METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS

One Region Moving Forward

November 2, 2011

To: COG Board of Directors

From: The Honorable Phil Andrews, Councilmember, Montgomery County
Chair, National Capital Region Emergency Preparedness Council
Chair, Steering Committee on Incident Management and Response

Re: Report of the Steering Committee on Incident Management and Response

Emergency planning since September 11, 2001 has greatly strengthened the region's incident management and response as evidenced during a variety of events, from the Beltway Snipers to Hurricane Irene. However, the January 26, 2011 snow and ice storm, which resulted in dangerous and many hours-long commutes on gridlocked roads during hazardous conditions for thousands of residents, and unacceptable results during other incidents have shown that serious challenges persist. Following the January storm, the COG Board of Directors approved a Major Regional Incident Response Action Plan and created a Steering Committee on Incident Management and Response (IMR) in March 2011 to identify improvements to regional incident management and response. The Committee was comprised of 19 area officials, including emergency managers, chief administrative officers, state transportation and WMATA officials, public information officers, and representatives of area electric utilities, the U.S. Office of Personnel Management (OPM), the Greater Washington Board of Trade, and the Red Cross. The COG Board asked the Committee to complete its work by November 2011.

Through its research, the Committee identified key needs and gaps in current programs and protocols and offered comprehensive and readily implementable recommendations to address them. It studied incident management models in New York, London, and other regions and considered the question of creating a single, decision-making authority. The Committee found that most other localities do not have such an entity and concluded that our region would achieve better, faster results by enhancing our multi-jurisdictional approach.

To address a lack of regional situational awareness and the need for better regional coordination and communication among area officials—the Committee proposes the creation of a Regional Incident Coordination Program. While our localities have skilled personnel and a wide array of tools and technologies, no single local agency has staff dedicated to monitoring the region. Highly-trained RIC Program staff will monitor the region, analyze and share information, create a picture of the regional situation, and initiate calls among area decision-makers. The program is a proactive step that will benefit the region immediately, and the Committee applauds the District of Columbia's Department of Homeland Security and Emergency Management for offering to host and staff the program beginning in December 2011.

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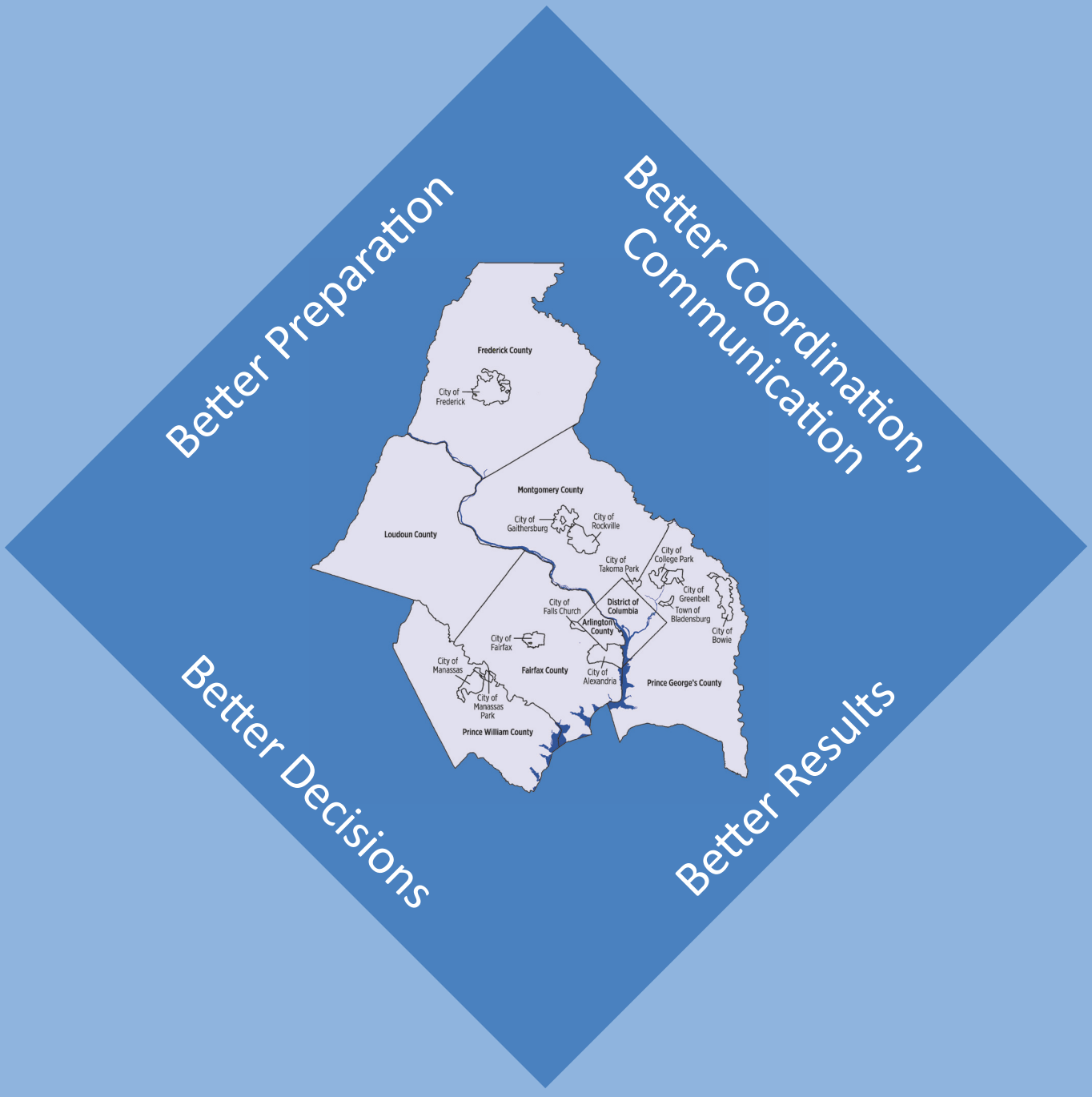
Many of the Committee's other recommendations to address other serious gaps require action by individual groups. Transportation officials are urged to continue making more real-time information on regional transportation conditions available to the public. The Committee recommends that public information officers communicate information to area residents through a new, regional web site, a Virtual Joint Information Center established by Fairfax County on behalf of the region. Emergency managers are urged to conduct regional exercises to test evacuation communication and coordination plans. Area employers should update their employee release policies, as OPM has done, and take into account transportation conditions and capacity before releasing employees. In addition, all jurisdictions in the National Capital Region are urged to assess and install back-up power for their major traffic signals to maintain road capacity and help prevent gridlock during widespread power outages.

The Committee unanimously approved this report on October 26, 2011. It is confident that implementation of the RIC Program proposal and other recommendations will lead to better decisions and a safer region when the next major incident occurs. In addition, with the COG Board's support, the Committee has agreed to remain "on call" to monitor implementation of the RIC Program and other recommendations and can update the Board on their progress in mid-2012.

Report of the Steering Committee on Incident Management and Response



A proposal for a Regional Incident Coordination Program and over a dozen other improvements to enhance incident management and response in the National Capital Region

Presented to the COG Board of Directors
November 9, 2011

Report of the Steering Committee on Incident Management and Response

Approved Unanimously by the Committee on October 26, 2011

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Executive Summary

On the afternoon of Wednesday, January 26, 2011, a snowstorm hit the National Capital Region (NCR), triggering widespread and many hours-long traffic gridlock and causing power outages that impacted thousands of residents. Initial and subsequent observations of the snowstorm indicated that officials underestimated its severity. Many federal employees did not know about the early release or did not leave work until after the snowstorm began. Decision-makers focused on their individual state and local concerns, but regional coordination was inadequate. Once the snowstorm was underway, the public did not have access to real-time information on regional conditions to inform their decisions.

Following the snowstorm, area leaders and residents questioned the region's preparedness and response, as well as its ability to deal with future storms, emergencies, and other major events. In March 2011, the Metropolitan Washington Council of Governments (COG) Board of Directors approved a Major Regional Incident Response Action Plan and Steering Committee on Incident Management and Response (IMR) to identify improvements to regional incident management. The Action Plan charged the Committee with reviewing focus areas and making recommendations that would improve the response to future incidents in the NCR. The Action Plan (*which is included in Appendix A*) had four focus areas:

- Real-time information or situational awareness among local, state, and federal government agencies with operational authority or responsibilities
- Real-time information to the media and the public
- Regional coordination
- Decision-making

The Committee was comprised of a wide range of public, private and nonprofit representatives. *For the membership list, see Appendix B*. It met 6 times over 8 months, receiving input from several COG policy boards and committees, including the Chief Administrative Officers Committee (CAOs), the National Capital Region Transportation Planning Board (TPB), and the National Capital Region Emergency Preparedness Council (EPC), among others. In this report, the Committee addresses the focus areas and makes recommendations that should substantially improve regional communication and coordination for events such as the January 26 snowstorm.

Focus Area Issues

For the first focus area, the Committee was tasked with examining how emergency managers and transportation officials communicate among themselves and with each other during incidents. The Committee notes that while WebEOC (Emergency Operation Center) is a valuable tool that provides information sharing, it is only used when trained staff is available to operate the system. Jurisdictions in the NCR have 24/7 emergency 911 centers and DC HSEMA (Homeland Security and Emergency Management Agency) has a 24/7 Emergency Operations Center, but no agency has staff providing situational awareness of the region as a whole. The Committee also finds that existing tools had been underutilized—such as messaging and consultation between transportation and emergency managers—before and during the January snowstorm. The Committee notes that the traffic gridlock on January 26 resulted from a compressed departure of

employees during a highly-problematic afternoon rush-hour rather than from an evacuation—reinforcing shelter-in-place as the default protective action for residents. Communication between transportation officials and emergency managers needs continued testing in order to help manage similar, future incidents, and in rare occasions, evacuations.

With regard to real-time information to the media and public, the Committee stresses the need for coordinated messages delivered through a steady stream of accurate, real-time information, through a variety of communication forms, to empower individuals with information so they can make good decisions during incidents. The Committee notes, for example, that the region has lacked a central web site where Public Information Officers (PIOs) can coordinate during emergencies and post a regional PIO message, compile up-to-date information from all individual government web sites, and link to information on regional utilities, weather, and traffic conditions. Another major issue, as evidenced by the January 26 snowstorm, is that employers need to have shelter-in-place procedures. The Committee also finds that area commuters and residents need to be well prepared for winter storms as well as unplanned events by having personal emergency plans and supplies for home and work and by signing up for alerts from local governments and transportation agencies.

The Committee finds several areas in need of improvement in regard to regional coordination. It notes that the Metropolitan Area Transportation Operations Coordination (MATOC) Program is still relatively new and has the potential to provide more detailed transportation incident information to a wider audience. The Committee finds that the Regional Incident Communication and Coordination System (RICCS)/snow calls, which provide a venue for area decision-makers to consult and coordinate efforts before an event, could be enhanced to better share information. The Committee notes that employee release decisions have a major impact on regional transportation conditions and that delivery of early release from work messages by employers needs improvement. While adequate plans and agreements are in place for removal of disabled vehicles, the region needs to do more to discourage commercial trucks and commuters from being on the road in the first place during forecasted major snowstorms or other events. On the subject of electric power reliability and restoration, the Committee finds that utilities' preparations for storms occur outside of the regional coordination framework and that regional officials would benefit from more communication with the major utilities serving the NCR on their work before, during and after storms. The Committee also notes that many critical facilities, including most traffic signals, lack back-up power.

For the final focus area, the Committee reviewed other U.S. and international incident management models to determine if there was a better framework for decision-making. The Committee notes that coordinating local decisions in a regional context is challenging in the multi-jurisdictional NCR. Incident management models, such as those in some foreign countries or U.S. regions located solely in one state or with a dominant jurisdiction, are not appropriate for the NCR due to this region's multi-jurisdictional nature. The Committee also notes that the New York-New Jersey-Connecticut metropolitan region's traffic monitoring program is similar to MATOC because it supports regional decision-makers instead of acting as a central, decision-making authority. Based on the Committee's research, there would also be legal barriers to creating a central authority, such as one decision-maker. Moreover, it is not clear that a central authority would achieve better results than a robust, well-coordinated multi-jurisdictional approach.

Committee Recommendations/Strategic Actions

In the previous four Focus Areas, the Committee recommends specific actions that will improve the region's future incident management and response through better regional coordination and communication. *(For a table of all Committee recommendations, see Appendix C.)* The Committee calls attention to several improvements underway since the January 26 snowstorm that must be continued, such as the ongoing work by transportation officials to provide their information to emergency managers.

Many of the recommendations require action by the Chief Administrative Officer's Committee and other individual groups—the central participants in incident management and response—to strengthen and enhance their own procedures and programs. Transportation officials are urged to continue efforts to make MATOC's transportation incident information available to the public. The Committee recommends public information officers utilize the new, regional Virtual-Joint Information Center and vigorously describe, promote, and inform personal emergency preparedness before the winter snow season begins. Emergency managers are urged to conduct regional exercises to test evacuation communication and coordination plans. The Committee recommends officials that make employee release decisions, like OPM, review and update their policies with a goal of having new policies in place by December 1, 2011. And all jurisdictions in the NCR are urged to conduct assessments of and expeditiously install back-up power for their major traffic signals.

Some recommendations—providing regional situational awareness and improving coordination and communication through the RICCS call—require participation by multiple agencies and jurisdictions, and the Committee believes they should be addressed through coordinated action—the creation of a Regional Incident Coordination (RIC) Program. The Committee notes in the report that no local agency has staff providing situational awareness of the region as a whole. The RIC Program would be staffed with highly trained and experienced individuals—its staff would have access to and knowledge of the region's many programs, such as RICCS, WebEOC, MATOC, Virtual JIC, as well as other information sources. RIC Program staff would be responsible for monitoring the region using these established programs, distributing and redistributing relevant information to appropriate officials, creating a picture of the regional situation, and sharing this picture with decision-makers on RICCS calls and through other means. Its staff would also serve a proactive role to initiate RICCS calls, contact agencies to help expedite the release of information to the public, and be a key participant in scenario-based regional exercises. The RIC Program would not usurp the authority or duplicate the current functions of any local, state, or federal agency, and it would not impact mutual aid agreements among jurisdictions. It would, however, provide better information for officials to make operational decisions. On an interim basis, DCHSEMA has offered to staff and host the RIC Program, so it can begin providing the Program's functions starting in December 2011.

The Committee also notes that area officials do not work jointly across their subgroups on a consistent basis to improve incident management and response. It sees value in continued engagement by its own multi-sector group of members and urges them to formalize their cooperation by establishing a RIC Oversight Group.

The Committee concludes this report by showing how its key recommendations fit together to improve management of and response to future incidents. It presents these high-level, strategic actions in three categories: advance planning, communication/coordination shortly before an incident, and management and response during an incident. The Committee notes the region has performed well in preparing and responding to planned events and many forecasted storms, but it must do better during unexpected events, such as storms that become stronger than forecast, earthquakes, and

potential terrorist attacks. The Committee believes, if implemented, its recommendations related to advance planning, as well as the functions provided by RIC Program staff, will greatly benefit the people of the NCR during these unexpected events.

Advance planning is the first part of effective incident management. RIC Program staff will use current regional programs like RICCS, WebEOC, MATOC, Virtual JIC, as well as other information sources to monitor the region and begin providing regional situational awareness. RIC Program staff will also participate in regional training and scenario-based exercises. COG will make improvements to the RICCS call so it will be a better forum for sharing information. PIOs will continue community and media outreach on personal preparedness, such as a regional "Get where you need to be before the weather gets bad!" messaging in advance of the 2011-2012 winter storm season. Area officials will update and improve standard operating procedures, such as employee release policies. Current mutual aid and operational agreements should be amended and expanded on, while utilities and other agencies should be asked to become a formal part of the region's emergency response network. Utilities will work to improve reliability. Jurisdictions and stakeholders will identify and provide back-up power to critical facilities, such as hospitals, shelters, traffic signals.

The time period shortly before an event is the next stage of incident management. RIC Program staff will distribute/redistribute relevant information and assemble and share an up-to-date picture of the regional situation for the appropriate area officials. Local officials or RIC staff will ensure coordination takes place by initiating a RICCS call. New RICCS call technology will better share information on conditions and the possible options for the status of federal employees. PIOs will use a wide array of tools to communicate directly with the public as well as through the media, private, civic and other groups. EOCs will be activated if determined necessary by local officials. Departments of transportation and utilities will mobilize to prepare for the event.

During an event, the RIC Program staff will continue providing regional situational awareness, sharing relevant information with appropriate officials, and coordinating additional RICCS calls with decision-makers as needed. PIOs will make real-time, factual information available to the public through the V-JIC and the many outreach tools they have developed. Emergency managers and transportation officials will communicate with each other. DOTs will be better able to plow and clear roads because fewer vehicles will be disabled due to messaging before the event. Improved messaging by utilities will alert customers of power outages and estimated time for restoration. Utilities will begin power restoration on facilities that are the region's highest priorities for restoration. New and expanded mutual aid agreements will allow local and state governments, federal agencies, and utilities to provide assistance to one another.

Emergency planning since September 11, 2001 has greatly strengthened the region's incident management and response as evidenced during a wide range of events, from the Beltway Snipers to Hurricane Irene. However, the January 26 snowstorm and other incidents have shown serious challenges persist. The region must take several proactive, tangible steps to better communicate and coordinate, especially during unplanned events. The Committee believes that its comprehensive and readily-implementable recommendations to strengthen and enhance current programs and procedures and provide new regional functions through a RIC Program will advance previous work in the National Capital Region and reassure the public that its leaders can work together effectively in times of crisis.

Introduction

January 26, 2011 Snowstorm Summary

On the afternoon of Wednesday, January 26, 2011, a snowstorm hit the National Capital Region (NCR), triggering widespread and many hours-long traffic gridlock and causing power outages that impacted thousands of residents. Weather forecasts in advance of the snowstorm were largely accurate. On January 25, the National Weather Service (NWS) called for a Winter Storm Watch for the northwestern suburbs of D.C. westward. In the early morning of January 26, a new forecast called for 3 to 5 inches of snow with the heaviest snowfall between 4 p.m. and midnight.

At 10 a.m., COG convened a snow conference call for area officials to exchange information and help inform their local decisions on government and school closings. At 11:40 a.m., before the snow began to fall, COG forwarded a Regional Incident Communication and Coordination Systems (RICCS) message to area officials that the federal government's Office of Personnel Management (OPM) authorized federal employees to leave 2 hours earlier than their normal departure time from work. Other area employers took similar actions; however, many employees were either uninformed or did not leave work until after the snowstorm began. When workers left, they did so in large numbers, which resulted in a compressed rush hour just as weather and traffic conditions were deteriorating.

Rain washed away early road treatments and rapid icing followed, making travel very difficult and impeding snow removal operations. The region's primary and secondary transportation arteries became blocked with vehicles. Despite the worsening traffic, no area officials initiated a RICCS call to exchange information, discuss regional coordination, or consider a region-wide message to the public. Most Emergency Operation Centers (EOCs) were never activated because that was not part of the protocol for a storm of the magnitude forecasted. The central tool that allows emergency managers to share information to assist with decision-making, Web EOC, was not used because the EOCs were not activated. An organization that was in the relatively early stages of implementation, the Metropolitan Area Transportation Operations Coordination Program (MATOC), was monitoring traffic continuously throughout the storm, but was able to communicate and coordinate only among the region's transportation agencies.

Before the storm, public information officers (PIOs) used traditional and social media and alert notification systems to advise people about the early release and weather conditions. However, once the snowstorm was underway, there was no coordinated message from authorities to the media or public to advise area residents.

Many commuters experienced 8 to 12 hour commutes due to snow and ice-covered roads, abandoned and disabled cars, trucks and buses, as well as outages to traffic signals lacking back-up power. Outages to traffic signals alone would cause a huge loss of transportation capacity and gridlock during a normal rush-hour in good weather conditions. Utilities had difficulty accessing downed power lines due to the traffic and identifying whether downed lines were power lines or other utility lines.

Snowstorm Summary

Weather Forecasts
Largely accurate, call for 3-5 inches of snow between 4pm and midnight

Snow/RICCS Call (10:00am)
Shares information with decision-makers

OPM Decision (11:40am)
Advises workers to leave 2 hrs before normal departure

Employees ' Actions
Many either unaware about early release or don't leave, leading to a compressed departure

Before Event

During Event

Weather Conditions
Worsen rapidly—rain washes road treatments, icing and snow, compressed rush hour, widespread outages

Regional Coordination
No additional RICCS call, no messages between transportation/emergency managers, public lacks real-time information

Results
Many people stuck on roads for 8-12 hrs (many without gasoline, supplies), disabled and abandoned vehicles

Regional Major Incident Response Action Plan and Steering Committee

Following the snowstorm, area leaders and residents questioned the region's preparedness and response, as well as its ability to deal with future storms, emergencies, and other major events. While natural events are to some extent always going to have a measure of unpredictability, the Metropolitan Washington Council of Governments (COG) Board of Directors concluded that NCR could do better at coordinating information, decision-making, resources and messaging. In March 2011, it approved a Major Regional Incident Response Action Plan and Steering Committee to identify improvements to regional incident management. The Action Plan, *which is included in Appendix A*, was shaped by the initial observations from the snowstorm and focused on four areas:

- Real-time information or situational awareness among local, state, and federal government agencies with operational authority or responsibilities
- Real-time information to the media and the public
- Regional coordination
- Decision-making

The first focus area directed the Committee to review the tools used by emergency managers and transportation officials and the protocols they follow to communicate to identify ways to improve information sharing among government officials. The second focus area centered on using new tools to share information with the public and messaging to better prepare the public to 'shelter-in-place' or 'stay put' temporarily. The third focus area covered a wide range of subjects related to regional coordination, including the region's traffic monitoring program, COG snow calls, early release policies, the removal of disabled vehicles, and coordination with electric utilities. The fourth focus area called on the Committee to review other U.S. and international incident management models to determine if there was a better framework for decision-making in the NCR.

The Committee was comprised of a wide range of public, private and nonprofit representatives. *For the membership list, see Appendix B*. It met 6 times over 8 months, receiving input from several COG policy boards and committees, including the Chief Administrative Officers Committee (CAOs), the National Capital Region Transportation Planning Board (TPB), and the National Capital Region Emergency Preparedness Council (EPC), among others. The Committee also conducted interviews, roundtable discussions, and site visits at incident management facilities with subject matter experts.

Current Framework/Model
for Regional Coordination and Communication
for Major Incidents

The ***Regional Emergency Coordination Plan*** (RECP) developed by local, state, and federal officials after the September 11, 2001 attacks provides a framework for how planning, communication, information sharing, and coordination activities should occur before, during, and after a regional incident or planned event.

The ***Regional Incident Communication and Coordination System*** (RICCS) is the primary 24/7 communications capability that links local, state, and federal officials for regional incidents.

There are 16 ***Regional Emergency Support Functions*** (R-ESFs) that support the region. They are made up of officials from throughout the region representing areas involved in incident response, including transportation, emergency management, and external affairs (public information).

Focus Area One: Improve Real-Time Information or Situational Awareness Among Local, State and Federal Government Agencies with Operational Authority or Responsibilities

1a. Strengthen the use of Web Emergency Operations Center (WebEOC) to provide real-time situational awareness on regional events or incidents, such as severe winter weather

Following the approval of the RECP, emergency managers selected WebEOC as their system for sharing information and coordinating with each other. WebEOC provides secure information sharing to enable managers to make sound decisions. Since then, jurisdictions within the NCR have used WebEOC to manage day-to-day operations, exercises, and real-world events, including the 2009 Presidential Inauguration and the 2010 "Snowmageddon" blizzards. The Committee notes that WebEOC is only as strong as the information flowing into the system and the degree to which the information is received by its users. If an incident is not significant enough to warrant activation of an EOC, there is no staff available to input information or update events. On January 26, 2011, a storm event was not created in WebEOC because EOCs were not activated, which was normal for a forecasted snowstorm of only 3-5 inches. Based on input it received, the Committee learned that that the NCR version of WebEOC does not share information with Virginia's WebEOC and vice-versa. Information must be entered twice to share it among these entities.

Emergency managers discussed additional tools with the Committee that will allow them to better share information with one another. One new resource currently under development by DCHSEMA for the region is a dashboard tool that would provide better access to incident information. The design of the dashboard has been completed, and DCHSEMA plans to use FY11 funding to build the tool and make it available in Summer 2012.

The Committee finds that, while officials have a great ability to coordinate through the RECP and the NCR's mutual aid agreements, they lack the capability for real-time, situational awareness of all local events occurring within the region and the maintenance of a common operating picture. This can cause emergency management officials and first responders to react to incidents, rather than act proactively before an emergency incident occurs. The NCR has many resources and numerous standing EOCs (*For selected communications technologies used by EOCs in the NCR, see Appendix F*); however, a majority of these centers support federal information exchange and they place varying levels of importance on situational awareness across the region's localities. No agency in the NCR has staff providing situational awareness for the region as a whole.

Recommendations

The Committee recommends emergency managers should work together to designate staff to provide regional situational awareness that could be shared among agencies throughout the region. Emergency managers should also work together to identify a medium for sharing information between various WebEOC versions

Issues	Recommendations	Status
While localities have emergency operations centers and incident management tools, the National Capital Region (NCR) lacks situational awareness for region as a whole.	Emergency managers should work together to designate staff to provide regional situational awareness that could be shared among agencies throughout the region.	Recommended.
The NCR version of WebEOC does not share information with Virginia's WebEOC and vice-versa.	Emergency managers should work together to identify a medium for sharing information between various WebEOC versions.	Recommended.

1b. Strengthen emergency management and transportation agency protocols and training to ensure that key staff monitor and provide input on the regional impact of local events, incidents or weather and traffic conditions

Ongoing communication and coordination among emergency managers and transportation officials is critical during most regional incidents. In the NCR, situational awareness of transportation operations is provided by the Metropolitan Area Transportation Operations Coordination (MATOC) program, which is discussed in greater detail in *Section 3a*. During the January 26, 2011 snowstorm, MATOC was still in the early stages of implementation and was communicating and coordinating only among the region's transportation agencies.

Since the snowstorm, transportation messaging to emergency management officials has been established. MATOC facilitators have begun sending Regional Incident Communications and Coordination Systems (RICCS) pages with incident information to regional partners, including emergency managers. Efforts are also underway to incorporate MATOC's Regional Integrated Transportation Information System (RITIS) data automatically into WebEOC for emergency managers as noted in the previous section.

During meetings with the Committee, the region's transportation and emergency management officials agreed that the January 26 snowstorm required well-coordinated traffic management, not an evacuation because it did not necessitate the removal of people from a stricken, threatened, or affected area. In most incidents, during snowstorms, severe thunderstorms, and earthquakes, as well as certain kinds of terrorism events, the safest protective action is to stay put or shelter-in-place. In circumstances where evacuation is warranted, it will most likely be for a small, specific geographic area—not the entire NCR.

The Committee finds that the widespread traffic gridlock on January 26 that resulted from the compressed departure of employees, worsening weather conditions, and outages to traffic signals lacking back-up power reinforces shelter-in-place as the default protective action for residents. Nevertheless, this event has raised concern about the region's ability to coordinate a large-scale evacuation. Most local and state governments have evacuation plans in place and emergency managers through R-ESF 5 continue to coordinate regionally on the issue, focusing on identifying available shelters, roadway size, traffic capacity, peak traffic volume, signal timing transportation options and prioritized evacuation routes. In most cases, the senior elected or appointed officials with the advice of their emergency managers are responsible for ordering evacuations as

necessary to protect their residents. Information sharing through the RICCS and MATOC programs and technology like WebEOC also aid officials as they coordinate evacuations and make other important decisions.

Recommendations

The Committee approves of the changes made after the snowstorm to establish transportation messages to emergency managers and others, which will eliminate the notification problems experienced on January 26. It recommends that transportation officials continue to work with emergency managers to integrate transportation data with WebEOC and other programs to further enhance real-time information sharing.

While the Committee reaffirms that January 26 was a compressed rush hour, rather than an evacuation, it recommends that emergency managers conduct new exercises focused on evacuation coordination to test this information sharing and coordination with transportation officials, public information officers, and others.

Issues	**Recommendations**	**Status**
Existing tools were underutilized.	Transportation officials should continue to work with emergency managers to integrate transportation data with Web Emergency Operations Center (WebEOC) and other programs.	Underway.
Communication between transportation officials and emergency managers needs continued testing to help manage future incidents, including evacuations.	Emergency managers should conduct regional exercises to test evacuation communication and coordination plans.	Recommended.

Focus Area Two: Improve Real-Time Information to the Media and the Public

2a. Establish a Virtual Joint Information Center (V-JIC). The V-JIC would support the rapid release of real-time information to the media and the public during a storm or other event or incident that develops rapidly.

The ability to share accurate, authoritative and timely information to the media and public is critical during all emergency responses. In the NCR, Public Information Officers (PIOs) coordinate as part of RESF 15, the external affairs group of the RECP. The group regularly disseminates information before, during, and after emergencies and major events through traditional means—outreach to the media, press releases, and advisories—as well as new technology such as government web sites and social media programs.

For several years, PIOs through RESF-15 have sought funding for a Virtual Joint Information Center (V-JIC), a central, regional web site. The V-JIC's primary function during an emergency event is to allow PIOs to communicate and coordinate as they work with emergency managers, CAOs, and elected officials to create a message for the public and media. This portion of the V-JIC is not accessible to the public.

However, at all times, the V-JIC will have a "public face" that will provide regional news and information, and the public and the media should see links to the regional V-JIC from other home pages. The V-JIC will serve as a news aggregator, automatically posting information from all local governments in the NCR. During emergencies and major events, the V-JIC's public face will be used for the rapid release of regional emergency information to the public and the media, including the coordinated message on what the public should do and updates on relevant information such as the state of traffic, weather, and utilities. For example, once MATOC traffic incident information is made available online, people will be able to access that information at the V-JIC.

Because the region had not been awarded funding for this project, Fairfax County purchased a V-JIC for use in the NCR. The Committee received a demonstration of the site and its capabilities in August 2011. The Chair of R-ESF 15 has met with emergency managers, the transportation RESF and others committees for a demonstration of the site. It should become operational within the next several weeks.

Recommendation:
The Committee believes the new regional V-JIC will help PIOs coordinate as they work with emergency managers and CAOs to develop and share coordinated, regional messages to the public and media.

Issue	**Recommendation**	**Status**
There is no central web site where regional Public Information Officers (PIOs) can coordinate during emergencies and share real-time information with other officials, area residents and the media.	PIOs should use and promote the regional Virtual Joint Information Center (V-JIC) established by Fairfax County on behalf of the region.	Underway. V-JIC should become operational in Fall 2011.

2b. Improve the timeliness, clarity and mode of information delivery to the public concerning adverse winter weather and its impact on transportation infrastructure.

Officials in the NCR use a variety of means before a snowstorm or major planned event to share information with the public about the upcoming incident and its impact on transportation, schools, and business. Delivering messages during emergencies can be challenging as some residents are limited in the ways they can receive information. This makes close coordination with the media, especially outlets with significant traffic monitoring capabilities, essential.

PIOs have been communicating with area public and private employers and educating them on their role in and impact on the outcomes of emergency situations, since they have great impact on people being able to get where they need to be before weather gets bad. PIOs also communicate with specific groups that have large audiences, like homeowners associations, which then spread the messages to their members.

PIOs have been using new technology and social media to communicate directly with the public. Government web sites and blogs continue to be an important source of online information. Several local governments have Facebook and Twitter accounts to communicate with thousands of users. These social media sites have a multiplying effect by allowing users to re-send the original PIO messages to their groups of friends. Several public officials also use these social media tools to give direction and guidance to area residents.

In addition, text alerts—for residents who have subscribed to these services—provide messages directly to peoples' cell phones and pagers. Capitalert (**www.capitalert.gov**) connects the public with free emergency alerts from the local governments in the Washington, DC area. From the Capitalert website, people can sign up and get emergency text alerts from city or county governments in the NCR. (for a list of government and transportation alerts for the NCR Public, *see Appendix G*.)

PIOs have been examining the development of an emergency application for smart phones for use throughout the region. Such a system would reach many more residents in a timely manner in the event of a rapidly developing emergency event. Funding was recently allocated for this effort in the FY11 Urban Area Security Initiative (UASI) application. The PIOs, emergency managers and transportation officials will work collaboratively to develop this application.

Recommendation
The Committee recommends that the PIOs should continue media outreach and developing new tools to communicate directly with the public.

Issue	**Recommendation**	**Status**
The public needs timely, accurate messages before and during incidents.	PIOs should continue media outreach and developing new tools to communicate directly with the public.	Underway.

2c. Improve the readiness and capability of the public to shelter-in-place, if required or recommended by public officials in response to an emergency or regional incident.

A prompt region-wide evacuation is impractical due to the limited transportation infrastructure to support the rapid movement of the large number of people that work and reside in the NCR. Officials stressed to the Committee that the default emergency protective measure in almost every circumstance, including the January 26 snowstorm, is "shelter-in-place" until public safety officials have issued specific emergency protective measures or other directions. Currently, very few employers have shelter-in-place plans and procedures, and in some cases, employees do not know what to do if an emergency occurs which requires action on their part.

In the absence of established shelter-in-place plans and supplies, officials told the Committee messages of personal preparedness and "staying put" temporarily can be beneficial to limit traffic congestion and allow road crews time to clear the roads. For this reason, it is important for public messengers and the media to remind area residents to make an emergency plan for themselves and their families and have key supplies—such as water, food, medications, blankets, flashlights, mobile device/cell phone chargers, and battery-powered radios—with them in their car, at work, and at home.

While much of the Committee's work plan focused on the role of governmental entities, the Red Cross and other officials stressed that solutions to improved preparedness and response to winter storms and all other kinds of emergencies include a major role for individuals and families. Whether residents choose to take to the roads, shelter-in-place or stay put, there are steps that individuals and families can take—in addition to the preparedness work done by governments and employers—to enhance their personal and family preparedness to withstand disasters of many types with minimal disruption.

The region's PIOs, through R-ESF 15, told the Committee they will be regionally coordinating new snow message, "Get where you need to be before the weather gets bad!" in advance of the 2011-2012 snow season. Regional PIOs have developed pre-scripted messages that tell people what to do in different scenarios, such as snowstorms, and these messages will be made available on the regional V-JIC when incidents occur.

The PIOs will use their own local platforms, venues, and tools as well as the V-JIC to promote the messages to the public. While there is currently no funding for a professionally produced public service announcement and advertisement campaign, individual PIOs can produce their own PSAs and share them through social media, You Tube, and government cable stations.

The American Red Cross recommends that all residents take three key actions to enhance their personal preparedness:

- Get a Kit. Keep essential emergency supplies in an easy-to-carry, well stocked, emergency preparedness kit that you can have close at hand at home, in the office and in the car.
- Make a Plan. Together with your family create a Family Emergency Plan. Discuss what you need to do to be prepared and what you need to do to stay safe in a variety of situations. Review and update your plans at least yearly or as your family situation changes.
- Be Informed. Know what disasters and emergencies may occur in your community, sign up for text/email alerts from local governments, and review your local emergency operations plan and any emergency plans available from your employer.

For more on being prepared visit: http://www.redcrossnca.org/

The Committee notes that members of the public have different needs and that "staying put" may often not be the preferred option. This underscores the need to make real-time information on conditions available to the public, so that people can make more informed decisions.

Recommendation:
The Committee recommends PIOs consider a new public education campaign promoting personal preparedness and "staying put" when applicable given the impracticality of a large-scale evacuation or compressed rush hour in the NCR.

Issue	**Recommendation**	**Status**
Sheltering-in-place is the recommended protective measure in many circumstances, but few employers/employees have such plans and key supplies in place.	PIOs should continue to educate the public on the importance of "staying put" during many incidents, and they should communicate personal emergency preparedness messages before the start of the winter 2011-2012 snow season.	Underway.

Focus Area Three: Improve Regional Coordination

3a. Expand operational support and provide more consistent funding for the Metropolitan Area Transportation Operations Coordination (MATOC) Program, including strengthening its technical support for the Regional Integrated Transportation Information System (RITIS).

Following experiences from the 9/11 attack and other major incidents, transportation officials from Maryland, Virginia, the District of Columbia, and the Washington Metropolitan Area Transit Authority committed to share and coordinate their transportation systems' conditions and information management during regional incidents.

On behalf of the region, the National Capital Region Transportation Planning Board (TPB) partnered with the major transportation agencies to create MATOC, which launched in 2009. RITIS is an automated system that supports MATOC activities by compiling real-time traffic and transit data from agencies around the region, consolidating the data into a common format, and enabling the data to be shared with others. Data provided through RITIS is in daily use by the region's major transportation operations centers.

Since the January 26, 2011 snowstorm, MATOC has received funding commitments at the target level of $1.2 million from the three state departments of transportation, and RITIS received a $2.3 million commitment from the federal Urban Area Security Initiative.

The Committee notes that MATOC is a relatively new organization and does not yet have all of its planned functionality in place. Officials are examining ways to enhance the program's data, such as expanding its geographic coverage and providing a more comprehensive picture of regional bus travel. MATOC is also working to expand the dissemination of its information to a wider audience, including a web site that would make its real-time transportation information accessible to the general public. As mentioned in *section 1.2*, MATOC facilitators have begun sending incident messages through the RICCS system to emergency managers. During times of emergency or planned regional events, MATOC staff provides extended coverage. Its regular coverage is 16-hours a day, five days a week.

Recommendation:
The Committee recommends that transportation officials continue supporting efforts to enhance the information provided by MATOC, widen its distribution to others, including the public, and provide funding for 24/7 operations.

Issue	Recommendation	Status
The Metropolitan Area Transportation Operations Coordination (MATOC) Program is a relatively new organization and does not yet have all of its planned functionality in place.	Transportation officials should continue supporting efforts that will enhance the information provided by MATOC, widen its distribution to others, including the public, and provide funding for 24/7 operations.	Underway.

3b. Improve policies and protocols for the regional snow calls coordinated by COG

Phone conference calls are used in the NCR to inform a wide range of officials and help them coordinate and make decisions before and during incidents and emergencies. Following 9/11 and the development of the RECP, regional calls expanded beyond snow to include other weather events and emergencies through use of the RICCS system.

As mentioned above, the snow calls serve two main purposes. First, it convenes a wide range of regional officials allowing them to share critical information when more than one inch of snow is forecast by the National Weather Service (NWS). The calls include weather updates from NWS, jurisdictional operating statuses, information from transportation officials, and any requests for assistance. The second purpose of the call is to help officials make their local decisions in a regional context. One of the main decisions discussed in the calls relate to government delays or closings or the early dismissal of employees after they have reported to work. In some instances, decisions have been made on the call. They are often made offline afterwards.

The Office of Personnel Management (OPM) uses information provided in the calls and by the NWS, departments of transportation and local public works and utility companies to determine its operating status during periods of inclement weather. Local governments and schools also make their decisions independently. Sharing information on these openings and closings is critical to incident management given the impact they have on surrounding jurisdictions and the road and transit systems.

The Committee finds that the RICCS/snow call is a critical regional coordination tool but believes improvements through new technology can be made to enhance its information sharing capabilities. The large number of people on the calls can make them difficult to manage. Because they are teleconference calls, disruptions often occur. Participants also don't have access to visual information, such as who is on the call, local conditions, weather conditions, and the current or planned operating status of each participant.

Recommendation:
The Committee recommends that COG upgrade calls by adding a web-based platform to improve information sharing among participants and allow more time for Decision-makers to consider actions, outcomes.

Issue	**Recommendation**	**Status**
Improvements to the Regional Incident Communication and Coordination System (RICCS)/ snow conference calls can be made to enhance information sharing and help area officials make better decisions.	COG should upgrade calls by adding a web-based platform to improve information sharing among participants and allow more time for decision-makers to consider actions, outcomes.	Recommended.

3c. Improve the consistency and clarity of employee release policies and practices for both government (local, state, and federal) and the private sector

Local governments share similar closure and dismissal policies for employees according to research conducted by COG for the Committee. Their decisions are based on reports received from weather forecasts (from NWS and commercial weather services), the COG Snow Call, and the transportation system's condition to ensure the safe passage of their employees to and from work. Local governments and COG also look to actions by OPM on closure and dismissal to guide their decisions but do not always act in sync with OPM's decision. They also have similar policies in place to determine the status of emergency personnel versus non-emergency personnel. The internet, emails, and telephone calls are used as means of communication to notify employees when a decision is made to release early. Public announcements are also sent to local media to disseminate the message. Some localities use additional means; for example, the City of Alexandria has staff members designated on each floor in City Hall trained to notify and evacuate personnel in case of an emergency. In smaller agencies, directors pass on the information directly to their employees. Some jurisdictions use recorded messages and auto calls in English and Spanish to communicate information about closures and dismissals.

On January 26, many federal employees did not know about their early release or did not leave right away because the weather initially appeared non-threatening. Their delay in departure contributed to a compressed rush hour just as weather conditions were deteriorating. For the federal government workforce, OPM is working to improve its closure and dismissal procedures. It is considering a "no later than" departure dismissal option, as well as a recommendation to "remain at the workplace" or "shelter-in-place" when appropriate. Some local jurisdictions also believe a web-based application and/or mobile notification procedure would improve the dissemination of closure and employee release information.

State officials told the Committee that schools, OPM, and transportation agencies needed to collaborate more closely and focus more on the capabilities of the region's roadways to handle early releases. They also stressed to the Committee the importance of alternative work schedules and telework to help keep vehicles off the road during inclement weather and emergencies. In addition to employee release decisions, it was noted that school release decisions have a major impact on transportation conditions in the NCR. Officials suggested schools and daycare centers be considered as part of employers' decision-making processes since their statuses often drive the actions of working parents. OPM told the Committee that it recognizes that transportation and law enforcement authorities need as much advanced notice as possible of early releases.

Recommendation:
The Committee recommends that area decision-makers and transportation officials need to work more closely together through the RICCS/snow call. In addition, it recommends that officials should coordinate with employers in their jurisdictions on release policies, and all government, private, and nonprofit employers should review and update closure/dismissal policies, establish and/or expand alternate work schedules and telework before/during emergencies, and use new technologies to communicate with employees.

Issues	Recommendations	Status
Employee release and school decisions and have a major impact on transportation conditions in the NCR.	Area decision-makers and transportation officials need to work more closely together through the RICCS/snow call.	Recommended.
Employee release policies and procedures are in place, but coordination among employers, use of alternate work schedules and telework, and message delivery needs improvement.	Officials should coordinate with employers in their jurisdictions on release policies, and all government, private, and nonprofit employers should review and update closure/dismissal policies, establish and/or expand alternate work schedules and telework before/during emergencies, and use new technologies to communicate with employees.	Underway.

3d. Establish or clarify policies to prevent and/or quickly remove abandoned and disabled vehicles from roadways.

The traffic congestion created by abandoned and disabled vehicles can be major obstacles to emergency, snow removal and utility company vehicles responding to major incidents. Area departments of transportation, the National Park Service, and law enforcement partners have agreements to assist each other and share equipment to clear blocked roads. Even with these agreements in place, on January 26, 2011, there were not enough services or contracts available to handle the high volume of disabled vehicles on several major highways caused by accidents, vehicles running out of gasoline, and drivers abandoning vehicles. The NCR only has so much capacity for vehicle towing/removal on any given day, and this capacity was quickly overwhelmed during the snowstorm. When large commercial tractor trailers become disabled, their size and weight often contribute to significant blockage of lanes and disruption of traffic flow. Many truck operators have noted the lack of truck parking and rest areas as their reason for remaining on the road and risking the possibility of becoming disabled.

The Committee finds that the region must do more to discourage commercial trucks and commuters from traveling on the roadways during major incidents. It also notes the key role of personal preparedness messaging to the public to prevent vehicles from being disabled. Before a storm, area residents need to fill up their vehicles with gasoline and travel with water, food, medications, and key supplies, such as blankets, flashlights, mobile device/cell phone chargers, and battery-powered radios. Public messaging before each snow season should also remind the public to ensure that their tires are in good condition. Real-time information on traffic conditions will help individuals make decisions about staying put.

<u>Recommendation:</u>
The Committee recommends that the transportation officials and PIOs focus on advance planning strategies to discourage trucks and vehicles from being on the roadways during adverse conditions, such as identifying additional areas for large commercial truck parking close to major interstates and expanding messaging efforts beyond its borders through variable message boards

along the interstates in order to give travelers additional route choices. The Committee believes improvements in sharing real-time information to the public and personal preparedness messaging will have the greatest effect on preventing trucks and vehicles from becoming disabled or abandoned during incidents. *See section 2c*. The Committee also recommends that area officials should continue pursuing measures to ensure vehicles are towed as quickly as possible.

Issues	**Recommendations**	**Status**
The region has plans for vehicle removal but needs to do more to discourage commercial trucks and commuters from traveling on the roads during major incidents.	Transportation officials and PIOs should focus on advance planning strategies to discourage trucks and commuters from being on the roadways during adverse conditions.	Recommended.
Abandoned and disabled vehicles are major obstacles to emergency, snow removal and utility company vehicles responding to major incidents.	Area officials should continue pursuing measures to ensure vehicles are towed as quickly as possible.	Underway.

3e. Improve coordination between electric utility providers and emergency management agencies concerning service restoration priorities for critical facilities; and enhance local government and customer communication. Consider the potential for regional sharing and best-practices for tree trimming policies and reliability programs and policies.

Ensuring the reliability and swift restoration of electric power after an outage is vital to everyday life, commerce, and safety in the NCR. The January 26 snowstorm caused a widespread loss of power across the region, which affected a large number of households as well as critical facilities. Loss of power during other events has also disrupted the region and reminds us of the need to increase the resiliency of the electric power system as well as to provide redundancy for critical facilities.

Residents of the NCR are served by several electric utilities (major utilities include PEPCO, Dominion, and BGE) that are all regulated by their respective state/District of Columbia public service commissions. Each utility has distinct programs and policies to restore power and ensure reliability, including implementation of redundant transmission systems, establishment of restoration priorities, agreements with other utilities to provide emergency assistance, and vegetation (tree) maintenance to help prevent downed branches and trees. To prepare for storms and potential outages, each utility relies on its own daily weather assessments to determine storm preparedness levels. Consequently, the utilities' preparations for storms may occur outside of the regional coordination framework that links emergency managers, transportation officials, and public information officers. While utilities have mutual aid agreements with other utilities, they do not have mutual aid agreements with local governments to assist them with their power restoration efforts. Officials told the Committee that agreement and implementation of common best practices among the different utilities, particularly with respect to communication, would enhance public understanding of conditions and responses during major events.

While the electric utilities focus on the reliability of their customers' regular power, the owners and operators of critical facilities, such as hospitals, emergency shelters, EOCs, and water and

wastewater treatment plants, and their public sector partners have focused on the capability to provide back-up power during emergencies. The Critical Infrastructure Regional Programmatic Working Group, part of the region's homeland security structure, as well as regional emergency managers have been identifying critical facility back-up power requirements and are working with jurisdictions to put in place back-up power plans. They are also considering expanding this initiative to include traffic signal systems and computer management facilities for transportation systems. The Committee notes that after the January 26 snowstorm, Montgomery County commenced a study of traffic signals and priority intersections that warrant back-up power and is accelerating the installation of back-up power at major traffic signals.

Recommendations:

The Committee recommends that COG convene electric utilities to share information on their vegetation management and electric power reliability, public communication, and storm preparation and response plans with their local government partners. The Committee recommends that utilities and local governments share storm preparedness assessments and develop more formal emergency coordination procedures to improve coordination before, during, and after incidents. They should also explore mutual aid agreements that would improve coordination and help speed power restoration, which is discussed as a recommendation in *section 4a*. The Committee also recommends that emergency managers continue working with regional stakeholders to identify and provide back-up power to critical facilities, including traffic signals. It recommends that officials in all jurisdictions within the NCR, including the District of Columbia and the states of Maryland and Virginia (which maintain traffic signals on many major roads) promptly conduct an assessment of back-up power at traffic signals—given the criticality of preserving the region's transportation capacity in an emergency—and move expeditiously to install back-up power at all major traffic signals.

Issues	**Recommendations**	**Status**
Regional officials would benefit from a meeting of all the utilities serving the NCR to discuss their work before, during and after storms.	COG should convene electric utilities to discuss vegetation management, reliability improvements, public communication, and storm preparation and response.	Recommended.
Utilities' preparations for storms occur outside of the regional coordination framework.	Utilities and local governments should share storm preparedness assessments and develop more formal emergency coordination procedures.	Recommended.
Many critical facilities in the NCR do not have back-up power, which is the responsibility of their owners/operators and public sector partners, rather than utilities.	Emergency managers should continue working with regional stakeholders to identify and ensure back-up power to critical facilities, and all jurisdictions in the NCR should conduct an assessment of and expeditiously install back-up power for major traffic signals.	Underway. Working Group, Emergency Managers are identifying critical facilities.

Focus Area Four: Strengthen and Focus Decision-Making

4a. Identify alternative regional models of incident management and decision-making used in metropolitan areas in the United States or Europe that will provide greater flexibility or authority for regional decision-making in response to major incidents in the National Capital Region.

The Committee understands the serious concerns about a lack of coordination in decision-making. It acknowledged questions about whether it was feasible or better to have a central decision-making authority. The Committee investigated whether better models existed, and also looked introspectively at current regional processes. The Committee reviewed alternative regional models of incident management and decision-making used in metropolitan areas in the United States or Europe to determine if these models could provide greater flexibility or authority for regional decision-making in the NCR. It also considered what authority would be needed to allow local and state jurisdictions and the federal government to enter into such an agreement or compact. Secondly, the Committee looked at ways in which current NCR processes might be improved in order to achieve a goal of coordinated decision-making among the NCR localities, the states of Virginia and Maryland, the District of Columbia, the federal government and the other entities which provide essential services to the region.

Background

Emergency responses occur in the first instance at the local level, i.e. in the region's counties, cities and towns, because those resources provide the first response. Furthermore, the overall structure and relationship of the national and state governments, all of which are part of the NCR, control the authority which each level of government can exercise authority in an emergency. As has been increasingly demonstrated in recent years, particularly in the NCR, cooperation between the various levels of government has enabled coordinated responses in emergencies because the participating parties have each ascertained the benefits of such teamwork. The question posed to the Committee was whether a unified Decision-maker was feasible or useful, when there was a perception that no one was in charge and the problems experienced in the region on January 26th were in large part due to a lack of coordination.

U.S. Models

There is no central decision-making authority in the United States with respect to emergency incidents. At each level of government, federal, state or local, there are separate powers to address emergency situations, and the powers available sometimes depend on the nature of the specific emergency situation. In the U.S., in recent decades, federal laws and regulations, especially through the Federal Emergency Management Agency (FEMA) component of the Department of Homeland Security (DHS), have provided a framework and guidance for state and local structures to respond to emergencies. Prior to that time and on an on-going basis, the states and the District of Columbia have developed and amended legislation which addresses emergency responses and management of those responses both at the state and local level.

In other metropolitan areas around the country, geographical and jurisdictional structures tend to provide a framework for decision-making by the states and localities within those regions. Unlike the National Capital Region, most of these metropolitan areas are located within a single state. Therefore, the respective state frequently takes the lead in an emergency, if the emergency

extends beyond the boundaries of a local government jurisdiction of that state (i.e. county, city or town/township). Local and state government entities are bound to abide by the applicable laws of the state, in addition to applicable federal law and regulations. Whether or not there is legislation for a particular level of government to respond will be a critical determinant as to who makes an emergency response and how that response is made. In short, an "apples to oranges" analysis occurs in making ready comparisons between the multi-state NCR and other metropolitan areas that are within a single state.

Furthermore, setting aside legislative authority, an entity which has substantial resources to respond to an emergency, or jurisdictions which are able to effectively pool their resources, have demonstrated an ability to provide an emergency response which would not otherwise be possible without their leadership and/or cooperation. In some cases, an exceptionally large local government entity may provide significant leadership, such as New York City.

However, as noted above, even multi-state regions tend to make decisions within state boundaries, with cooperative, sometimes case by case, interstate coordination when necessary. While state emergency management agencies (EMAs) (e.g., California, New Jersey) may establish subdivisions/satellite operations centers (e.g., San Francisco Bay Area, Northern New Jersey) focusing on particular areas of the state, these regional centers are nonetheless a part of state government. A multi-state organization like the Port Authority of New York and New Jersey may prompt *ad hoc* interstate coordination, likely focused on narrowly defined questions relevant to that entity, such as the Port Authority's cross-boundary bridges and tunnels. These EMAs and multi-state organizations are authorized by state legislation, and encouraged by some federal funding; the same is true of the NCR.

The Committee compared the New York-New Jersey-Connecticut region's Transportation Operations Coordinating Committee (TRANSCOM) to MATOC to determine any activities not currently done in the NCR that should be established. Based on its review, the Committee found many similarities between the two organizations. Both are consortiums of transportation agencies, provide regional transportation situational awareness, including notifications and updates on incidents impacting the transportation system, and feature robust technical data sharing systems. Significantly, neither has authority to direct or overrule any member agency or government. One major difference is that TRANSCOM is a mature organization which has been in existence since 1986, whereas having begun operations in fall 2009 MATOC is still relatively new and does not yet have all of its planned functionality in place. TRANSCOM operates on a 24 hour, 7 days a week schedule with 35 staff members, compared to MATOC's current 16 hour, 5 days a week schedule with 3 staff members. MATOC did expand to 24-hour operation during the January 26 storm, however. (*see Appendix D for a more detailed case study*)

International Models

International models have both similarities and differences with the American "FEMA" model. Similar to the U.S., a dominant player tends to rise out of the particular geographical and governmental structure of each country or its metropolitan area such as the Greater London Police and New South Wales combined State Police/Emergency Management Ministry in Sydney. The dominant governmental entity tends to be in the lead (e.g., the national government or a major city). Public outreach structures are similar: information is shared through a variety of means (opt-in alerts to your mobile phone; awareness campaigns; systems communicating through

broadcast television and radio). The most significant difference the Committee observed was that police agencies, especially the police agency of the dominant governmental entity, tend to have the prominent role, and serve the role of voice to the public. This is not generally the situation in the United States.

Of the international models, the Committee studied London, where police are given the lead, and play a key role in creating the message that goes to the public. Unlike other regions, London has a combined multi-jurisdictional Greater London Police, with only a few other police agencies in the region, thereby streamlining coordination. One of the few other police agencies beside the Greater London Police is the City of London Police, which is responsible for a small area of about one square mile in one of the most historic portions of the greater London area. The City of London Police installed and has operated since 2007 a loudspeaker system in public areas that can reach people on the streets with the police warnings or messages. However, use of such loudspeaker systems does not appear to be common nationwide. The United Kingdom does have a national legislative requirement for "warn and inform" alerting systems for the public as a counter-terrorism measure; the technical systems used are generally the same kinds used by agencies in the NCR (e.g. phone text messaging, emails). Additionally, the U.K. has what is called Project Griffin, which is a national system of agencies and outreach to facilitate the public's reporting of suspicious activities and awareness of terrorist threats.

NCR Model

Based on its review, the Committee finds no new, applicable decision-making authority to propose for the NCR. No other metropolitan area in the U.S. has the combination of characteristics that the NCR has in terms of the size, location and nature of the area's governmental entities. Based on this uniqueness, Congress enabled the National Capital Mutual Aid Agreement. Some incident management models, such as those in foreign countries or U.S. regions located solely in one state or with a dominant jurisdiction, are not appropriate for the NCR due to this region's unique multi-jurisdictional nature. After studying New York's model, the Committee notes that TRANSCOM's role is to support regional decision-makers rather than act as a central, decision-making authority.

Recommendation:
The Committee recommends that regional officials modify, reaffirm, and expand upon existing mutual aid plans and utilize the strong framework for regional coordination provided by the RECP. Regional officials should also create mutual aid agreements with additional parties, like some federal agencies and utilities, to further expand the region's emergency response network.

Issue	**Recommendation**	**Status**
Coordinating local decisions in a regional context is challenging in the multi-jurisdictional NCR.	Officials should modify, reaffirm and expand upon existing mutual aid plans and ask other federal agencies and utilities to become a formal part of the region's emergency response network.	Recommended.

4b. Examine the feasibility of decision-making models, especially in a multi-state and multijurisdictional region and what authority would be needed to allow local and state jurisdictions and the federal government to enter into such an agreement or compact.

The Committee examined the feasibility of other decision-making models and what authority would be needed to create a new agreement. Major changes in which one entity or office controls an emergency response would require a combination of changes to federal and state legislation regarding authority and decision-making, and/or legislation aimed in particular at the NCR, like the mutual aid agreement legislation. Most emergency responses start locally and between multiple localities and only rise to state and federal level when the resources are expended at the local level.

The Committee finds the following obstacles to a central decision-making authority:

- Because of the embodiment of federalism in the United States Constitution and different State laws, laws would have to be passed at the federal, state and local levels to create a body which had the power to direct personnel at all of these levels and commit the necessary financial resources; immediate action in this regard is unlikely.
- Such an authority would have to have substantial resources directly or through regional cooperation in order to assess and compel responses to an emergency.
- Without knowing the emergency event, it is hard to visualize how a central decision-making authority would be able to compel action by every possible public service that might be affected.

As noted previously in this report, the NCR has a communication and coordination framework to help area leaders make local decisions in a regional context. With the assistance of long sought after federal legislation in 2004, COG members have developed a growing network of mutual aid and other agreements, not only among COG members but with some federal entities and non-COG jurisdictions. Members have engaged in this cooperation because they perceive the value.

The tendency, to date, has been to take an "all hazards" approach within existing laws and political boundaries, and actively coordinate on an as-needed basis tailored to particular situations. Whether any alternative decision-making model or authority structure would be better will depend on an assessment of that model's ability to address the variety of potential situations that might arise. Such an assessment must be done prior to seeking any additional state or federal legislation because, based on experience with obtaining federal authority for the COG mutual aid agreements, the legislation hurdles are very high, given the delegation of federal and state authority in the U.S. Constitution and the particular interests of each level of government.

The Committee notes these legal barriers to creating a new, central authority, such as one decision-maker. Moreover, it is not clear that a central authority would achieve better results than a robust, well-coordinated multi-jurisdictional approach.

<u>Recommendation:</u>
Based on its review of other regional incident management models, the Committee believes that strengthening the current framework for regional coordination and communication will result in

better local decision-making. For this reason, the Committee does not recommend that officials pursue the creation of a new central, decision-making authority.

Issue	Recommendation	Status
There are significant legal barriers to creating a central decision-making authority, and it is not clear that such an authority would achieve better results than a robust, well-coordinated multi-jurisdictional approach.	Officials should strengthen the current framework for regional coordination and communication, rather than pursue the creation of a new decision-making authority.	Recommended.

Summary of Focus Area Recommendations

In the previous four Focus Areas, the Committee recommends specific actions that will improve the region's future incident management and response through better regional coordination and communication. *(For a table of all Committee recommendations, see Appendix C.)* The Committee calls attention to several improvements underway since the January 26 snowstorm that must be continued, such as the ongoing work by transportation officials to provide their information to emergency managers.

Many of the recommendations require action by the Chief Administrative Officer's Committee and other individual groups—the central participants in incident management and response—to strengthen and enhance their own procedures and programs. Transportation officials are urged to continue efforts to make MATOC's transportation incident information available to the public. The Committee recommends public information officers utilize the new, regional Virtual-Joint Information Center as soon as it is launched and describe, promote, and inform personal emergency preparedness before the winter snow season begins. Emergency managers are urged to conduct regional exercises to test evacuation communication and coordination plans. The Committee recommends officials that make employee release decisions, like OPM, review and update their policies. And all jurisdictions in the NCR are urged to conduct assessments of and expeditiously install back-up power for their major traffic signals.

Some recommendations—providing regional situational awareness and improving coordination and communication through the RICCS call—require participation by multiple agencies and jurisdictions, and the Committee believes they should be addressed through coordinated, regional action. The Committee recommends the creation of a formal program with highly trained and experienced staff and oversight to enhance regional coordination and communication and help area decision-makers as they manage and respond to a range of incidents. It proposes such a program in the following section.

Regional Incident Coordination Program Proposal

In the current framework described in this report, regional coordination and communication occur when a local official recognizes that an incident, event, or weather and traffic conditions will have an impact beyond its agency or jurisdictional borders. Often, this framework functions well. For example, a local Chief Administrative Officer is informed of current conditions, understands the ripple effects that could affect the region, and initiates a RICCS call to coordinate with other CAOs, transportation officials, OPM and others. However, in some cases, regional coordination does not occur or is not sufficient because officials are focused on local concerns or they don't have adequate information to see the big, regional picture. To provide these officials with some needed, new functionality that will help them make better, more-informed decisions, the Committee proposes a **Regional Incident Coordination (RIC) Program**.

The Committee notes in the report that no local agency has staff providing situational awareness of the region as a whole. The RIC Program would be appropriately staffed—its staff would have access to and knowledge of the region's many programs, such as RICCS, WebEOC, MATOC, Virtual JIC, as well as other information sources. RIC Program staff would be responsible for monitoring and aggregating this information, which would provide the NCR with something it has lacked—it would be building regional situational awareness.

Monitoring information, by itself, will not guarantee that regional coordination and communication occurs. It will be essential for RIC Program staff to distribute and redistribute relevant information and put together a picture of the regional situation that can be shared with the appropriate area officials. When officials initiate a RICCS call, they will have access to this up-to-date, regional situation.

The RIC Program would serve a proactive, behind-the-scenes role. If officials don't make the first move to coordinate, RIC Program staff will initiate a call. When observing little or no incident information being made available to the public, RIC Program staff will contact the affected agencies to inform them of the regional situation and encourage them to release information as soon as possible. Staff would also be a key participant in all future regional trainings and scenario-based exercises.

The Committee reiterates that the RIC Program would be focused on ensuring regional coordination and communication among area decision-makers. It would not usurp the authority or duplicate the current functions of any local, state, or federal agency, and it would not impact mutual aid agreements among jurisdictions. It would, however, provide better information for officials to make operational decisions.

The RIC Program will help area officials make better, more-informed decisions and improve incident management and response by designating staff to provide the following new, regional coordination functions:

- Monitoring the region with existing tools and programs, such as RICCS, WebEOC, MATOC, Virtual JIC
- Analyzing the information to create a picture of the regional situation
- Sharing this picture with appropriate officials
- Initiating RICCS calls
- Contacting agencies to help expedite the release of information to the public
- Participating in scenario-based regional exercises

The Committee recommends that a local, state, or federal agency detail or re-purpose current staff in order to begin providing its key functions as soon as possible. On an interim basis, DCHSEMA has offered to staff and host the RIC Program, so it can begin providing the Program's functions starting in December 2011 at its 24/7 EOC. D.C. and its regional partners can then formalize an agreement on how to jointly fund the RIC Program and determine appropriate staffing. To ensure the RIC Program staff retains regional responsibilities and focus, the Committee believes it should not be staffed by any one government agency or rotated among agencies.

To ensure the success of this new RIC Program and the implementation of its other recommendations, the Committee sees value in continued engagement by its own multi-sector group of members. Groups like the CAOs, emergency managers, police and fire chiefs, transportation officials, OPM, PIOs, and utilities are the central participants in incident management and response. They work together in their subgroups regularly. But other than their participation on this Committee, they do not work jointly across their subgroups on a consistent basis.

The Committee recommends establishing a **RIC Oversight Group** comprised of members of the current Committee to review the RIC Program's progress and focus on the advance planning recommendations (scenario-based regional exercises, personal preparedness campaigns, updating of procedures and programs by different subgroups) necessary to improve the region's ability to manage and respond to incidents. The full Steering Committee on Incident Management and Response can meet periodically to monitor progress as well.

Issues	**Recommendations**	**Status**
Area officials need new functionality to ensure regional coordination and communication and help them make better, more-informed decisions.	Officials should create a Regional Incident Coordination (RIC) Program with appropriate staffing responsible for monitoring the region, distributing/redistributing relevant information, and sharing a picture of the regional situation with decision-makers.	Recommended.
Area officials do not work jointly across their subgroups on a consistent basis to improve incident management and response.	Officials should create a RIC Oversight Group to regularly review the RIC Program's progress and focus on the implementation of the Committee's advance planning recommendations.	Recommended.

Conclusion: Strategic Actions to Improve Incident Management and Response

The Committee concludes this report by showing how its key recommendations fit together to improve management of and response to future incidents. It presents these high-level, strategic actions in three categories: advance planning, communication/coordination shortly before an incident, and management and response during an incident.

The Committee notes the region has performed well in preparing and responding to planned events and many forecasted storms, but it must do better during unexpected events, such as storms that become stronger than forecast, earthquakes, and potential terrorist attacks. The Committee believes, if implemented, its recommendations related to advance planning, as well as the functions provided by RIC Program staff, will greatly benefit the people of the NCR during these unexpected events.

Advance planning is the first part of effective incident management. RIC Program staff will use current regional programs like RICCS, WebEOC, MATOC, Virtual JIC, as well as other information sources to monitor the region and begin providing regional situational awareness. RIC Program staff will also participate in regional training and scenario-based exercises. COG will make improvements to the RICCS call so it will be a better forum for sharing information. PIOs will continue community and media outreach on personal preparedness, such as a regional "Get where you need to be before the weather gets bad!" messaging in advance of the 2011-2012 winter storm season. Area officials will update and improve standard operating procedures, such as employee release policies. Current mutual aid and operational agreements should be amended and expanded on, while utilities and other agencies should be asked to become a formal part of the region's emergency response network. Utilities will work to improve reliability. Jurisdictions and stakeholders will identify and provide back-up power to critical facilities (hospitals, shelters, traffic signals.)

	Key Actions
Advance Planning	• Use of current regional programs like RICCS, WebEOC, MATOC, Virtual JIC by RIC Program staff to monitor region and begin providing regional situational awareness • Participation in regional training and scenario-based exercises • Improvement of RICCS call • Continued public outreach on personal preparedness, especially in advance of the winter storm season • Update of procedures (employee release, information sharing) • Expansion of mutual aid agreements • Electric power reliability improvements and back-up power ensured

The time period shortly before an event is the next stage of incident management. RIC Program staff will distribute/redistribute relevant information and assemble and share an up-to-date picture of the regional situation for the appropriate area officials. Local officials or RIC staff will ensure

coordination takes place by initiating a RICCS call. New RICCS call technology will better share information on conditions and the possible options for the status of federal employees. PIOs will use a wide array of tools to communicate directly with the public as well as through the media, private, civic and other groups. EOCs will be activated if determined necessary by local officials. Departments of transportation and utilities will mobilize to prepare for the event.

	Key Actions
Coordination/ Communication Before Event	• Upgraded RICCS calls shares real-time regional picture with decision-makers • Local decisions made with awareness of regional situation • Communication with public on weather forecasts, consequences of storm/event • Stand-up of EOCs, if needed • Mobilization of DOTs and utilities

During an event, the RIC Program staff will continue providing regional situational awareness, sharing information with appropriate officials, and coordinating additional RICCS calls with decision-makers as needed. PIOs will make real-time, factual information available to the public through the V-JIC and the many outreach tools they have developed. Emergency managers and transportation officials will communicate with each other. DOTs will be able to better plow and clear roads because fewer vehicles will be disabled due to messaging before the event. Improved messaging by utilities will alert customers of power outages and estimated time for restoration. Utilities will begin power restoration on facilities that are the region's highest priorities for restoration. New and expanded mutual aid agreements will allow local and state governments, federal agencies, and utilities to provide assistance to one another.

	Key Actions
Management/Response During Event	• Steady stream of accurate, up-to-date information to public • Regional real-time situational awareness and additional coordination with decision-makers through RICCS call as needed. • Messaging between emergency managers/ transportation officials • Plowing/road clearance/ towing • Electric power restoration, utilities communicating with customers

Emergency planning since September 11, 2001 has greatly strengthened the region's incident management and response as evidenced during a wide range of events, from the Beltway Snipers to Hurricane Irene. However, the January 26 snowstorm and other incidents have shown serious challenges persist. The region must take several proactive, tangible steps to better communicate and coordinate, especially during unplanned events. The Committee believes that its comprehensive and readily-implementable recommendations to strengthen and enhance current programs and procedures and provide new regional functions through a RIC Program will advance previous work in the National Capital Region and reassure the public that its leaders can work together effectively in times of crisis.

Recent Incidents: Examples of Regional Coordination/Communication

January 26, 2011 – Snowstorm

How did regional communication and coordination work?

- A RICCS/snow call was conducted at 10:00 a.m.
- At 11:40 a.m. OPM authorized a two hour early release of federal employees.
- Local officials communicated with public through media, social media, alerts, and other means about the early release and weather conditions.
- Many employees did not leave work early as authorized.
- When snow began and many people departed about the same time, roadways became almost impassable.
- Transportation officials and MATOC were aware of the worsening road conditions but there was no protocol in place requiring the sharing of information with emergency managers and others.
- No additional RICCS call for regional coordination.

How would regional communication and coordination have worked based on the IMR Committee recommendations?

- MATOC is now sharing information directly with emergency managers and others.
- RIC Program staff would have seen the MATOC information, shared it with appropriate officials, and initiated additional RICCS calls.
- Through the RICCS calls, transportation officials would have informed decision-makers that many roads were expected to be impassable. Decision-makers could have then agreed to coordinated messages to the public to stay off the roadways or take Metro if possible.
- Information would have been transmitted through the V-JIC web site and other PIO outreach tools.
- MATOC would have been sharing real-time incident information with the public through a web site.
- More traffic signals would be equipped with back up power and would have been operational.
- Messaging would have discouraged large trucks from being on the roadways.

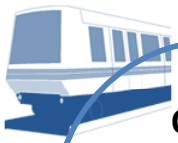
August 23, 2011 - Earthquake

How did regional communication and coordination work?

- The region experienced an earthquake at 1:51 p.m.
- Several local jurisdictions began sending text alerts to the public within 15 minutes of the earthquake.
- A RICCS call occurred at 3:15 p.m. with CAOs, emergency managers, and others sharing initial assessments that indicated minimal damage.
- Many commuters departed work early resulting in traffic delays of several hours. In addition, Metrorail was operating at 15 mph while their system was being evaluated by engineers.
- During a RICCS call at 9:15 p.m., CAOs confirmed minimal damage and OPM/General Services Administration (GSA) indicated that they had damage to some federal buildings.
- At approximately 2:30 a.m., OPM/GSA determined the status of federal employees for the following day and this information was posted on the OPM web site, provided to the media, and distributed via RICCS.

How would regional communication and coordination have worked based on the IMR Committee recommendations?

- Advance planning activities and scenario-based exercises would have provided information for the public on appropriate responses to earthquakes or other significant, unexpected events.
- RIC Program staff would have gathered and provided to decision-makers timely information on the earthquake, the condition of the transportation systems, and employee release statuses.
- Timely information would have been posted for public use on the V-JIC and MATOC web sites as well as internally on WebEOC, and updated frequently as new information became available.



October 11, 2011 – Person Struck by Metro train

How did regional communication and coordination work?

- Incident occurred at 4:50 p.m.
- WMATA sent the first of 44 twitter messages at 4:57 p.m. The first alert from WMATA was sent at 5:14 p.m.
- RICCS message was sent out at 6:11 p.m.

How would regional communication and coordination have worked based on the IMR Committee recommendations?

- WMATA's early alerts and messages to its customers would have been recognized by RIC Program staff.
- RIC Program staff would have shared all relevant information from WMATA as well as the implications for the regional transportation system with appropriate officials.
- Timely information would have been posted for public use on the V-JIC and MATOC web sites as well as internally on WebEOC.

Acronyms and Abbreviations

COG	Metropolitan Washington Council of Governments
DCHSEMA	District of Columbia Homeland Security and Emergency Management Agency
DHS	U.S. Department of Homeland Security
DOTs	Departments of Transportation
EMAs	Emergency Management Agencies
EOC	Emergency Operations Center
EPC	National Capital Region Emergency Preparedness Council
FEMA	Federal Emergency Management Agency
JFRQ-NCR	Joint Forces Headquarters – National Capital Region
IMR	Steering Committee on Incident Management and Response
MATOC	Metropolitan Area Transportation Operations Coordination Program
NCR	National Capital Region
NIMS	National Incident Management System
NPS	National Park Service
NWS	National Weather Service
OPM	U.S. Office of Personnel Management
PIOs	Public Information Officers
RECP	Regional Emergency Coordination Plan
RESF	Regional Emergency Support Function
RIC	Regional Incident Coordination Program (proposed)
RICCS	Regional Incident Communication and Coordination System
RITIS	Regional Integrated Transportation Information System
SPG	Senior Policy Group
TRANSCOM	Transportation Operations Coordinating Committee (NY-NJ-CT Region)
TPB	National Capital Region Transportation Planning Board
V-JIC	Virtual Joint Information Center

Appendix A: Steering Committee on Incident Management and Response Members

Purpose

The COG Board will be asked to adopt Resolution R19-2011, approving an action plan, steering committee and schedule for identifying and seeking improvements to regional incident management arising from the January 26 snow/ice event and the implications for other events in the National Capital Region.

Background

Public officials, business leaders and area residents have voiced concern with preparedness and response to the January 26 snow/ice storm that left thousands without electric power and triggered hours-long commutes for many drivers. COG has invited several of its policy boards and committees to provide input on this issue, including the Chief Administrative Officers Committee (CAOs), the National Capital Region Transportation Planning Board (TPB), and the National Capital Region Emergency Preparedness Council (EPC), among others. COG staff has also compiled initial information on local and regional actions associated with the January 26 snow event.

January 26 Observations

- Weather forecasts were largely accurate. Weather changed quickly from rain to sleet and then snow during the afternoon and evening rush hour, causing rapid icing of roadways, making travel very difficult and impeding ice/snow treatment and clearing.

- The Federal government authorized the early release of its workforce (two hours earlier than normal departure). Similar actions by local and state governments and private sector were inconsistent or not clearly communicated. Reportedly, some federal workers were not informed of the early release. Others did not leave the office early because the weather initially appeared non-threatening until later in the afternoon.

- COG held a regional snow conference call on January 26 at 10:00 a.m. Response vehicles, snow plows and salt trucks were pre-positioned. Early road treatments were washed away by rain and road crews quickly found it difficult to access and move on highways and roads due to poor weather conditions and disabled/abandoned vehicles.

- Metro rail provided reliable transit service throughout the January 26 snow/ice event, although single-tracking caused some minor delays. Metro bus operations encountered hazardous road conditions and many buses became stuck or were unable to complete their routes.

- Area public information officers used traditional and social media and alert notification systems to advise residents of the Federal government early release and deteriorating conditions on area roads. Conditions worsened quickly and there was no easy way for drivers to learn about real-time travel conditions or the need to shelter in place until conditions improve. Radio stations played a key role in keeping individuals informed during the weather event.

Frequent Questions

Wasn't January 26 just an exceptionally difficult and very challenging storm and the region couldn't have done much different?

This storm was challenging in that it hit hardest in the afternoon/evening commute when rain washed away road treatment chemicals and then froze. The forecast of accumulation of up to five inches of snow may not have initially triggered the concern that the storm subsequently justified. Lots of actions or decisions, some by individual motorists and others by local, state or federal government agencies, contributed to the situation on January 26. Solutions for the future will require review and action by lots of stakeholders. There are lessons that can be learned that can point to improvements for the future.

Doesn't the experience on January 26 point to the region's shortcomings in an evacuation in the event of a terrorist attack or incident?

January 26 wasn't an emergency evacuation. It was an evening rush hour commute, for some begun earlier than normal, during extremely adverse weather conditions, on a transportation network that was stressed to the max. The region has very congested roadways in normal traffic and sunny weather. Local governments in the National Capital Region have developed evacuation and shelter-in-place plans. Emergency managers acknowledge that very few circumstances would warrant a large, regional evacuation to outlying areas. Most scenarios involve either shelter-in-place or evacuation of a specific sector or neighborhood. Also, had January 26 been an emergency or incident necessitating an evacuation, it would have been accompanied by local emergency declarations, followed by possible state and/or federal declarations, and many resources, personnel and assets would have been immediately put into place.

Why can't the region decide to put some agency or organization in charge of making decisions for all local and state government actions during events or emergencies?

Creating a single organization that can direct action across two states and the District of Columbia and among multiple local governments with their own sovereign authority is not impossible, but it would be difficult and more achievable actions need to be quickly pursued while that option is examined. The COG region is more than 3,000 square miles and many workers commute from points even further out. The large size of the region often means that there is adverse weather in one portion of the region, while conditions are much less severe in another. Existing laws and statues clearly define who has the authority to take actions on behalf of a local or state government. In the absence of new laws or statutes, a local or state government cannot easily transfer or delegate that authority.

What is COG's role in assisting the region with assessing the January 26 response?

COG is a voluntary association of 250 local, state and federal elected officials in the National Capital Region. COG has well-defined responsibilities for planning in key areas like transportation and air quality, and significant capacity to aid in regional planning and coordination in a number of other areas, including emergency management and homeland security. The COG Board of Directors has directed staff to solicit the input on the January 26

snow/ice event and possible improvements for the future from several of its policy and advisory committees, including the Chief Administrative Officers Committee, the National Capital Region Transportation Planning Board, and the National Capital Region Emergency Preparedness Council, among others. These groups have many years of experience and knowledge and include representatives of local and state governments that are operational or have response authorities. The COG Board is seeking to engage these regional groups and stakeholders and ask that they examine and respond to recommendations outlined in this action plan. The COG Board will appoint an ad hoc steering committee to oversee and monitor this effort, culminating in an October 2011 report identifying actions taken to improve incident management in advance of the 2011 – 2012 snow season.

This seems like it is all about transportation. What about all of the people who lost electric power on January 26 and recently in other storms?

Thousands of homes and businesses lost electric power on January 26 and during several other storms in recent years. Loss of electric power to traffic signals compounded an already difficult traffic situation on January 26. Regulation of utilities, including electric power companies is principally the responsibility of state government, and the District of Columbia, Maryland and Virginia each has a regulatory oversight body that monitors performance and sets the rates that utilities can charge for electric power to residences and businesses. States are now considering new legislation that would set performance standards and penalize utilities that fail to meet standards, among other measures. Staff recommends that COG invite utility regulatory representatives from the District of Columbia, State of Maryland and Commonwealth of Virginia to provide information on current performance standards as well as any new proposals or recommendations as part of this action plan.

Action Plan

There are four focus areas identified in the proposed action plan. These focus areas and the proposed tasks were suggested by participants in recent briefings held by the Chief Administrative Officers Committee, the National Capital Region Transportation Planning Board and the National Capital Region Emergency Preparedness Council.

The steering committee will refine focus areas and tasks at its organizational meeting. Steering committee recommendations on implementation will be directed to local, state and/or federal agencies, other regionally-serving organizations such as MATOC, and COG.

Consistent with the proposed schedule, the steering committee will advise the COG Board of implementation progress to date in July 2011 and implementation outcomes in November 2011 prior to the 2011 – 2012 snow season.

Focus Area One: Improve Real-Time Information or Situational Awareness Among Local, State and Federal Government Agencies with Operational Authority or Responsibilities

a) Strengthen the use of Web Emergency Operations Center (WebEOC) to provide real-time situational awareness on regional events or incidents, such as severe winter weather.

b) Strengthen emergency management and transportation agency protocols and training to ensure that key staff monitor and provide input on the regional impact of local events, incidents or weather and traffic conditions.

Focus Area Two: Improve Real-Time Information to the Media and the Public

a) Establish a Virtual Joint Information Center (V-JIC). The V-JIC would support the rapid release of real-time information to the media and the public during a storm or other event or incident that develops rapidly.

b) Improve the timeliness, clarity and mode of information delivery to the public concerning adverse winter weather and its impact on transportation infrastructure.

c) Improve the readiness and capability of the public to shelter-in-place, if required or recommended by public officials in response to an emergency or regional incident.

Focus Area Three: Improve Regional Coordination

a) Expand operational support and provide more consistent funding for the Metropolitan Area Transportation Operations Coordination (MATOC) Program, including strengthening its technical support for the Regional Integrated Transportation Information System (RITIS).

b) Improve policies and protocols for the regional snow calls coordinated by COG.

c) Improve the consistency and clarity of employee release policies and practices for both government (local, state, and federal) and the private sector.

d) Establish or clarify policies to prevent and/or quickly remove abandoned and disabled vehicles from roadways.

e) Improve coordination between electric utility providers and emergency management agencies concerning service restoration priorities for critical facilities; and enhance local government and customer communication. Consider the potential for regional sharing and best-practices for tree trimming policies and reliability programs and policies.

Focus Area Four: Strengthen and Focus Decision-Making

a) Identify alternative regional models of incident management and decision-making used in metropolitan areas in the United States or Europe that will provide greater flexibility or authority for regional decision-making in response to major incidents in the National Capital Region.

b) Examine the feasibility of decision-making models, especially in a multi-state and multi-jurisdictional region and what authority would be needed to allow local and state jurisdictions and the federal government to enter into such an agreement or compact.

Resources

COG has already begun to compile and organize information and research pertinent to the proposed action plan. Key information includes:

- Chronology of Regional Incident Communications and Coordination System (RICCS) notifications sent before, during and immediately after the January 26 event.
- OPM federal employee release plan (1996) that recommended release based on employee residence.
- OPM closure/telework policy (2011) developed following the 2009-2010 winter storms.
- Major highway system performance data from January 26.
- COG and local, state and federal government after-action review reports and recommendations following the 2009-2010 winter storms and the January 26 snow/ice event.

Ad Hoc Steering Committee

Staff recommends that the COG Board authorize creation of an ad hoc steering committee for a period of eight months to oversee and monitor progress in addressing the four focus areas and associated tasks.

The steering committee will look to existing policy boards and committees and technical committees to support the proposed areas of focus, with the steering committee performing a coordinating and oversight role. The steering committee will be chaired by Councilmember Phil Andrews, who chairs the National Capital Region Emergency Preparedness Council (EPC). Other members will include representatives from the following committees or groups, which will be called on to provide policy or technical support to action plan implementation:

- Representatives, District of Columbia, Maryland and Virginia Departments of Transportation and WMATA
- Representative, Metropolitan Area Transportation Operations Coordination (MATOC) Program
- Representative, Chief Administrative Officers Committee
- Representative, Office of the City Administrator, District of Columbia
- Representative, Senior Policy Group (Mayor, District of Columbia and Governors of Maryland and Virginia Homeland Security Advisors)
- Representative, Emergency Managers Committee
- Representative, Public Information Officers Committee
- Representative, Regional Attorneys' Committee
- Representative, U.S. Office of Personnel Management
- Representative, Greater Washington Board of Trade or business community
- Representative, not-for-profit community
- Representatives, Electric utility companies

Schedule

- COG Board adoption of Resolution R-19-2011, approving an action plan, steering committee and schedule, March 9, 2011
- Organizational meeting of Steering Committee, April 2011
- First "check-in" meeting of Steering Committee, June 2011

- Steering Committee briefing for COG Board, July 2011
- Second "check-in" meeting of Steering Committee, August 2011
- Steering Committee develops draft report on action/implementation; draft report circulated for review and comment, September 2011
- Steering Committee adoption of final report, October 2011
- Steering Committee briefs COG Board on report and actions/implementation, November 2011

Senior Staff Team

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- Sharon Pandak, General Counsel
- Stuart Freudberg, Director, Dept. of Environmental Programs
- Ron Kirby, Director, Dept. of Transportation Planning
- David McMillion, Director, Dept. of Public Safety and Health
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Contributions from The Mitre Corporation (*Mitre report referenced in Appendix E*)

- Robert. P. Crouch, Jr., Homeland Security Systems Engineering and Development Institute (HD SEDI)
- Anna Gradishar, P.E., Multi-Discipline Systems Engineer, SR. Preparedness & Infrastructure Resilience, HS SEDI

Appendix B: Steering Committee on Incident Management and Response Members

Hon. Phil Andrews[1]
Montgomery County Council
Chair, NCR Emergency Preparedness Council

Tony Alexiou
Deputy Director & Divisions Chief for Operations
Montgomery County
Regional Emergency Managers

Steward Beckham, Director
Office of National Region Capital Coordination
DHS/FEMA
Federal Government

Jim Dinegar, President & CEO
Greater Washington Board of Trade
Business Community

Tim Firestine, Chief Administrative Officer
Offices of the County Executive
Montgomery County
Chief Administrative Officers

Merni Fitzgerald, Director of Public Affairs
Fairfax County
Regional Public Information Officers

Bob Gore, Supervisor
Regional Operations
Dominion Virginia Power
Electric Utilities

Warren Graves, Chief of Staff
District of Columbia
D.C. City Administrator's Office

Dean Hunter, Deputy Director
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Office of Personnel Management
Federal Government

Tom Jacobs, Director
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University of Maryland
MATOC

Natalie Jones-Best
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District Department of Transportation
State DOTs

Stephen MacIsaac, County Attorney
Arlington County
Attorneys Committee

Linda Mathes, CEO
American Red Cross of the National Capital Region
Nonprofit Organizations

Reggie McCauley
Director of Systems Operations
Pepco Holdings, Inc.
Electric Utilities

Jack Requa, Assistant General Manager
Department of Bus Services
Washington Metropolitan Area Transit Authority
WMATA

Hari Sripathi, Regional Operations Director
VDOT-Northern Region Operations
State DOTs

Frank Tiburzi, Principal Engineer
Restoration Services & Operations Support
BG&E
Electric Utilities

Millicent West, Director
District of Columbia HSEMA
Senior Policy Group

Michael Zezeski, Director
Office of CHART & ITS Development
Maryland State Highway Administration
State DOTs

[1] Chair of Committee
* Group represented is italicized.

Appendix C: Issues and Recommendations

Overall Issues	Overall Recommendations	Status
Area officials need new functionality to ensure regional coordination and communication and help them make better, more-informed decisions.	Officials should create a Regional Incident Coordination (RIC) Program with appropriate staffing responsible for monitoring the region, distributing/redistributing relevant information, and sharing a picture of the regional situation with decision-makers.	Recommended.
Area officials do not work jointly across their subgroups on a consistent basis to improve incident management and response.	Officials should create a RIC Oversight Group to regularly review the RIC Program's progress and focus on the implementation of the Committee's advance planning recommendations.	Recommended.

Focus Area Tasks	Issues	Recommendations	Status
Focus Area One: Improve Real-Time Information or Situational Awareness Among Officials			
1a. Strengthen use of Web Emergency Operations Center (WebEOC)	While localities have emergency operations centers and incident management tools, the National Capital Region (NCR) lacks situational awareness for region as a whole.	Emergency managers should work together to designate staff to provide regional situational awareness that could be shared among agencies throughout the region.	Recommended. (requires coordinated action, see 'overall recommendation' above)
	The NCR version of WebEOC does not share information with Virginia's WebEOC and vice-versa.	Emergency managers should work together to identify a medium for sharing information between various WebEOC versions.	Recommended.
1b. Strengthen Emergency Management Agencies (EMAs) and transportation monitoring protocols	Existing tools were underutilized.	Transportation officials should continue to work with emergency managers to integrate transportation data with WebEOC and other programs.	Underway.
	Communication between transportation officials and emergency managers needs continued testing to help manage future incidents, including evacuations.	Emergency managers should conduct regional exercises to test evacuation communication and coordination plans.	Recommended.

Focus Area Tasks	Issues	Recommendations	Status
Focus Area Two: Improve Real-Time Information to the Media and the Public			
2a. Establish regional Virtual Joint Information Center (V-JIC)	There is no central web site where regional Public Information Officers (PIOs) can coordinate during emergencies and share real-time information with other officials, area residents and the media.	PIOs should use and promote the regional V-JIC established by Fairfax County on behalf of the region.	Underway. V-JIC should become operational in Fall 2011.
2b. Improve information to the public on winter transportation impacts	The public needs timely, accurate messages before and during incidents.	PIOs should continue media outreach and developing new tools to communicate directly with the public.	Underway.
2c. Improve public readiness to shelter-in-place	Sheltering-in-place is the recommended protective measure in many circumstances, but few employers/employees have such plans and key supplies in place.	PIOs should continue to educate the public on the importance of "staying put" during many incidents, and they should communicate personal emergency preparedness messages before the start of the winter 2011-2012 snow season.	Underway.
Focus Area Three: Improve Regional Coordination			
3a. Support and funding for Metropolitan Area Transportation Operations Coordination (MATOC) Program & Regional Integrated Transportation Information System (RITIS)	MATOC is a relatively new organization and does not yet have all of its planned functionality in place.	Transportation officials should continue supporting efforts that will enhance the information provided by MATOC, widen its distribution to others, including the public, and provide funding for 24/7 operations.	Underway.
3b. Improve COG snow call policies and protocols	Improvements to the Regional Incident Communication and Coordination System (RICCS)/ snow conference calls can be made to enhance information sharing and help area officials make better decisions.	COG should upgrade calls by adding a web-based platform to improve information sharing among participants and allow more time for decision-makers to consider actions, outcomes.	Recommended.

Focus Area Tasks	Issues	Recommendations	Status
3c. Improve consistency and clarity of public and private employee release policies	Employee release and school decisions have a major impact on transportation conditions in the NCR.	Area decision-makers and transportation officials need to work more closely together through the RICCS/snow call.	Recommended.
	Employee release policies and procedures are in place, but coordination among employers, use of alternate work schedules and telework, and message delivery needs improvement.	Officials should coordinate with employers in their jurisdictions on release policies, and all government, private, and nonprofit employers should review and update closure/dismissal policies, establish and/or expand alternate work schedules and telework before/during emergencies, and use new technologies to communicate with employees.	Underway.
3d. Establish or clarify abandoned/disabled vehicle removal policies	The region has plans for vehicle removal but needs to do more to discourage commercial trucks and commuters from traveling on the roads during major incidents.	Transportation officials and PIOs should focus on advance planning strategies to discourage trucks and commuters from being on the roadways during adverse conditions.	Recommended.
	Abandoned and disabled vehicles are major obstacles to emergency, snow removal and utility company vehicles responding to major incidents.	Area officials should continue pursuing measures to ensure vehicles are towed as quickly as possible.	Underway.
3e. Improve coordination between EMAs and electric utilities concerning service restoration for critical facilities, improve customer communication, and consider best practices for tree-trimming	Regional officials would benefit from a meeting of all the utilities serving the NCR to discuss their work before, during and after storms.	COG should convene electric utilities to discuss vegetation management, reliability improvements, public communication, and storm preparation and response.	Recommended.
	Utilities' preparations for storms occur outside of the regional coordination framework.	Utilities and local governments should share storm preparedness assessments and develop more formal emergency coordination procedures.	Recommended.
	Many critical facilities in the NCR do not have back-up power, which is the responsibility of their owners/operators and public sector partners, rather than utilities.	Emergency managers should continue working with regional stakeholders to identify and ensure back-up power to critical facilities, and all jurisdictions in the NCR should conduct an assessment of and expeditiously install back-up power for major traffic signals.	Underway. Working Group, Emergency Managers are identifying critical facilities.

Focus Area Tasks	Issues	Recommendations	Status
Focus Area Four: Decision-making			
4a. Identify alternative regional models of incident management and decision-making in the U.S. or Europe that provide greater flexibility or authority	Coordinating local decisions in a regional context is challenging in the multi-jurisdictional NCR.	Officials should modify, reaffirm and expand upon existing mutual aid plans and ask other federal agencies and utilities to become a formal part of the region's emergency response network.	Recommended.
4b. Examine feasibility of and authority needed for entering into a federal-state-local agreement or compact	There are significant legal barriers to creating a central decision-making authority, and it is not clear that such an authority would achieve better results than a robust, well-coordinated multi-jurisdictional approach.	Officials should strengthen the current framework for regional coordination and communication, rather than pursue the creation of a new decision-making authority.	Recommended.

Appendix D: Case Study on TRANSCOM (Transportation Operations Coordinating Committee NY-NJ-CT Region)

TRANSCOM, established in 1986, provides regional transportation situational awareness among public agencies the New York metropolitan area, and to the public indirectly through data systems that are shared with the "511" traveler information systems of the states of New York and New Jersey (Connecticut will also be starting a statewide 511 system soon that will use TRANSCOM data). The transportation agencies of the Washington metropolitan area launched the Metropolitan Area Transportation Operations Coordination (MATOC) Program in 2009, modeled in large part on New York's TRANSCOM, but tailored to the particular needs and situation of the NCR.

A great number of similarities were observed between TRANSCOM and MATOC. Both are independent entities that are consortiums of transportation agencies. Both have the primary duty of providing regional transportation situational awareness, including notifications and updates on incidents impacting the transportation system. Both feature robust technical data sharing systems (TRANSCOM's Open Reach, and MATOC's Regional Integrated Transportation Information System (RITIS)) that provide real-time transportation information to a number of public agency users, both transportation agencies and non-transportation agencies including public safety agencies. Both have operations center staff that coordinate directly with a number of transportation management and operations centers in their region, to help coordinate transportation interagency actions in light of a particular situation. And, significantly, neither has been granted nor sought authority to direct or overrule any member agency or government. Actions are limited to transportation information sharing and recommendations; TRANSCOM describes its effectiveness not in terms of authority, but as a "function of relationships and quality data and systems."

A few differences were also observed between TRANSCOM and MATOC. The New York metropolitan area is significantly larger and more complex in its transportation infrastructure than is the National Capital Region, and thus TRANSCOM has an appropriately larger scale. TRANSCOM, now 25 years old, is more established in its role and systems; three-year-old MATOC is still in the process of being fine-tuned. Additionally, TRANSCOM has a long-established role in construction scheduling coordination that does not have a MATOC analog.

Other lessons learned from TRANSCOM, especially in discussions with TRANSCOM staff, were that the goals and activities of TRANSCOM are quite similar to the goals and activities of MATOC. TRANSCOM's transportation situational awareness information is eagerly used by both transportation agencies and public safety agencies; similarly, use of MATOC information by both transportation and non-transportation agencies has been growing in the National Capital Region.

TRANSCOM brings in extra staff during snow storms or other events where this may be necessary due to the sheer number of transportation incidents to be handled. In such situations, they may put out hourly regional summary transportation system updates during major storms; MATOC has also done so. However, TRANSCOM does not take on special or different duties during such events or during emergencies other than its usual transportation situational awareness mission. TRANSCOM staff has taken no role in New York regional or subregional discussions on governmental and school closures, personnel decisions, early dismissal, and the like. TRANSCOM staff has, however participated in their member agencies' after-action reviews of

incidents, as well as in members' tabletop exercises, but has not taken a leadership role in such activities.

Comparative Roles and Activities of TRANSCOM and MATOC

Description	TRANSCOM	MATOC
	Transportation Operations Coordination Committee	Metropolitan Area Transportation Operations Coordination Program
Membership	Coalition of 16 transportation & public safety agencies in the NY-NJ-CT metro region; others active in information exchange	DDOT, MDOT, VDOT, WMATA; TPB (ex-officio); others active in information exchange
Structure	Independent non-profit corporation	Program hosted by the U-MD Center for Advanced Transportation Technology on behalf of the partner agencies
Governance documents	Bylaws; Multiyear agreements renewed every 5 years	MOU, bylaws, SOPs, funding agreements, annual work plans
Funding	Membership fee structure (~$6M/yr); other grants ad hoc	Fed transportation aid & match provided by DOTs (~$1M/yr); UASI & other grants ad hoc
Committee structure	Board; Technical & Operating Committee; ad hoc subcommittees	Steering committee & tech subcommittees (2)
Staffing	35 total staff for all activities Minimum 2 per shift	3 full time staff dedicated to the program; U-MD provides other shared staff time for RITIS
Hours of operation	24/7/365	5-day, 16 hour coverage w/ limited additional on-call / special event capabilities
Facilities	Dedicated regional facility in Jersey City, New Jersey; "desks" available at other agencies' operations centers	Single office co-located w/ CapWIN Program in Greenbelt, Maryland; "desks" available at other agencies' operations centers
Technical support systems	"Open Reach" System	Regional Integrated Transportation Information System (RITIS)
Deployment or management of field assets	Limited - roadside infrastructure for a few agencies (signs, detectors)	None
Day-to-day activities	Monitor regional traffic / transit & make needed notifications, address ripple effects	Monitor regional traffic / transit & make needed notifications, address ripple effects
Pre-planned events	Construction schedule coordination; awareness of planned events; event information in Open Reach system as available	Currently, maintaining situational awareness; further activities under discussion / consideration

Description	TRANSCOM	MATOC
	Transportation Operations Coordination Committee	Metropolitan Area Transportation Operations Coordination Program
Special duties during emergencies	No special duties; maintain core transportation situational awareness; may increase staffing levels	No special duties; maintain core transportation situational awareness; may expand hours of coverage
"Snow Call" role	None (no such calls are held for the metropolitan area)	Monitor COG Snow Calls
Communications/ notifications to the public	"Wholesale" role; data feeds to 3rd party developers; no direct-to-public information	"Wholesale" role coming soon; other roles under consideration
After Action Reviews (AARs)	Upon request by DOTs, 5 – 10 times per year; does not typically lead AARs	After-action discussions during committee meetings, but no involvement in other agencies' AARs to date
Table-Top Exercises	Participates upon request in DOTs' exercises occasionally; does not typically lead exercises	Used during MATOC formation

Appendix E: Conclusions, Emergency Event Decision-Making Protocols: A Study of Multi-Jurisdictional Decision-Making During Extreme Weather Events; September 2011; By the MITRE Corporation

(The MITRE report supported the IMR Committee's decision-making recommendation that officials should strengthen the current framework for regional coordination and communication, rather than pursue the creation of a new decision-making authority.)

With two states and the District of Columbia, numerous localities, major Federal presence, and private sector stakeholders, the National Capital Region is a uniquely complex jurisdictional environment for collaborative decision making. While there is probably no "typical" NCR resident, it is accurate that many residents cross jurisdictions on a daily basis to work, to study, and for shopping, recreation, and entertainment. Economically and culturally they are "NCR Residents."

The NCR is not only jurisdictionally complex. For example, a weather event impacting one side of the Potomac may not impact the other. North of the District of Columbia may not experience a weather event the same as south of DC.

These complexities present challenges to emergency planners and Decision-makers that are not replicated elsewhere. In the course of this review, MITRE interviewed emergency management officials from Boston, Chicago, New York City, Philadelphia, Pittsburgh, and San Francisco. While no other complex region surveyed in this inquiry has a weather "czar," the decision making environment in several is dominated by the existence of a strong mayoral structure. The political complexity of the NCR does not afford such a hierarchical structure, but requires one that is necessarily collaborative across jurisdictional and functional boundaries.

Under these circumstances, the NCR has developed a very mature set of processes and use of technology to provide all key stakeholders a voice and to inform decision making. NCR systems such as MATOC and the use of tools such as WebEOC are cited by other regions as models they seek to implement. Yet, in stressed circumstances, as the snow and ice event of January 26 demonstrates, there is recognition by the impacted citizens, emergency planners and Decision-makers, and political leaders and the media that current protocols and systems are not sufficient.

The yearning for a "silver bullet," or a simple way to "slice thru this Gordian Knot," is understandable and a natural response in this shared recognition that the region should, must, and can do better in managing such events. It is an environment in which a daily commute under best circumstances is difficult, in which commuter demand overwhelms capacity on a normal daily basis and, even if the resources could be found to address those transportation needs, capacity is unlikely to ever catch up with demand. Our inquiry of other complex urban regions reveals no silver bullet and no sharp, swift sword to cut Gordian Knots. Indeed, even where decision making is more centralized weather events occur which Decision-makers and citizens alike conclude should have been better managed (e.g., NYC December 26, 2010 storm; Chicago February 2, 2011 storm).

Both MITRE's survey of a select group of NCR emergency management Decision-makers and its interviews of emergency management Decision-makers in Boston, Chicago, New York City, Philadelphia, Pittsburgh, and San Francisco lead to the conclusion that the NCR has effective and

useful protocols and tools at hand. These need to be strengthened through expansion and maturation. MATOC and GIS-based systems such as VIPER contribute to increased situational awareness and information sharing and can inform modeling and simulation as applied to the already robust training and exercise environment overseen by COG.

While accepting the reality of the NCR's complexity and challenges, improving and building upon current regional capacity by continuing to expand and develop existing tools and engaging in a continuously reiterative process of examination, review, adaptation, training and exercising is the realistic next step in improving situational awareness and decision making during regional emergency events. The implementation of a Systems Engineering strategy would further institutionalize a process of review, improvement, and best practice development to the benefit of the National Capital Region while creating a model with potential value to other complex regions in the Nation.

Appendix F: Selected Communications Technologies Used by Emergency Operations Centers in the NCR - adapted from "National Capital Region Situational Awareness: A White Paper; March 2011; By Roy Shrout, CEM, Deputy Coordinator, Fairfax County Office of Emergency Management

(This report illustrates the wide array of capabilities among agencies in the NCR that provide situational awareness. It also underscores the IMR Committee's finding that while localities have emergency operations centers and incident management tools, the NCR lacks situational awareness for the region as a whole. This is why the Committee proposes a RIC Program—to draw these capabilities together to monitor the region, distribute/redistribute relevant information, initiate RICCS calls, and share a picture of the regional situation with decision-makers.)

Situational awareness is about getting the most accurate information on what is going on in a quick and efficient manner to those who need it. In almost every case, this can only be accomplished by utilizing technology. From the commander who has "boots on the ground" providing an update to the communications center to the 911 call taker who receives the initial telephone call, all of those key positions require technology to make these lines of communications happen. The NCR has invested a significant amount of money in a variety of programs that allow immediate and effective communications. These technologies include satellite phone systems, video conferencing, EAS broadcast capabilities, incident management programs (WebEOC, CAPWIN), along with countless others. In order to understand how to achieve that ideal situational awareness operating picture we need to look at some of the capabilities within the NCR and leverage them both from the standpoint of who has them and how best to utilize them to gain awareness. Some of these systems are pure technology while others try and capture existing systems and bring them into a useful solution. This list is not complete; however, the attempt has been made to incorporate as many of the regional initiatives possible. This list includes mapping/GIS solutions, incident management programs, emergency notification systems, communications, regional bio-monitoring, transportation integration, intelligence sharing systems and integration concepts.

NAWAS – National Alert Warning Area System

The National Warning System (NAWAS) is an automated telephone system used to convey warnings to United States-based federal, state and local governments. The original mission of NAWAS was to warn of an imminent enemy attack or an actual accidental missile launch upon the United States. NAWAS still supports this mission but the emphasis is on natural and technological disasters. NAWAS is operated and fully funded by the Federal Emergency Management Agency (FEMA). Today, the system consists of what is essentially a 2200+ telephone party line. The phone instruments are designed to provide protection for lightning strikes so they may be used during storms. The interconnecting lines provide some protection by avoiding local telephone switches. This ensures they are available even when the local system is down or overloaded. NAWAS has major terminals at each state Emergency Operations Center and State Emergency Management Facility. Other secondary terminals include local emergency management agencies, National Weather Service field offices and Public-safety answering points (PSAPs). NAWAS is used to disseminate warning information concerning natural and technological disasters to approximately 2200 warning points throughout the continental United States, Alaska, Hawaii and the Virgin Islands. This information includes acts of terrorism including Weapons of Mass Destruction (WMD) after aircraft incidents/accidents, earthquakes, floods, hurricanes, nuclear incidents/accidents, severe thunderstorms, tornadoes, tsunamis and winter storms/blizzards. NAWAS allows issuance of warnings to all stations nationwide or to selected stations as dictated by the situation.

WAWAS – Washington Area Warning Alert System
Launched in the 1960s, WAWAS is the Washington area segment of the NAWAS systems. It is managed by FEMA and connects more than 119 operations centers within the National Capital Region. DC HSEMA serves at the control point for the WAWAS circuit. Every PSAP, EOC and most federal and military installations in the region are connected to this automated telephone system. It allows rapid interaction between operations centers on a secure phone service. WAWAS is still used heavily for NCR communications.

RICCS – Regional Incident Communication and Coordination System
RICCS Roam Secure Alert Network is an emergency communication system used by governments, emergency management agencies and first responders to send emergency alerts, notifications and updates to your cell phone, pager, BlackBerry, PDA and/or e-mail account. This system has been deployed in the NCR since 2002 and is used by every local government on a daily basis. It is the backbone of regional communication for area officials. The system is owned and managed by the Metropolitan Washington Council of Governments and operated by DC HSEMA as the RICCS Primary Host Center. VDEM and MEMA are active backup host centers.

WebEOC – Web Enabled Emergency Management Communications System
WebEOC has been in place in the NCR since 2006. It is the original web-enabled crisis information management system and provides secure real-time information sharing to help managers make sound decisions quickly. Introduced in 1998, WebEOC *Professional* is a web-enabled, user-friendly, and locally-configurable incident and event management system. With access to the Internet, authorized emergency managers and first responders, regardless of location, can enter and view incident information in WebEOC status boards. WebEOC *Professional* enables users to manage multiple incidents and daily events, assign and track missions and tasks, provide situation reports, manage resources, and prepare FEMA, ICS, and IAP reports. The NCR utilizes WebEOC as the primary incident management program. DCHSEMA, VDEM, MEMA and NoVA all utilize the program both in their EOC environment and for situational awareness. Several NCR boards have been deployed which allow localities the ability to publish information up to a regional view. The integration that now exists allows multiple federal, state, local and regional partners the opportunity to see what's going on in the region.

EAS – Emergency Alert System
The EAS is a national public warning system that requires broadcasters, cable television systems, wireless cable systems, satellite digital audio radio service (SDARS) providers, and direct broadcast satellite (DBS) providers to provide the communications capability to the President to address the American public during a national emergency. The system also may be used by state and local authorities to deliver important emergency information, such as AMBER alerts and weather information targeted to specific areas. EAS messages automatically take over the airwaves of the broadcast system. The system was started in 1963 as the (Emergency Broadcast System) EBS as part of the civil defense system. EAS is the outgrowth of EBS and was renamed in 1997

EMNet – Emergency Management Network
Since 2003, EMNet has been deployed throughout the NCR and is a secure satellite-based messaging system designed for the emergency management community, broadcasters, county officials, local government agencies and private industry. The system can transmit vital

information to individual stations, or hundreds of stations at once using controlled circles. It is fully encrypted to prevent network misuse. The system can rebroadcast EAS messages directly from a computer and is capable of forwarding EMNet messages to pagers, cell phones and email addresses. The same software can run EAS and EMNet messaging at the EOC. While EAS messages automatically take over the airwaves, EMNet messages are provided to broadcasters with the option of disseminating the content. It allows rapid messaging to the media without raising an incident to the level of an airwaves takeover.

NCR Video/Audio Conference Systems
Established in 2008, this program connects all of the 19 local government NCR Emergency Operations Centers with video and audio conferencing capabilities. The VTC system allows regional emergency managers and senior officials and their staff to communicate in real time during significant or pre-planned events. These systems are used daily for regional meetings and discussions.

NCR Satellite Phone Program
A UASI funded regional project that connects all of the local government 19 NCR Emergency Operations Centers with both a pure satellite and land based communications system. The functionality also provides for 15 talk groups that allow specific agencies to communicate in a secure manner. One common operational talk group in place allows all 19 EOC's to communicate simultaneously with each other. This system also is utilized by other federal, state and military organizations.

RITIS – Regional integrated Transportation Information System
The Regional Integrated Transportation Information System (RITIS) is an automated data sharing, dissemination, and archiving system. RITIS improves transportation efficiency, safety, and security through the integration of existing transit and transportation management data in Virginia, Maryland, and Washington D.C. The emphasis of RITIS is on data fusion and standardization, and their relationship to data collection, regional transportation systems management, regional traveler information dissemination, and system evaluation. RITIS automatically fuses, translates, and standardizes data obtained from multiple agencies in the region in order to provide an enhanced overall view of the region's transportation network. Participating agencies are able to view regional traffic information and use it to improve their operations and emergency preparedness. RITIS uses regional standardized data to enable traveler information, including web sites, paging systems, and 511. The two main RITIS functions include—the real-time fusion and exchange of regional transportation data; and data archiving.

RITIS Information Flow Chart

800MHZ Radio Systems
One of the benefits in the NCR is the robust communications capability. All of the NCR has the same 800MHZ trunked radio system. Although the region is going through re-banding and the process for P-25 compliance and conversion to dual band 700MHZ, the region today can talk to each other. The region also hosts several radio caches which will allow outside agencies, federal and military organizations to communicate with the other agencies. The radio cache's include portable radios, batteries and a mobile antennae system. The NCR has been recognized as the top rated region for interoperability.

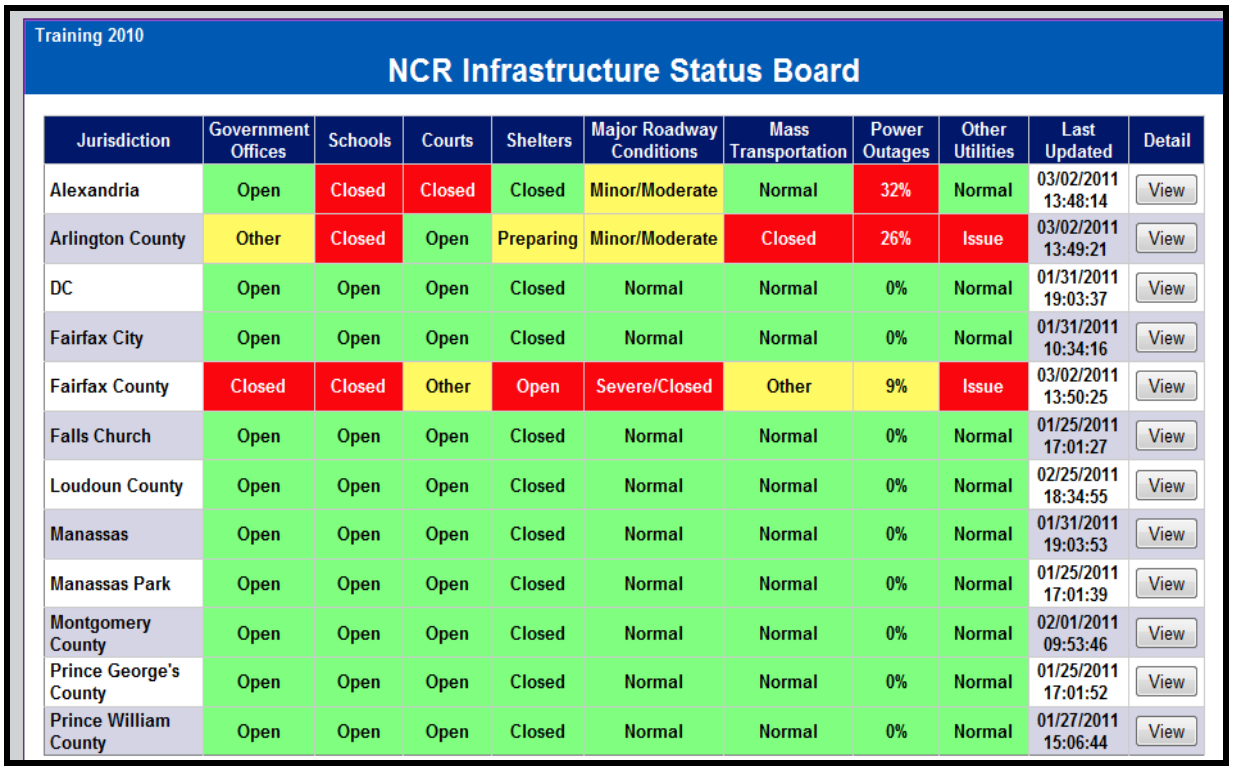
CAPWIN – Capital Wireless Information Network
CapWIN serves a growing family of users and agencies. Currently the CapWIN Membership includes over 4,500 users drawn from 80 local, state, and federal agencies operating in Maryland, Virginia, and the District of Columbia. They represent law enforcement, transportation, fire/EMS, and emergency services. The Capital Wireless Information Net (CapWIN) is a program located in the University of Maryland's Center for Advanced Transportation Technology (CATT) that was created by, and continues to operate under the direction of a coalition of law enforcement, fire/EMS, and transportation agencies in Maryland, Virginia, and the District of Columbia to advance data communications across agency, jurisdiction, government, and discipline boundaries. This multi-disciplinary, multi-jurisdictional effort focuses on first responders in the field and the unique requirements of wireless users. Today, CapWIN has over 5000 registered users from more than 80 public safety, transportation, and emergency services agencies drawn from all levels of government--including regional authorities--operating in the three state jurisdictions.

CAD 2CAD
One of the regional initiatives is to capitalize on the Data Exchange Hub and I-Net infrastructure. The first phase was to allow three localities with disparate CAD systems to share data (City of Alexandria, Arlington and Fairfax County). These three systems are now connected and allow for the dispatch of fire and EMS equipment from the respective PSAP. The program is still in its pilot phase as additional funding is being secured and other localities are looking at participating. The three CAD systems that have been integrated include SunGard, Tiburon and Intergraph.

LinX – Law Enforcement Information Exchange
In an effort to reduce the level of crime and mitigate the risk of terrorism, the NCR has established a regional information sharing system called NCR-LinX, which links local, state and federal law enforcement data together to provide investigators with easy to use search and analytical capabilities essential to identifying, apprehending and prosecuting criminal suspects. This aggregated law enforcement data is integrated on a near real time basis. The system links people and incidents across jurisdictions, and provides capabilities to display previously unknown relationships in graphical link analysis charts. NCR LinX data is available to law enforcement personnel supporting the four area fusion centers supporting the NCR. NCR LinX, originally centered in the Washington Metropolitan area, now extends well beyond the defined National Capital region. Through the cooperative efforts of the Naval Criminal Investigative Service (NCIS) and the MWCOG Police Chiefs committee, funding provided by the Department of the Navy and UASI grants, has been used to incorporate agencies within and around the National Capital Region, in and around the Baltimore Region, and connect with the Hampton Roads, Virginia Beach and Richmond areas. There are currently over 116 member agencies in the NCR LinX sharing data. With the efforts here in the NCR, this program now is connected to the other

eight LinX regions around the county. This provides all LinX users immediate access to law enforcement information from agencies participating in those respective LinX programs.

WebEOC – Hospital
WebEOC for Hospitals is a crisis information management system designed to manage and communicate health information and hospital resources in real time. The new software is based on more than ten years of experience in providing crisis information management solutions to hospitals (including Boston University Medical Center, Kaiser Permanente Medical Center, UC Davis Medical Center and University of Pittsburgh Medical Center), federal agencies, state/county/local governments and corporations across the nation and the world. WebEOC for Hospitals gives hospital administrators and emergency managers real-time situational awareness of available resources and it's compliant with the Hospital Incident Command System (HICS) IV standards. WebEOC for hospitals is deployed at all Virginia hospitals and is used along with other data management programs.


Training 2010

NCR Infrastructure Status Board

Jurisdiction	Government Offices	Schools	Courts	Shelters	Major Roadway Conditions	Mass Transportation	Power Outages	Other Utilities	Last Updated	Detail
Alexandria	Open	Closed	Closed	Closed	Minor/Moderate	Normal	32%	Normal	03/02/2011 13:48:14	View
Arlington County	Other	Closed	Open	Preparing	Minor/Moderate	Closed	26%	Issue	03/02/2011 13:49:21	View
DC	Open	Open	Open	Closed	Normal	Normal	0%	Normal	01/31/2011 19:03:37	View
Fairfax City	Open	Open	Open	Closed	Normal	Normal	0%	Normal	01/31/2011 10:34:16	View
Fairfax County	Closed	Closed	Other	Open	Severe/Closed	Other	9%	Issue	03/02/2011 13:50:25	View
Falls Church	Open	Open	Open	Closed	Normal	Normal	0%	Normal	01/25/2011 17:01:27	View
Loudoun County	Open	Open	Open	Closed	Normal	Normal	0%	Normal	02/25/2011 18:34:55	View
Manassas	Open	Open	Open	Closed	Normal	Normal	0%	Normal	01/31/2011 19:03:53	View
Manassas Park	Open	Open	Open	Closed	Normal	Normal	0%	Normal	01/25/2011 17:01:39	View
Montgomery County	Open	Open	Open	Closed	Normal	Normal	0%	Normal	02/01/2011 09:53:46	View
Prince George's County	Open	Open	Open	Closed	Normal	Normal	0%	Normal	01/25/2011 17:01:52	View
Prince William County	Open	Open	Open	Closed	Normal	Normal	0%	Normal	01/27/2011 15:06:44	View

NCR WebEOC Infrastructure Board

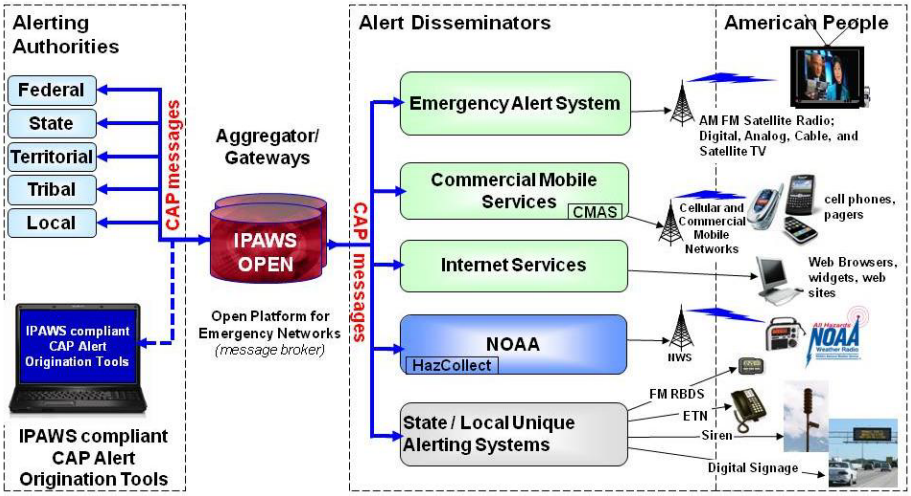
ESSENCE
ESSENCE technology is being used to form a regional collaborative disease-surveillance network. The network consists of four major nodes, one at each state and District of Columbia health department and a regional node for performing analysis across jurisdictional boundaries. The architecture permits fully identifiable information to be captured and archived at health departments for patients within their jurisdiction. The regional node negotiates the acquisition and distribution of data (e.g., military health-care data and OTC medication sales) across the region.

The architecture also permits de-identification, aggregation, and sharing of information among the region's health departments while increasing the sensitivity for detection of abnormal health events occurring across jurisdictional boundaries. Multiple versions of ESSENCE have been developed, each for different purposes. ESSENCE I provides worldwide surveillance for military personnel and their dependents at all military treatment facilities by using ambulatory records generated for TriCare, the military's health-care system. ESSENCE II is a regional system that supports advanced surveillance within the National Capital Region (NCR) test bed. The system is being developed by JHU/APL in collaboration with the Maryland Department of Health and Mental Hygiene, the District of Columbia Department of Health, and the Virginia Department of Health. Other versions of ESSENCE have been developed for military facilities and deployed forces. This description focuses on ESSENCE II only.

ESSENCE II is a test-bed system for 1) evaluating nontraditional health-care indicators, 2) developing and evaluating analytic techniques for early identification of abnormal disease patterns, and 3) providing an integrated view of NCR military and civilian health department data (*3*). The system captures data on military ambulatory visits and prescription medications and merges them with civilian emergency department (ED) chief-complaint records, school-absenteeism data, over-the-counter (OTC) and prescription medication sales, civilian ambulatory visits, veterinary health records, and health department requests for influenza testing. All data are de-identified by their providers before being transferred to ESSENCE II, where they are archived, analyzed, and provided through secure Internet sites to local health departments and to hospitals that have data-sharing agreements with their health departments.

SSADM – Secure Situational Awareness Data Menu
A concept that was introduced in 2010 that looks at developing a menu of secure, standards based data feed from which End Users can pick the data streams of interest for display in their chosen viewer. The NCR has several key components that could be utilized in this concept already in place. The NCRNet which is the fiber based network interconnecting existing locality networks (I-Net), and the Data Exchange Hub, consisting of data exchange standards and a middleware infrastructure. The idea would be to capture CAD data and GIS layers as the primary data streams as requested by first responders. Then provide the data into one of the regional viewers such as WebEOC and thus allow the consumer the opportunity to see real time data.

IPAWS – Integrated Public Alert and Warning System
Executive Order 13407 established as policy the requirement for the United States to have an effective, reliable, integrated, flexible, and comprehensive system to alert and warn the American people. FEMA is designated within the Department of Homeland Security to implement the policy of the United States for a public alert and warning system as outlined in Executive Order 13407 and has established a program office to implement IPAWS. FEMA and its federal partners, the Federal Communications Commission, the National Oceanic and Atmospheric Administration's National Weather Service and the DHS Science and Technology Directorate are working together to transform the national alert and warning system to enable rapid dissemination of authenticated alert information over as many communications channels as possible. The system will be tested in New York and Washington before a roll out to the nation in 2012.



IPAWS Alerting Schematic

CMAS – Commercial Mobile Alert System

In response to the Warning, Alert, and Response Network (WARN) Act passed by Congress in 2006, the FCC has established the CMAS to allow wireless service providers choosing to participate to send emergency alerts as text messages to their subscribers. During 2007 and 2008 the FCC proposed and then adopted the network structure, technical requirements, and operating procedures for the CMAS. While much work has been done, the exact date that CMAS will become operational depends on many factors, and is still probably at least two years in the future.

The CMAS network will allow the Federal Emergency Management Agency (FEMA), to accept and aggregate alerts from the President of the United States, the National Weather Service (NWS), and state and local emergency operations centers, and then send the alerts over a secure interface to participating wireless providers. These participating wireless providers will then distribute the alerts to their customers. Within ten months of FEMA making the government's design specifications for this secure interface available, wireless service providers that voluntarily choose to participate in CMAS must begin development and testing of systems that will enable them to receive alerts from FEMA and distribute them to their customers.

The FCC is also requiring public TV stations to act as an extra distribution system for CMAS alerts. Within 18 months of receiving funding from the Department of Commerce, all public TV stations must install equipment and technologies at their digital TV transmitters to enable them to receive CMAS alerts from FEMA and transmit them to participating wireless service providers.

Participating wireless service providers must be able to target alerts to individual counties, and ensure that alerts reach customers roaming outside a provider's service area. Participating providers must also transmit alerts with a dedicated vibration cadence and audio attention signal to ensure the alerts reach wireless customers with hearing or vision disabilities. Emergency alerts will not interrupt calls in progress. While the FCC currently is requiring only text-based alerts with a maximum displayable message size of 90 characters, CMAS may include audio and video alerts in the future. Similarly, the FCC currently is requiring that alerts be provided only in English, but is assessing whether foreign language alerts can also be provided.

For purposes of CMAS, emergency alerts will be classified in one of three categories:

- **Presidential Alerts** – Alerts for all Americans related to national emergencies, such as terrorist attacks, that will preempt any other pending alerts;
- **Imminent Threat Alerts** – Alerts with information on emergencies, such as hurricanes or tornadoes, where life or property is at risk, the event is likely to occur, and some responsive action should be taken; and
- **Child Abduction Emergency/AMBER Alerts** – Alerts related to missing or endangered children due to an abduction or runaway situation.

Virtual USA

The Department of Homeland Security launched Virtual USA in December, 2009. The program was developed in collaboration with the emergency response community and state and local governments across the nation. Virtual USA links disparate tools and technologies in order to share the location and status of critical assets and information to include power and water lines, flood detectors, emergency vehicle and ambulance locations, weather and traffic conditions, evacuation routes, and school and government building floor plans.

- Integrates existing frameworks and investments: It utilizes current information sharing-platforms to permit new and existing technologies to seamlessly exchange information with one another.
- Draws on local input: Virtual USA is based on the needs of local and state first responders to manage data access within their own jurisdictions and to share information with relevant jurisdictions across the nation.
- Employs a comprehensive approach: Virtual USA is not limited to information exchanges between two agencies: instead, the initiative fosters dynamic information sharing among all federal, state, local and tribal practitioners.
- Provides a flexible, accessible platform: Because Virtual USA uses open data standards and open sources software, more states and localities can join this information exchange project.
- Involves everyone: Virtual USA allows Americans in their own communities to contribute information in real time to support the efforts of police, fire and emergency management officials during disasters and recovery efforts.

The program was developed by DHS Science and Technology Directorate (S&T), Virtual USA currently operates as a pilot in eight states: Alabama, Georgia, Florida, Louisiana, Mississippi, Texas, Virginia and Tennessee.

Virtual USA Situation Screen – Regional Information

ISAVE - Integrated Situational Awareness Visualization Environment

The Office of National Capital Region Coordination Center (NCRC) was established to coordinate homeland security activities relating to the National Capital Region (NCR). In support of the NCRC mission, the ISAVE system provides situational awareness through a touch assisted visualization system environment. ISAVE provides a dynamic User-Defined Operating Picture (UDOP) for the NCRC by combining best of breed GIS technology and the net-centric aggregation of a wide variety of disparate federal, state, local, regional, and private sector data sources. ISAVE consumes Open Geospatial Consortium (OGC) GIS data forms and combines them with real-time data to develop a comprehensive UDOP.

Foundational Capabilities

- Data aggregation approach built upon open standard interfaces and customized data protocols.
- Integrated static, streaming, and dynamic geo-spatial data including web-services, live sensor feeds, and extensible to datasets that can be presented in a standard interface.
- GIS platform agnostic, technology neutral, and compatible with other systems.

Technical Features

- Integrated Homeland Security Information Program (HSIP) Gold Datasets.
- Ability to create separate integrated COP Layer (ICL) for multiple situation monitoring.
- Automated reporting capability.
- On-screen White boarding capability.
- Base canvas map is vender agnostic and user defined.
- Service Oriented Architecture (SOA); Interfaces with services using a wide variety of methods including REST, SOAP, XMPP, and RSS.
- Collaboration: Provides framework to communicate between other TACCS modules.

Six Dynamic Components

- Alerts and Notifications: Harmonizes and geospatially tags over 19 regional voice and data feeds including the Washington Area Warning and Alert System (WAWAS), Regional Incident Communication and Coordination System (RICCS), and Capital Wireless Information Net (CapWIN).
- Critical Information Management Systems (CIMS): Aggregates legacy and emergency information platforms such as Homeland Security Information Network (HSIN), and WebEOC.
- Consequence Analysis: Provides regional-specific plume, evacuation, and infrastructure interdependency modeling and simulation.
- Real Time Data Feeds: Integrates live video, image, and traffic sensor feeds from disparate sources such as Trafficland, NEXRAD, and Regional Incident Information System (RITIS).
- Collaborative Communications: Enables real time collaboration with CapWIN and supports video conferencing and UDOP sharing via FEMA Connect.
- Asset Tracking: Supports the display of live GPS and RWF data tracking.

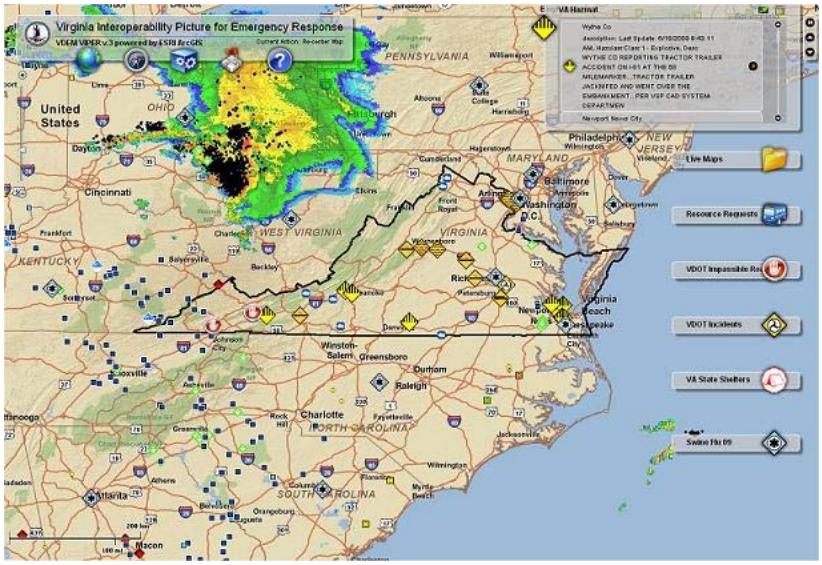
VIPER – Virginia interoperability Picture for Emergency Response

VIPER is a crisis management data aggregation project of the Virginia Department of Emergency Management (VDEM). With VIPER, Virginia pioneered production of detailed visual imagery which assimilates multiple data streams to assist emergency responders, Decision-makers and citizens. VIPER uses a Web interface to acquire and integrate real-time data from numerous

sources with geospatial information. It provides a timely, accurate and user defined operating picture, which allows Decision-makers to perform "real time" analysis of previously disparate information. VIPER facilitates situational awareness at all levels of government and improves response times for first responders. Citizen awareness also has been facilitated through social media tools, including Twitter and an iPhone application. VIPER is an open-source application, constantly running analytical tools and operational planning overlays to provide comprehensive situational awareness. Additionally, it provides the ability to utilize previously static planning efforts in a dynamic environment. VIPER data can be updated instantly from the field or command center. Requirements are user-defined and role-based. In addition, the system has been designed so that only information that reaches a certain critical level will automatically notify the user of its existence. This characteristic further leverages the value of the system to sort multiple streams of real-time data, recognize actionable information for Decision-makers and enable more rapid response in an emergency. The VIPER concept originated in Virginia and now is used 24x7x365 in the Virginia. Emergency Operations Center (VEOC). VDEM can anticipate major weather events, monitor systems, brief leaders, and alert Decision-makers and citizens to developing situations. The Web-based system is available to emergency partners at local, state and federal levels. VIPER first launched in August 2008 and has since been fielded successfully in support of several important statewide response operations. It is being lauded nationwide for its ability to provide previously unattainable situational awareness. Virginia now is assisting other states and governmental entities with development of situational awareness pictures. Using existing Commonwealth assets, including hardware, software and manpower, VIPER was developed with no costs beyond staff time.

Examples of this include:

- Displaying the location of hospitals around a rapidly escalating traffic incident.
- Showing the location of schools around a hazardous materials event.
- Showing the infrastructure affected by a forecasted storm surge.

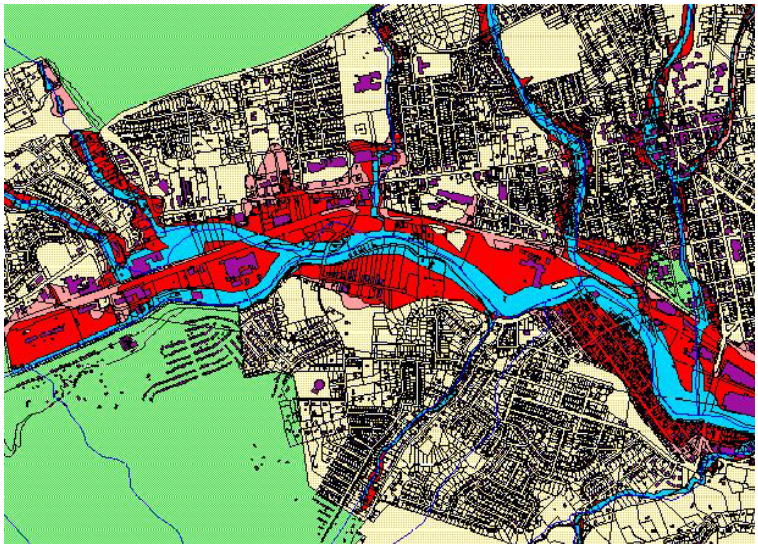


VIPER Screen Display

EMMA – Emergency Management Mapping Application
EMMA is a secure, content- and tool-rich Web-based mapping application that enables first responders and emergency managers to share a common operating picture by locating incidents on a map, describing affected areas, and viewing relevant real-time information. Along with operational and situational status, the information is presented and shared using WebEOC, a Critical Information Management System (CIMS) that MEMA has made available to emergency managers and other response partners at all levels of Maryland government. Information within WebEOC can also be shared to users of other CIMS software (e.g., outside of Maryland) via an interoperable backbone for accessibility to the Homeland Security Information Network (HSIN). EMMA© transforms disparate information into a common operating picture using a language that everyone can understand—maps—by accessing geospatial data via MEGIN. Built upon ESRI software and established standards, EMMA© displays relevant information before, during, and after incidents and emergencies. EMMA© provides basic and advanced tools for map visualization, location analysis, and report generation via a standard Web browser, such as Internet Explorer. MEGIN serves as the secure clearinghouse that organizes and protects the data. Together, this suite of emergency management tools supports collaborative decision-making across disparate emergency management communities.

IFLOWS – Integrated Flood Observing and Warning System
The Federal Integrated Flood Observing and Warning System (IFLOWS) is a cooperative venture between the National Weather Service (NWS) and seven flood-prone Appalachian states (KY, NC, NY, PA, TN, VA, and WV). IFLOWS purpose is to reduce the annual loss of life from flash floods, reduce property damage, and reduce disruption of commerce and human activities. To accomplish these goals IFLOWS uses communications technology and software to collect real time sensor data from remote locations, and disseminate the data among government organizations responsible for public safety.
In 1977, the National Weather Service (NWS) hired a consulting engineer to examine the problem of flash flooding. Flooding experiences in the late 1970's made it obvious that many local officials were unprepared to deal effectively with flash floods, even given advance notice of their occurrence. The contractor's recommendations recognized the need for greater community involvement and better coordination among agencies. The contractor recommended that NWS create a National Flash Flood Program, which would:

- Encourage communities to recognize and treat their flash flood danger areas
- Encourage States to support and assist local jurisdictions in development of flash flood warning systems and preparedness plans, and encourage research in these areas
- Take steps to ensure that other Federal agencies' programs complement National Weather Service (NWS) efforts to encourage the use of flood warning systems and preparedness planning
- Examine the possibility of altering existing institutional, financial, and legal arrangements to encourage use of flood warning systems and preparedness plans



IFLOWS Overlay Map

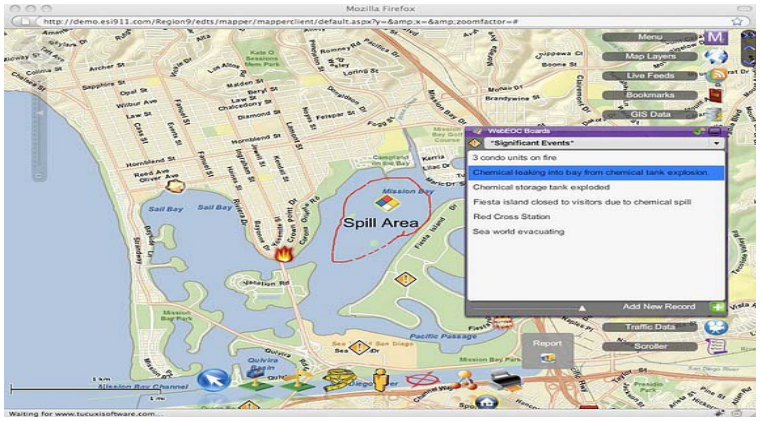
Mapper Professional – WebEOC

WebEOC *Mapper Professional* 2.5 brings the power of visualization technology into the emergency operations center. With WebEOC *Mapper Professional* 2.5, emergency managers are able to create a dynamic, geographically-based common operating picture without the need for specialized GIS or mapping expertise. WebEOC *Mapper Professional* 2.5 allows users to view data from multiple WebEOC boards in the context of other map data to achieve an easy-to-understand common operating picture.

Users can display the data with custom icons that are relevant to their own organizations. Support for real-time GeoRSS feeds enables the system to display real-time information, such as hurricane tracks, on the map. Layers from local data sources, such as a street network, can be combined with online data to enhance situational awareness.

With WebEOC *Mapper Professional* 2.5,

- View live, dynamic, multi-user WebEOC board data on a map.
- Combine WebEOC data with other geographic information system (GIS) data or services on a single map.
- Dynamically push and pull data in and out of WebEOC.
- Configure the map with data from local and remote services on the fly.
- Plume modeling
- Driving Direction around roadblocks
- Custom map icons



WebEOC Mapper View

BIOWATCH

The anthrax mailings of 2001 increased public and governmental awareness of the threat of terrorism using biological weapons. The federal response to this threat includes increases in countermeasure research funding, greater investment in public health infrastructure, and greater preparation of first responders who might be the first to encounter such weapons in an event. The new Department of Homeland Security (DHS) has made preparation against biological weapon attack a priority and deployed the BioWatch Program to provide early warning of a mass pathogen release.

The BioWatch Program uses a series of pathogen detectors co-located with Environmental Protection Agency air quality monitors. These detectors collect airborne particles onto filters, which are subsequently transported to laboratories for analysis. It is expected that this system will provide early warning of a pathogen release, alerting authorities before victims begin to show symptoms and providing the opportunity to deliver treatments earlier, decreasing illness and death.

The BioWatch Program, funded and overseen by DHS, has three main elements each coordinated by different agencies, sampling, analysis, and response. The Environmental Protection Agency (EPA) maintains the sampling component, the sensors that collect airborne particles. The Centers for Disease Control and Prevention (CDC) coordinates' analysis, the laboratory testing of the samples, though testing is actually carried out in state and local public health laboratories. Local jurisdictions are responsible for the public health response to positive findings. The Federal Bureau of Investigation (FBI) is designated as the lead agency for the law enforcement response if a bioterrorism event is detected. Efforts to develop integrated response plans, lower the system cost, and develop complementary and next-generation systems continue.

The function of the BioWatch Program is to detect the release of pathogens into the air, providing warning to the government and public health community of a potential bioterror event. The BioWatch Program, consists of aerosol samplers mounted on preexisting EPA air quality monitoring stations. These collect air, passing it through filters. These filters are manually collected at regular intervals and are analyzed for potential biological weapon pathogens using polymerase chain reaction (PCR) techniques. While filters from the BioWatch program were initially shipped to and tested at a federal laboratory in California, state and local public health laboratories now perform the analyses.

The BioWatch equipment is fielded in select cities, including Philadelphia, New York City, Washington, DC, San Diego, Boston, Chicago, San Francisco, St. Louis, Houston, and Los Angeles. The Department of Homeland Security has not confirmed the exact number of cities engaged in the BioWatch program, nor the number of pathogens that are detected using BioWatch equipment. It is reported that at least 31 cities are included in the BioWatch program, while according to the minutes of a Centers for Disease Control and Prevention (CDC) Information Council meeting; the program may expand to as many as 120 cities. While the exact cost of this program is unknown, the capital costs for installation in a single city are estimated at $1 million and the yearly budget for operation at $1 million per city.

HSIN – Homeland Security Information Network

The Homeland Security Information Network (HSIN) is a national secure and trusted web-based portal for information sharing and collaboration between federal, state, local, tribal, territorial, private sector, and international partners engaged in the homeland security mission.

HSIN is made up of a growing network of communities, called Communities of Interest (COI). COIs are organized by state organizations, federal organizations, or mission areas such as emergency management, law enforcement, critical sectors, and intelligence. Users can securely share within their communities or reach out to other communities as needed. HSIN provides secure, real-time collaboration tools, including a virtual meeting space, instant messaging and document sharing. HSIN allows partners to work together instantly, regardless of their location, to communicate, collaborate, and coordinate.

HSIN offers many dynamic capabilities including:

- 24/7 availability
- Document Libraries
- Instant-messaging tool
- Web conferencing
- Incident reporting
- Common Operational Picture (COP) provides situational awareness and analysis
- Integrated Common Analytical Viewer (iCAV) gives geographical visualization
- Announcements
- Discussion Boards
- Task Lists
- Requests For Information/For Your Information (RFIs/FYIs)
- Calendars
- Really Simple Syndication (RSS) Feeds
- Online training materials

FlyteComm Guardian System

Guardian takes static and real-time situational data from 9-1-1 Emergency Communication Center CAD systems, aggregates it into a database, applies business logic and policies based on customer permissions, and displays text data graphically. This gives an integrated view of neighboring jurisdictions, incident status and equipment through a web-based portal that can be securely accessed from any internet enabled PC. FlyteComm's Guardian includes the ability to achieve an unprecedented level of Emergency Operations Center support by including the geospatial mapping of critical infrastructure and supported Automatic Vehicle Locator (AVL) display information. Dispatchers, responders, and Decision-makers in the field get information that is updated every 3 to 25 seconds. All participants involved in incident management have a

real-time regional view (including neighboring jurisdictions) of incidents and resources available for mutual-aid and events and requests. The display shows, at a glance, whether a fire station is manned or unmanned and if it is in operation on a full-time or part-time basis. The user can also see the number of personnel, as well as the status and availability of units and apparatus. Incident managers can ensure that the best resource is dispatched to an incident.

CWIN – Critical Infrastructure Warning Information Network

The Critical infrastructure Warning Information Network (CWIN) is the critical, survivable network connecting the Department of Homeland Security (DHS) with vital sector partners (including Federal, State, private sector and Canada and the United Kingdom) that are essential in restoring the Nation's infrastructure during incidents of national significance. These sectors include Electricity, Information Technology, Finance, and Telecommunications; private partners in other critical sectors; the states' homeland security advisors; the specific agencies and resources for each of the critical infrastructure sectors; and the agency responsible for homeland security in Canada and the UK. CWIN connects the emergency operations centers of the 50 states and the District of Columbia to the DHS Network Operations Center (NOC). Operational since 2003 on a private network backbone separate from the public switched networks, CWIN was designed as a mechanism by which the Federal Government can communicate with the private sector in support of critical infrastructure restoration. Established at White House direction, when CWIN moved to DHS, its mission expanded to protection of critical infrastructure. CWIN directly supports two key DHS priorities: infrastructure protection and information sharing among vital sector partners. It supports these priorities by providing protected voice and data connectivity between DHS and infrastructure protection partners and enabling information sharing particularly during incidents of national significance. CWIN provides voice and data connectivity using Voice over Internet Protocol (VoIP) phones and thin client devices for enhanced security purposes. CWIN's backbone is used by the Homeland Security Information Network.

ALOHA – Area Locations of Hazardous Atmosphere

ALOHA (Areal Locations of Hazardous Atmospheres) is a modeling program that estimates threat zones associated with hazardous chemical releases, including toxic gas clouds, fires, and explosions. A threat zone is an area where a hazard (such as toxicity, flammability, thermal radiation, or damaging overpressure) has exceeded a user-specified Level of Concern (LOC).

- Generates a variety of scenario-specific output, including threat zone plots, threat at specific locations, and source strength graphs.
- Calculates the rate of release for chemicals escaping from tanks, puddles (on both land and water), and gas pipelines and predicts how that release rate changes over time.
- Models many release scenarios: toxic gas clouds, BLEVEs (Boiling Liquid Expanding Vapor Explosions), jet fires, vapor cloud explosions, and pool fires.
- Evaluates different types of hazard (depending on the release scenario): toxicity, flammability, thermal radiation, and overpressure.
- Displays threat zones on MARPLOT maps (and on Arc View and Arc Map with the Arc Tool extensions).
- Works seamlessly with companion programs CAMEO Chemicals and MARPLOT; it can also be used as a standalone program.

SLOSH – Sea, Lake, and Overland Surge from Hurricanes

SLOSH, is a computerized model developed by the Federal Emergency Management Agency (FEMA), United States Army Corps of Engineers (USACE), and the National Weather Service

(NWS) to estimate storm surge depths resulting from historical, hypothetical, or predicted hurricanes by taking into account a storm's pressure, size, forward speed, forecast track, wind speeds, and topographical data.

PRND – Prevention, Radiological, Nuclear Detection Strategy
The program's goal is to develop an intelligence-driven protection strategy that will enable the ability to perform interdiction and special-event missions within the NCR. The NCR's PRND program provides a framework to detect and interdict illicit radiation sources as early and as safely as possible. It provides regional reporting to the NCR partners to see near-real time radiological data. This data will inform resource deployment decisions and reduce the risk of radiation exposure to first responders. As the NCR encompasses the states of Maryland and Virginia, as well as the District of Columbia, it is necessary to encompass the entire region with the appropriate resources to maintain a regional preventative capability.

DEN – Domestic Events Network
The DEN is a 24/7 FAA sponsored telephonic conference call network (recorded) that includes all of the air route traffic control centers (ARTCC) in the United States. It also includes various other Governmental agencies that monitor the DEN. The purpose of the DEN is to provide timely notification to the appropriate authority that there is an emerging air-related problem or incident.

DMI Services – Disaster Management Interoperability Services
Disaster Management Interoperability Services (DMI-Services) is part of the President's Disaster Management e-Government initiative, largely aimed at greatly enhancing Disaster Management on an interagency and intergovernmental basis. DMI-Services are primarily focused on assisting individuals and organizations with crisis and consequence management responsibilities for disasters and for the mitigation of all hazards. The primary mission of DMI-Services is to provide Interoperability services. DMI-Services is service, not an application. The service is providing a portal for the rapid and secure exchange of information between emergency management organizations. DMI-Services connectivity and functionality is also applicable to prevention, preparedness, response, and recovery at the local, state, and federal levels. Organizations will obtain maximum benefit through day-to-day usage of DMI-Services as a tool for preventing and responding to disasters. Connectivity is provided through a connection to the Internet.

ARES – Amateur Radio Emergency Services
ARES groups are volunteer amateur radio operators who come together for the common purpose of providing emergency and/or auxiliary communications service to public safety and public service organizations. Most individual ARES units are autonomous and operate locally. Although the Amateur Radio Emergency Service is a program (and trademark) of the American Radio Relay League (ARRL) in the USA, the structure is more supportive than directive in nature, providing mostly for mutual aid in the event of large-scale emergencies

RACES – Radio Amateur Civil Emergency Services
Founded in 1952, the Radio Amateur Civil Emergency Service (RACES) is a public service provided by a reserve (volunteer) communications group within government agencies in times of extraordinary need. During periods of RACES activation, certified unpaid personnel are called upon to perform many tasks for the government agencies they serve. Although the exact nature of each activation will be different, the common thread is communications.

Appendix G: Government and Transportation Alerts for the NCR Public

Capitalert (http://www.capitalert.gov) connects the public with free emergency alerts from the local governments in the Washington, DC area. From the Capitalert website, people can sign up and get emergency text alerts from these city or county governments:

- **Alexandria**
- **Arlington County**
- **Bowie**
- **District of Columbia**
- **Fairfax County**
- **City of Fairfax**
- **Falls Church**
- **Gaithersburg**
- **Greenbelt**
- **Loudoun County**
- **Manassas**
- **Montgomery County**
- **Prince George's County**
- **Prince William County**
- **Rockville**
- **Stafford County**
- **Takoma Park**

Each offers text alerts specific to their area, including major emergencies, traffic updates, weather reports, and school and government closings. Alerts can be sent to cell phones, PDAs (like BlackBerry ®), pagers, emails, and RSS web feeds.

In addition to text alerts, several local governments use social media sites like Twitter and Facebook to communicate with the public.

When the Virtual Joint Information Center (V-JIC) is launched, it will serve as a one-stop-shop, including a comprehensive list of these government links as well as transportation agencies. As referenced in this report, **MATOC** will begin making its transportation incident information available to the public on a website. It already uses Twitter: http://www.twitter.com/matoc

In addition, area transportation agencies use alerts and social media to communicate with the public. The following links direct you to this information where you can sign up for alerts or connect with the agencies' social media pages.

AMTRAK
Service Disruptions (online): http://www.amtrak.com/
Twitter (service alerts): http://twitter.com/amtrakNEC

ART—Arlington Transit
RSS: http://www.commuterpage.com/RSS/artalert_rss.xml
Alerts on Twitter: http://twitter.com/art_alert
Alerts on Facebook: http://www.facebook.com/pages/ART-Alerts-Arlington-Transit/152888718096226?v=wall

DASH- City of Alexandria
Alerts (through city's main eNews System; must sign up for DASH Bus Group):
http://enews.alexandriava.gov/

DDOT
Traffic alerts, e-news: http://www.ddot.dc.gov
Twitter: http://twitter.com/ddotdc
Facebook: http://www.facebook.com/DDOTDC

Fairfax Connector
RSS Alerts/Service Info: http://www.fairfaxcounty.gov/connector/news/rss.htm
Twitter: http://twitter.com/ffxconnector
Facebook: http://www.facebook.com/fairfaxconnector

Loudoun County Transit and Loudoun County Tysons Express Bus
LC Alerts: http://www2.loudoun.gov/Default.aspx?tabid=437

MARC, MTA Commuter Bus and more
Alerts: http://www.mtamarylandalerts.com/
MARC Train Status (GPS tracking): http://www.marctracker.com/PublicView/status.jsp
MTA Twitter (alerts and other info): http://twitter.com/mtamaryland
MTA Facebook (other info, plus some service alert info): http://www.facebook.com/mtamaryland

MDOT
http://www.mdot.maryland.gov | http://www.md511.org
Twitter: http://twitter.com/MDOTNews

PRTC OmniRide and OmniLink
Potomac and Rappahannock Transportation Commission (PRTC) is the transit service for Prince William and Manassas area residents.
Alerts (via e-mail): http://prtcriderexpress.com/
RSS for service information: http://www.prtctransit.org/rss/serviceupdate/allfeed
Facebook: http://www.facebook.com/prtctransit

RideOn—Montgomery County
RSS of service interruptions:
http://www.montgomerycountymd.gov/content/DOT/transit/rideondelays.asp

TheBus—Prince George's County
Next Bus Alerts (tells you when next bus will arrive; based on GPS and Metro offers same service.): http://www.nextbus.com/

WMATA
Alerts (e-mail for rail, bus and elevator/escalator): http://wmata.com/rider_tools/ealerts/
RSS alerts: http://wmata.com/rider_tools/ealerts/rss_feeds.cfm
Twitter (some alerts and other info): http://twitter.com/wmata
Facebook: http://www.facebook.com/MetroForward

VDOT
http://www.virginiadot.org | http://www.511virginia.org
Twitter: http://twitter.com/vadot
Facebook: http://www.facebook.com/VirginiaDOT

VRE
Alerts (called "Train Talk" and delivered by e-mail): http://traintalk.vre.org/
Service delays posted on this Web page too: http://www.vre.org/vremap/app?action=ovmap
Twitter: http://twitter.com/VaRailXpress
Facebook: http://www.facebook.com/pages/Virginia-Railway-Express/53836370185