

## **1. Introduction**

This Annex primarily focuses on tidal inundation incidents and events that may affect Sussex County including hurricanes, nor'easters, coastal storms, tidal or storm surges, and heavy rains. However, it may be applied to other events that may require mass evacuation, e.g., terrorist actions. Approximately ninety percent of Delaware's coastal storm flood-vulnerable housing units (Category 2 hurricane) are in Sussex County making the County vulnerable to flooding and potential coastal storm damage.<sup>1</sup> As a result, this plan describes a concept of operation to manage the transportation system and assist the population in Sussex County deemed most "at risk" to the effects of tidal inundation from a hurricane or coastal storm, escape the effects of the storm. The procedures outlined here are the minimum actions that will be required from the Transportation Management Center (TMC)/Traffic and Sussex County Transportation Management Team (TMT), in the event of the formation of a tropical storm or hurricane that threatens Sussex County.

## **2. Purpose**

It is the intent of this annex to demonstrate how the TMC/Traffic and Sussex County TMT will work together to manage the transportation system during an incident or event that threatens to cause tidal inundation in Sussex County in order to protect life and property.

## **3. Transportation Management Team (TMT)**

As defined in the Transportation Incident and Event Management Plan (TIEMP), the TMT is a dynamic group that will work together with the TMC/Traffic – not only for planning purposes but also for field operations – to support the management of incidents and events that impact the transportation system. The Sussex County TMT will have the responsibility of establishing communication, response, resource, and responsibility procedures and guidelines for Sussex County and will make joint decisions on responding to the incident or event. If necessary, the TMC/Traffic will establish a remote TMC to facilitate the Sussex County TMT working together during an incident or event that impacts the transportation system.

## **4. Situation**

Sussex County is vulnerable to seventeen of the twenty-one hazards defined by the federal government including flood and hurricanes. Based on work in progress by the US Army Corps of Engineers, it is estimated that eight percent of all Delaware's non-hotel/motel housing units are located either in areas that are potentially vulnerable to some level of tidal inundation from a Category 2 hurricane. Sixteen percent are subject to some level of tidal inundation from a Category 4 hurricane. Coastal beaches are a significant focus of Delaware's tourist industry; a large percentage of hotel/motel units are located in or near Sussex coastal storm vulnerable areas. In addition, one of four housing units in Sussex County is a mobile home (24,000); these are susceptible to severe wind damage and will need to be evacuated during many hurricane threats. Sussex County has the majority of Delaware's flood-vulnerable housing: 89 percent for Category 2 hurricanes and 77 percent for Category 4 hurricanes. Consequently, these initial estimates indicate that a large number of evacuees and vehicles are expected during a peak season hurricane evacuation in Sussex County. The 1990 Delaware Hurricane Evacuation Study estimated a range of 40,000 to 56,000 potential evacuating vehicles<sup>1</sup>; it is anticipated that the ongoing Delmarva Hurricane Evacuation Study (HES)<sup>2</sup> will provide increased estimates of evacuating vehicles. The draft storm surge map for Sussex County is shown in Figure SC-1.

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<sup>1</sup> U.S. Army Corps of Engineers (Philadelphia District). Delaware Hurricane Evacuation Study 1990.

<sup>2</sup> U.S. Army Corps of Engineers (Philadelphia District). Preliminary Data – Delmarva Hurricane Evacuation Study 2004.

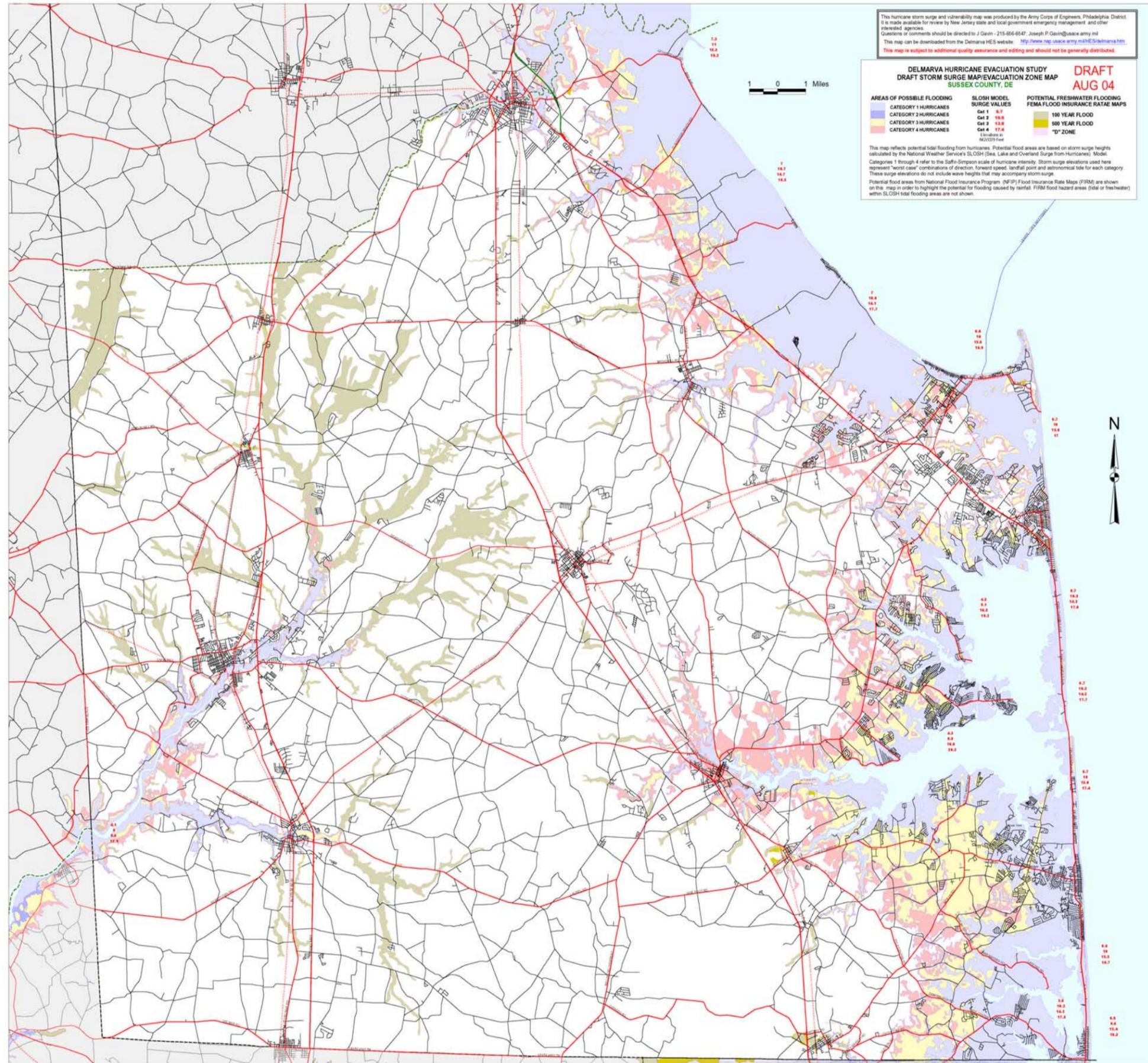


Figure SC-1. Sussex County Draft Storm Surge Map

## **5. Mitigation And Preparedness**

Tropical storms and hurricanes have a distinct season in which they occur (June 1 through November 30). Therefore, the impact of the storms can be minimized by implementing preseason procedures prior to the start of each season. This will help the Sussex County TMT be at the optimal readiness in the event that an incident or event with the potential to cause tidal inundation threatens Sussex County.

### **5.1. Preseason Plan**

The TMC/Traffic and Sussex County TMT agencies will prepare a checklist of actions to complete prior to each hurricane season to include:

- 5.1.1. Perform a traffic engineering analysis of the evacuation routes.
- 5.1.2. Determine the capacity of the network.
- 5.1.3. Determine the demand on the system.
- 5.1.4. Check and replenish the inventory and supply database.
- 5.1.5. Review the signing, marking, and lighting along the designated evacuation routes.
- 5.1.6. Update the estimated evacuation times required along designated evacuation routes in the Resorts Area
- 5.1.7. Coordinate evacuation plans with neighboring jurisdictions
- 5.1.8. Recommend short-term, mid-term, and long-term improvements.
- 5.1.9. Educate the public during National Hurricane Preparedness Week. In partnership with Delaware Emergency Management Agency (DEMA), Sussex County Emergency Management Agency and Delaware State Police (DSP), conduct education/informational outreach pre- and during hurricane season. Plan and coordinate activities during National Hurricane Preparedness Week and distribute storm and evacuation information during participation in fairs, festivals, expos, home shows and other appropriate venues.
- 5.1.10. Coordinate with the media, i.e., radio stations, TV stations, cable TV, and educational TV, to discuss the media's role in receiving and disseminating warning messages and emergency information to the public before, during, and after an event.
- 5.1.11. Ensure that the designated Public Information Officers (PIOs) list for staffing the Joint Information Center (JIC) is updated to include TMT agency positions.
- 5.1.12. Conduct pre-response and pre-planning inspections of buildings, structures, and other places as defined in Chapter 67, Title 16 of the Delaware Code.
- 5.1.13. Perform coastal mitigation and shoreline protection.

### **5.2. System Improvements**

The following is a list of short-term, mid-term, and long-term improvements that may be implemented by the TMC/Traffic and Sussex County TMT agencies to enhance the efficiency of the transportation network and provide support for more effective movement of people and traffic in Sussex County during an incident or event with the potential to cause tidal inundation.

#### ***SHORT-TERM IMPROVEMENTS***

- ❖ Improve Signing
- ❖ Develop an Inventory and Supply Database
- ❖ Incident/Event Information Web Page

#### ***MID-TERM IMPROVEMENTS***

- ❖ Roadway and Intersection Improvements
- ❖ Upgrades to the Signal System
- ❖ Improving Traveler Information Systems
- ❖ Pre-engineering for Installing Monitoring & Detection Devices

#### ***LONG-TERM IMPROVEMENTS***

- ❖ Installing Monitoring & Detection Devices
- ❖ Improving Communications System

### **5.2.1.Short-Term Improvements**

There are many short-term improvements that could be made to enhance the system including:

#### **5.2.1.1. Improve Signing**

The following are a few general rules for improving the evacuation signing:

- All signs should be compliant with the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD).
- All major decision points should be signed.
- The signs should call out what town the route will take you to.
- Shrubs and trees should be removed from the sign's sightline.

#### **5.2.1.2. Develop an Inventory and Supply Database**

Each TMT agency should develop an inventory of items required during an incident or event should be developed. There should also be a plan for obtaining additional supplies should the inventory runs out during an emergency.

#### **5.2.1.3. Incident/Event Information Web Page**

One of the most important aspects in an evacuation is the dissemination of information to the public. By developing a incident/event-specific web page, the public can access real-time information on which roads are passable and offer any current information they may have about roadway conditions. In addition, the "in-vehicle" information needs of the evacuating public should be considered. It is anticipated that commercial radio stations and Radio Station WTMC will provide "in-vehicle" information to motorists.

### **5.2.2.Mid-Term Improvements**

While the short-term improvements would help immediately, mid-term improvements would help in the future. These improvements are not as quickly implemented as the short-term improvements and include:

#### **5.2.2.1. Roadway and Intersection Improvements**

There are many locations where the condition of the roadway could cause bottleneck situations during an evacuation in Sussex County. These intersections should be examined further and a plan for increasing capacity and avoiding the bottlenecks developed.

#### **5.2.2.2. Upgrades to the Signal System**

Currently there are signals along the designated evacuation routes in Sussex County that are not on the traffic adaptive signal system. By upgrading these signals so that they are on the system, the TMC/Traffic would be able to determine the optimal timings for the signals along the designated evacuation routes in Sussex County during an incident or event thereby allowing for a more efficient evacuation.

#### **5.2.2.3. Improving Traveler Information Systems**

Installing various devices such as dynamic message signs (DMS), web based kiosks, and automated telephone information systems would improve the

distribution network for traveler information thereby enhancing the dissemination of information to the public.

**5.2.2.4. Pre-engineering for Installing Monitoring and Detection Devices**

Activities to take place include identifying locations, fieldwork, developing design plans and specifications, and calculating estimates.

**5.2.3. Long-Term Improvements**

Long-term improvements will give the TMC/Traffic better information about conditions of the transportation system throughout Sussex County. By installing monitoring and detection devices, the TMC will be aware of trouble spots prior to them becoming major incidents and allow them to better manage the transportation system. In order to support these new devices and other long-term improvements, an improved communications system will be required.

**6. Concept of Operations**

During an incident or event that impacts the transportation system in Sussex County, the TMC/Traffic will request DelDOT's Division of Public Relations, Delaware Transit Corporation (DTC), and other divisions from state and local agencies including the Delaware State Police (DSP), Federal Highway Administration (FHWA), and the Delaware National Guard (DNG) to come to the TMC/Traffic. DelDOT's Division of Public Relations will notify DEMA Public Information Officer (PIO) and/or DEMA Operations Center of appropriate DelDOT contact person and phone number. Depending on the location and severity of the incident or event, a decision may be made to setup a remote TMC to manage the incident.

The TMC/Traffic and Sussex County TMT will coordinate activities to manage the transportation system to assist the "at risk" population in Sussex County in accordance with this plan. The Sussex County Hurricane Evacuation Annex adopts the concept of phased decision points based primarily on the National Weather Service (NWS) storm classifications, e.g., awareness, watch, warning, etc. These phased decision points define the approach of the hurricane in terms of the time (hours) before the estimated arrival of the hurricane.

In order to establish response effort, levels of response 1 thru 4 related to the "level" of impact an incident or event has on the transportation system have been developed and defined in the Transportation Incident and Event Management Plan (TIEMP) **for the purpose of guidance only**. The use of "levels" allows the amount and assignment of resources (i.e., people, vehicles, equipment, and materials) to be more readily defined and can reduce the times associated with incident identification, response, and clearance. These levels should be used as guidance and best professional practices should always be incorporated in determining levels of response. Transportation management actions to be performed as a tropical storm or hurricane approaches Delaware are summarized in the following sections.

**6.1. Tropical Storm or Hurricane Awareness Phase (Level 2)**

A tropical storm or hurricane with the potential to threaten Delaware within a minimum of 48 hours has formed. It is not unusual for bridge calls to be in progress from the formation of a tropical storm or hurricane, i.e., before it is identified as a threat to Delaware. Since the TMC/Traffic and Sussex County TMT agencies generally operate at a Level 1, it is expected that the TMC/Traffic and Sussex County TMT agencies would move to a Level 2 at the *Awareness Phase*. Transportation management actions to be carried out when the hurricane is located a minimum of 48 hours from Delaware will include but will not be limited to:

**6.1.1. Delaware Department of Transportation (DelDOT)**

**6.1.1.1. TMC/Traffic**

- 6.1.1.1.1. Set up a conference call with the Sussex County Transportation Management Team (TMT) to discuss the possible areas that will be affected, the extent, evacuation route selection, staging area, etc., and to review evacuation and traffic control procedures.
- 6.1.1.1.2. Coordinate with neighboring state TMCs, Maryland's CHART, Pennsylvania's District 6-0 Traffic Control Center (TCC), Virginia's Smart Traffic Center (STC), and New Jersey's Traffic Operations Center (TOC) and local jurisdictions, Ocean City and Queen Anne's County.
- 6.1.1.1.3. Monitor and track the path of the storm or hurricane.
- 6.1.1.1.4. The TMC staff will alert Supervisors and Operators;
- 6.1.1.1.5. Begin evacuation planning with the TMT agencies. In planning for evacuation, the characteristics of the tropical storm or hurricane and its magnitude, intensity, speed of onset and anticipated duration are all significant factors. These will determine the number of people to be evacuated; the distance people must be moved to ensure their safety, the need for reception facilities, and the extent of traffic control and security required.
- 6.1.1.1.6. Together with the TMT agencies, consider site-selection and pre-positioning of deployable resources such as aircraft, marine vessels, debris removal equipment, generators, light carts, fuels, food, cots, blankets, etc. Consider reallocation and disbursement of previously positioned equipment and coordinate the availability of portable water tanks (water buffaloes) and Public Health requirements prior to their use.
- 6.1.1.1.7. Request that all TMT agencies test equipment, e.g., FAX machines, telephones, copiers, and especially those agencies with generators should test under full load for a minimum of 8 hours. Ensure fuel supply for a minimum of 72 hours of emergency generator operations without re-supply.

**6.1.1.2. DelDOT South District**

- 6.1.1.2.1. Activate Gravel Hill.
- 6.1.1.2.2. Alert all DelDOT staff in Sussex County.
- 6.1.1.2.3. Ensure that hurricane evacuation signs reflect road closures or route changes along the evacuation routes.
- 6.1.1.2.4. Review resource lists and availability of debris clearing equipment, four-wheel drive vehicles, emergency generators, fuel, chain saws, traffic control equipment, etc.

**6.1.1.3. Delaware Transit Corporation**

- 6.1.1.3.1. DTC staff will alert Dispatchers and Drivers.

**6.1.1.4. Public Relations**

- 6.1.1.4.1. Participate in bridge calls and/or conference calls with meteorologist.
- 6.1.1.4.2. Ensure that DelDOT is prepared for the tropical storm or hurricane.

**6.1.2. Delaware Emergency Management Agency (DEMA)**

- 6.1.2.1. Consider partial activation of the State Emergency Operations Center (EOC) to coordinate assessment actions. The assessment should include weather monitoring and hurricane tracking information from sources such as the National Hurricane Center and the National Weather Service. The assessment information will be

disseminated to state, county and local jurisdiction emergency management agencies.

- 6.1.2.2. Reconfirm shelter resources with Red Cross to include availability of the shelter (facility) and shelter management personnel.
- 6.1.2.3. Use DelMarVa Emergency Task Force (DETF) bridge call to coordinate lines of communications with adjoining states (Maryland, Pennsylvania, and Virginia) and local jurisdictions (Ocean City) emergency management personnel.
- 6.1.2.4. Update status of inland flooding potential with Delaware Geological Survey (DGS), NWS, and the coastal conditions with the Department of Natural Resources and Environmental Control (DNREC).
- 6.1.2.5. DEMA Planners review debris management plans and verify disposal sites with DeLDOT, DNREC, and DSWA. DEMA may consider bridge conference call with the Debris Management Task Force to update/review information.
- 6.1.2.6. DEMA, DeLDOT, and State Police will update status of evacuation routes. Ensure road closures are coordinated with local and county emergency officials and are considered in evacuation time-estimates when making evacuation decisions.
- 6.1.2.7. Coordinate with Emergency Support Function 8 (ESF 8), Public Health and Medical Services, to advise all special facilities to be ready to evacuate their patients, staff, narcotics, and records.
- 6.1.2.8. DEMA Public Information Section will coordinate press releases and media response with DeLDOT and DSP.
- 6.1.2.9. At 84 hours out, DEMA will issue hurricane/coastal storm tips and guidelines for preparation, safety and possible evacuation.
- 6.1.2.10. Confirm that primary and alternate(s) points of contact are current and available for activation and 24-hour operation of the Emergency Operations Center (EOC) and associated Emergency Support Function (ESF) personnel. DEMA will establish contact with FEMA Region III and obtain a liaison point of contact.

### **6.1.3. Sussex County Emergency Operations Center (EOC)**

- 6.1.3.1. Review and update shelter availability. Ensure shelter management plans are up to date. Contact the shelter point of contacts (POCs) to update notification procedures, memorandum of understandings, and alert rosters for 24-hour notification.
- 6.1.3.2. Ensure that basic procedures are in place for rapid procurement of services, equipment and supplies. Review Memorandum of Understandings (MOUs) and Memorandum of Agreements (MOAs), as required.
- 6.1.3.3. Test emergency communications systems and generators under full load for a minimum of six hours. Review procedures for procurement of additional emergency communications systems in the event of large-scale failures. Ensure preparatory equipment is installed (lines, connection boxes, compatible connection plugs, etc.) to facilitate and reduce turnaround time.
- 6.1.3.4. Update notification alert lists to include primary and alternate POCs to ensure 24-hour coverage. Include addresses, telephone numbers, FAX lists, e-mail lists, etc.
- 6.1.3.5. Coordinate lines of communications with adjoining state EOCs (Maryland, Pennsylvania, and Virginia) and local jurisdiction (Ocean City) emergency management personnel, with DEMA, and the Delmarva Task Force.

### **6.1.4. Delaware State Police (DSP)**

- 6.1.4.1. Assist in the implementation of the Traffic Control Plan for Sussex County.
- 6.1.4.2. Provide traffic control along the designated evacuation routes to expedite the flow of traffic out of the affected areas, when necessary.
- 6.1.4.3. Control access to evacuation routes during the evacuation of the risk areas.

- 6.1.4.4. Maintain order and security on the designated evacuation routes.
- 6.1.4.5. Report any traffic flow surplus to the TMC/Traffic.
- 6.1.4.6. Patrol sections of the designated evacuation routes in order to help immediately clear any disabled vehicles, which may block the roadway or shoulders.
- 6.1.4.7. Recommend evacuation routes to the District Engineers and/or TMC/Traffic.
- 6.1.4.8. Assist in warning the public.
- 6.1.4.9. Control re-entry into the impacted area.
- 6.1.4.10. Provide, as requested by the State EOC, emergency transport of personnel as required and enforcement of the Traffic Regulations.
- 6.1.4.11. Protect property in evacuated areas and limit access to those areas.
- 6.1.4.12. DSP staff will alert Officers.

**6.1.5. Department of Natural Resources & Environmental Control (DNREC)**

- 6.1.5.1. Mobilize personnel to evaluate the beach areas, to assess site-specific dune conditions, and continue to monitor the storm formation and provide updated status on the coastal conditions.

**6.1.6. County and Local Fire Service**

- 6.1.6.1. Alert the appropriate fire district's preplanned equipment response hierarchy, including equipment and personnel of mutual aid fire companies.

**6.1.7. County and Local Emergency Management Agencies**

- 6.1.7.1. Review and update shelter availability.
- 6.1.7.2. Review list of city/county transportation resources.
- 6.1.7.3. Update notification alert lists to include primary and alternate point of contacts POCs to ensure 24-hour coverage.

**6.1.8. Local Law Enforcement**

- 6.1.8.1. Assist DSP as required.
- 6.1.8.2. Assist in warning the public.

**6.2. Watch Phase (Level 3)**

The National Hurricane Center (NHC) will issue a **HURRICANE WATCH** for Delaware when it appears that hurricane conditions may threaten the coast of Delaware within a minimum of 36 hours. The State EOC goes to a *Watch Phase* when the NHC declares a **HURRICANE WATCH** for Delaware. This is equivalent to a Level 3 incident. It is assumed that affected Sussex County TMT agencies that are at Level 1 or 2 will elevate to a Level 3 during the *Watch Phase*. Transportation management actions to be carried out when the hurricane is located a minimum of 36 hours from Delaware will include but will not be limited to:

**6.2.1. Delaware Department of Transportation (DelDOT)**

**6.2.1.1. TMC/Traffic**

- 6.2.1.1.1. The TMC/Traffic and the Sussex County TMT will continue active communications.
- 6.2.1.1.2. Keep neighboring TMCs (CHART, TCC, STC, and NJ TOC) informed of status and traffic control decisions.
- 6.2.1.1.3. Coordinate public information announcements with the Division of Public Relations to insure that consistent, correct information is given out.

6.2.1.1.4. Since it is estimated to take over 24 hours to evacuate a large population<sup>3</sup>, any planned evacuation should be in progress. This is the evacuation of the most “at risk” population by way of the designated evacuation routes. At least 24 hours prior to the onset of the storm and anticipated tidal inundation, the “at risk” populations of Sussex County will be advised to evacuate voluntarily or directed by the Governor, if this action is necessary for the preservation of life.<sup>4</sup> It is assumed that all roads are opened, demand is constant, and two-way traffic is in effect. In general, the evacuation of the most “at-risk” areas will take place using the designated evacuation routes as follows:

- 6.2.1.1.4.1. **Fenwick Island** – All evacuating traffic from Fenwick Island to include North Ocean City and the surrounding areas will be routed west on Route 54 towards Selbyville.
- 6.2.1.1.4.2. **South Bethany/Bethany Beach** – All evacuating traffic from South Bethany/Bethany Beach and the surrounding areas will be routed west on Route 26 towards Dagsboro.
- 6.2.1.1.4.3. **Dewey Beach/Rehoboth Beach** – All evacuating traffic from Dewey Beach/Rehoboth Beach and the surrounding areas will be routed west on SR 1 towards Five Points.
- 6.2.1.1.4.4. **Lewes** – All evacuating traffic from Lewes and the surrounding areas will be routed west on US 9 towards Georgetown and/or north on SR 1 to continue north on SR 1 towards Milford or to travel west on Route 16 towards Milton and Ellendale.

#### **6.2.1.2. DeIDOT South District**

- 6.2.1.2.1. Mobilize State evacuation traffic control active and passive resources and people. People will be positioned where they can take up their duties within an hour of being ordered to do so. Barriers will be positioned where they can be brought into operation with minimal delay.
- 6.2.1.2.2. Clear any maintenance activities and coordinate with the Division of Transportation Solutions to clear current road construction activities along designated and alternate evacuation routes.
- 6.2.1.2.3. Clear all drains and gutters to provide for maximum flow of stormwater.
- 6.2.1.2.4. Ensure evacuation traffic control measures are in place to include pre-positioning of equipment to tow stalled vehicles. Data from the Transportation Management Center (TMC) will be used to make evacuation decisions and recommendations. Decisions made will be passed to the media and radio station WTMC (1380 AM). DeIDOT may consider waiving tolls and adjusting traffic lights to allow for increased evacuation flow.
- 6.2.1.2.5. Ensure that employees and critical emergency response personnel are allowed and have time to take care of their families.

#### **6.2.1.3. Delaware Transit Corporation**

- 6.2.1.3.1. DTC will mobilize its resources to aid in the evacuation of people with special needs, when requested.

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<sup>3</sup> DeIDOT Division of Planning. Presentation: Sussex County Evacuation Plan. October 19, 2001.

<sup>4</sup> Delaware Code Annotated. Revised 1974. 1998 Supplement. Paragraph 3116, Section (b), Subsection (3).

**6.2.1.4. Public Relations**

- 6.2.1.4.1. Coordinate with the DEMA Public Information Officer (PIO) or designated PIO, as necessary.
- 6.2.1.4.2. Relevant PIOs, including DelDOT, DEMA, and DSP, will disseminate consistent evacuation information advising the public of evacuation actions to be taken using a current list of radio stations, television stations, cable television companies, and newspapers.
- 6.2.1.4.3. Report to the State EOC and/or Joint Information Center (JIC), if necessary.
- 6.2.1.4.4. DelDOT TMC/Traffic or designated back-up will issue transportation statements, as required.
- 6.2.1.4.5. DEMA will assist in establishing rumor control center, if possible.
- 6.2.1.4.6. Coordinate with the TMC/radio station WTMC (1380AM)

**6.2.2. Delaware Emergency Management Agency (DEMA)**

- 6.2.2.1. Activate the State EOC, (known hereafter as EOC) if not previously activated, and identify the required Emergency Support Functions to report to the EOC. Implement appropriate plans and annexes.
- 6.2.2.2. DEMA PIO in conjunction with other agency PIOs will ensure public is informed of current situation and recommended actions to ensure safety of personnel and property. DEMA Director, in coordination with the Governor's Communications Director/Public Information Officer, will determine need for Joint Information Center (JIC). Disseminate information using radio, TV, newspaper, etc. to ensure maximum coverage. Encourage people to stay tuned to their local radio and TV stations for information and instructions and local weather conditions. Coordinate action and information release with Ocean City emergency management personnel.
- 6.2.2.3. Coordinate actions with county and local emergency management personnel and establish bridge call conference schedule.
- 6.2.2.4. Coordinate the necessary documentation to activate or partially activate the Delaware National Guard (DNG) when their support is necessary. Additionally, the EOC prepare necessary documentation for the Governor to declare a State of Emergency and a request for Federal Assistance prior to the event if a disaster appears eminent (See Appendix 6 for examples).
- 6.2.2.5. Assess data from: the National Hurricane Center, the National Weather Service, coastal seasonal population information, and computer models, such as HURREVAC, to assist in making appropriate protective action recommendations and emergency decisions (e.g., when to start initial evacuation of coastal and low-lying areas, mobile home parks, and waterfront properties, campgrounds, opening shelters, securing of marinas, small craft, and aircraft, etc.).
- 6.2.2.6. Coordinate evacuation decisions with adjoining states (Maryland, Pennsylvania, and Virginia) and local jurisdiction (Ocean City) emergency management personnel via the Delmarva Emergency Task Force (DETF).
- 6.2.2.7. In coordination with DelDOT TMC/Traffic and DSP, ensure pertinent information (existing weather conditions, traffic conditions, road closures, etc.) is properly distributed to local EMAs, law enforcement and media.
- 6.2.2.8. Ensure communication network is established to give/receive regular situation reports (SITREPS) on local conditions, shelter status, and evacuation status. Consider testing a backup plan in the event the primary method fails. Backup systems include systems operated by the Radio Amateurs Civil Emergency System (RACES), the Civil Air Patrol (CAP), the DNG, etc.
- 6.2.2.9. Coordinate for the early release of schools and non-essential employees (State and industry) to assist evacuation measures. Coordinate actions with the Governor's

Chief of Staff, Department of Education (DoEd), and the American Society of Industrial Safety (ASIS) group.

**6.2.3. Sussex County EOC**

- 6.2.3.1. Monitor the status of the storm and consider opening the SEOC, when conditions merit, if not previously activated and implement appropriate plans and annexes.
- 6.2.3.2. Assess data from: the National Hurricane Center, the National Weather Service, coastal seasonal population information, and computer models, such as HURREVAC, to assist in making appropriate protective action recommendations and emergency decisions (e.g., when to start initial evacuation of coastal and low-lying areas, mobile home parks, and waterfront properties, campgrounds, opening shelters, securing of marinas, small craft, and aircraft, etc.).
- 6.2.3.3. Coordinate evacuation decisions with adjoining counties and local jurisdiction emergency management personnel.
- 6.2.3.4. Ensure pertinent information (existing weather conditions, traffic conditions, road closures, etc.) is properly distributed.
- 6.2.3.5. Ensure communication network is established to give/receive regular situation reports (SITREPS) on local conditions, shelter status, and evacuation status. Consider testing a backup plan in the event the primary method fails. Backup systems include systems operated by the Radio Amateurs Civil Emergency System (RACES), the Civil Air Patrol (CAP), the DNG, etc.
- 6.2.3.6. Ensure that employees and critical emergency response personnel are allowed and have time to take care of their families.

**6.2.4. Delaware State Police**

- 6.2.4.1. Assist in the implementation of the Traffic Control Plan for Sussex County.
- 6.2.4.2. Provide traffic control along the designated evacuation routes to expedite the flow of traffic out of the affected areas, when necessary.
- 6.2.4.3. Control access to evacuation routes during the evacuation of the risk areas.
- 6.2.4.4. Maintain order and security on the designated evacuation routes.
- 6.2.4.5. Report any traffic flow surplus to the TMC/Traffic.
- 6.2.4.6. Patrol sections of the designated evacuation routes in order to help immediately clear any disabled vehicles, which may block the roadway or shoulders.
- 6.2.4.7. Recommend evacuation routes to the District Engineers and/or TMC/Traffic.
- 6.2.4.8. Assist in warning the public.
- 6.2.4.9. Control re-entry into the impacted area.
- 6.2.4.10. Provide, as requested by the State EOC, emergency transport of personnel as required and enforcement of the Traffic Regulations.
- 6.2.4.11. Protect property in evacuated areas and limit access to those areas.
- 6.2.4.12. DSP staff will alert Officers.

**6.2.5. Department of Natural Resources & Environmental Control (DNREC)**

- 6.2.5.1. Assess the coastal and inland flooding vulnerability and risk assessment together with DGS.

**6.2.6. County and Local Fire Service**

- 6.2.6.1. Establish a field command post (CP) and staging area(s).
- 6.2.6.2. Send a fire district representative to the EOC, if requested.
- 6.2.6.3. Maintain contact between field command and EOC representative.
- 6.2.6.4. Assist in warning the public.

- 6.2.6.5. Assist in evacuating the aged, persons with disabilities, and other special needs groups.

**6.2.7. County and Local Emergency Management Agencies**

- 6.2.7.1. Determine availability of needed transportation resources within the jurisdiction and coordinate the mobilization and distribution of same.
- 6.2.7.2. Support and coordinate special evacuation needs of the physically impaired and senior citizens in the jurisdiction.

**6.2.8. Local Law Enforcement**

- 6.2.8.1. Assist DSP with traffic control, property protection, and warning the public, as required.

**6.3. Warning Phase (Level 4)**

The National Hurricane Center (NHC) will issue a **HURRICANE WARNING** for Delaware when sustained winds of at least 74 mph are expected along the coast of Delaware within a minimum of 24 hours. The State EOC goes to a *Warning Phase* when the NHC declares a **HURRICANE WARNING** for Delaware. This is equivalent to a Level 4 incident. It is assumed that affected Sussex County TMT agencies at a lower level will elevate to a Level 4 during the *Warning Phase*. Transportation management actions to be carried out when the hurricane is located a minimum of 24 hours from Delaware will include but will not be limited to:

**6.3.1. Delaware Department of Transportation (DelDOT)**

**6.3.1.1. TMC/Traffic**

- 6.3.1.1.1. The TMC/Traffic and Sussex County TMT agencies will maintain 24-hour operations from the beginning of any evacuation through the implementation of any recovery plan.
- 6.3.1.1.2. Keep neighboring TMCs informed of status and traffic control decisions.
- 6.3.1.1.3. Continue to monitor traffic flow and choke points. Radio station WTMC (1380 AM) will broadcast regular road reports and updates statewide.

**6.3.1.2. DelDOT South District**

- 6.3.1.2.1. Activate traffic control plans and will place resources (arrow boards, portable VMS, barricades, detour signs, cones, and shelter arrows) into position at critical locations.
- 6.3.1.2.2. Activate the established evacuation traffic routes. Ensure traffic control measures are in place and activated to provide maximum evacuation traffic flow. Coordinate the traffic control measures with the DSP. Tow vehicles must be in position to remove stalled vehicles. Evaluate staffing requirements needed to occupy key intersections and evacuation choke points. Notify Delmarva Emergency Task Force (DETF) and adjacent states of traffic plans and road status.
- 6.3.1.2.3. Coordinate the closure of the draw span on all drawbridges to all unauthorized traffic.
- 6.3.1.2.4. Place available wreckers, tow trucks, and Motorist Assistance Patrols (MAP) vehicles on-site at predetermined locations.
- 6.3.1.2.5. Impose mandatory traffic control to funnel evacuating vehicles to designated evacuation routes. The evacuation of residents in “at risk” areas may also occur by helicopter.

- 6.3.1.2.6. Be prepared to recommend last minute “panic” places of refuge for those individuals that did not evacuate and are now asking where they can go for safety. Recommend to those individuals facilities that appear to be structurally sound and located above surge heights, i.e. 2nd or 3rd floor. If individuals refuse to evacuate and remain at home, if time permits, attempt to obtain names and addresses of next of kin notification. PIOs consider radio and TV releases to inform those individuals concerning last minute recommendations, i.e., “structurally sound and above surge heights”.

**6.3.1.3. Delaware Transit Corporation (DTC)**

- 6.3.1.3.1. Pick up persons desiring to be transported to shelters, if required.

**6.3.2. Delaware Emergency Management Agency (DEMA)**

- 6.3.2.1. Ensure notification is made to all emergency management agencies concerning the upgraded status. Determine what protective actions should be recommended to the Secretary/Governor. Ensure evacuation decisions are based upon completion of evacuation prior to arrival of gale force winds (34 knots/39 mph) and if possible should be accomplished during daylight hours. Initiate widest dissemination of all protective actions and evacuation decisions to include the use of the Emergency Alert System (EAS) messages. Emphasize the importance of the evacuation of all campers and mobile homes. Consider staffing requirements for last minute door-to-door evacuation recommendations for residents who refuse to leave coastal beach areas. Notify adjacent states of protective actions and evacuation decisions.
- 6.3.2.2. Consider and make arrangements for EOC relocation if storm conditions force the move (Reference EOC Relocation Procedures in the Basic Plan). The EOC and Emergency Support Functions (ESF) agencies should review the “EOC Relocation” procedures to identify alternate location and identify any shortfalls. If the relocation is necessary, make arrangements to maintain operational continuity during the move.
- 6.3.2.3. The EOC and State Police consider additional security and law enforcement requirements as areas are evacuated. DSP consider a plan of action to prevent looting in areas that are likely to sustain major storm damage. Consider pre-positioning of security resources prior to arrival of gale force winds (34 knots/39 mph). Delaware National Guard (DNG) units can only perform certain law enforcement actions when/if they are federalized, upon declaration of a state of emergency by the Governor.
- 6.3.2.4. The State EOC, local emergency managers and emergency responders should review procedures for human needs assessment and damage assessment. This review should be done at least 24 hours in advance of predicted occurrence of storm event before the potential for communication becoming impaired.
- 6.3.2.5. The State EOC should provide periodic SITREPS to FEMA Region III ROC. Based on these reports, attempt to keep the public informed of the current conditions and recommended actions.
- 6.3.2.6. The State EOC will provide tips and guidelines to the public on what to expect during the storm.

**6.3.3. Sussex County EOC**

- 6.3.3.1. Provide periodic SITREPS to the State EOC.
- 6.3.3.2. Ensure notification is made to all county and municipal personnel concerning the upgraded status. Ensure evacuation decisions are based upon completion of evacuation prior to arrival of gale force winds (34 knots/39 mph) and if possible

should be accomplished during daylight hours. Initiate widest dissemination of all protective actions and evacuation decisions to include the use of the Emergency Alert System (EAS) messages. Emphasize the importance of the evacuation of all campers and mobile homes. Consider staffing requirements for last minute door-to-door evacuation recommendations for residents who refuse to leave coastal beach areas. Notify adjacent states of protective actions and evacuation decisions.

- 6.3.3.3. Red Cross shelter availability and requirements should be finalized. Shelters scheduled to be opened must be coordinated with state and municipal emergency management agencies. Provide shelter availability information to DelDOT and DSP to assist public inquires.
- 6.3.3.4. If not previously accomplished, consider partial or full activation of the SEOC.
- 6.3.3.5. Consider and make arrangements for EOC relocation of the center if storm conditions force the move. If the relocation is necessary, make arrangements to maintain operational continuity during the move.

#### **6.3.4. Delaware State Police (DSP)**

- 6.3.4.1. Deploy law enforcement and traffic control personnel, (e.g., flagmen, police officers).
- 6.3.4.2. DSP will limit all incoming traffic on the evacuation routes to emergency personnel.
- 6.3.4.3. Be prepared to recommend last minute “panic” places of refuge for those individuals that did not evacuate and are now asking where they can go for safety. Recommend to those individuals facilities that appear to be structurally sound and located above surge heights, i.e. 2nd or 3rd floor. If individuals refuse to evacuate and remain at home, if time permits, attempt to obtain names and addresses of next of kin notification. PIOs consider radio and TV releases to inform those individuals concerning last minute recommendations, i.e., “structurally sound and above surge heights”.

#### **6.3.5. Department of Natural Resources & Environmental Control (DNREC)**

- 6.3.5.1. Maintain contact with DEMA TAC and the State EOC.

#### **6.3.6. Emergency Support Function (ESF) Agencies**

- 6.3.6.1. Emergency Support Function 8 (ESF 8), Public Health and Medical Services will coordinate the evacuation and shelter of persons having mobility limitations.

#### **6.3.7. Public Utilities**

- 6.3.7.1. Public utility agencies/companies implement action plans to minimize storm damage due to wind and storm surge. Action should be taken to preclude contamination of potable water resources and minimize damage to sewage disposal systems and electrical distribution grids. County and local EOCs can assist the public utility agencies to ensure the public is notified of systems that are/will be deactivated. This announcement may encourage undecided residents/tourists to evacuate.

#### **6.3.8. Delaware National Guard (DNG)**

- 6.3.8.1. If not previously accomplished, consider partial or full activation of the Delaware National Guard (DNG) and a State of Emergency declaration by the Governor. Consider FEMA Region III ERT and FAST team assistance. The Governor can request a Federal Emergency Declaration prior to the storm event if event is imminent which would make additional resources available such as the Army Corps of Engineers Post Flood Assistance under Public Law 84-99.

- 6.3.8.2. Be prepared to recommend last minute “panic” places of refuge for those individuals that did not evacuate and are now asking where they can go for safety. Recommend to those individuals facilities that appear to be structurally sound and located above surge heights, i.e. 2nd or 3rd floor. If individuals refuse to evacuate and remain at home, if time permits, attempt to obtain names and addresses of next of kin notification. PIOs consider radio and TV releases to inform those individuals concerning last minute recommendations, i.e., “structurally sound and above surge heights”.

**6.3.9. County and Local Fire Service**

- 6.3.9.1. Direct task assignments and personnel relief in performing fire, rescue, fire police, and emergency medical efforts; alerting, warning, evacuating, and, if necessary, radiological monitoring activities.
- 6.3.9.2. Coordinate task assignments given to support agencies.
- 6.3.9.3. Request additional personnel and resources, as appropriate.
- 6.3.9.4. Prepare and forward fire reports to the State Fire Marshal's office.
- 6.3.9.5. Fire protection in evacuated areas.

**6.3.10. County and Local Emergency Management Agencies**

- 6.3.10.1. Communicate with DEMA, TMC/Traffic, and DSP regarding information on local evacuation routes and road conditions.
- 6.3.10.2. Assist TMC/Traffic and DSP in identifying major transportation arteries affected by the storm event and developing alternate or by-pass routes.

**6.3.11. Local Law Enforcement**

- 6.3.11.1. Coordinate law enforcement activities with the DSP and other emergency services.

**6.4. Storm Event (Level 4)**

The hurricane with gale force winds has arrived. This is equivalent to a Level 4 incident. It is assumed that affected Sussex County TMT agencies at a lower level will elevate to a Level 4 during the *Storm Event*. At Level 4, the Sussex County and state Emergency Operation Centers (EOCs) will be activated. Storm event management activities will be coordinated directly between TMC/Traffic, DelDOT’s South District office, scene(s) supervisor(s), the State EOC, and federal transportation agencies as illustrated in Figure SC-2. Coordination with all activated local and county EOCs and Federal Emergency Management Agency (FEMA) will be through the state EOC. During the storm event, all TMT agencies (i.e., DelDOT South District, DSP, DNREC, County and Local Fire Service, County and Local EMAs, and Local Law Enforcement) should recall emergency responders and all deployed personnel back to their operating locations. Ensure personnel do not take unnecessary risks as the storm approaches and winds exceed gale force strength. Supervisors must continue to emphasize safety procedures. Other transportation management actions to be carried out will include but will not be limited to:

**6.4.1. Delaware Department of Transportation (DelDOT)**

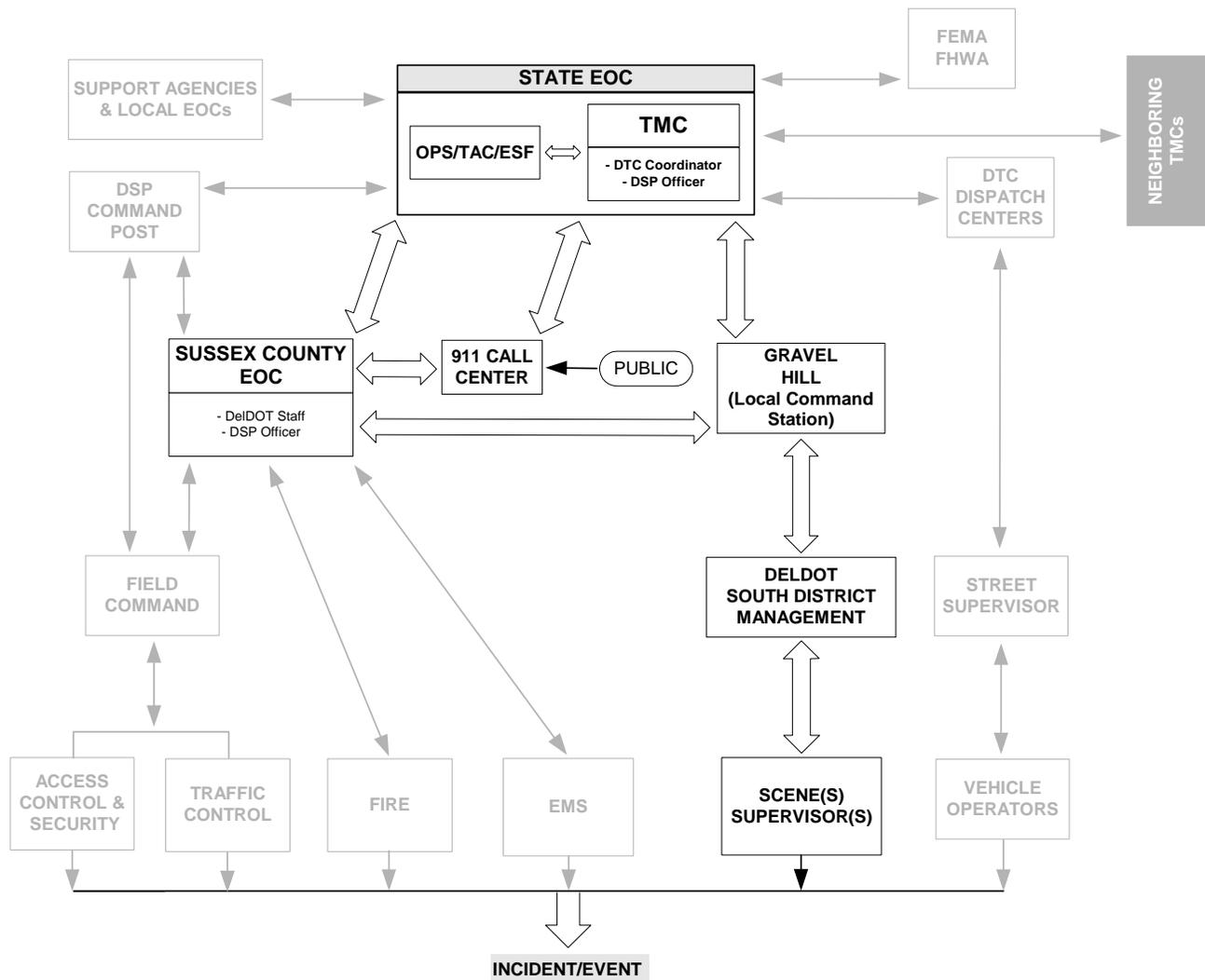
**6.4.1.1. TMC/Traffic**

- 6.4.1.1.1. The TMC/Traffic and Sussex County TMT will terminate all pre-event activities.
- 6.4.1.1.2. Continue to monitor the event and provide information to the Sussex County TMT agencies, and the neighboring TMCs.

**6.4.2. Delaware Emergency Management Agency (DEMA)**

6.4.2.1. DEMA PIO, continues to coordinate with PIOs of relevant agencies, DelDOT TMC/Traffic, DSP, DNG, and using all and any means available, will notify the public and explain the calm conditions as the eye passes overhead. The public should be made aware that the improved weather conditions are temporary and that the storm conditions will return with winds coming from the opposite direction sometimes in a period of just a few minutes. Should a JIC be established, lead PIO will coordinate information and distribution.

6.4.2.2. EOC and ESF members establish a plan of action concerning re-entry and recovery procedures. Finalize procedures for human needs assessment and damage assessment. If possible, continue to maintain communications with local EOC emergency management personnel to receive SITREPS. Consider alternate communication methods operated by the RACES, DNG, CAP, etc. Monitor local weather conditions to determine when it is safe to proceed outside.



**Figure SC-2.** State EOC/Sussex County EOC/DelDOT South District Communications (Level 4)

**6.4.3. Sussex County EOC**

- 6.4.3.1. Ensure evacuation procedures are terminated. Residents who did not evacuate and are requesting assistance, will be encouraged to seek a last minute place of refuge.
- 6.4.3.2. Together with DEMA and ESF members, establish a plan of action concerning re-entry and recovery procedures. Finalize procedures for human needs assessment and damage assessment. If possible, continue to maintain communications with municipal emergency management personnel to receive SITREPS. Consider alternate communication methods operated by the RACES, DNG, CAP, etc. Monitor local weather conditions to determine when it is safe to proceed outside.
- 6.4.3.3. PIOs, using all and any means available, notify the public concerning the calm conditions as the eye passes overhead. Be aware that the improved weather conditions are temporary and that the storm conditions will return with winds coming from the opposite direction sometimes in a period of just a few minutes.

**6.4.4. Delaware State Police (DSP)**

- 6.4.4.1. DSP will block all access to evacuation routes.

**6.4.5. Local Law Enforcement**

- 6.4.5.1. Assist DSP as required.

**6.5. Re-entry/Recovery Phase**

This phase will be implemented following the passage of the storm. Affected Sussex County TMT agencies may remain at Level 4 or downgrade to a lower level depending on the extent of the damage inflicted by the storm. First responders shall accomplish initial assessments to determine hazardous and non-hazardous areas. If conditions allow for debris clearance and power restoration, then workers may re-enter the area. Areas that the EOC or first responders consider unsafe shall be restricted areas until they are made safe. Emergency Roadway Clearance procedures and guidelines shall be followed as specified in the Debris Management Annex of the DEOP (Being Developed). The following minimum transportation management actions will be implemented:

**6.5.1. Delaware Department of Transportation (DelDOT)**

**6.5.1.1. TMC/Traffic**

- 6.5.1.1.1. Reestablish communication with the Sussex County TMT agencies.
- 6.5.1.1.2. Set up a conference call with the Sussex County TMT agencies to determine the requirements for traffic control for return of evacuees.
- 6.5.1.1.3. Continue to monitor the event and provide information to the Sussex County TMT agencies and the neighboring TMCs.

**6.5.1.2. DelDOT South District**

- 6.5.1.2.1. DelDOT, as the Primary Agency for ESF 3 (Public Works and Engineering) will be responsible for coordinating with appropriate ESF 3 support agencies and companies to provide the public works and engineering assistance required to restore the evacuated area(s) to habitable conditions.
- 6.5.1.2.2. DelDOT and ESF 3 support agencies will provide personnel to assess the affected areas to ensure that the following conditions prevail in the evacuated area before evacuees are authorized to return:
  - 6.5.1.2.2.1. The threat that caused the evacuation has been resolved.
  - 6.5.1.2.2.2. Sufficient debris has been removed to permit travel and roads and bridges are safe to use.

6.5.1.2.2.3. Downed power lines have been removed; ruptured gas, water and sewer lines have been repaired; and other significant safety hazards have been eliminated. However, utility services may not have yet been fully restored.

6.5.1.2.2.4. Structures have been inspected and determined to be safe to reoccupy

6.5.1.2.2.5. There is adequate water available for firefighting.

6.5.1.2.3. Activate the traffic control plan and will place resources into position.

6.5.1.2.4. Coordinate the closure of the draw span on all drawbridges to all unauthorized traffic.

6.5.1.2.5. Place available wreckers, tow trucks, and MAP vehicles on-site at predetermined locations.

### **6.5.1.3. Division of Public Relations**

6.5.1.3.1. Disseminate information advising the public that they can return to their homes and businesses using a current list of radio stations, television stations, cable television companies, and newspapers. Preferred travel routes will be indicated.

6.5.1.3.2. Coordinate with the DEMA PIO, as necessary.

6.5.1.3.3. Report to the State EOC and/or JIC, if necessary. During the re-entry/recovery phase, the JIC may stand down or may be operating on a skeleton staff. Alternatively, the EOC may take over the responsibility for disseminating information to the public.

6.5.1.3.4. Issue transportation statements, as required.

6.5.1.3.5. Assist rumor control, if possible.

6.5.1.3.6. Coordinate with the TMC/Radio Station WTMC (1380AM)

### **6.5.2. Delaware Emergency Management Agency (DEMA)**

6.5.2.1. EOC assess and/or re-establish communications with all areas and emergency management or emergency response agencies.

6.5.2.2. PIOs initiate aggressive public awareness measures to keep the public informed of the current situation. Emphasize outdoor hazards to include downed power lines, weakened bridges, washed out roads, weakened tree limbs, damaged overhanging structures, etc.

6.5.2.3. The EOC will provide tips and instructions to the public on re-entry.

### **6.5.3. Sussex County EOC**

6.5.3.1. Assess and/or re-establish communications with all areas and emergency management or emergency response agencies.

6.5.3.2. Communicate with municipal and local officials, including local fire service organizations to assess their conditions and potential hazards of reentry. Human needs requirements and initial damage information shall be passed to the county EOC to be forwarded to the State EOC. The State EOC shall be responsible to coordinate the Initial Damage Assessment (IDA) as specified in the Damage Assessment Annex of the Delaware Emergency Operations Plan (DEOP). This assessment may include but not be limited to CAP, DNG and DSP aerial fly-over, windshield assessment, etc.

6.5.3.3. Initiate immediate search and rescue (SAR) procedures if there are missing individuals. Responsibility and protocol for coordinating SAR efforts are outlined in ESF-9 of the DEOP and may include urban SAR by the fire service organizations, aerial SAR by DSP and the CAP, and marine SAR by the Delaware Marine Patrol.

Requests for status of missing persons should be coordinated with the American Red Cross in Delaware.

- 6.5.3.4. Coordinate with DSP to establish security to those areas that have been severely impacted. Security and law enforcement resources and procedures are specified in ESF 14 of the DEOP.

**6.5.4. Delaware State Police**

- 6.5.4.1. Deploy law enforcement and traffic control personnel, and provide traffic control for the return of the evacuees.
- 6.5.4.2. Maintain access controls for areas that cannot be safely reoccupied.
- 6.5.4.3. Establish security to those areas that have been severely impacted. Security and law enforcement resources and procedures are specified in Emergency Support Function 14 (ESF 14), Military Support.

**6.5.5. Department of Natural Resources & Environmental Control (DNREC)**

- 6.5.5.1. Coordinate and assess damage to beaches, parks, dams, and fish and wildlife areas.

**6.5.6. Emergency Support Function (ESF) Agencies**

- 6.5.6.1. Emergency Support Function 8 (ESF 8), Public Health and Medical Services will coordinate the return of evacuees to special facilities.

**6.5.7. County and Local Fire Service**

- 6.5.7.1. Local officials and local fire service organizations shall assess their conditions and potential hazards of reentry.
- 6.5.7.2. Assess safety of damaged area(s)/structure(s) for public/private use.
- 6.5.7.3. Notify proper authorities to inspect damaged area(s)/structure(s) for public/private use, as appropriate.
- 6.5.7.4. Prepare and forward fire reports to the State Fire Marshal's office
- 6.5.7.5. Perform decontamination functions.
- 6.5.7.6. Inspect and repair equipment.
- 6.5.7.7. Participate in post-disaster critiques.
- 6.5.7.8. Make appropriate recommendations for changes to the Fire and Rescue ESF.

**6.5.8. County and Local Emergency Management Agencies**

- 6.5.8.1. Assess and/or re-establish communications with all areas and emergency management or emergency response agencies.

**6.5.9. Local Law Enforcement**

- 6.5.9.1. Assist DSP with traffic control and security, as required.

**7. Evacuation Routes**

**7.1. Primary Evacuation Routes**

The primary evacuation routes for Sussex County are indicated in Table SC-1A and 1B, and illustrated in Figure SC-3. These evacuation routes are all unlimited access roadways with numerous entrances and exits. Therefore, it will not be possible to limit access to the designated primary evacuation routes during an emergency and it is anticipated that traffic flow will continue normally along these routes. It is expected that evacuees will utilize the outbound lane(s) with emergency vehicles being directed to the inbound lane(s). All primary evacuation routes are signed. TMC/Traffic will provide traffic management and control along the designated evacuation routes with assistance from the DSP.

**Table SC-1A. Primary Evacuation Routes (North/South)**

ROUTE	FROM	NEAR	TO	NEAR
54	SR 1	Fenwick Island	US 113	Selbyville
26	SR 1	Bethany Beach	Route 26/30	Shaft Ox Corner
24	Route 24/26	Shaft Ox Corner	US 13	Laurel (Records Pond)
20	Route 24	Millsboro	US 13	Seaford
9	Lewes & Rehoboth Canal	Lewes	Route 18	Georgetown
18/404	US 9	Georgetown	Maryland Border	Adams Crossroads
16	1 mile inland	Broadkill Beach	Kent County Border	Adamsville
224	Slaughter Creek	Slaughter Beach	SR 1	Argos Corner
36	2 miles inland	Slaughter Beach	SR 1	Milford

**Table SC-1B. Primary Evacuation Routes (East/West)**

ROUTE	FROM	NEAR	TO	NEAR
1	Kent County Border	Milford	Maryland Border	Fenwick Island
5/23	SR 1	Waples Pond	Route 22C	Masseys Landing
20 (382)	Route 26	Dagsboro	Route 54	Fenwick Island
24/5	SR 1	Midway	Route 20	Millsboro
113	Kent County Border	Milford	Maryland Border	Selbyville
13	Route 16	Greenwood	Route 24	Laurel (Records Pond)

**7.2. Secondary Evacuation Routes**

A network of secondary evacuation routes direct local residents to the primary evacuation routes and can also be utilized to reroute traffic during an evacuation in the event the primary evacuation routes become impassible. All secondary evacuation routes are signed. Traffic management and control along the secondary evacuation routes will be provided by TMC/Traffic with assistance from the DSP.

**7.3. Local Routes**

Traffic management and control along local roads, i.e., roads not designated as primary or secondary evacuation routes, will be by the local municipalities.



## **8. Travel Model**

A travel model was used to determine the evacuation times required along designated evacuation routes in the Resorts Area (North by US 9, south by Maryland line, west by US 113, and east by the Atlantic Ocean). The model inputs included existing traffic volumes, posted speeds, roadway types, O/D data, and route choice data. Assuming all roads opened and constant demand throughout the evacuation period, it is estimated that approximately 24 hrs will be required to process travel demand.<sup>5</sup> Constant demand refers to a "constant traffic flow rate based on a consistent evacuation travel demand following notification", which means that a constant number of persons would want to leave throughout the evacuation period. This is absolutely a best-case scenario. In reality, there would be a surge of demand, traffic levels would approach gridlock, and the resulting evacuation times would be at least double those shown. In addition, the times extend greatly if one or more evacuation routes are "closed". The model results, assuming the "best case" scenario are summarized in Table SC-3.

**Table SC-3. Evacuation Times on Designated Evacuation Routes**

<b>CORRIDOR</b>	<b>SUMMER VOLUME</b>	<b>VPH</b>	<b>ESTIMATED EVACUATION TIME (HRS)</b>
SR 1	20,000 – 26,000	1600	12.5 – 16.25
US 9	16,000 – 22,000	800	20.0 – 27.5
SR 24	15,000 – 20,000	800	18.7 – 25.0
SR 26	9,000 – 11,000	800	11.2 – 13.7
SR 54	22,000 – 45,000	800	20.0 – 25.0

## **9. Resources**

The TMT will address resource issues during the event.

## **10. Shelters**

There are a number of Sussex County public shelters approved by the American Red Cross (ARC) for evacuation. The Sussex County TMT will coordinate the opening of shelters with the ARC, and state and municipal emergency management agencies during the event.

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<sup>5</sup> DelDOT Division of Planning. Presentation: Sussex County Evacuation Plan. October 19, 2001.