

Hurricane Preparedness

Town of Edisto Beach and Colleton County
Fire-Rescue (2023)

Introductions

South Carolina Hurricane History

Hurricane Dorian,
2019, Cat 3

Hurricane's
Florence and
Michael, 2018

Hurricane Irma,
2017

Hurricane
Matthew, 2016,
Cat 1

Hurricane
Joaquin, 2015

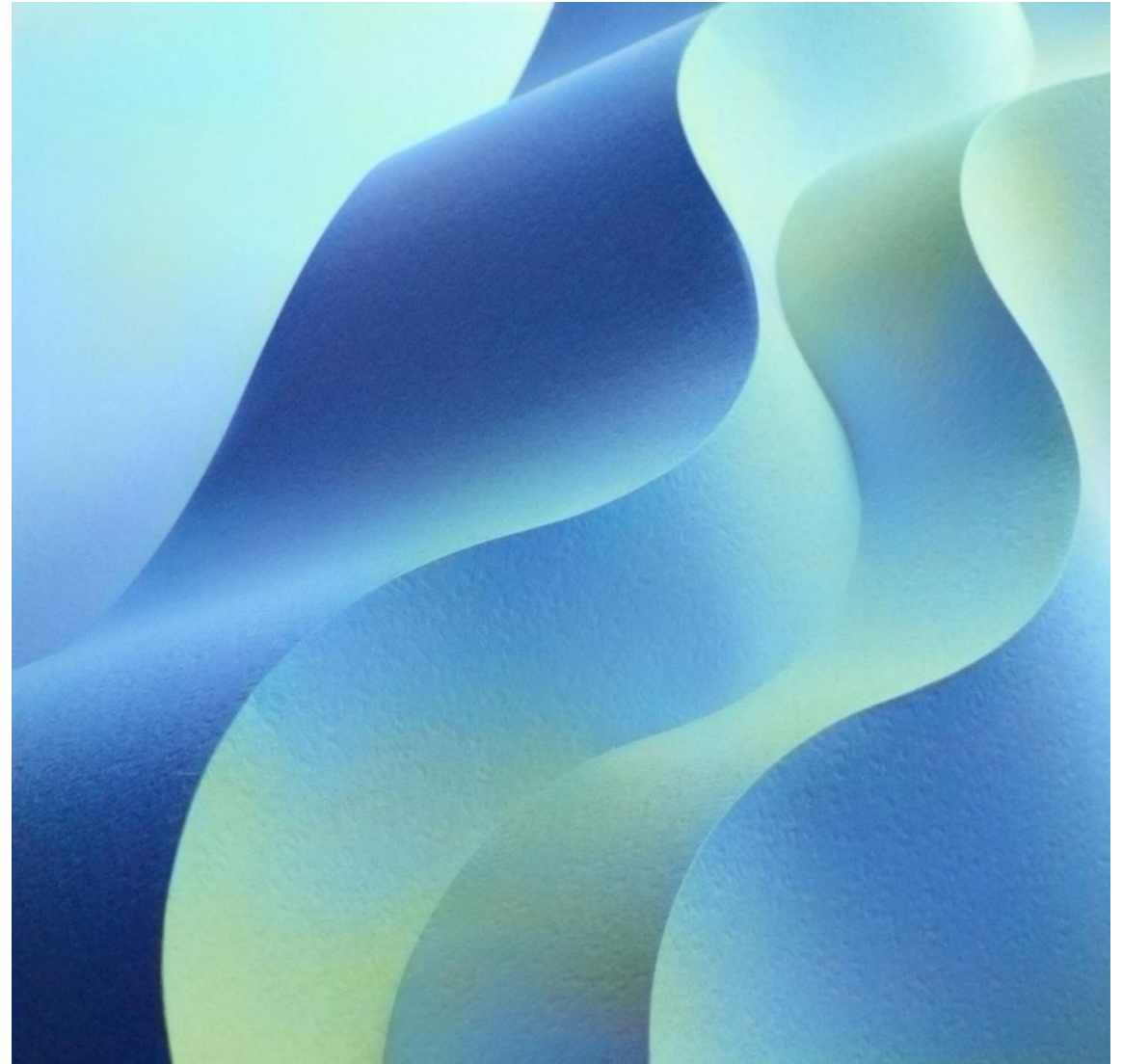
Hurricane Gaston
and Charley,
2004, Cat 2

Hurricane Kyle,
2002, Cat 2

Hurricane Hugo,
1989, Cat 4

Hurricane Gracie,
1959, Cat 3

Hurricane Hazel,
1954, Cat 4





Hurricane Matthew - 2016

National Weather Service

Storm Surge Facts

- There will be more flooding if the highest surge occurs around high astronomical tide (compared to low tide)
- The coastal areas of SC/GA are very surge-prone given the low elevation and gently sloping continental shelf offshore
- In 1989, Hurricane Hugo produced the highest water levels ever recorded on the U.S. East Coast (~20 foot storm tide above Mean Sea Level at Bulls Bay, SC and ~10 foot storm tide above MSL in downtown Charleston, SC)

« Images courtesy of NWS



Romain Retreat, SC (near Bulls Bay) after Hugo (1989)



Edisto Beach, SC after Matthew (2016)

Know the difference between a Watch and a Warning

Hurricane Watch - Issued 48
hours in advance of threat

What do I do? – prepare your
belongings and plan to
evacuate if a Hurricane or
Tropical Storm Warning is
issued.

Hurricane Warning - Issued 36
hours in advance of threat

What do I do? – finish storm
preparations and immediately
evacuate if directed by local
officials. Plan housing and pet
arrangements in advance.

Threats to Edisto Beach

Hazards

Storm Surge

Wind

Rainfall-Induced Flooding

Tornadoes

Saffir-Simpson Hurricane Wind Scale

Hurricane Intensity Scale (Wind Damage)

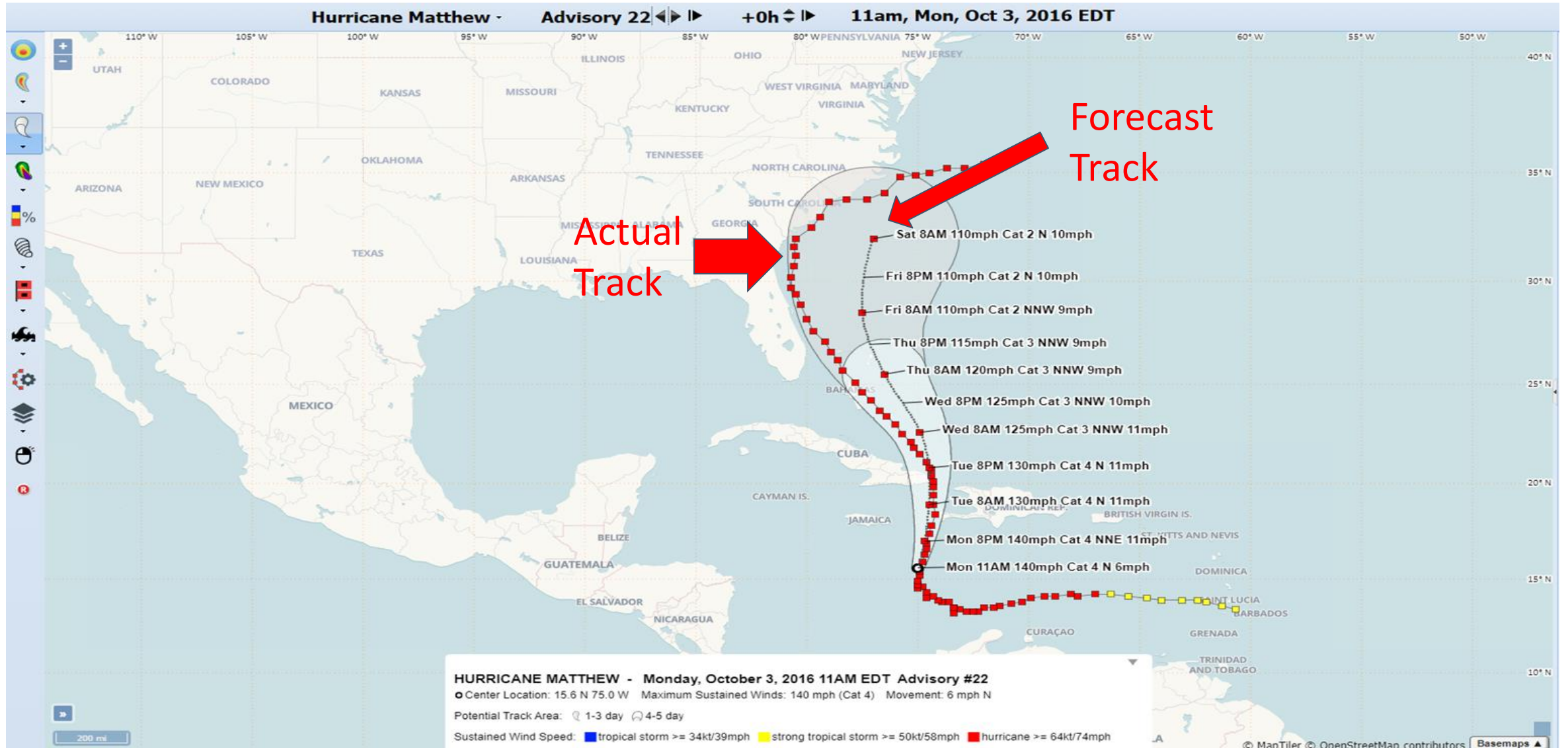


Wind speed	Category 1	Category 2	Category 3	Category 4	Category 5
	75 - 95 mph	96 - 110 mph	111 - 130 mph	131 - 154 mph	155 + mph
	33-42 ms ⁻¹	43-49 ms ⁻¹	50-58 ms ⁻¹	59-69 ms ⁻¹	70+ ms ⁻¹

Dr. David Greene

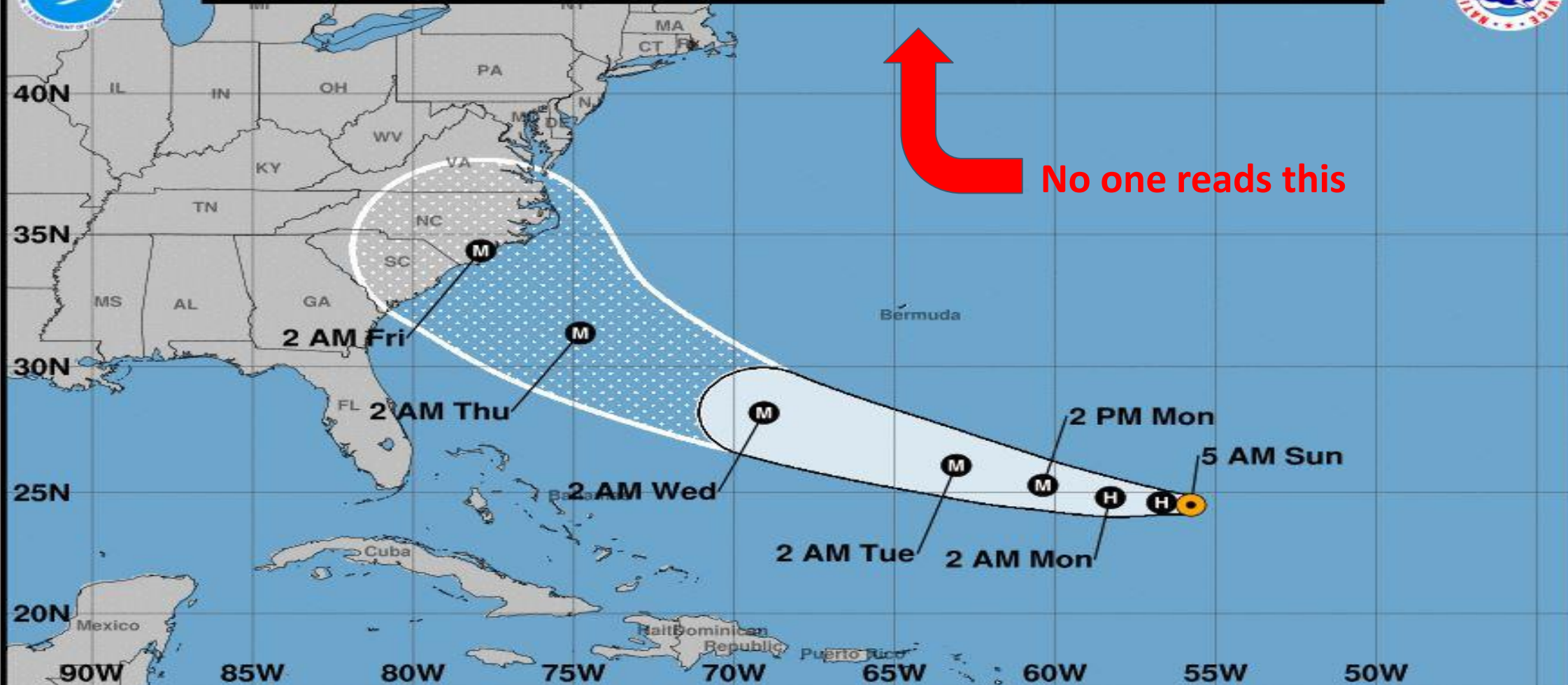
Deputy Chief / Emergency Manager
Colleton County Fire Rescue

The Cone of “Uncertainty” NOT the Cone of “Certainty”





Note: The cone contains the probable path of the storm center but does not show the size of the storm. Hazardous conditions can occur outside of the cone.



Tropical Storm Florence
 Sunday September 09, 2018
 5 AM AST Advisory 40
 NWS National Hurricane Center

Current information: ●
 Center location 24.5 N 55.8 W
 Maximum sustained wind 70 mph
 Movement W at 6 mph

Forecast positions:
 ● Tropical Cyclone ○ Post/Potential TC
 Sustained winds: D < 39 mph
 S 39-73 mph H 74-110 mph M > 110 mph

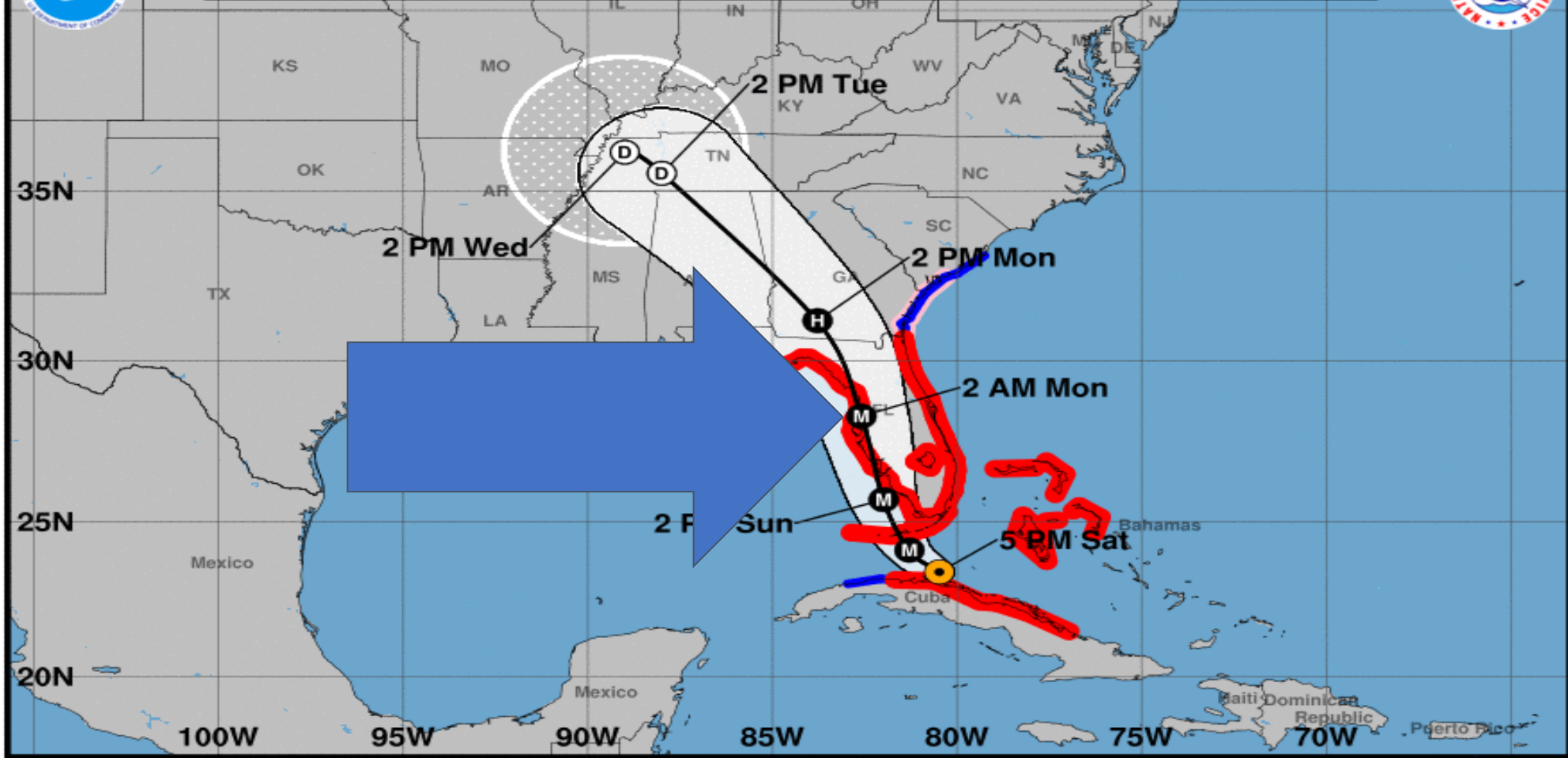
Potential track area:
 ▽ Day 1-3 ▨ Day 4-5

Watches:
 ■ Hurricane ■ Trop Storm

Warnings:
 ■ Hurricane ■ Trop Storm



Note: The cone contains the probable path of the storm center but does not show the size of the storm. Hazardous conditions can occur outside of the cone.



Hurricane Irma
 Saturday September 09, 2017
 5 PM EDT Advisory 43
 NWS National Hurricane Center

Current information: ●
 Center location 23.4 N 80.5 W
 Maximum sustained wind 125 mph
 Movement WNW at 9 mph

Forecast positions:
 ● Tropical Cyclone ○ Post/Potential TC
 Sustained winds: D < 39 mph
 S 39-73 mph H 74-110 mph M > 110 mph

Potential track area:
 ▽ Day 1-3 ▨ Day 4-5

Watches:
 ■ Hurricane ■ Trop Storm

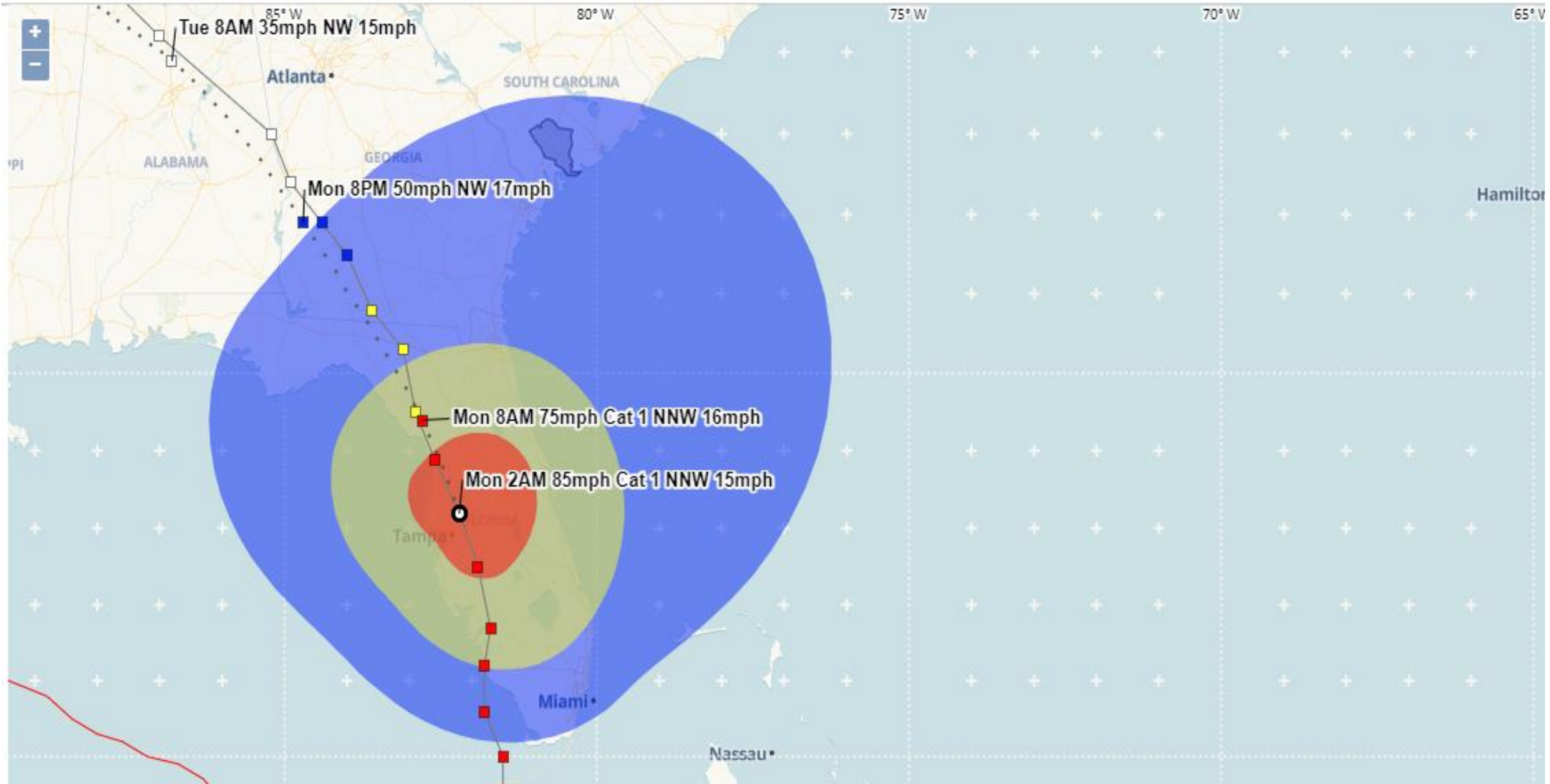
Warnings:
 ■ Hurricane ■ Trop Storm

Hurricane Irma

Advisory 48A ◀ ▶ ▶▶

+0h ⬆ ⬇ ▶▶

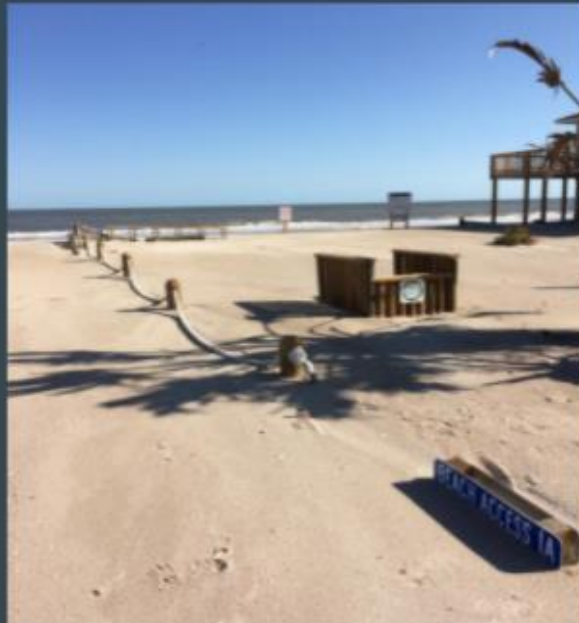
2am, Mon, Sep 11, 2017 EDT



Edisto Beach



Hurricane Irma
2017



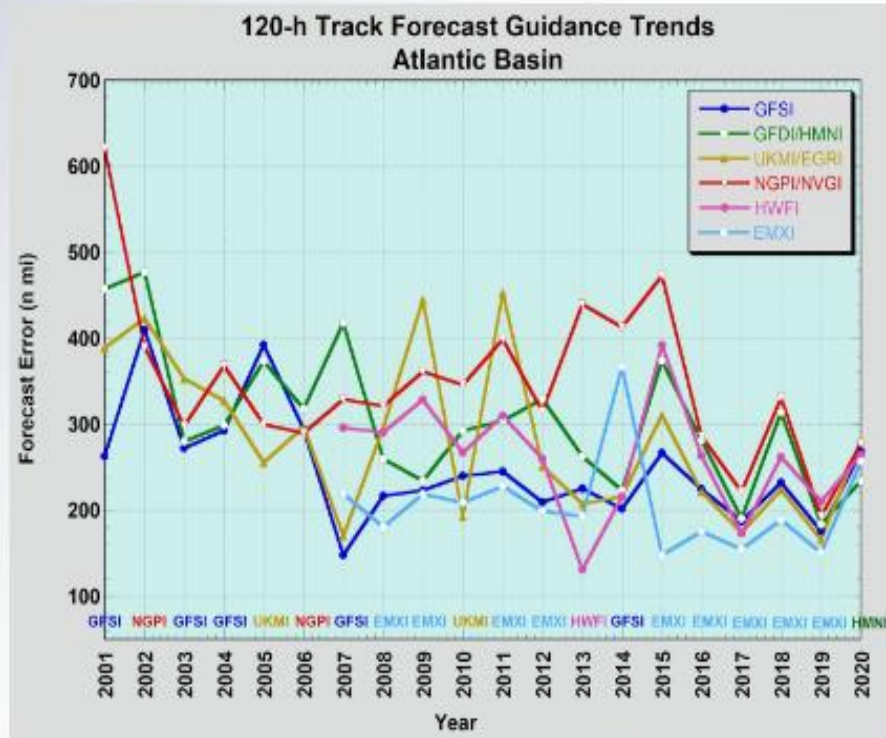
Tybee Island, GA



Which model should we look at?

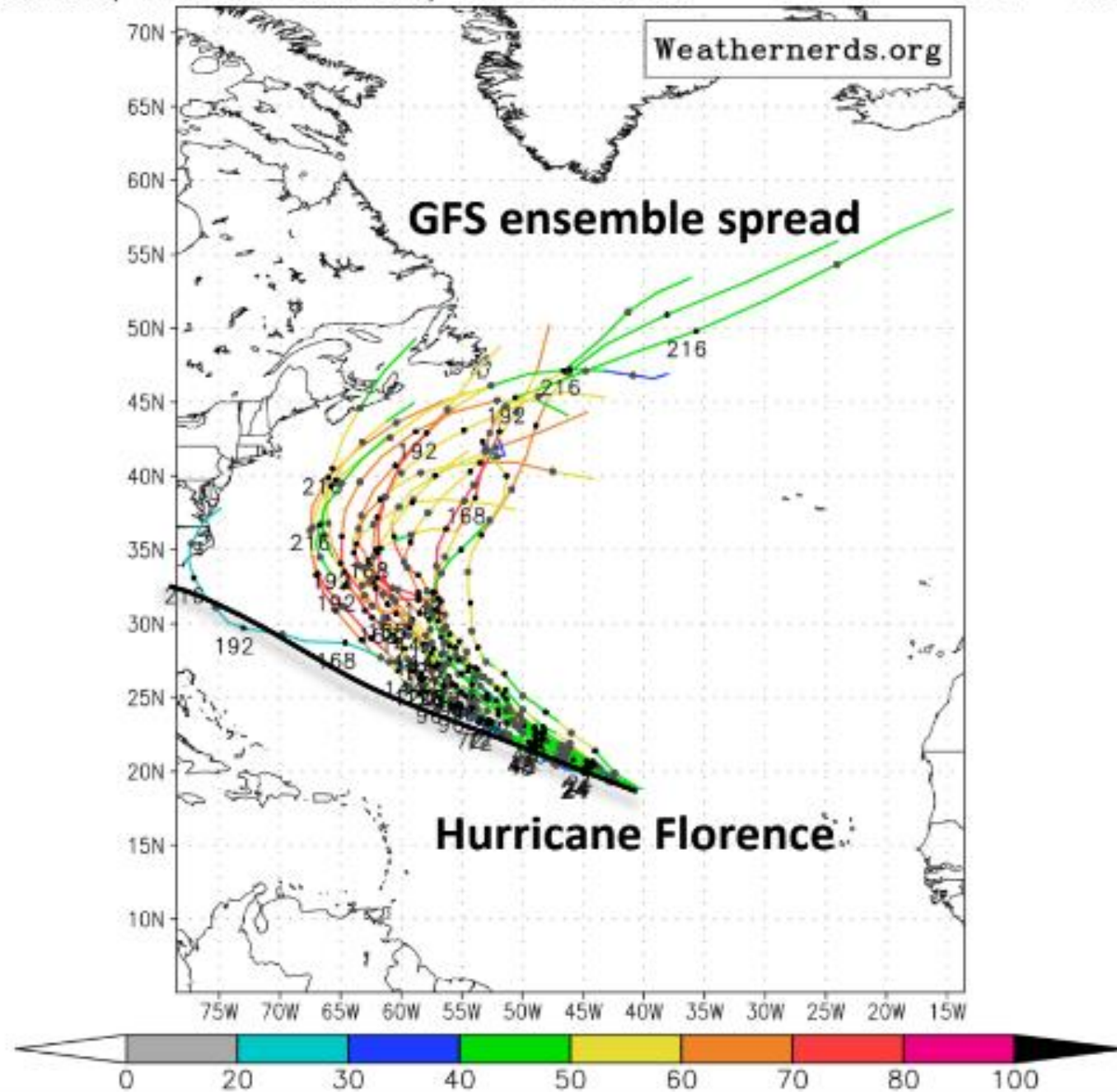
Track Model Trends

Best 5-day Track Model 2001-2020



Due to model changes and other factors, the best performing model often varies from season to season

Euro model had a good run 2015 to 2019, but HMNI (Interpolated Hurricane Multi-Scale Ocean-coupled Non-hydrostatic model) did best in 2020 and preliminary data for 2021 and 2022 says GFS did best those two years.





And of course, the Twitter posts



Sep 7

Updating yesterday's tidbit... as of Friday morning's advisory, 79 named storms have passed within 200 nautical miles of #Florence's position since 1851, and not one has ever come close to the U.S. coast.



The Official National Hurricane Center Forecast is the only model that is touched by a human.



Remember Category DOES NOT include surge

No More Surge in the Saffir-Simpson Scale!



FEMA

(it fits like a square peg in a round hole)

Category	Wind speed			Storm surge	
	mph	km/h	kn	ft	m
Five	≥ 156	≥ 250	≥ 136	> 18	> 5.5
Four	131–155	210–249	114–135	13–18	4.0–5.5
Three	111–130	178–209	96–113	9–12	2.8–3.7
Two	96–110	154–177	83–95	6–8	1.8–2.4
One	74–95	119–153	64–82	4–5	1.2–1.5
Additional classifications					
Tropical storm	39–73	63–117	35–63	0–3	0–0.9
Tropical depression	0–38	0–62	0–34	0	0

KATRINA (3)
IKE (2)

SANDY (1)
ISAAC (1)

CHARLEY (4)

New Bern, NC – Hurricane Florence



New Bern, NC – Hurricane Florence



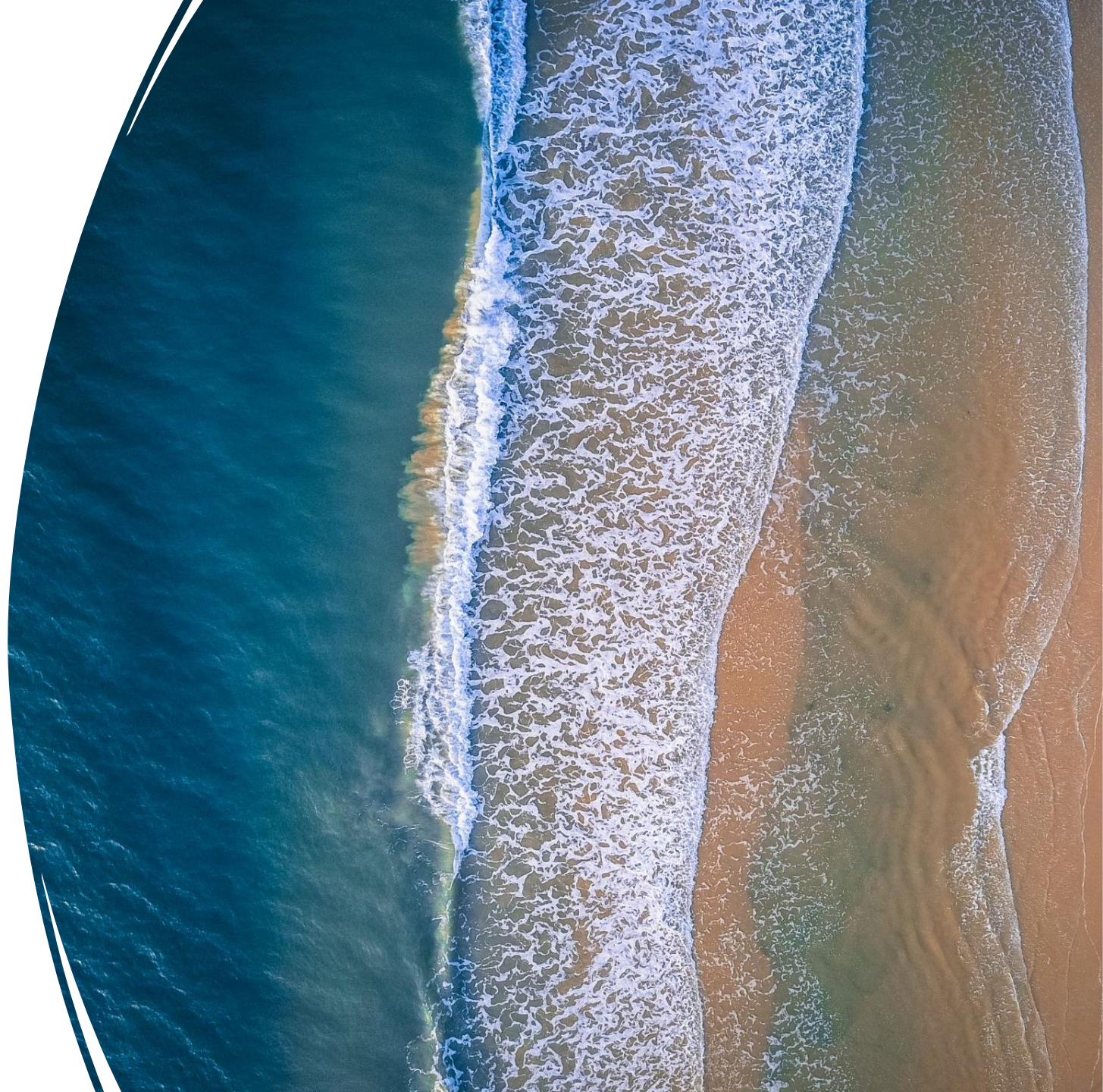
Know Your Zone - Edisto is in Zone A

Follow Trusted Sources of Information (NHC,
NWS, SCEMD, Local Officials)

Have a plan, follow evacuation orders (we
will), and plan for pets

Town of Edisto Beach Preparations

- Edisto Beach Emergency Operations Plan
- Staff meetings and Table-Top exercise with Colleton County
- Incident Command System (ICS)



How to Prepare Your Home

- Insurance Coverage
- Remove outdoor objects
- Secure garbage cans
- Protect window openings with storm shutters
- Unplug appliances
- Lock doors and secure valuables

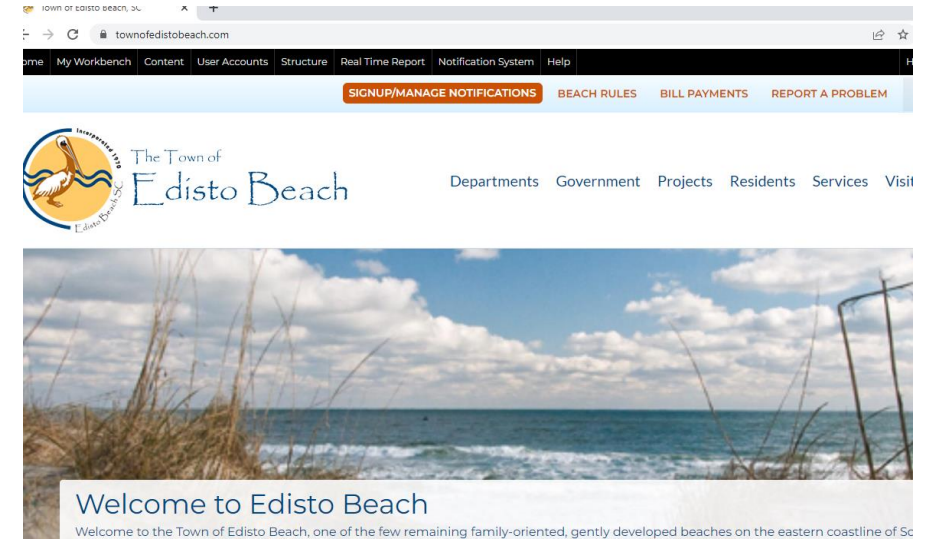
Resources

Sand and Sandbags

CodeRED – Community Notification System

South Carolina Emergency Manager App (iPhone and Android compatible)

<https://www.scemd.org/stay-informed/mobile-applications/>



Disaster Supply Kit

(Visit scemd.org for more information)

3-day minimum preparation

Weather Alert Radio

Non-perishable food (don't forget a can opener)

Drinking water, two gallon per person per day

Flashlights, extra batteries

Cash or travelers' checks

First aid kit

Mess kit

Waterproof matches

Baby supplies

All prescription medication

Hygiene products

Sunscreen and bug spray

Important family documents

Planning for Your Pet

Crate/carrier

Leash/harness/bowls

3 days of water and food

Medications, health/vaccinations records, microchip numbers, photo of your pet

Lost

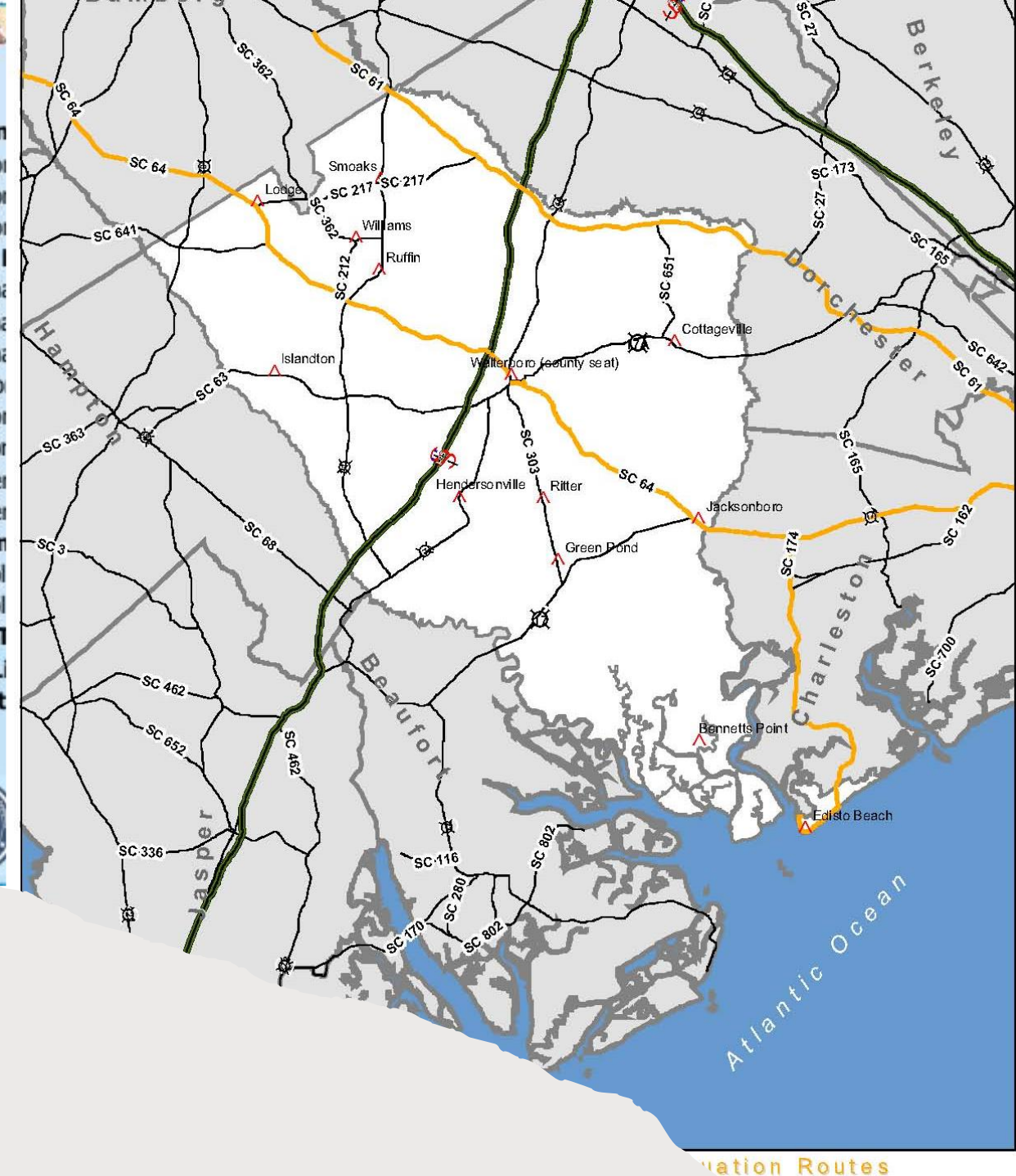
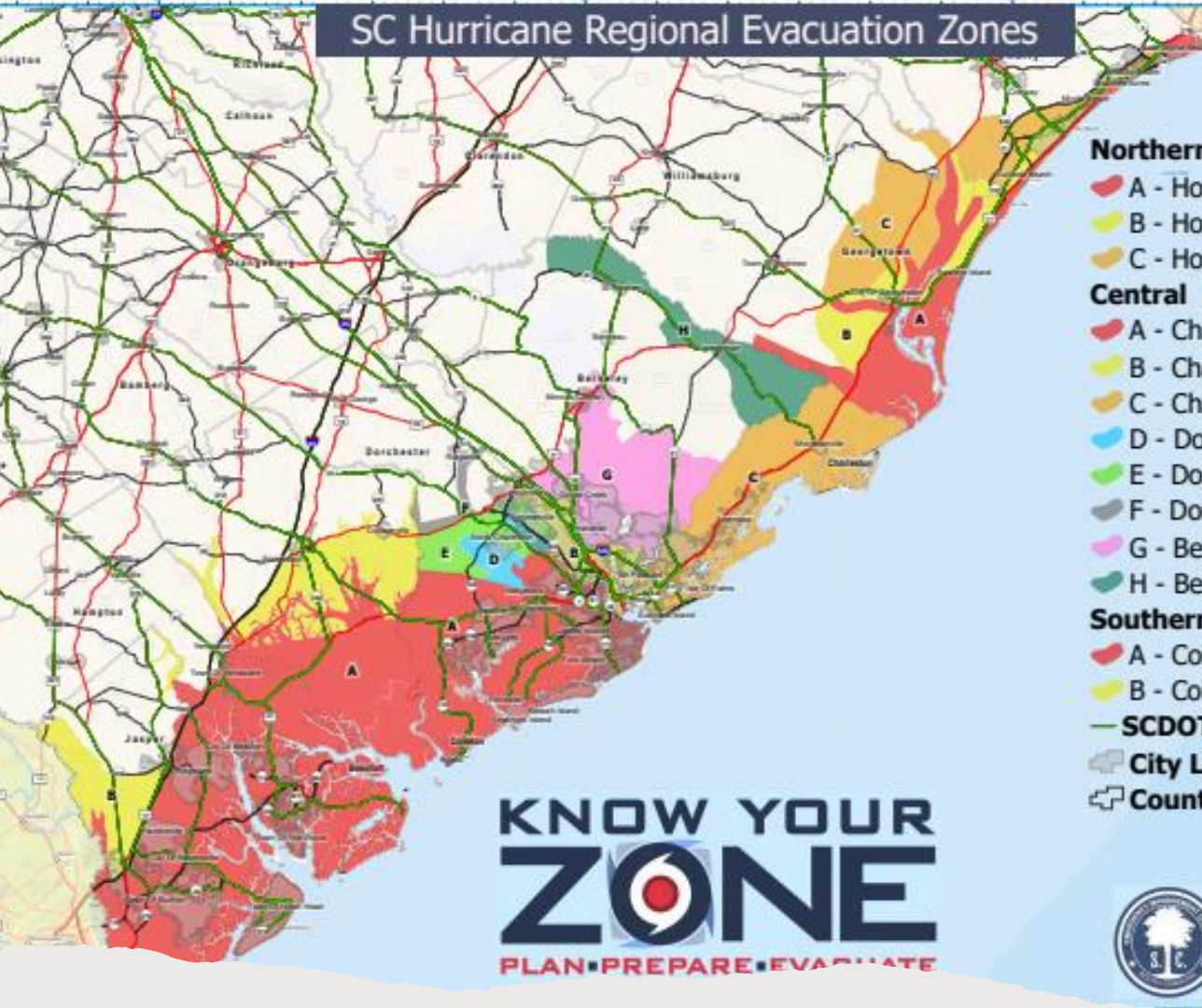




Evacuations

- Notice will be provided through all available means of communications
 - CodeRED
 - Website
 - Email notifications
 - News media
 - No emergency shelters on the beach or island
 - Emergency personnel will evacuate

SC Hurricane Regional Evacuation Zones



Evacuation Route

Re-Entry to Edisto Beach

Re-Entry is phased and dependent on conditions.

Occurs only after safety and damage assessments.

Limited entry.

Property owner decals. Applications can be found in your chairs and on the Town [Website](#).

Important Contact Information

Edisto Beach Town Hall: 843-869-2505,
townofedistobeach.com

Colleton County Fire-Rescue: 843-539-
1960, colletonfire.com/em

Colleton County Emergency Operations
Center: 843-549-5632

S.C. Emergency Management Division
(SCEMD): scemd.org

National Hurricane Center:
hurricanes.gov



Questions?