

## **NORTH CAROLINA** Department of Transportation



# NCDOT's Response to Hurricane Matthew

Kelly Wells, PE

ITS Carolinas, Feb 2018

# Outline



- The Storm
- Our Response
  - Operations Center
  - Service Patrol
  - Traveler Information
- Then and Now



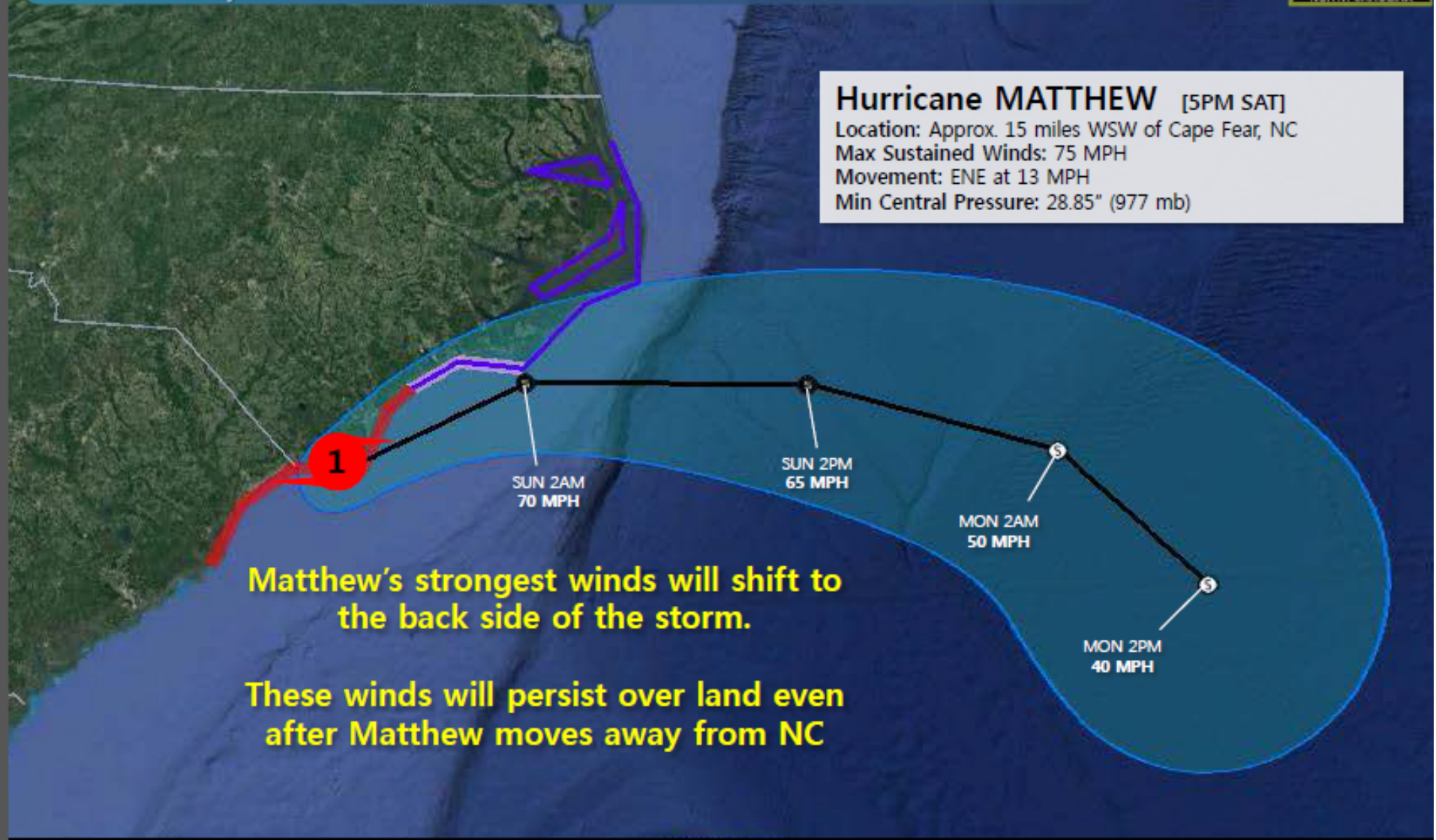
# TROPICAL WEATHER OUTLOOK

Valid Saturday, October 08, 2016



## Hurricane MATTHEW [5PM SAT]

Location: Approx. 15 miles WSW of Cape Fear, NC  
Max Sustained Winds: 75 MPH  
Movement: ENE at 13 MPH  
Min Central Pressure: 28.85" (977 mb)



**Matthew's strongest winds will shift to the back side of the storm.**

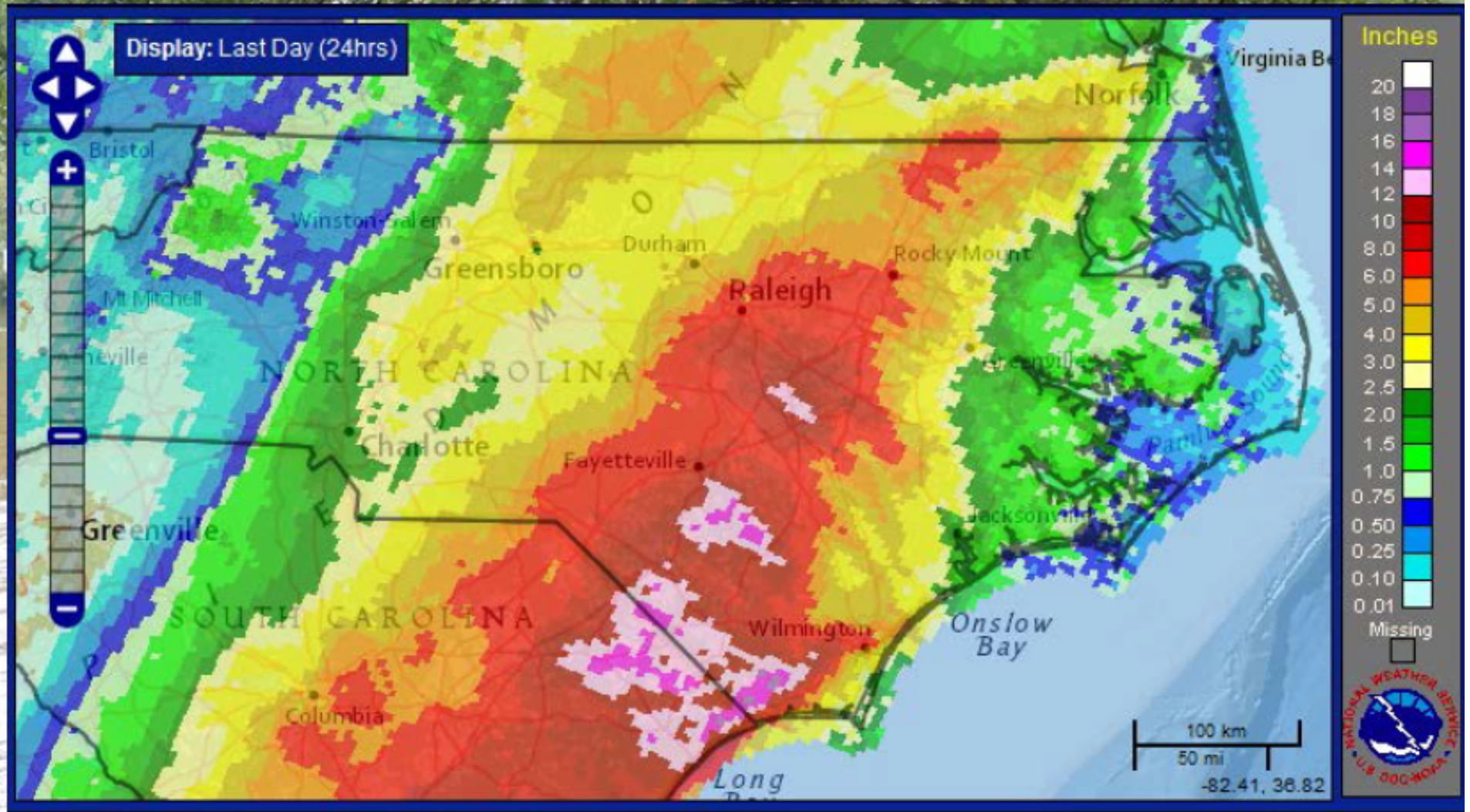
**These winds will persist over land even after Matthew moves away from NC**

- **Hurricane Warning:** North of the NC/SC border to Surf City
- **Tropical Storm Warning:** North of Surf City to Duck (including Pamlico & Albemarle Sounds)
- **Hurricane Watch:** North of Surf City to Cape Lookout

NGA, GEBCO

# ESTIMATED RAINFALL

LAST 24 HOURS – AS OF 6PM



## Road Closures

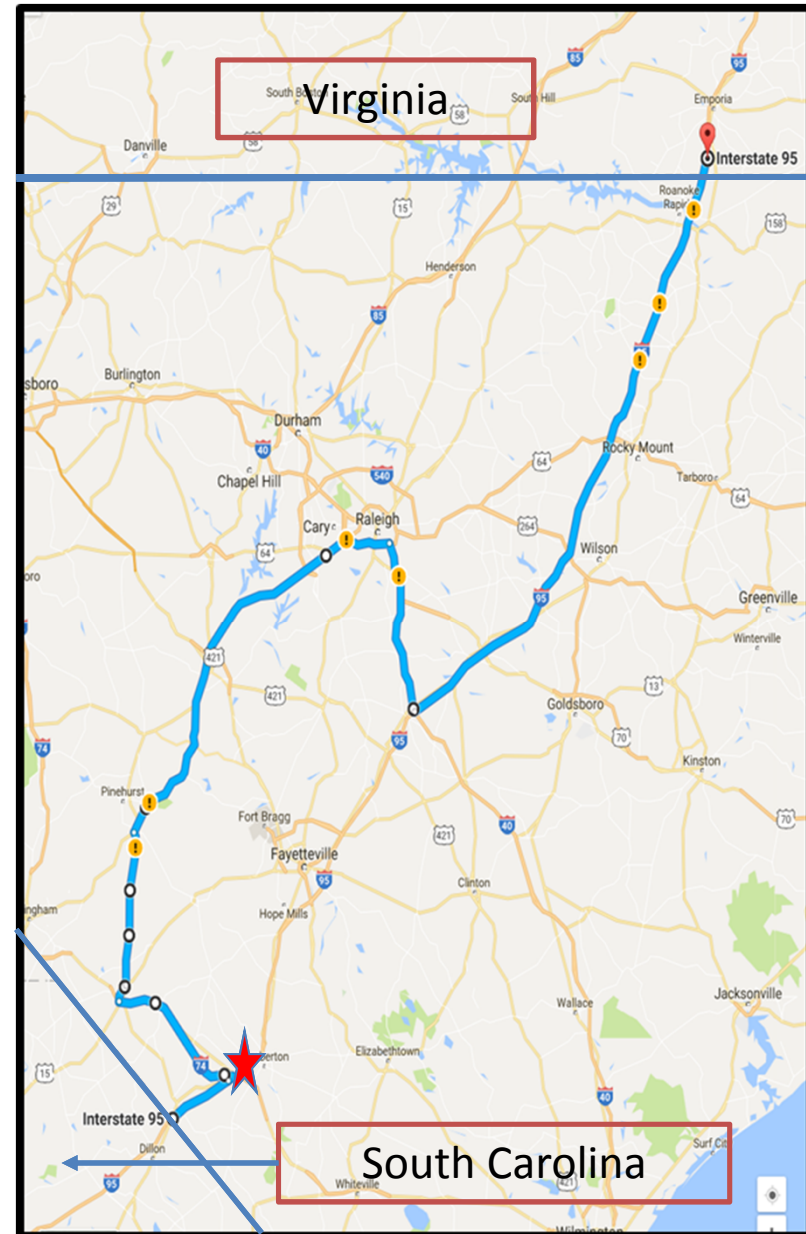
1500 storm related incidents

I-95 flooded, about 20 miles from SC



# I-95 Closure

- I-95 North Bound and South Bound Detours
- Coordination with
  - Highway Patrol
  - local law enforcement
  - Virginia DOT and South Carolina DOT



# NCDOT Statewide Transportation Operations Center (STOC)



Co-located at State  
Emergency  
Operations Center



# Statewide Transportation Operations Center (STOC)

- **Hurricane Matthew Response Plan** – actions to be taken by STOC Supervisors & Operators in preparation and during event
- **I-95 Response Plan** – I-95 DMS/detour activation and updates
  - Coordination with VA and SC (VA put out CMS to advise motorists)
  - spreadsheet kept and updated with all I-95 closures, activated DMS, and detours
  - Information shared with EM, SCDOT, VDOT, and NCDOT
- **Road Closure Report** – Updated three times daily to keep NCDOT and Emergency Management advised of active road closures





## Service Patrol NCDOT State Farm Safety Patrol (aka IMAP)

- Sent staff from Raleigh to I-95
  - NCDOT does not normally patrol I-95: only in emergencies
  - NCDOT does not normally run IMAP on weekends
- Distributed gas to stranded motorist due to I-95 closure and no power for gas pumps

# Service Patrol NCDOT State Farm Safety Patrol (IMAP)



- Assisted with initial push to detour route and patrolled detour route
- Kept 1 driver for 1 week on 12 hour shift to patrol detour route

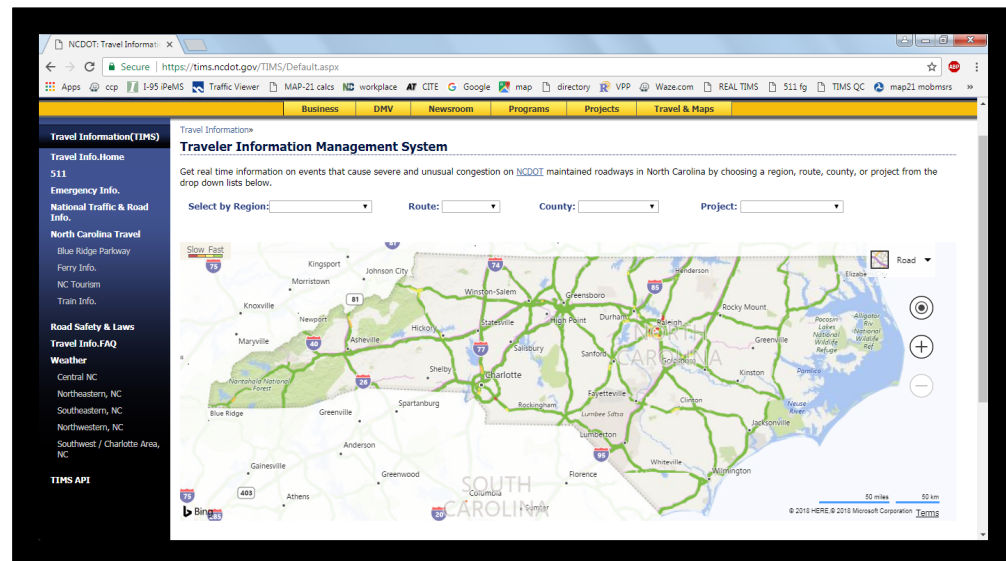


# Traveler Info

Web: DriveNC.gov (aka TIMS)

- All hazards system: crash, wz, snow, hurricane, ...
- Entered by over 1000 NCDOT staff via web
- QA/QC by STOC
- Feed to Media & Nav Cos
- STOC staff produced KML files (point/line)

3.3M pageviews  
over 10 days



## Traveler Info

### Phone: 511 and DOT Customer Service

- Overnight IVR System
- Daytime Live Operators at T&T Call Center
- Used Terminal Floodgate: my first time in 13 years

Over 120,000 calls



# Traveler Info

## DOT Crisis Response Team

- teams of DOT volunteers
- report to STOC to answer calls using DriveNC.gov
- formalized for future events

Over 5000 calls



# Traveler Info



## Travelers Using Navigation Systems/Apps

- Stories of repeat visitors to I-95 barricades
- Learned some about HW/SW
- Worked with HERE and Waze
- Identified challenges with our info
  - Points not lines
  - “Expiring” not “Re-opened”
- Increased focus on working with these information providers going forward



# Then & Now

## Hurricane Floyd 1999

- NCDOT TSMO coordination in hallway of Highway Building
- 1 central office “TSMO” staff
- NCDOT website had static content with GIS maps hand drawn
- (877) DOT 4 YOU call taking was ...interesting
- No IMAP sent to other Divisions

## Hurricane Matthew 2016

- NCDOT TSMO coordination at 24x7x365 Statewide Transportation Operations Center
- Almost 50 central office TSMO staff
- NCDOT website provides real time traveler information entered by field forces in a consistent manner
- (877) DOT 4 YOU & 511 has solid info to use
- IMAP responds as needed to emergencies

But still our  
focus remains...  
Keeping traffic  
moving and  
telling people  
when it is not!

