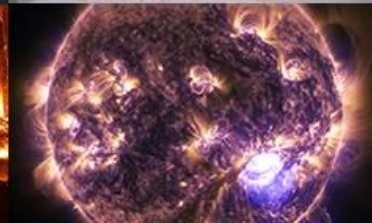
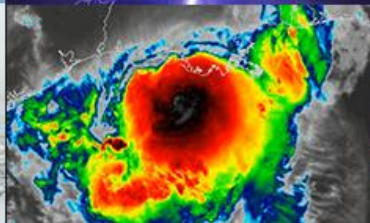




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Using Social Science to Create More Targeted Local Outreach Programs Focused on Reaching Vulnerable Communities

Erik Heden, Warning Coordination Meteorologist NWS Morehead City, NC



Teamwork/Ongoing Effort



**Ocracoke, NC September 2019
Hurricane Dorian**

**National Weather Service Newport
Morehead City, NC**

Ryan Ellis

Isabella Kemp*

Casey Dail

Shane Kearns

***University of Florida**

Maegan Byrd



Objectives



- Define/obtain more knowledge about community vulnerabilities within our forecast area
- Develop a vulnerability atlas to document these efforts
- Develop a targeted outreach plan for vulnerable communities based on the atlas
- GO WHERE WE HAVEN'T BEEN



Resilience Analysis and Planning Tool (RAPT)

National Integration Center Technical Assistance | August 2021

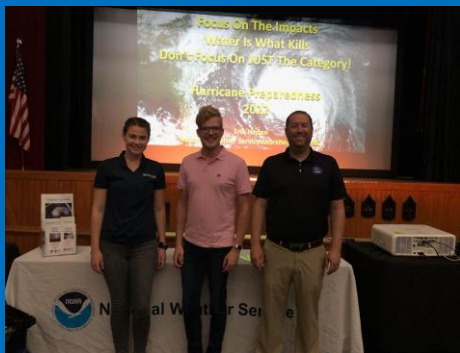


FEMA

Select a community or county to identify
Neighborhoods at Risk

NEW! The latest American Community Survey data are

Q Which community or county?



Data Sources

Find at-risk neighborhoods

People

Set criteria: None County Median U.S. Average

Households with no car
> 0%

Families in poverty
> 0%

People who don't speak English well
> 0%

Housing units that are mobile homes
> 0%

Children under 5 years
> 0%

People with disabilities
> 0%

People over 65 years
> 0%

SEE MORE

- Electronic Databases
- Forecaster Input
- Forecaster/EM Interaction
- Community Outreach Interaction

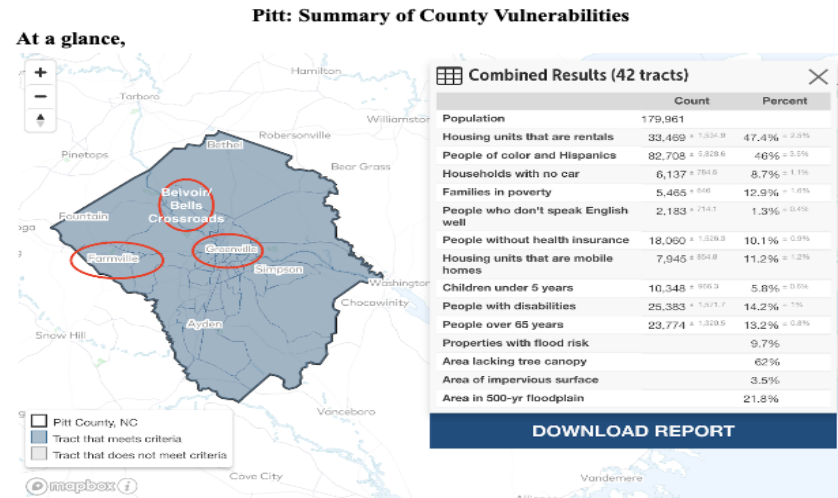


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Building a Weather-Ready Nation // 4

Vulnerability Atlas

- Highlights top 3 vulnerable communities for each county
- Includes customized stats from Neighborhoods at Risk
- Includes Forecaster Input
- Includes Emergency Manager / Forecaster Communication
- Includes Community Input
- Ongoing work/document



Designated Vulnerable Areas within Pitt County:

- Greenville (southern portions- Census Tract 1.02)
 - Flood risk, poverty (56%), no car (19%)
- Bells Crossroads/Belvoir
 - Flood risk, mobile homes (73%), no car (24%), poverty,
- Farmville
 - Flood risk, poverty (20%), no car (11%), disabilities, elderly

Forecaster Input:

- Higher tornado probability within this county
- Greenville largest city

Emergency Manager Input:

- Northern portion of the county considered more vulnerable
- Targeted outreach right now focuses on flood prone areas
- Rural and poor trust towards government officials is a significant vulnerability
- More outreach to build trust within the rural communities and help people understand the Weather Service's role
- Attention to local media (EM's think that the media is sensationalizing weather)

Community Input:

- Want more information on where to go/not to go during floods
- Most people are getting weather information from the local news stations



Outreach Plan 2022-23 School Year



- Plan/schedule outreach in vulnerable/underserved areas (proactive)
- Visit schools all our counties
- Develop relationships (gain trust...)
- Working with other groups (faith based organizations)



Five Challenges We Faced

- Most of our visits had been within an hour of the office (who are we?)
- Travel logistics (rural, ferries, water)
- Staffing
- Dedicated/team effort
- Teacher turnover



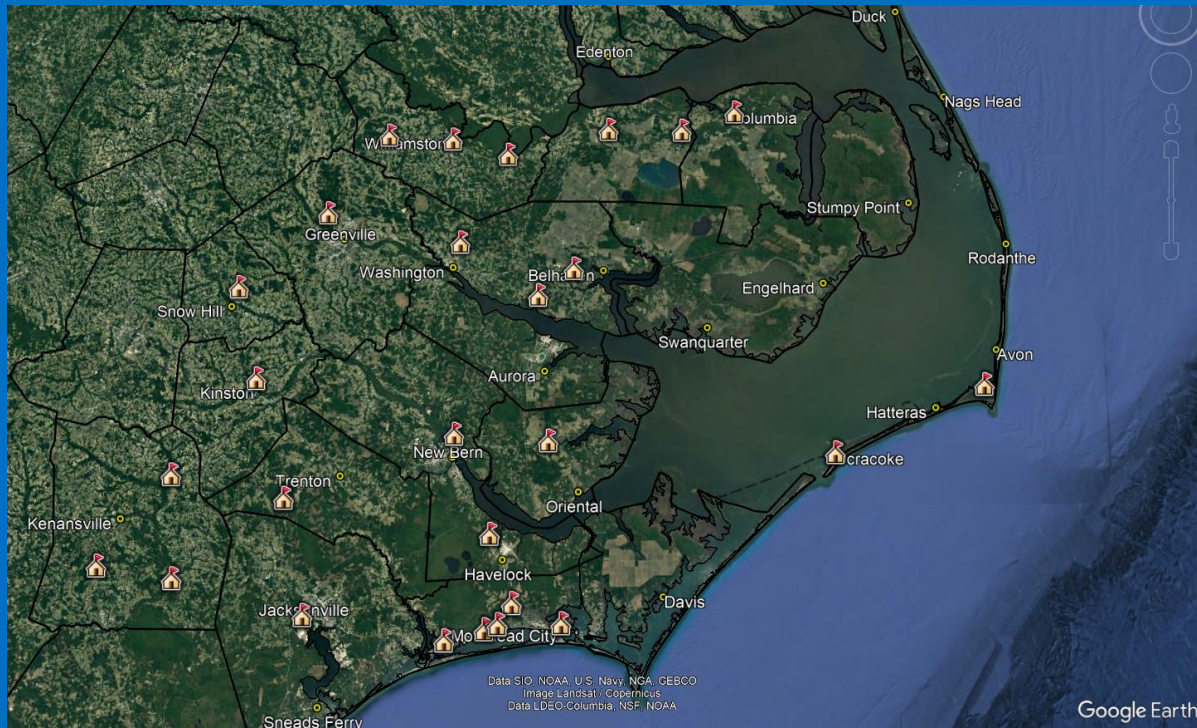
Five Ways We Overcame Them



- Reached out to 5th grade schools, defined as vulnerable in our atlas
- Combined trips with partner meetings, dedicated whole days to visits (2 – 3 schools per day)
- 10 different forecasters helped out
- Maintained a database of contacts beyond just teachers (admin)

Results

- Visited at least one school in every county (15)
- Multiple counties had all 5th graders reached
- Almost entirely, first time visits
- 2,570 miles driven!



Results



- Over 4,000 school students reached
- Focused on 5th grade standards
- Every child received rip current, flooding brochures (*heat and lightning as available)

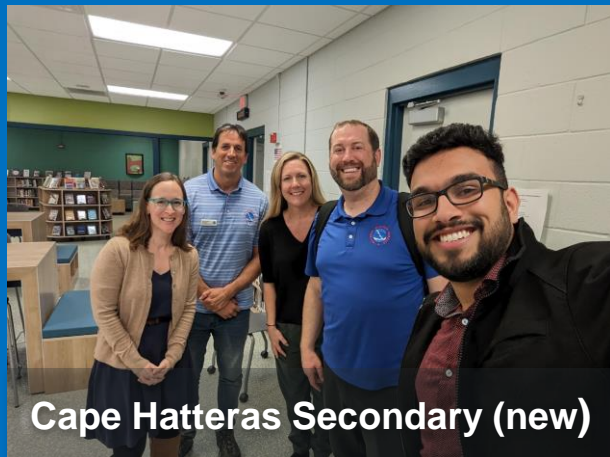


Results Beyond Schools

- Meeting with partners on the way
- Delivering brochures, lightning signs
- Attending meetings
- Interacting IN THE COMMUNITY



Weather Ready Nation Ambassadors



- Visiting WRN Ambassadors, delivering brochures
- Meeting and signing up new ambassadors!



Faith Based Communities



Kinston, NC
St James AME Church
Hurricane Forum



Volunteer Organizations



**Volunteer Organizations
Active in Disasters
(VOAD)**

Can provide what we can't

**Are already active in
underserved communities**





Future

More involvement with faith based/disaster groups

Highlight careers paths in STEM

Virtual/More Communities

Incorporate Citizen Science (CoCoRaHS)

See how these is being expanded in the NWS





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Questions?

Quick Slide Deck



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