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## EVENT SUMMARY:

Tropical Storm Irene developed in the southeastern Atlantic Ocean on August 20, 2011. The storm became a hurricane on August 22, 2011. The track of the storm moved nearly 550 miles in six days, putting Accomack County in its projected path. Initial forecasts showed Irene would be a Category 2 storm when it neared Accomack County with projected rainfall totals of 6 – 12 inches and a storm surge of 2 – 5 feet. Hurricane Irene made landfall in North Carolina Saturday, August 27, 2011 as a Category 1 hurricane. Irene slowly moved to the north/northeast. Effects of Irene started in Accomack early Saturday morning, with heavy rainfall and wind occurring throughout the day Saturday. Until late in the afternoon on Saturday, Irene was projected to impact the County with Category 1 winds. The center of Irene passed just east of the County Saturday evening, August 27<sup>th</sup>, with an unforeseen dry air mass pushing the heaviest winds of the storm to the west of the county. The storm left the area by Sunday morning, September 28<sup>th</sup>. Although effects were less than projected, the storm's effects were felt through 40 – 50 mph sustained winds, seaside and bayside flooding, power outages, and trees down. Homes on Chincoteague and Tangier Islands had flood waters enter their homes, some homes were damaged by falling trees, and numerous watermen reported lost crab pots, damaged crab houses and crab floats.

A large number of personnel contributed to the county's storm preparation. Many federal, state, local, commercial, and volunteer entities coordinated an effective response and recovery to Irene's effect. Many affected citizens heeded the evacuation orders and the media did a very effective job of relaying all public service messages regarding the storm.

### EOP Emergency Support Functions:

- ESF 1: Transportation - VDOT
- ESF 2: Communications – 911 Communications Center, Eastern Shore Amateur Radio Club (ESARC)
- ESF 3: Public Works
- ESF 4: Firefighting & Emergency Medical Services – Department of Public Safety (DPS), all volunteer stations
- ESF 5: Emergency Management (EM)
- ESF 6: Mass Care, Housing, and Human Services – Dept. of Social Services (DSS), Accomack Co Schools, Community Services Board (CSB), Eastern Shore Health Dept. (ESHD)
- ESF 7: Resources Support – EM, VDEM
- ESF 8: Public Health and Medical Services – Health Dept. (ESHD)
- ESF 12: Energy - ANEC
- ESF 13: Law Enforcement – Sheriff's Office (ACSO), VA State Police (VSP)
- ESF 14: Long Term Recovery – EM, Building & Zoning (B & Z), Planning Dept., Assessor's Office, Public Works

## PREPAREDNESS ACTIONS:

### Tuesday, August 23:

- Emergency Management distributed email of National Hurricane Center (NHC) info regarding hurricane projected path to EOC staff

### Wednesday, August 24:

- Level 1 EOC activation began (Standby/Alerts)
- Weather briefing videoconference by National Weather Service (NWS) and situational briefing for EOC staff held in DPS conference room at 1130
- PSA on general storm preparedness issued to local media outlets for immediate release

### Thursday, August 25:

- Weather briefing videoconference by National Weather Service (NWS) for EOC staff held in DPS conference room at 1130. Forecast for Accomack continued to be 90 – 105 mph winds
- Weather briefing followed by a discussion of protective measures implemented:
  - ✓ ESF 1 – VDOT had ~ 40 personnel on standby and staging Friday evening at local hotels; other teams on standby in Suffolk if needed; had secured all necessary supplies; priority designation for roads – Rt.13, primary roads, then secondary roads; crews will be pulled off roads at sustained wind speeds of > 39mph.
  - ✓ ESF 2 - 911 center had double staffing reporting in on Saturday and Sunday; ESARC had staff for EOC and shelters; County IT staff worked to get additional computer and IT infrastructure operational in the EOC
  - ✓ ESF 3 – Debris management staff briefed and ready to accept debris at least at 3 temporary storm debris sites
  - ✓ ESF 4 – Ready to assist VDOT with road debris removal as much as possible; additional DPS staff assigned to 24 hr stations; no response after 50 mph sustained winds
  - ✓ ESF 5 - PSAs regarding preparedness, evacuation and sheltering information will be or has been issued ; Tangier had been notified and urged to evacuate as soon as possible; in contact with Town of Chincoteague and Northampton County; conference call with Maryland and Delaware EM; all 3 DPS supervisors assigned to EOC for duration of storm
  - ✓ ESF 6 - DSS shelter managers ready to staff shelters; 4 Spanish speaking interpreters (3 DSS, 1 ESHD) ready to staff shelters; DSS will meet with school staff to review sheltering room locations and other sheltering concerns; school staff checking generator functions; school staff installing hurricane shelter at middle schools; ACSO has assigned staff for 4 shelter locations

- ✓ ESF 7 – 1 DPS staff member assigned to liaison with Tangier for any unmet needs; VMRC had all resources available for use; a VDEM representative was prepositioned on the ES for the storm; VDEM prepositioned 2 Conex boxes with shelter supplies and items for initial damage support; VDEM prepositioned 1000 heater meals; 911 communications requested back-up radio cache to the state; Fish & Wildlife resources available through VSP if needed; VSP has available 30 – 50 National Guard engineers for tree removal along highways;
  - ✓ ESF 8 – ESHD nursing staff teams assigned for shelters; nursing homes contacted and report plans to shelter in place with generators operative and emergency supplies in stock; ChemPac emergency info sent to POCs at Riverside Shore Memorial.
  - ✓ ESF 12 - ANEC contacted critical facilities regarding power restoration assurance; 2 additional contractor's teams have been assigned to this area; additional ANEC resources on standby for Sunday arrival if needed;
  - ✓ ESF 13 – additional ACSO road deputies scheduled; VSP requested an armored all terrain vehicle for flood and/or high winds rescue; VSP can assist ACSO in shelters if needed; VSP will attempt to set up STARS network in EOC; VSP can also be assisted by VMRC and VMP;
  - ✓ ESF 14 – Damage Assessment teams on standby to start damage assessment process
- Local Emergency declared by Accomack EM Director
  - PSA of a Voluntary Evacuation for surge/flood zone areas and mobile home residents issued to local media outlets and county website for immediate release
  - PSA of a Mandatory Evacuation beginning at 0800 Friday, 9/26/11 for surge/flood zone areas and mobile home residents issued to local media outlets and county website for immediate release PSA advises all evacuees to have evacuation plans completed by 1200 Saturday

Friday, August 26:

- Weather briefing videoconference by National Weather Service (NWS) for EOC staff held in EOC
- Weather briefing followed by a discussion of further protective measures implemented
- Local Emergency Declaration resolution accepted by BOS at special called meeting and status briefing given by EM to BOS
- PSA for 0600 Emergency Shelter openings at Nandua & Arcadia Middle Schools issued to local media outlets and county website for immediate release
- Informational meeting for volunteer fire/EMS stations held to discuss storm operations, including High Impact Storm Response Dispatch Procedures

## RESPONSE ACTIONS:

### Saturday, August 27:

- 0600 – EOC at Level 3 – fully activated
- Weather/situation briefing by NWS/VDEM held in EOC at 1130 with updated briefings given with every advisory from NHC
- PSA for Emergency Shelter openings at Nandua High School issued to local media outlets and county website for immediate release
- PSA for Emergency Shelter openings at Arcadia High School issued to local media outlets and county website for immediate release
- Final sheltering data:

Shelter Locations	# of Evacuees	Shelter Staff
Arcadia Middle	305	8 DSS, 8 School, 4 ESHD, 1 CSB, 2 ACSO, 2 ESARC
Arcadia High	60	8 DSS, 4 School, 3 ESHD, 2 CSB, 2 ACSO
Nandua Middle	293	8 DSS, 5 School, 3 ESHD, 1 CSB, 2 ACSO, 2 ESARC
Nandua High	340	7 DSS, 8 School, 3 ESHD, 2 CSB, 2 ACSO, 2 ESARC
<b>Total # Sheltered</b>	<b>998</b>	<b>89</b>

- Situation reports regularly sent to state EOC via WebEOC from EM or EOC Manager
- As the call volume increased during Saturday evening, High Impact Storm Response Dispatch Procedures were implemented. This alternate dispatch procedure provided a more effective approach to dispatching of fire/EMS incidents. When call volume returned to more manageable levels, normal dispatch procedures resumed.

## RECOVERY ACTIONS:

### Sunday, August 28:

- All emergency shelters closed by 0800
- EOC demobilized at 1200
- PSA on storm debris removal information issued to local media outlets and ACDPS website for immediate release
- PSA from ESHD on health precautions issued to local media outlets and ACDPS website for immediate release
- B & Z Damage Assessment team began Initial Damage Assessment (IDA) by documenting private property and business damages. Public Works began IDA process by documenting damage to publicly owned property.

### Monday, August 29:

- IDA data sent from B&Z to Planning and then on to the Assessor's office
- Debris Management Plan implemented by Public Works with 3 temporary debris sites accepting storm debris and landfill tipping fee for citizen's storm debris lifted.

### Tuesday, August 30:

- IDA conducted on Tangier Island by VDEM representative and EM Deputy Coordinator
- Cumulative Damage Report sent to VDEM via WebEOC

Wednesday, August 31:

- Updated Cumulative Damage Report sent to VDEM via WebEOC
- After Action Review meeting held for EOC staff
- After Action Survey sent to local media requesting comments regarding county's information dissemination efforts during Hurricane Irene

Friday, September 2:

- Preliminary Damage Assessment conducted by FEMA/VDEM team

## **BEST PRACTICES**

- Great cooperation and collaborative efforts between EOC agencies and their field personnel were cited by all EOC entities
- Great response from a new school superintendent unfamiliar with hurricane planning efforts
- Pre-positioning of assets in Accomack County
- A VDEM representative in the EOC
- Full time liaison/POC with Tangier Island
- DPS 3 staff to augment EOC staff for external operations, communications, press releases, and other issues
- Alternate dispatch procedures during 8 hours of high call volume for fire/EMS
- Debris Management plan
- Damage Assessment plan
- Having 110 people with equipment available for road debris removal
- Emergency radio kits provided by the county to ESARC EOC and Shelter Operations
- ESARC quarterly communication tests between EOC and shelters, state EOC, Chincoteague EOC, and the hospital
- Good interaction and communication among DSS, school principals, school janitors, sheriff deputies, and even town law enforcement in the shelters
- Not opening the shelters too early
- Messaging system at shelters
- Emergency sheltering process was a good team building exercise
- Having good cell phone reception and satellite phone back up in the EOC
- Having STARS system available in the EOC
- Amount of dialogue between Chincoteague and Accomack EOCs
- 5 VSP officers pre-deployed to Chincoteague
- VSP presence aided Chincoteague evacuation efforts and made people feel safe
- Proactive pre-storm actions

## AREAS FOR IMPROVEMENT

### Sheltering:

- School physical plant & equipment availability as well as the sheltering roles of the school, DSS, and other shelter staff were sometimes unclear (1.1)
- Means to identify registered evacuees vs. unregistered (1.2)
- Gray area of when general population evacuee becomes a special needs evacuee (1.3)
- Lack of special needs sheltering (1.3)
- Lack of a pet shelter (1.4)
- Shelter radios did not work (1.5)
- Increased relief staffing, especially if shelters are to be open for longer than 24 hours (1.6)
- Increased staffing of Spanish and Creole translators (1.7)
- Inclusion of CSB in pre-storm sheltering discussions (1.1)
- Sheltering equipment kits need to be stored in Accomack (1.8)
- No place for rehab of off duty shelter workers (1.1)
- ESARC had only enough volunteers to man 3 of the 4 shelters (1.9)

### EOC

- The EOC is too small a space for the number of necessary staff (2.1)
- EOC is not a securable area (2.1)
- EOC layout is not and cannot be configured for effective operations (2.1)
- EOC has no showers or sleeping areas (2.1)
- EOC has no rehab area for personnel breaks or shift workers (2.1)
- EOC personnel not able to view incoming data simultaneously (2.2)
- Lack of wireless internet capability for back offices in the EOC (2.2)
- EOC meetings too long due to number and variety of people present (2.3)
- EOC meeting minutes not accurately recorded (2.4)
- Telephone and messaging communication process between EOC staff and 911 staff was cumbersome (2.5)
- Lack of phone lines for the public (2.6)
- Better communications between VDOT and ANEC (2.7)
- Lack of consistent PIO (2.8)
- Radio stations needed increased numbers of updated information (2.8)
- Public Safety/EM website not operational (2.9)
- County website not controllable by EM (2.9)
- No generator for power backup at the alternate EOC – County Admin building (2.10)
- Satellite internet backup was not functional (2.2)
- No backup personnel for EM (no shift capability) (2.11)
- Lack of a central access location for resource contacts, policies, PSA's, etc (2.12)

### Other

- Mappsville and Eastville communication towers inoperability hampered 911 and ACSO communications efforts (3.1)
- Limited to no access to county internet server controls in School Board office (3.2)

- Lack of storm debris collection sites for VDOT refuse (3.3)
- Citizens blocking of road right of way or actual roadway with storm debris piles (3.4)
- Convenience center operational hours not enough for pre-storm refuse (3.5)
- Load tickets for storm debris take too long to fill out (3.6)
- Damage Assessment web upload process has gaps (3.7)
- Damage Assessment team unable to access certain areas due to fallen trees & debris (3.8)
- No back up communications equipment for Tangier Island (3.9)
- Lack of a written fiscal plan for reporting storm related costs (3.10)
- Lack of a county policy regarding overtime pay for all personnel (3.11)
- Lack of a County social media site (3.12)

## **SUMMARY OF RECOMMENDATIONS**

The comments of response agencies were all very positive regarding local personnel's actions during Hurricane Irene. However, most of their noted areas of concern could collectively be grouped into three areas:

1. Emergency generator for the County Administration Building
2. The need of a functional EOC
3. Increased communications between agencies (having a role in emergency sheltering regarding mitigation, preparation, response and recovery actions along with defining specific population shelter need and between local response agencies, town governments and the public).

## IMPROVEMENT MATRIX

#	Areas for Improvement	Recommendation	Primary Responsible Agency	Time Line
1.1	Shelter staff not aware of available school equipment and accessible areas of school for sheltering	Hold annual meetings (pre-June 1) between EM, school staff, DSS, CSB, and Health Dept to discuss shelter needs	Deputy EM Coordinator	First meeting before June 1, 2012, annually afterwards
1.2	Shelter staff unable to recognize registered evacuees	Purchase wrist bands for each registered evacuee to wear	DSS	6/1/2012
1.3	County has no shelter capacity for special needs population	Define special needs population for the county and seek sheltering options for defined population	ESDPC	January 2012
1.4	County has no pet shelter capacity	Investigate location, staffing needs and other issues related to pet sheltering	EM, state agencies	2012
1.5	Shelter radios for staff were not operable	Purchase new radios	DSS	2012
1.6	Not enough personnel to provide relief shelter staff	Investigate ways to train existing staff for relief shelter manager duties	DSS	2012
1.7	Too few translators in shelters	Investigate alternative sources for Spanish & Creole translators	DSS, Health Dept., CSB	2012
1.8	More sheltering supplies needed in County	Continue discussions with VDEM about pre-storm positioning of resources. Determine location to store such resources	EM	2011
1.9	Not enough ESARC personnel to man all shelters	Promote and train more club members for shelter duty	ESARC	2011
2.1	EOC physical plan not functional	Find a securable EOC space to effectively accommodate EOC staff space needs, as well as having rehab areas	County Admin	2013 budget year or before

#	Areas for Improvement	Recommendation	Primary Responsible Agency	Time Line
2.2	EOC staff does not have access to multiple communications pathways	<ul style="list-style-type: none"> <li>• Purchase flat screen TV w/3 display function &amp; having dedicated server</li> <li>• Purchase wireless router for back offices of EOC</li> <li>• Assure minimum of four undedicated laptops for EOC staff use</li> <li>• Repair satellite internet</li> </ul>	EM	2012
2.3	EOC meetings too large a group resulting in long meetings	Confine EOC meetings to decision making people only, with sub group meetings held afterwards for more specific response teams (sheltering, debris management., damage assessment, etc)	EM	October 2011
2.4	EOC meeting minutes not being recorded properly	Assign 2 DPS staff to take minutes of all EOC meetings	DPS	October 2011
2.5	Message routing between 911 & EOC cumbersome	Review & update messaging forms & routing process	DPS Administrative Asst.	October 2011
2.6	Inadequate phone communication available for public to county contact	Use County Admin building phone system for a public "Hotline" with 1 advertised # going to several phones	County Admin	October 2011
2.7	Information flow between ANEC and VDOT to field staff was inadequate	Conduct annual meetings before June 1 to discuss info flow processes	VDOT/ANEC	2012
2.8	Difficulty in consistent outflow messaging to public	Assign one DPS3 personnel for all PSA distributions	DPS	October 2011
2.9	Accurate public website information not available	Assure current acdps.net website is fully functional & advertised as the only county website for local emergency information	DPS	ongoing

#	Areas for Improvement	Recommendation	Primary Responsible Agency	Time Line
2.10	No generator back-up for Admin Building (alternate EOC)	Secure funding for generator backup of Admin Bld.	County Admin	Currently in discussion
2.11	No backup personnel for EM in EOC, resulting in no down time available for EM	Have 1 county dept. director and 1 DPS3 staff assume the 2 <sup>nd</sup> shift role of the Coordinator and Deputy Coordinator role in the EOC	County Admin/EM	Currently in discussion
2.12	Lack of central location in EOC for policies, plans, PSA templates, etc.	<ul style="list-style-type: none"> <li>• Assure that hard copy policies and plans are available in the EOC</li> <li>• Develop an electronic share point site where electronic copies of policies, plans, templates, etc can be easily accessed by EOC staff</li> </ul>	EM	October 2011
3.1	Communications towers inoperability hampered 911 and ACSO communications efforts	Review towers operability and react accordingly	911/ACSO	2011
3.2	County internet server controls in School Board office are not accessible during non-office hours	Assure 24/7 restorative access to county internet server	County IT	2011
3.3	VDOT was unaware of storm debris collection sites for their refuse	Update debris management plan to add VDOT pre-storm notification of temporary sites	Public Works	October 2011
3.4	Residents blocked road right of ways and/or actual roadways with storm debris piles for pick-up	Develop and distribute pre-storm information on proper & safe handling of local storm debris for roadside pick-up	VDOT/Public Works	2012
3.5	Convenience center operational hours were not long enough for pre-storm refuse	Change convenience center hours policy to include extended hours pre-storm	Public Works	2012

#	Areas for Improvement	Recommendation	Primary Responsible Agency	Time Line
3.6	Debris management load tickets took too long to fill out	Review debris management plans for any possible changes to plan	Public Works	2012
3.7	Damage Assessment web upload process has gaps	Update Damage Assessment Plan	EM	ongoing
3.8	Damage Assessment teams unable to access some areas due to fallen trees	<ul style="list-style-type: none"> <li>• Secure all terrain vehicles for team use</li> <li>• Secure chain saws for team use</li> </ul>	B & Z	2013 Budget
3.9	Lack of backup communications equipment on Tangier Island	<ul style="list-style-type: none"> <li>• Secure funding for satellite phone for town official use as backup communication</li> <li>• Secure funding for amateur radio kit for town use as back up communication</li> </ul>	EM	2012
3.10	County lacks a written fiscal plan for reporting storm related costs	Develop a written plan for reporting storm related costs	Finance Dept.	2012
3.11	County lacks a comprehensive policy regarding overtime pay for all emergency response personnel	Change current policy to read along the lines of “during local emergencies, all personnel, exempt or otherwise, will be paid overtime”	County Admin	2011
3.12	County needs a social media site to track public perceptions of storm events	Develop a social network site monitored through the acdps.net website allowing public to post and EOC staff to monitor photos, public reaction and perception of storm related events	EM	2011