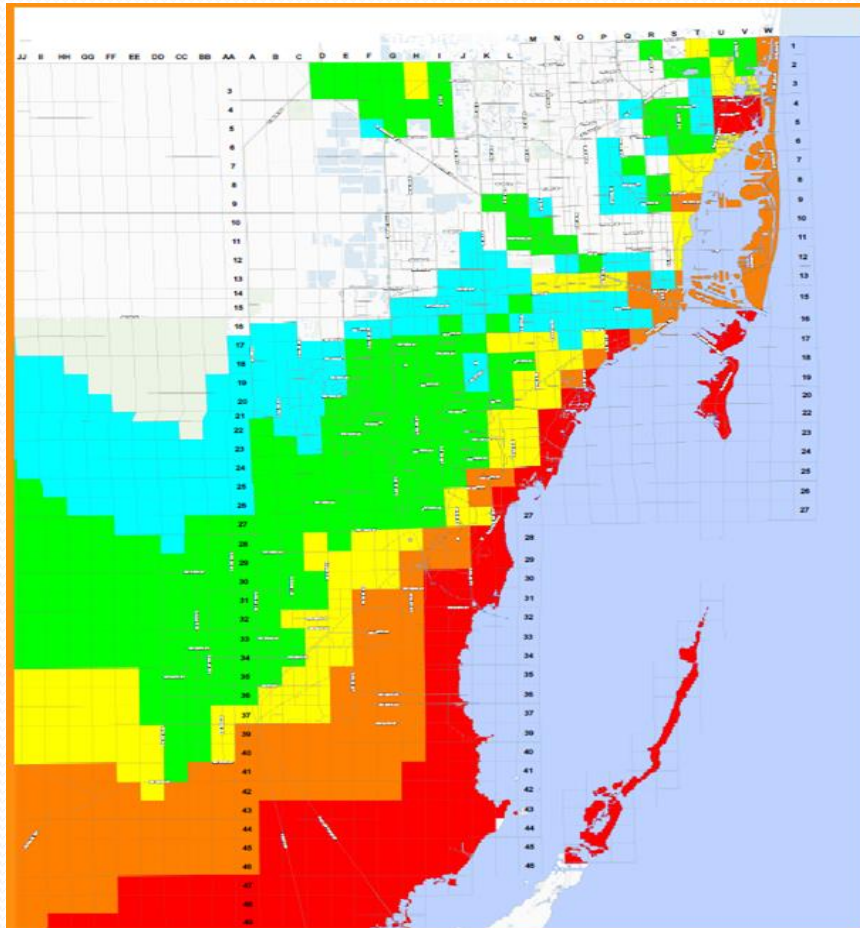
- 2,000 square miles
- World's busiest cruise port
- 2.6 million residents
- Second busiest US airport for international travelers
- Gateway to the Caribbean and Latin America



Natural Hazards Risks

Probability		Consequence							OVERALL RISK SCORE
Hazards	Frequency & Probability	Potential Magnitude & Scale	Impact Analysis			Capabilities & Capacity	Mitigation	Hazard Consequence & Impact Score	
			Social Vulnerabilities Hazard Impact Rating	Physical Vulnerabilities Hazard Impact Rating	Community Conditions Impact Rating				
			Natural Hazards						
Droughts	38%	38%	15%	29%	39%	82%	70%	40%	39%
Extreme Cold	17%	11%	15%	29%	34%	82%	57%	32%	23%
Extreme Heat	75%	16%	15%	41%	34%	82%	58%	35%	52%
Flooding	50%	27%	38%	53%	52%	68%	96%	53%	51%
Hailstorms	69%	18%	24%	29%	51%	82%	50%	41%	53%
Heavy Rain	50%	9%	32%	29%	32%	68%	96%	35%	42%
Hurricanes & Tropical Storms	69%	64%	58%	66%	64%	63%	58%	75%	72%
Lightning	75%	18%	15%	29%	29%	82%	96%	32%	49%
Winter Weather / Ice	5%	16%	15%	37%	35%	82%	75%	35%	13%
Sinkholes / Erosion	50%	13%	38%	29%	41%	82%	50%	41%	45%
Space	1%	7%	23%	29%	29%	68%	N/A	29%	5%
Tornadoes	44%	20%	42%	53%	53%	68%	75%	53%	48%
Tsunami	13%	24%	24%	37%	35%	68%	25%	45%	24%
Volcano (Ash)	1%	4%	15%	37%	32%	85%	N/A	28%	5%
Windstorm	50%	18%	42%	37%	45%	82%	75%	45%	47%
Wildfires	38%	13%	42%	57%	51%	68%	63%	53%	44%
Earthquakes	5%	4%	24%	29%	29%	68%	N/A	29%	12%

Storm Surge Planning VS. Evacuation Planning



Services Near You

miamidade.gov

Back to Services

Search By

Address Intersection Landmark

Enter the address and click Locate. Use the Tab key to switch between fields or click using the mouse.

House Number:

Direction:

Street Name:

Street Type:

Zip Code (opt):

Locate

What is my...?

[Census Information](#)

[Community Council](#)

[Community Development Block Grant Area](#)

[Community Development District](#)

[Community Redevelopment Area](#)

[County Commission District](#)

[County Police District and Grid](#)

[Empowerment Zone](#)

[Enterprise Zone](#)

[FEMA Flood Zone](#)

[Garbage Pickup Days](#)

[Municipality](#)

[Neighborhood Revitalization Strategy Area](#)

[Recycling Pickup Days](#)

[School Board District](#)

[School Boundaries](#)

[Storm Surge Planning Zone](#)

[Targeted Urban Area](#)

[Township-Range-Section](#)

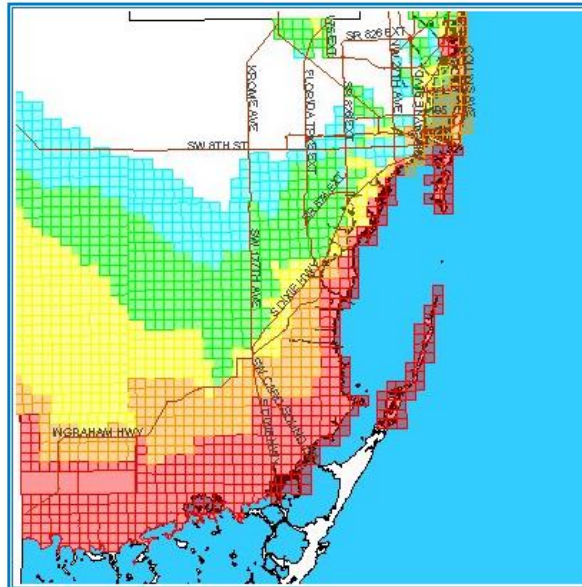
[Voting Precinct](#)

[Water and Sewer Service Areas](#)

[Zip Code](#)

Storm Surge Planning Zones Map

ACTIVE TOOL: ZOOM IN



0 31345 ft

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Map Report

Storm Surge Planning Zone:

- Zone: C
- Color: Yellow
- Grid: C35

Legend

Storm Surge Planning Zone

- A
- B
- C
- D
- E
- Highway

Other GIS Map Services

[My Neighborhood](#)

[Property Search](#)

[Public Notification](#)

[eMaps](#)

[Artificial Reefs](#)

[Sexual Offender/Predator](#)

[Residence Search](#)

Storm Surge Planning Zones Map

ACTIVE TOOL: ZOOM IN



0 554 ft

Legend

Map Location
★ 975 BAPTIST WAY, 33033
Selected
Storm Surge Planning Zone

- B
- C
- Street

Other GIS Map Services

[My Neighborhood](#)

[Property Search](#)

[Public Notification](#)

[eMaps](#)

[Artificial Reefs](#)

Storm Surge Simulator

Storm Surge Simulator

975 Baptist Way

or click on the map to drop a point.

Search Map



MIAMI-DADE
COUNTY

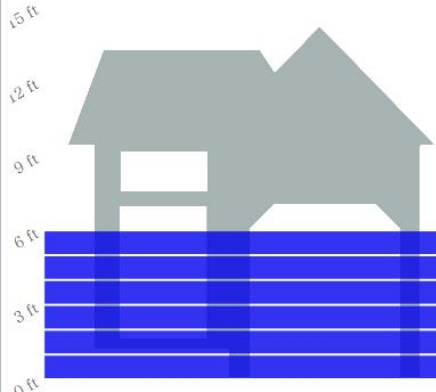
Which hurricane category? ⓘ

Category 5

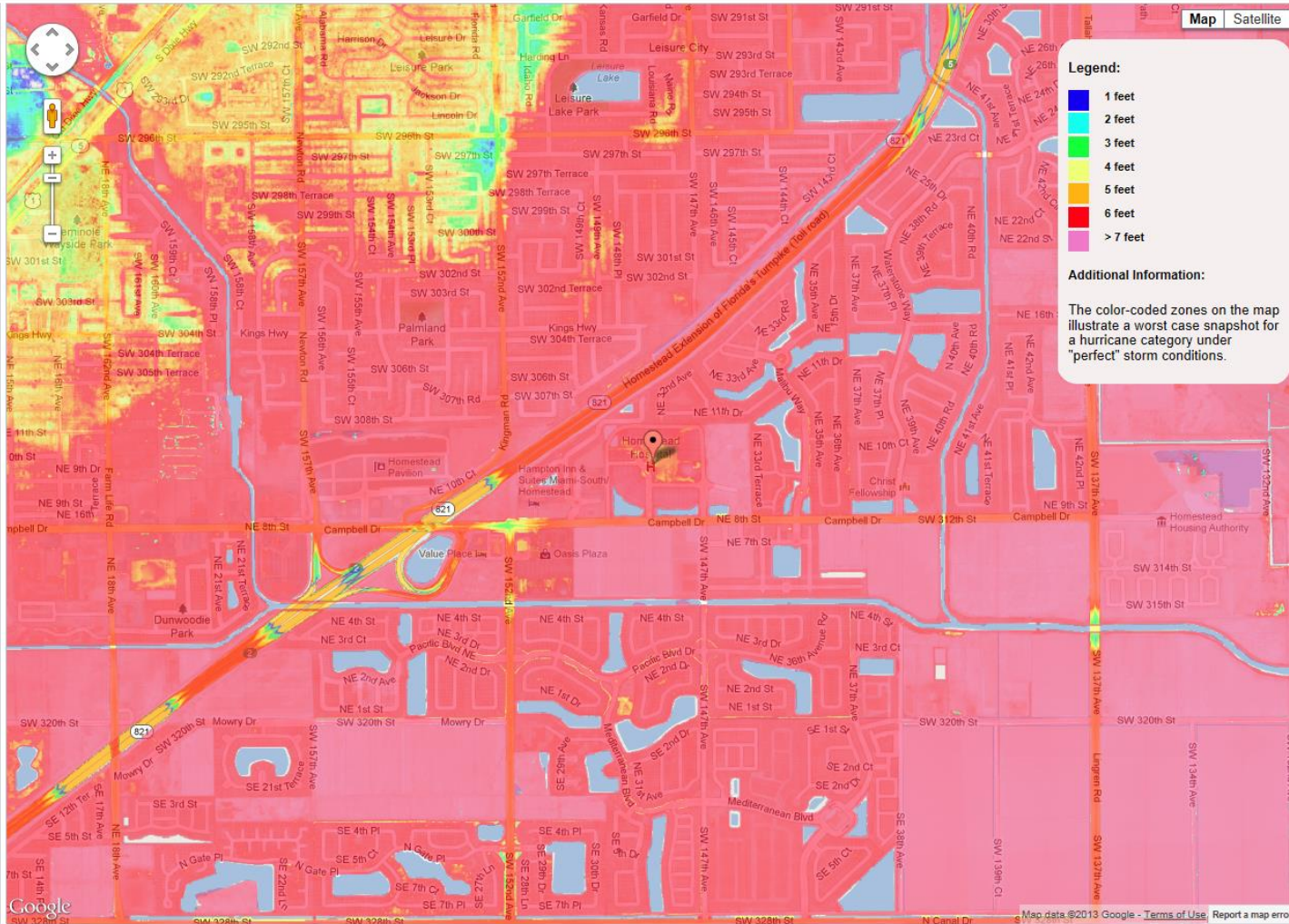
What type of structure? ⓘ

☐ Person ☒ House ☐ Villa

Projected storm surge depth: ⓘ



Projected Storm Surge Inundation: 6ft



Legend:

- 1 feet
- 2 feet
- 3 feet
- 4 feet
- 5 feet
- 6 feet
- > 7 feet

Additional Information:

The color-coded zones on the map illustrate a worst case snapshot for a hurricane category under "perfect" storm conditions.

FIU FLORIDA
INTERNATIONAL
UNIVERSITY

The Storm Surge Simulator is a public service provided by Florida International University

Google

Map data ©2013 Google - Terms of Use Report a map error

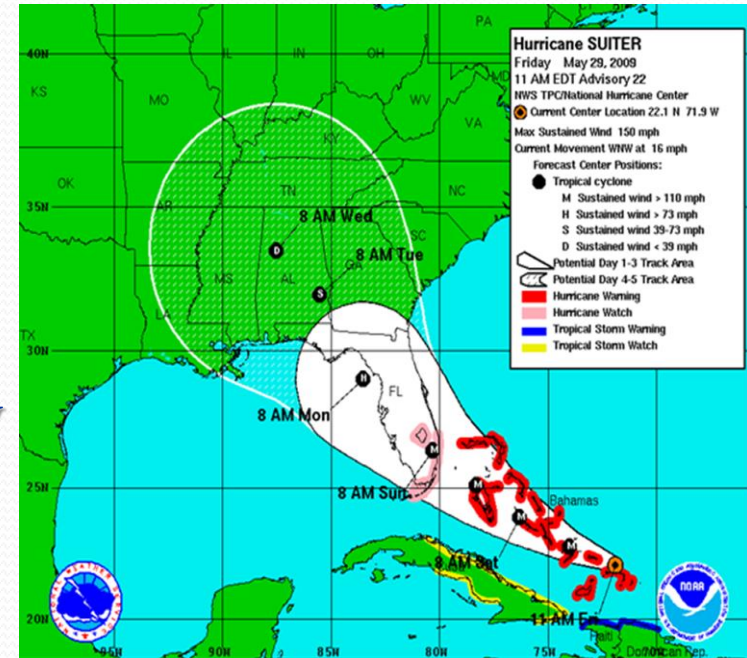
“The quintessential purpose of conducting a risk assessment is to ensure decision-making is not done in a vacuum”



PROTECTIVE ACTION DECISIONS

• THE CHALLENGE

- Consistently
- Interpret data correctly
- Reach defensible conclusions
- Communicate the data effectively



STORM ACTION LEAD TIME

- SALT is a planning tool to provide emergency managers a schedule of key activities that must be accomplished to prepare for the storm and their decision time.
- The schedule is based on an objective analysis of when an activity must commence in order to fully accomplish the task prior to arrival of tropical storm winds.
- The official National Hurricane Center and National Weather Service forecasts are the exclusive storm forecasts data entered into the application.



Storm Action Lead Time

Last calculated on: Never

[Print](#)


Storm Name:	<input type="text"/>	NHC ADV Num:	<input type="text" value=""/>	Forward Speed:	<input type="text" value=""/>
Arrival of TSW:	<input type="text" value=""/>	Time of ADV:	<input type="text" value=""/>	Max. Sust. Wind:	<input type="text" value=""/>
Evacuation Zone:	<input type="text" value="A"/>	Storm Heading:	<input type="text" value="WebEOC 7.4&"/>	Storm Diameter:	<input type="text" value="body"/>

[Calculate S.A.L.T.](#)

Saved.

STORM ACTION LEAD TIME

- SALT assists in this decision making process by organizing and identifying planning milestones and decision times.
- The lead times determined by SALT should be considered tentative and subject to change.



Storm Action Lead Time
Last calculated on: January 6, 2015 @ 1:40 PM

Storm Name:

Arrival of TSFW:

Evacuation Zone:

NHC ADV Num:

Time of ADV:

Storm Heading:

Forward Speed:

Max. Sust. Wind:

Storm Diameter:

Saving disabled.

Lead Time	Date & Time to Perform Task	Task	Hours From Now
-96	Monday, January 5 2015 5:00 PM	Initial storm notification to EOC Reps	0
-76	Tuesday, January 6 2015 1:00 PM	Initiate bridge lock down discussion with stakeholder agencies	0
-72	Tuesday, January 6 2015 5:00 PM	EOC Planning Section Initiate Flash Report distribution	3
-72	Tuesday, January 6 2015 5:00 PM	Designate a PIO point of contact for media	3
-72	Tuesday, January 6 2015 5:00 PM	Initiate Divisional EOC conference calls	3
-60	Wednesday, January 7 2015 5:00 AM	Begin LAP Production	15
-60	Wednesday, January 7 2015 5:00 AM	EOC to Level 2 (To support E&EAP Operations) and Prepare Mayor's Emergency Declaration for signature	15
-60	Wednesday, January 7 2015 5:00 AM	Begin E&EAP registry call down	15
-60	Wednesday, January 7 2015 5:00 AM	Notify Medical Management Facilities of tentative activation schedule	15
-60	Wednesday, January 7 2015 5:00 AM	Department Director's Briefing	15
-48	Wednesday, January 7 2015 5:00 PM	Notification to stakeholder agencies of probable drawbridge lockdown	27
-47	Wednesday, January 7 2015 6:00 PM	Disseminate "Get Ready" press release / press conference	28
-47	Wednesday, January 7 2015 6:00 PM	Update Web Page	28
-47	Wednesday, January 7 2015 6:00 PM	Extend Answer 3-1-1 Center hours	28
-44	Wednesday, January 7 2015 9:00 PM	Activate Ambulance Dispatch Center, Fire Rescue Dept., and STS to coordinate E&EAP evacuation	31
-42	Wednesday, January 7 2015 11:00 PM	Evacuate MMF clients via Ambulances and Fire Rescue	33
-42	Wednesday, January 7 2015 11:00 PM	Evacuate MMF clients via STS	33
-42	Wednesday, January 7 2015 11:00 PM	Mayor signs Emergency Declaration	33
-42	Wednesday, January 7 2015 11:00 PM	Commence Residential Shuttering Program	33
-37	Thursday, January 8 2015 4:00 AM	Begin HECs / MECS preparations : Discussions with DCPSB, ARC, DOH, MDR Logistics, and alert DAEs	38
-36	Thursday, January 8 2015 5:00 AM	Notify medical facilities to implement evacuation plans as applicable	39
-35	Thursday, January 8 2015 6:00 AM	Notify 3-1-1 Answer Center to start entering last minute calls for assistance into E&EAP database	40
-29	Thursday, January 8 2015 12:00 PM	Close Schools	46

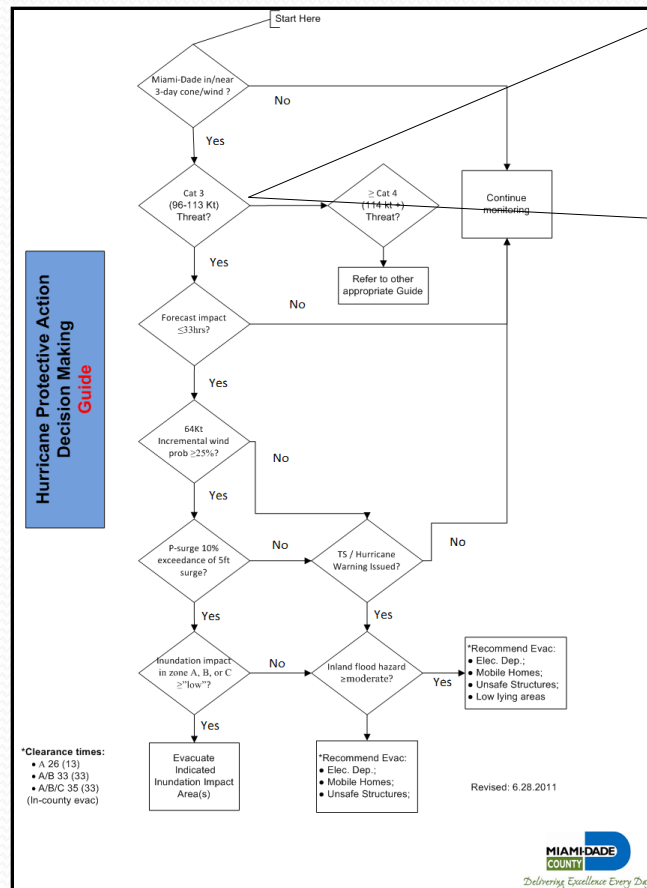
Clearance Times

	Zone A Lead Time	Zone B Lead Time	Zone C Lead Time	Zone D Lead Time	Zone E Lead Time
In-County	23	24	28	32	52
Out-of-County	23	25	28	34	52

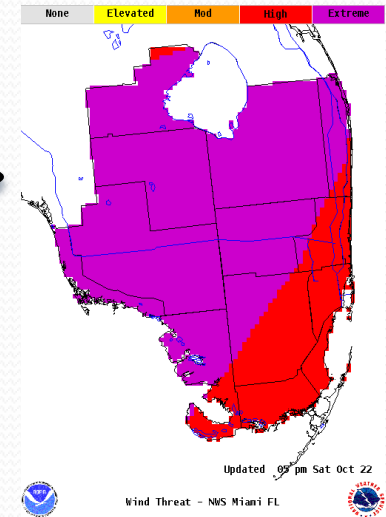
NWS Graphics and Forecast Products

- With tropical storms and hurricanes, it's **all about impacts**.
 - Utilized to execute our plans
 - Potential Impact Graphics depict the worst of all **plausible impacts and scenarios**.

Storm Intensity



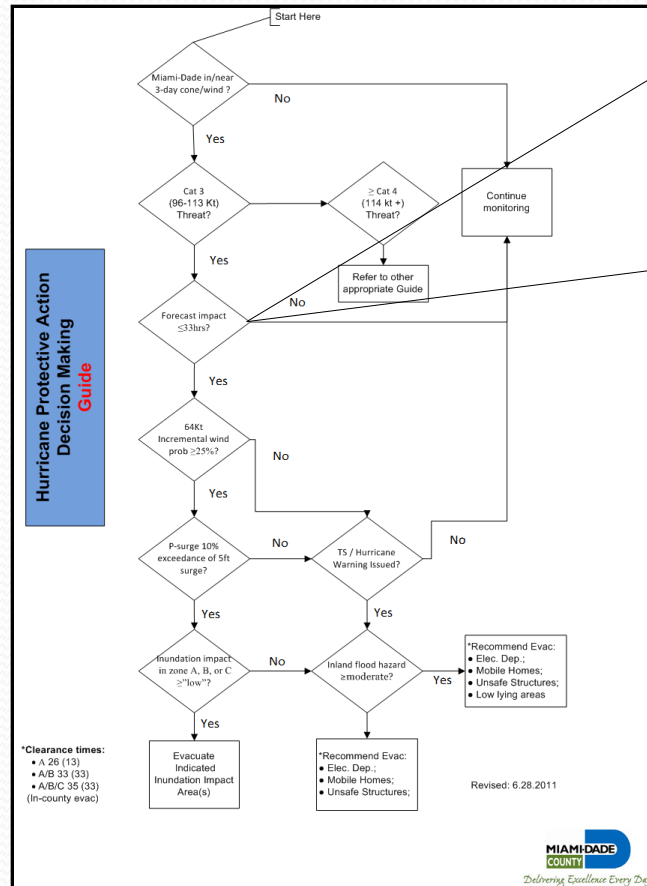
At least
Cat 3
Threat?



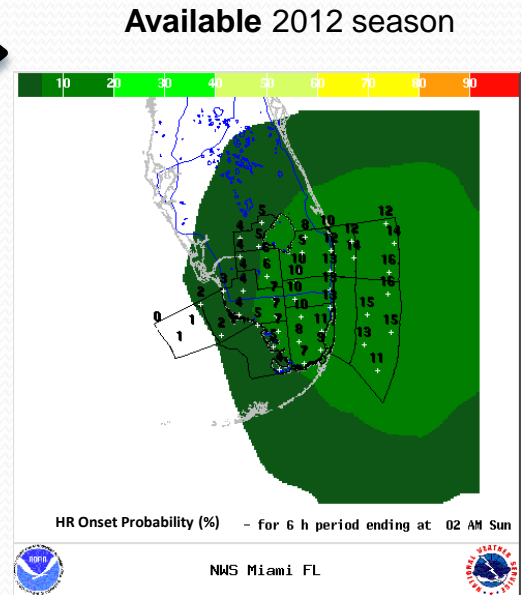
OR

FORECAST VALID XX/XX00Z 31.4N 77.5W
MAX WIND XXX KT...GUSTS XXX KT.

Clearance Times

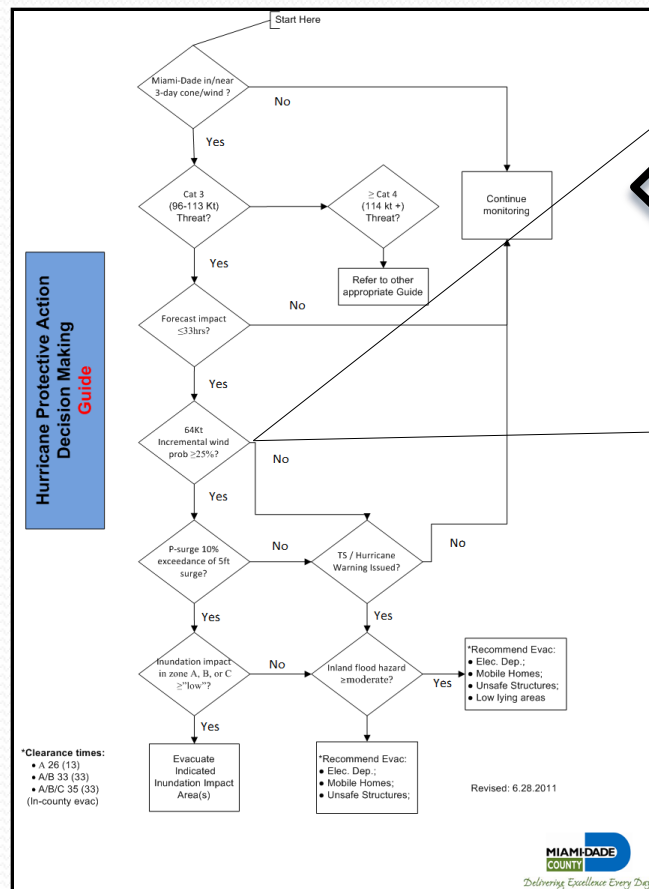


Forecast
Impact
< 33 Hrs



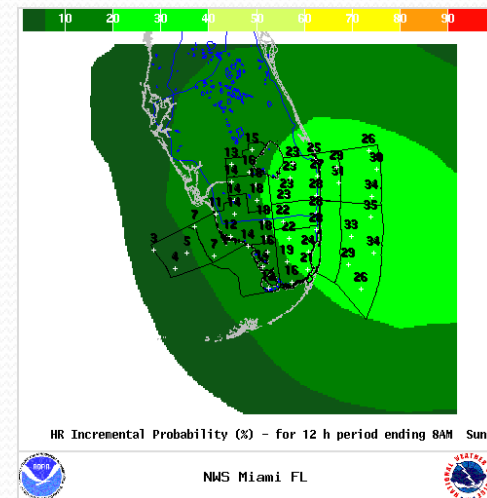
FORECAST VALID XX/XX00Z 31.4N 77.5W
MAX WIND XXX KT...GUSTS XXX KT.

Wind Probabilities



64Kts
Incremental
WSP ≥ 15%

Period	2014	
	PWS64	PWS34
00-12 hr	25%	45%
13-24 hr	20%	35%
25-36 hr	15%	30%
37-48 hr	12.5%	25%
49-60 hr	10%	22.5%
61-72 hr	8%	20%
73-84 hr	7%	17.5%
85-96 hr	6%	15%
97-108 hr	5%	12.5%
109-120 hr	4%	10%

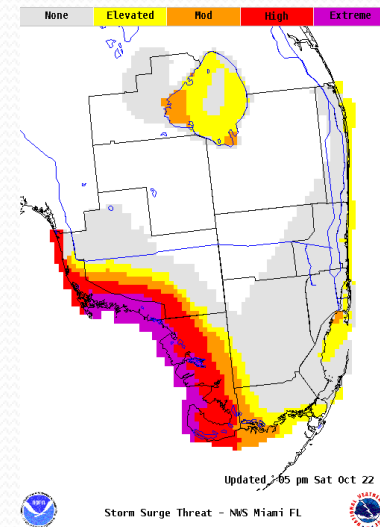
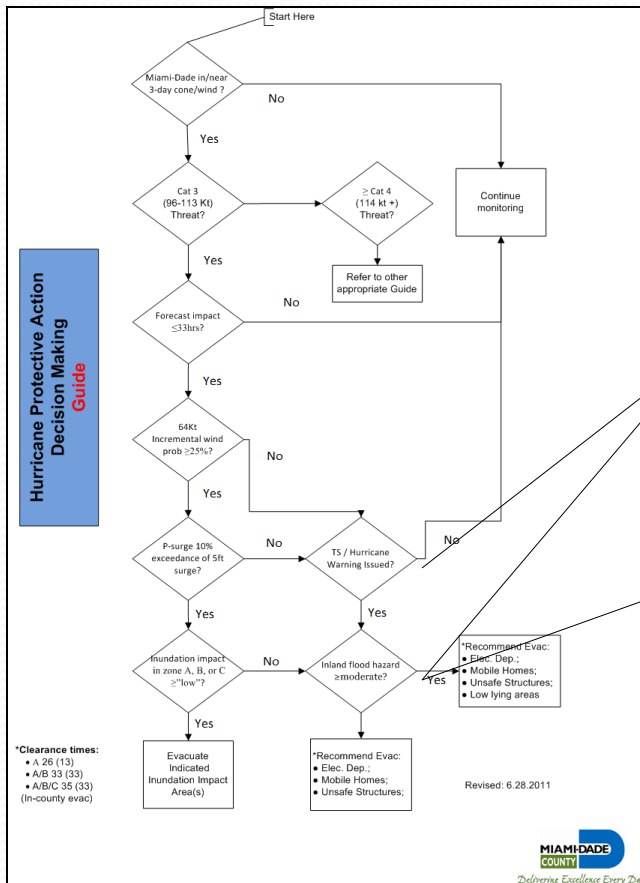


Coastal Flooding (i.e., Inundation) Impact

PSurge2.0 in 10%
Exceedance
Cumulative Form

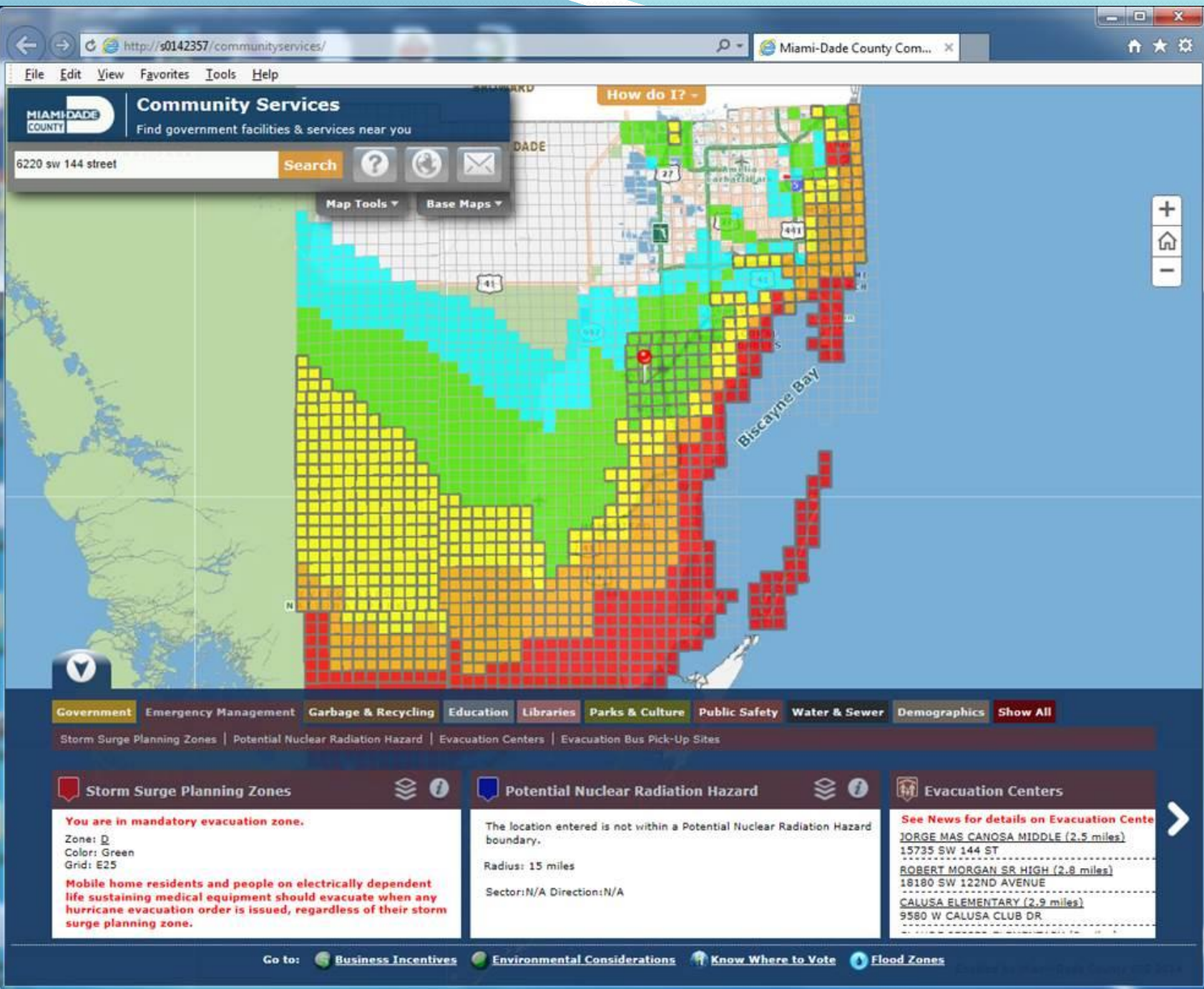
Inundation
Impact
in zone A, B, or C
>= "Elevated"?

Elevated— an
elevated threat to life
and property;
reasonable chance of
combined storm
surge and tide
resulting in sea water
inundation of 1 – 3 ft.



Implementing Protective Actions





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