



STATE OF GEORGIA  
OFFICE OF THE GOVERNOR  
ATLANTA 30334-0900

Nathan Deal  
GOVERNOR

April 3, 2014

To: The Honorable Nathan Deal, Governor

From: Bart Gobeil, Chief Operating Officer, and On Behalf of the  
Severe Winter Weather Warning and Preparedness Task Force

Re: This note transmits to you a copy of the Final Task Force Report in response to your Executive Order dated February 4, 2014. The Task Force met three times to review and discuss the response to the January 28<sup>th</sup> winter storm as well as recommendations for future actions to better prepare the state, its communities and resources for severe weather. On behalf of the Task Force members and the Carl Vinson Institute of Government who assisted in the compilation of this report, let me briefly list some of the recommendations:

- Continue implementing the action items developed in the wake of the January 28 weather event as included in the Internal Review Plan (February 2014):
  - Mobile Phone Wireless Emergency Alert System
  - Consultation with the Weather Advisory Group
  - Winter Weather Information Emails to School Superintendents
  - Improvement of the Ready Georgia Mobile app
  - Implement the creation of the 35 Rapid Response Strike Teams
  - To provide essential GDOT equipment, storage, supply needs and other enhancements, \$14.5 million dollars was appropriated into the FY-15 State Budget.
  
- Clearly define actions needed to increase efficiency and coordination during a severe weather event:
  - Assign responsibility and accountability for the state's emergency response to the GEMA Director, as defined in Executive Order 01\_24\_11\_01 establishing the Emergency Operation Command.
  - Establish a set internal communications protocol for the state-level emergency response team.
  - Assign a GEMA staff member to be the Dedicated Weather Monitor who will communicate directly with the National Weather Service and local meteorologists.
  - Designate a representative from the State Board of Education to participate in the National Weather Service pre-event webinars.
  - GSP coordination with large trucking associations to assist with message delivery to commercial vehicle operators in the region.



- Coordination between GEMA and local governments regarding issuance of wireless emergency alerts.
- Specific recommendations on improving weather forecasting and disseminating relevant weather information to the public:
  - Evaluate the effectiveness of a statewide Mesonet system of weather data stations, including road sensors to monitor and assist in forecasting ground temperatures.
  - Creating uniform definitions and criteria for severe weather terminology, along with a comprehensive public education campaign, including a Severe Winter Weather Preparedness Week to be designated at the beginning of the winter season.
  - Better use of social, traditional, and broadcast media, and electronic billboards to keep the public up-to-date on evolving weather forecasts.
  - Create a single website for use by all key stakeholders during weather emergencies.
- Establish set protocols for planning and preparing for severe weather events:
  - Develop a set protocol schedule that would trigger state action.
  - Identify designated short-term parking areas for trucks during weather events.
  - Continue cross-agency training and communication with both public and private entities, and expand these training drills to include utilities, large trucking companies, and public transportation systems to develop “muscle memory” so that reactions will be automatic and timely with minimal start-up time lost.
  - Encourage employers to adopt non-punitive policies regarding travel during severe weather events.
  - Ensure that all public and private utilities’ plans for emergencies are integrated with state plans.
  - Institute better coordination and involvement with the Red Cross, faith-based organizations and other non-governmental organizations regarding emergency plans.

On behalf of the Task Force, thank you for your leadership on this important initiative.

Recommendations  
of the  
Governor's Severe Winter  
Weather Warning and  
Preparedness Task Force



March 2014

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**Appreciation is extended to the Carl Vinson Institute of Government at the University of Georgia for their assistance in the compilation and preparation of this report.**

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## TASK FORCE CHARGE

On February 4, 2014, Governor Deal issued an Executive Order calling for the creation of the Governor's Severe Winter Weather Warning and Preparedness Task Force. The purpose of the Task Force was to better prepare the state, its communities, and its resources for severe winter weather. The Governor gave the members the following charges:

- Evaluate the Internal Review Report (February 2014) assessing the State's response to the January 28<sup>th</sup> winter storm.
- Develop measures to improve communication and coordination before, during and after severe weather events.
- Examine information-gathering and weather predictions and how information is used and implemented during severe weather events.
- Identify short-term and long-term preparation protocols needed before a severe weather event.
- Deliver within 60 days of the first meeting (held February 18, 2014) a report to the Governor of the Task Force's recommendations.

To facilitate the creation of the recommendations in this report, the Task Force broke into the following six work groups based on area of expertise: Education, Meteorologists and Weather Service, State Agency Heads, Legislative/Local Government/Business, Utilities, and Transportation. Each expertise area presented to the Task Force a different perspective on the unique challenges they face during severe winter weather. This report attempts to identify those challenges and offer solutions to better prepare for severe winter weather events in the future.

**Appendix A** provides a list of the members of each of these groups.

**Appendix B** contains the Executive Order creating the Governor's Severe Winter Weather Warning and Preparedness Task Force.

**Appendix C** provides a copy of the Internal Review and Action Plan submitted to Governor Deal in the wake of the January weather event by state agency heads involved in emergency response.

**Appendix D** contains the Executive Order creating the Emergency Operation Command, which operates as the central state governmental office to coordinate and facilitate the state response to natural disasters, including severe winter weather events.

## INTRODUCTION

Early Tuesday morning, January 28 and into Wednesday, January 29, 2014, a winter storm delivered a long swath of snow and ice from parts of Texas to the coastal Southeast, coastal Mid-Atlantic, and Northeast.

According to the National Weather Service (NWS), the winter weather circumstances that affected the Atlanta metro area on those days were extremely unusual. Since the beginning of official snow record for Atlanta in 1929, there have only been 13 occasions when the maximum temperature was less than or equal to 30 degrees that coincided with snowfall. In fact, January 28, with a maximum temperature of 27 degrees, was the coldest it has ever been when snow has fallen in Atlanta. The most recent similar event was in January 1982, but at that time a lighter snow fell later in the day. In addition, January 2014 was the 12th coldest January on record going back to 1878, and the coldest January since 1985. In more recent years, 1998–2010, only one day had a maximum temperature of lower than 30 degrees.

A confluence of events on January 28 led to total gridlock throughout metro Atlanta roadways and streets. An appropriate early response would have allowed the state, local governments, schools, businesses, and other entities to quickly react in an effective manner. Instead, children in most metro systems went to school that morning, business and government offices opened, and suppliers continued to make deliveries throughout the metro area. When it became apparent that the storm's impact was more severe than originally anticipated, schools, government offices, and private businesses closed. This resulted in a massive influx of traffic onto the roadways within a very short period of time.

The traffic volume, in conjunction with the deteriorating weather conditions and considerable ice forming on roadways, caused highways and secondary surface roads to become impassable in many parts of the metro Atlanta area. Severe ice conditions combined with road congestion curtailed the ability of emergency vehicles and personnel to reach critical areas of need. As a result, thousands of motorists were stranded for up to 24 hours in certain areas. Many students and teachers were unable to leave schools and were forced to shelter in-place at their locations. Appendix C contains the Internal Review and Action Plan submitted to the Governor by state agency heads in the wake of the January 28 weather event. This plan provides a step-by-step timeline of the state agencies' emergency response during the event.

The Task Force reviewed the internal report and discussed lessons learned and best practices. State response to a subsequent winter storm on February 10–13 provided the Task Force with additional information about the state's preparedness and response capacity. In this report, the Severe Winter Weather Warning and Preparedness Task Force will further share its findings and discuss several overriding issues that contributed to problems in January, including a failure to fully implement a state-level command structure, inadequate and unclear guidance to the public, inadequate or incomplete communication across state agencies, and the need for more preparedness drills. This Task Force report provides recommendations for improving the state's preparedness for and response to severe weather events.

# REVIEW OF FEBRUARY 2014 REFORMS TO GEORGIA'S WINTER STORM MANAGEMENT SYSTEM

In the wake of the January 28 weather event, Governor Deal is implementing four reforms to improve how the state communicates with Georgians when threatened by a winter storm event. These reforms were tested during the February 10–13 winter storm event, and the results clearly reflected their promise for successful usage once fully implemented.

**Recommendation: Continue to implement the four action items instigated by the Governor in the wake of the January 28 weather event.**

1. *Mobile Phone Wireless Emergency Alert (WEA) System.* Instant public communication with our citizens is essential in today's world, especially in times of emergency. This system, which includes the widely known Amber Alert system, was successfully utilized by the Georgia Emergency Management Agency (GEMA) during the recent winter storm event on February 10–13. The WEA System can be used by GEMA and other public safety officials for future weather and other emergencies endangering life and property.
2. *Weather Advisory Group.* The Governor established the Weather Advisory Group, which includes meteorologists and weather forecasters from Atlanta's four major network affiliates along with the National Weather Service. These professionals should continue to be fully involved as decisions are considered and implemented. During the storm event week of February 10–13, the Weather Advisory Group was activated, and they consulted with GEMA. The group's efforts significantly benefitted public information and weather predictability.
3. *Winter Weather Information Emails to School Superintendents.* In coordination with the Georgia School Superintendents Association (GSSA), GEMA compiled an email database of all 180 Georgia school superintendents. GEMA used this database during the February 10–13 event to email superintendents in affected counties, notifying them of the "fast evolving weather event." It is critical that GEMA continue to coordinate with the GSSA, the Weather Advisory Group, and other subject matter experts to ensure superintendents receive the most up-to-date weather forecast information as they determine whether to close schools.
4. *The Ready Georgia Application.* The Ready Georgia mobile app, created by GEMA and the Georgia Department of Public Health, is an interactive tool that helps prepare Georgians for emergencies. The state is improving the app in four stages through technical assistance from the Georgia Tech Research Institute and The Weather Channel. Phase 1, which is now live, includes a Google map with a live feed that shows traffic speeds, the ability to add manual alerts, and a fix to the push notification system. Phase 2, which is scheduled to go live in mid-April, includes automated audible NWS push alerts, shelter map improvements, updated static content, and completion of the GEMA admin portal. Phase 3, scheduled to be completed by the end of April, includes a button/window for traffic information and news and alerts from the Georgia Department of Transportation's (GDOT) GA 511 app, as well as an overlay showing traffic incident locations from GDOT that will replace the "This Day in Hazard

History” section on the homepage. The Task Force supports the Governor’s call for a strong marketing campaign to push this app out to citizens on the broadest possible level.

## **DURING A SEVERE WEATHER EVENT**

The Task Force assessed the state’s storm response during the January and February storm events and looked at lessons learned and best practices in several industries. Below are recommendations designed to increase efficiency and coordination during a weather event:

**Recommendation: When severe weather strikes, the state should follow the Emergency Operation Command (EOC) set out in Executive Order 01-24-11-01, which gives responsibility and accountability for coordinating the state’s emergency response to the GEMA Director.**

Strong command and control is paramount during emergencies. A 2011 Executive Order established the Emergency Operation Command, which gives the Director of GEMA responsibility and authority for coordinating and controlling the state’s response to natural disasters, including severe winter weather events (see Appendix D). The Task Force believes that this command structure is appropriately arranged, but during the January 28 weather event, it was not clearly followed. The public and responders of all levels in both local and state agencies need to know who is in charge of deploying state resources during an emergency. All information and direction needs to emanate from GEMA.

**Recommendation: Establish a set internal communications protocol for the state-level emergency response leadership team.**

During an emergency, internal communications are critical. In a given emergency, the GEMA Director calls upon the Emergency Operation Command leadership team. This team needs communication protocols that work, so that they can talk to each other and to those in charge of emergency response in the field. The State of Georgia Snow and Ice Plan (2011) states that GEMA is to “facilitate coordination calls among response partners.” To ensure that all stakeholders have the same information and to coordinate efforts, the Task Force suggests that at the onset of a weather event, the GEMA Director establish a scheduled set of mandatory conference calls with the leadership team throughout each day of the emergency. For example, Georgia Power uses a similar model, requiring that the leadership team participate in two to three calls per day depending on the severity of the event. No matter what situation in the field a particular member is handling, he or she must be on the calls. For the state, such calls will ensure that the latest information flows through the chain of command and is readily available to team members not only in the Operation Command Center and their sphere of influence, but also to the staff on call and actively engaged in the field. This flow of information and communication is essential to ensure that timely response and two-way communication occurs as weather conditions change or as public needs dictate.

**Recommendation: During inclement weather, coordinate with large trucking associations.**

During weather emergencies, Georgia State Patrol (GSP), with the concurrence of GEMA and/or the Emergency Operations Command Leadership Team, should coordinate with the Georgia Motor Coach Operators Association, the Georgia Motor Trucking Association, and the American Trucking Association to assist in message delivery to commercial vehicle operators in the region. It is important that the State of Georgia work closely with the truckers, since they will be such key players during future weather events.

**Recommendation: Assign a GEMA staff member to be the Dedicated Weather Monitor who will communicate directly with the National Weather Service.**

The Task Force recommends that GEMA have a dedicated person on staff to monitor weather conditions. The Task Force also recommends that criteria be developed that will determine when the GEMA Weather Monitor will contact NWS. Once contacted, NWS would become involved, giving more details about what is happening and what the weather forecasting models are showing could happen. NWS alerts tell what the meteorologists feel confident is likely to occur. However, NWS has more detailed information about what could occur, and GEMA should have access to that information. The GEMA Weather Monitor should also be a member of the NWS chat room, an instant messaging program that shares real-time critical warning decision expertise and other types of significant weather information. The GEMA Weather Monitor should be in constant communication with meteorologists throughout the state, including members of the Weather Advisory Group (see page 7).

**Recommendation: Have a dedicated person on staff at the State Board of Education to participate in the NWS pre-event webinars.**

When a severe weather event seems likely, NWS gives a webinar (or often a series of webinars) to government and media partners. A dedicated representative from the State Board of Education (BOE) must participate in the webinar. It is recommended that this BOE representative continue to communicate relevant information in times of need to school systems, and it will be important that this person work in close conjunction with GEMA as planning and mobilization for future severe weather events occur.

**Recommendation: Investigate allowing local governments to issue local wireless emergency alerts.**

GEMA issues statewide alerts, but local alerts could allow local governments to issue more targeted alerts with more specific information. This is an issue on which GEMA should continue exploring feasibilities and working in conjunction with the Federal Communications Commission (FCC). The benefits to local governments and the citizens they serve of such local alerts will be obvious in terms of timeliness and information sharing.

## IMPROVING WEATHER FORECASTING AND DISSEMINATING RELEVANT WEATHER INFORMATION TO THE PUBLIC

The first line of defense against a weather emergency is foreknowledge. In a weather emergency, the definitive source for weather information is the National Weather Service (NWS). Six NWS offices cover Georgia, but only one is actually located in Georgia. This office in Peachtree City covers 96 counties, from Columbus to Macon, north to the state line. NWS is continually running scenarios and looking at various models to predict what might happen. The models are run every few hours, so when NWS meteorologists issue alerts, they are confident in the forecasts. NWS is constantly reevaluating the weather situation. Television meteorologists get their data from the NWS, but they can interpret the data as they see fit. We recognize the importance of the National Weather Service having the data and capability needed to make accurate winter weather predictions in order to continue being such a valuable partner to the State of Georgia and the state and local agencies who rely so heavily upon its data.

To avoid unnecessary activity on the roadways during a weather event, the public must have access to weather information that they can both understand and use when making decisions. Businesses need to understand the likely effects of inclement weather events so they can make informed decisions about whether to close their doors. Shutting down is not something that businesses do lightly, and without clear communication from a single authoritative source, many make arbitrary decisions. Relatedly, when businesses stay open, they demand that suppliers continue to make deliveries. Though some large trucking companies made the choice to stop deliveries during the January 28 event, independent and smaller trucking companies continued to operate, which exacerbated the initial congestion and ultimate shutdown of all roads. Further, regardless of a business decision to remain open or shut down, many employees who are parents will make their own decisions based on whether their children's schools choose to close.

The Task Force reviewed the current weather monitoring system and means of communication with the public. Below are recommendations related to improving weather forecasting and disseminating that information to the public:

**Recommendation: Evaluate the effectiveness of a Mesonet system of weather stations that includes road sensors and other weather collecting data assets already in the state.**

The Mesonet system is a potential statewide network of automated weather data stations. The idea of such a system for benefitting the State of Georgia was actually born out of the 1996 Olympics and very nearly came to fruition in the mid-2000s before financial shortages caused it to be put on the shelf. The system is designed to observe mesoscale meteorological phenomena such as sea breezes, squall lines, dry lines, etc. The weather stations are spaced closer together and report more frequently than synoptic-scale observing networks. Basically, the Mesonet system provides meteorologists with more information and data, which translates into improved forecasting. Several states have implemented Mesonet systems, including North Carolina and Kentucky. Improved forecasting means meteorologists can provide more specific information regarding the time and place in which storms will occur.

There has been significant preliminary work on the possibility of establishing a statewide Mesonet system. When the system was first being investigated, it was proposed that the Mesonet system would connect federal, state, and local entities across the state with existing weather data collecting stations such as the NOAA/NWS and the University of Georgia Automated Environmental Monitoring Network. This coordinated “network of networks” would serve as a foundation for expansion and adaptation as new mesonet stations/sensors are installed. Eventually, sensors would be located every 32 km, or roughly one station per county in Georgia. Although the Mesonet system was never implemented, the Task Force recommends that this project be investigated further through the creation of a Working Group that would evaluate this project with consideration given to cost, feasibility, affordability, and accountability for all who would benefit from it. Such an undertaking would cut across local, state, and federal entities as further review is given to determine how this system might be implemented.

The proposed road sensor system, which was included in the recommendations of the Internal Report, can be integrated into the Mesonet system. The road sensors would monitor and assist in forecasting ground temperatures to assess the potential for road surface freezing.

**Recommendation: Create uniform definitions and criteria for severe weather terminology.**

Currently, there is inconsistency in the criteria (weather conditions) used to determine when to employ specific severe weather terms such as *Watch*, *Advisory*, and *Warning*. This creates confusion and uncertainty, both for the public in general and for decision-makers having to make a call on whether to open a school, deploy emergency workers, or send employees home. To resolve this issue, the Task Force recommends that GEMA work with the NWS to create statewide uniform weather condition definitions and criteria to be used to determine when various weather conditions are declared for all six NWS offices that serve the State of Georgia.

**Recommendation: Develop a public education campaign around severe weather terminology, paying particular attention to the impact that these various weather phenomena have on humans.**

The public needs to understand the possible impacts of severe weather. The Task Force recommends urging local television meteorologists to be more specific about possible impacts. Instead of using scientific language, Warnings, Watches, and Advisories should be communicated in language that helps the public understand how it will affect them so that they can make informed decisions. For example, meteorologists could report that an ice storm also means hazardous traveling conditions. GEMA should convene the Weather Advisory Group to develop specific recommendations for the public education campaign.

**Recommendation: Create a Winter Weather Preparedness Week in early December, and use it to reinforce the public education campaign.**

In recent years, Georgia has held a Severe Weather Awareness Week in late January/ early February. The Task Force recommends that GEMA also create a Winter Weather Preparedness Week in early

December to focus specifically on severe winter weather and to reinforce understanding of severe winter weather terminology among the public before the winter weather is likely to strike. This would also be a time for the state to encourage individuals, schools, and businesses to review/revise their severe weather plans and to replenish any necessary supplies. During this week, individuals would also be encouraged to develop a personal emergency plan of action. Organizations such as churches, civic groups, Chambers of Commerce, and Regional Development Commissions would be encouraged to help individuals create their own plans of action. This would be a prime opportunity for state agencies to fully implement the Emergency Operation Command (EOC), as mandated in the Governor's Executive Order of January 24, 2011 (See Appendix D).

**Recommendation: Create a single website for use by all key stakeholders during weather emergencies.**

When severe weather develops, all entities affected by the weather event need to be able to stay connected and know what one another are doing. Creating a single website, the Weather Emergency Resource site, for weather emergencies would accomplish this goal. GEMA should develop and maintain this website and ensure that it is constantly updated. A particular emphasis should be given to assuring that the website is available to all social media such as Twitter, Facebook, Instagram, etc.

**Recommendation: Before and during an event, use every available medium to communicate with the public, including social media, traditional media, broadcast media, and electronic billboards, similar to the process used for Amber Alerts.**

There exists a potential source of messengers around the State of Georgia and its interstate system who can and will assist in getting the messages out to the public. We live in a time when the public wants, needs, and expects instant communication, especially when severe winter weather strikes, and it is essential that this type of system be marketed and the public encouraged to use these outlets. It is recommended that GEMA establish a Joint Information Center (JIC) with all engaged state agencies during these events to coordinate the delivery of timely, essential information across all media platforms. Good communication during times of severe weather is essential, and using all forms of public communication will significantly help to keep the public fully informed.

## **PLANNING AND PREPAREDNESS**

The Task Force examined emergency preparedness and best practices across state agencies, several industries, school systems, and private businesses. Below are recommendations designed to increase efficiency and coordination before and during a weather event:

**Recommendation: Develop a disaster specific activation protocol schedule that could trigger the need for state involvement during an emergency situation.**

Such a protocol schedule would help state agency heads identify when state intervention is likely to be needed so that timely and appropriate mobilization can begin before the event occurs. GEMA should coordinate the development of the protocol schedule. A challenge in developing such a protocol is that it has to be flexible enough to be relevant for various types of events, especially when local requests are received. Such a protocol will also provide critical insight as to areas of responsibility in such times of need.

**Recommendation: Establish designated parking areas for trucks in the event of inclement weather.**

Getting trucks off the roads during a weather emergency would reduce congestion and make travel easier for emergency personnel. The Task Force recommends that GEMA, working with the other members of the Emergency Operation Command Leadership team, develop a plan for implementation of this recommendation. Furthermore, GEMA should work with the Georgia Department of Administrative Services (DOAS) to negotiate contracts or memoranda of understanding with local businesses and/or schools for truck parking.

**Recommendation: Continue cross-agency training and communication, and build on existing relationships.**

Emergency management and public safety agencies should continue to plan and do table top exercises. The leadership and staff of these agencies know each other, and local coordination and responses to events are built on these relationships. Such exercises should be regularly scheduled by GEMA and occur multiple times throughout the year.

**Recommendation: Consider expanding preparedness drills beyond emergency management and public safety agencies to include utilities, large trucking companies, and public transportation systems.**

Because of the infrequency of severe weather events in Georgia, there is a need to work to keep lessons learned fresh through practice and drills in between events. Drills for emergency situations would help at all levels and provide education and “muscle memory” for an actual emergency. In addition, routine changes in leadership in various organizations necessitates ongoing preparedness drills as a way to bring the new leaders up to speed on knowing and being able to implement emergency management plans. Repetition is the key to learning and being prepared when implementation becomes necessary. It is essential to clearly state who is in charge of performing certain actions in times of severe weather events. GEMA is clearly the state agency from whom leadership and timely calls to action must come. GEMA must take the leadership role in coordinating with its sister agencies to ensure that the State’s emergency efforts are planned, executed, and delivered.

**Recommendation: Establish a periodic review of GEMA’s emergency contact list and EOC member information.**

Because of continual turnover in emergency response personnel across the state, GEMA needs to continue to maintain an up-to-date list of key emergency personnel in all areas of the state as well as current members of the EOC.

**Recommendation: Ensure that all public and private utilities’ plans for emergencies are integrated with state plans.**

Many utilities have thorough emergency plans. GEMA shall convene a meeting with state agencies and representatives of the public and private utilities to review existing emergency preparedness plans to promote greater integration with state emergency plans.

**Recommendation: Ensure that GEMA and the various state agencies involved in emergency response are using the most up-to-date technology, including communication and fleet management.**

The key to effective and efficient emergency response is often logistics. New technology allows for accurate tracking of vehicles and personnel in the field. During emergency response, the ability to pinpoint resources and communicate quick-changing, real-time information can save lives and mitigate damage to property and infrastructure. The Task Force recommends that GEMA research new technology in fleet management and in-field communications and do so in a manner that will maximize the State’s efforts to fulfill the responsibilities and leadership needs that will lead to improvements and efficient deployment of assets.

**Recommendation: Encourage school systems across Georgia to review and revise their severe weather protocols and plans immediately and to revisit them annually.**

While the experiences and lessons learned this winter are still fresh, schools should revisit their severe weather protocols and make any necessary revisions. Once severe weather is on the way, it is too late to plan. GEMA should work with the Department of Education and the Georgia Association of School Superintendents to develop a strategy to promote severe weather preparedness for all schools. Schools should also keep in mind that their stakeholders are constantly changing and that demographic shifts can affect the efficacy of severe weather plans. For example, a high level of poverty in some districts makes communicating via the Internet a less-than-perfect option. Plans should be communicated to both internal and external stakeholders at the beginning of the school year (and possibly revisited in conjunction with Severe Winter Weather Preparedness Week in December, see Recommendation on page 11) so that parents and employers in the community are aware of what the school system will do when there is severe weather.

**Recommendation: Encourage employers to adopt non-punitive policies that would protect employees who are unable to travel to work during severe weather events.**

One of the keys to avoiding events such as the gridlock of January 28 is to keep people off the roads during times of emergency. Therefore, the Task Force urges that a balance be struck by businesses and private entities between their responsibilities to their customers and clients, and their responsibilities to their employees. One option would be for businesses to self-adopt non-punitive policies that would protect employees from termination or disciplinary action if they cannot (or choose not to) travel during inclement weather. Additionally, businesses should pursue work-from-home options.

**Recommendation: Consider including such organizations as the Red Cross, the many faith-based groups, and other non-governmental organizations in future planning sessions for large-scale emergencies.**

Inclusion of such organizations will pay huge dividends when such critical needs as shelters, development of public information cell phone apps, or emergency response needs arise during future weather events. GEMA should continue to promote the engagement of nonprofit and faith-based organizations during all phases of emergency management and include these vital resources in the state planning, training and exercise activities.

**Recommendation: Governors in the southeast region of the country should develop reciprocal agreements on weigh station waivers for use during restoration events.**

During a restoration event, utilities and other first responders that are traveling across regions of the country have to request waivers at each state's weigh stations in order to quickly move needed resources to impacted areas. This requirement has the potential to slow response times as the waivers are being processed or convoys of response vehicles are required to stop at all weigh stations. The process could be improved if the Governors in the southeast region would proactively develop reciprocal agreements on weigh station waivers for use during emergency events. These reciprocal agreements would need to be put in place quickly (before utilities and other first responders start staging resources for a potential event).

## **ADDITIONAL ISSUES & SUGGESTIONS ARISING FROM THE PUBLIC**

The Task Force also received and reviewed input and suggestions from the public. The following are some examples of this input:

- *“Appropriate agencies should identify key routes that cross multiple jurisdictions.....a task force of state agencies and local officials should develop a road-clearing plan that assigns priorities to these key routes....”* This excellent suggestion will also benefit greatly from implementation of the Strike Teams (as recommended in the Internal Review Team Report) that will be created and assigned specific areas to patrol during times of severe weather. This precise, on-site information will be valuable to planning and reacting to road conditions and other concerns.
- *One suggestion was that “a snow removal committee be sent to one or more of the northeast (Washington, DC, Maryland, Pennsylvania and on up) states to learn how they efficiently remove snow.....and then adapt their system for Atlanta and train Atlanta staff to get the job (done) efficiently.”* A very similar recommendation was included in the Internal Review Report, and staff has already had direct contact with other states that regularly experience even more severe winter weather climate challenges than Georgia.
- *“Do not allow tractor trailers on I-75 during rush hour....Tractor trailers need to use the ring road, I-285, all the time.”* Legislation has passed that would mandate that GDOT address these concerns through their rule-making process.
- *“Educate people on how to be drivers.”* The Task Force agrees with this recommendation and endorses further coordination with the Department of Driver Services, along with other public and private organizations that teach students to drive, to look for opportunities to encourage inclement weather driving skills. Educating the public on the best practices for safe driving during severe winter weather, as well as how to determine when it is necessary to avoid road travel, will reduce the number of accidents and help to keep our roads clear for emergency personnel and GDOT crews.

## **APPENDIX A**

### **TASK FORCE EXPERTISE WORK GROUPS**

#### **Education**

Robert Avossa, Fulton County Schools  
 Emily Lembeck, Marietta City Schools  
 Michael Thurmond, DeKalb County Schools

## **Meteorologists and Weather Service**

Markina Brown, CBS Atlanta  
Glenn Burns, WSB-TV  
Ken Cook, Fox 5  
Chesley McNeil, 11 Alive  
Keith Stellman, National Weather Service

## **State Agency Heads**

Jim Butterworth, Department of Defense  
Charley English, Georgia Emergency Management Agency  
Mark McDonough, Department of Public Safety  
Mark Williams, Department of Natural Resources

## **Legislative/ Local Government/ Business**

Kelvin Cochran, City of Atlanta Fire Chief  
Gary George, City of Alpharetta, Public Safety and Emergency Management  
State Representative Mike Glanton  
Hala Moddelmog, Metro Atlanta Chamber of Commerce  
State Senator Steve Thompson  
George Turner, Atlanta Police Department  
William Wright, Barrow County 911 Emergency

## **Utilities**

Eric Adams, Verizon  
Judy Agerton, AT&T  
Jerry Donovan, Georgia Transmission Corporation  
Anthony Wilson, Georgia Power

## **Transportation**

Ed Crowell, Georgia Motor Trucking  
Kirk Fjelstul, Georgia Regional Transportation Authority  
Keith Golden, Dept. of Transportation  
State Senator Steve Gooch  
Jeffrey Parker, HNTB Corporation  
Keith Parker, MARTA  
State Representative Jay Roberts  
Chris Tomlinson, State Road and Tollway Authority  
Gil West, Delta

## **APPENDIX B**

### **Executive Order Establishing the Governor's Severe Winter Weather Warning and Preparedness Task Force**



# THE STATE OF GEORGIA

## EXECUTIVE ORDER

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### BY THE GOVERNOR:

**WHEREAS:** On January 28, 2014, the State of Georgia and, in particular, the Metro Atlanta area experienced significant winter weather causing major snowfall and ice buildup on roads, bridges and other thoroughfares; and

**WHEREAS:** This significant winter weather caused major problems in the area of public safety and traffic congestion; and

**WHEREAS:** There is a necessity to review and assess the State of Georgia's response to this major winter weather event, as well as prior events, to determine how the State and local governments may be better prepared for and respond during significant winter weather events; and

**WHEREAS:** Task Force representatives encompass individuals from a diverse background (both public and private) with expertise in predicting, preparing for and working through severe weather situations which may lead to loss of life or harm to individuals or impact personal property; and

**WHEREAS:** The purpose of the Task Force is to better prepare the state, its communities and resources, for severe weather. It will specifically examine information gathering and weather predictions and how that information is used and implemented during severe weather events. The Task Force will identify measures for:

- Preparing for Emergency situations (long term and on-going preparations)
- Severe weather warnings and predictions
- Communications and coordinating around severe weather
- Actions needed once the warnings occur
- Actions occurring during the weather event
- Standing down after weather events

**NOW, THEREFORE, BY VIRTUE OF THE POWER VESTED IN ME AS GOVERNOR OF THE STATE OF GEORGIA, IT IS HEREBY**

**ORDERED:** That the Governor's Severe Winter Weather Warning and Preparedness Task Force be assembled.

**IT IS FURTHER**

**ORDERED:** That Bart Gobeil, Chief Operating Officer, be appointed as chair of the Governor's Severe Winter Weather Warning and Preparedness Task Force.

**IT IS FURTHER**

**ORDERED:** That the following individuals are hereby appointed as members to the Governor's Severe Winter Weather Warning and Preparedness Task Force:

- Keith Golden, Commissioner – Georgia Department of Transportation
- Mark Williams, Commissioner – Georgia Department of Natural Resources
- Colonel Mark McDonough, Commissioner – Georgia Department of Public Safety
- Major General Jim Butterworth, The Adjutant General – Georgia Department of Defense
- Jannine Miller, Executive Director – Georgia Regional Transportation Authority
- Christopher Tomlinson, Executive Director – State Road and Tollway Authority
- Charley English, Executive Director – Georgia Emergency Management Agency
- Glenn Burns, Chief Meteorologist – WSB Channel 2
- Markina Brown, Chief Meteorologist – CBS Channel 46
- Ken Cook, Chief Meteorologist – FOX 5
- Chesley McNeil, Meteorologist – 11Alive
- Robert Avossa, Superintendent - Fulton County Schools
- Emily Lembeck, Superintendent – Marietta City Schools
- Michael Thurmond, Superintendent – DeKalb County Schools
- Keith Parker, General Manager/CEO – MARTA
- Ed Crowell, President and CEO – Georgia Motor Trucking
- Jeffrey Parker, Vice President – HNTB Corp. (former Connecticut DOT commissioner)
- Anthony Wilson, Executive VP, Customer Service and Operations -- Georgia Power
- Jerry Donovan, President and CEO – Georgia Transmission Corporation
- Hala Moddelmog, President - Metro Atlanta Chamber
- Gil West, Senior VP, Airport Customer Service and TechOps – Delta
- Steve Thompson, District 33 – Georgia State Senate
- Steve Gooch, District 51 – Georgia State Senate
- Jay Roberts, District 155 – Georgia House of Representatives
- Mike Glanton, District 75 – Georgia House of Representatives
- Kelvin Cochran, Fire Chief – City of Atlanta
- George Turner, Chief of Police – Atlanta Police Department
- William Wright, 911 Emergency Communications Director – Barrow County
- Keith Stelman, Meteorologist-in-Charge – National Weather Service

- Judy Agerton, Regional VP/External Affairs – AT&T
- Eric Adams, Director of Operations – Verizon
- Gary George, Director of Public Safety and Emergency Management  
Director – City of Alpharetta

**IT IS FURTHER**

**ORDERED:**

That the Severe Winter Weather Warning and Preparedness Task Force shall meet in a timely manner at the call of the chair and deliver a report to the Governor with their findings within 60 days of the first called meeting of the Task Force.

This 4<sup>th</sup> day of February, 2014.



GOVERNOR

## **APPENDIX C**

### **Internal Review Report Winter Storm Event of January 26–30, 2014**

# Internal Review and Action Plan

## Winter Storm Event

January 26-30, 2014

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As Requested By:  
Governor Nathan Deal

February 2014

## **Internal Review Report- Winter Storm Event of January 26-30, 2014**

On February 3, 2014, Governor Deal issued a statement related to the weather events of January 26-30. The announcement called for the creation of the Governor's Severe Winter Weather Warning and Preparedness Task Force, which would deliver within 60 days a report reviewing the storm of January 26-30, 2014. In addition, the Governor also called for an internal review and interim report by agency heads involved in the emergency response. These individuals would deliver a report and action plan to the Governor prior to the 60 day report of the Task Force. The following is that report, which includes:

- A. A narrative summary of events and actions related to the efforts by various agencies (GEMA, DOT, DPS, DNR, DOD)**
- B. An immediate action plan going forward for future weather related events**
- C. Summary recommendations from state agency heads**

### **INTRODUCTION**

Early Tuesday morning, January 28, and into Wednesday, January 29, 2014, a winter storm delivered a long swath of snow and ice from parts of Texas to the coastal Southeast, coastal Mid-Atlantic and Northeast.

According to the National Weather Service in Peachtree City, GA, the winter weather circumstances that affected the Atlanta metro area on these dates were extremely unusual and rare. Since the beginning of official snow records for Atlanta in 1929, there have been only 13 occasions where the maximum temperature was less than or equal to 30 degrees that also coincided with snowfall. Of those 13 occasions, only four occurred during the day with the remainder occurring during the overnight hours. The maximum temperature on January 28, 2014, was 27 degrees, which occurred at 11:00 a.m. right as the snow began to fall. Temperatures fell throughout the afternoon into the mid and lower 20s with snow continuing to fall. The most recent event similar to January 28 was in January 1982, but on that occasion the snow began to fall later in the afternoon and it was a lighter snowfall at the beginning of the event. In addition, January 2014 was the 12<sup>th</sup> coldest January on record and the coldest January since 1985. In more recent years, 1998-2010, there has been only one other occurrence when the maximum temperature was less than or equal to 30 degrees in Atlanta.

The complexity of the event was such that normal preparations for storm-related preparedness actions were made more difficult by the weather's unique aspects. The result was a less than timely and appropriate early response, which would have allowed state and local governments, schools,

businesses and other entities to quickly respond and react in a more effective manner. This situation caused Atlanta and the metro area to experience a significant shutdown. Schools, government offices and private businesses closed once it became apparent that the storm's impact was more severe than originally anticipated, resulting in a massive influx of traffic on the roadways within a very short period of time.

The traffic volume, in conjunction with deteriorating weather conditions and considerable ice forming on roadways, caused highways and surface roads to become impassible in many areas of metro Atlanta. As a result, thousands of motorists were stranded for up to 24 hours in certain areas. Many students and teachers were unable to leave schools and were forced to shelter in-place at their locations.

### A. Summary of Events

#### **Summary of weather events and the State's response: January 26 through January 30, 2014**

At 3:12 p.m. on the afternoon of Sunday, January 26, 2014, the National Weather Service published a Winter Storm Watch for portions of central Georgia, including parts of south metro Atlanta. This watch was to extend from Tuesday morning until Wednesday afternoon and predicted a mix of snow and sleet, with accumulations of two or more inches of snow and half an inch or more of sleet. These sleet accumulations were projected to be along a Columbus-to-Macon line.

This forecast stated that the wintry precipitation was expected to begin as early as mid-morning Tuesday and last through early Wednesday afternoon, with the heaviest precipitation between 10 p.m. Tuesday and 5 a.m. Wednesday. The impact of roads covered in snow and sleet was predicted to make travel more difficult or even impossible for Tuesday night and early Wednesday. Temperatures Tuesday afternoon were predicted to fall into the lower 30s. Minimum temperatures Tuesday night would fall into the lower and middle 20s, with temperatures on Wednesday reaching the middle 30s. The National Weather Service stated that the Winter Storm Watch meant there was a potential for significant snow, sleet or ice accumulations that might impact travel. (see Figure 1)

At 9:06 p.m. the Georgia Department of Transportation (GDOT) provided this weather information to its various district supervisors.

At 4:53 a.m. on Monday, the National Weather Service updated the Winter Storm Watch to include metro Atlanta areas, including Paulding, Cobb, North Fulton, South Fulton, Gwinnett, DeKalb and Douglas Counties. This Winter Storm Watch was to be in effect from Tuesday morning through Wednesday afternoon, predicting snow accumulations from ½ to 2 inches beginning as early as mid-morning Tuesday and lasting into Tuesday night. As of Sunday, the National Weather Service stated that the Winter Storm Watch meant there was a potential for significant snow, sleet or ice accumulations that might impact travel. (see Figure 2)

At 6:22 a.m. the Georgia Emergency Management Agency (GEMA) received this information, briefed their executive staff and created a “winter weather incident” in the GEMA Crisis Management System.

At 3:22 p.m. Monday the National Weather Service upgraded the weather forecast for central and north central Georgia from a watch to a Winter Storm Warning, with the same snow and sleet impacts. This warning was to be in effect from 10 a.m. Tuesday until 1 p.m. Wednesday. While the northern part of this warning included areas to the east and west of Atlanta, such as Newnan, Conyers, Fayetteville, Covington and Athens, Atlanta itself was not a part of this Winter Storm Warning. The Winter Storm Watch remained in effect for much of metro Atlanta. (see Figure 3)

That afternoon, GEMA’s State Operations Center (SOC) sent emails to appropriate state partners who would be present in the SOC and notified state agency heads of the State Inclement Weather Policy. At about the same time, GDOT notified its District Maintenance Engineers that the GDOT Emergency Operations Center would open at noon on Tuesday.

At 9:36 p.m. on Monday night the National Weather Service upgraded the Winter Storm Watch for the Atlanta Metro to a Winter Weather Advisory. Their forecast stated that a slight shift in moisture could require an upgrade to a Winter Storm Warning during the overnight hours. The prediction for metro Atlanta was for ½ to 1 inch of snow. The forecast stated that snow covered roads would make travel difficult from midday Tuesday into Wednesday. Later that evening, GDOT updated their field engineers with this new forecast.

A key event occurred at 3:39 a.m. on Tuesday, when the National Weather Service upgraded the status for metro Atlanta from a Winter Weather Advisory to a Winter Storm Warning, to be in effect from 9 a.m. Tuesday until 7 a.m. Wednesday. This warning predicted 1 to 2 inches of snow and included north central and central Georgia. (see Figure 4)

Since metro-area schools need to make early morning decisions (usually by 5:00 a.m.) regarding school closings, the timing of this warning was such that leaders of school systems faced a very compressed timeframe in which to make their decisions. Based on the historical record of very few of these types of storms during daylight hours in metro Atlanta, this may have led to school systems opting to proceed with the normal school day.

By 6:00 a.m. Tuesday, January 28, the GEMA Director of Operations received an update by telephone from the National Weather Service and at 7:06 a.m. briefed the GEMA Director on updated data. Also that morning, GDOT moved up the opening of their Emergency Operations Center (EOC) and notified their various field directors that the storm was moving faster than expected. Pretreatment of roads began at 9:00 a.m. using 47 trucks with spreaders. Unfortunately, metro Atlanta drivers were still in the middle of rush hour traffic, and it was impossible to get the equipment and road treatment product where it needed to be at 9:00 a.m. due to normal traffic conditions.

At approximately 10:00 a.m., the Governor signed an Executive Order giving state agency heads liberal discretion to release their employees and close state offices. This order was distributed by

GEMA to state agency heads at 10:25 a.m. Before noon the Georgia State Patrol transmitted weather road condition updates to GEMA and GDOT.

By 11:07 a.m. the National Weather Service repeated the Winter Storm Warning for metro Atlanta and other parts of central and north central Georgia, with the warning remaining in effect until 7 a.m. Wednesday. They predicted accumulations of 1 to 2 inches of snow mixing with sleet, making travel hazardous through Wednesday morning.

Just after noon, the GDOT commissioner emailed copies of the state law requiring chains on trucks to appropriate parties. However, by 12:45 p.m. heavy congestion had already occurred on the metro highways and surface streets. At about the same time, the National Weather Service updated their forecast for the state with a Winter Storm Warning from central Georgia northward until 7 a.m. Wednesday morning.

During the afternoon on Tuesday, GEMA coordinated with Hartsfield-Jackson International Airport and requested that GDOT adjust the Variable Message Signs to warn commercial traffic to avoid Atlanta. At 5:15 p.m. the Governor's Declaration of a State of Emergency was received by GEMA.

By mid to late afternoon on Tuesday, people were trying to get home in some of the worst traffic gridlock imaginable. By that time road conditions had deteriorated to the point that motorists, school children, parents and citizens had already started abandoning vehicles that could not move due to these conditions.

Over the course of the January 28-29 event, approximately 260 DPS troopers and 80 motor carrier officers responded in both operational and command-level capacities. DPS state troopers assisted 1,185 motorists and were dispatched to investigate 1,521 crashes, which resulted in 184 injuries and 1 weather-related fatality. DPS personnel distributed 10,000 bottles of water, 1,200 blankets, 2,400 MRE's (meals ready to eat) and 4,000 snack food items to stranded motorists. In addition, the GSP Aviation Division landed a helicopter on I-285 to distribute food and water to motorists. DPS also deployed troopers to 95 schools to provide protection for staff, students and parents who sheltered in-place during the night of January 28. DPS personnel continually monitored road conditions, provided information to GDOT, and provided security and transportation to citizens needing to reunite with their abandoned vehicles.

Based on weather conditions, the Georgia National Guard (NG) began mobilizing vehicles and personnel for potential missions. The Joint Forces Headquarters (JFHQ) in Marietta had issued guidance to units in armories in the metro Atlanta area to be prepared to move at the direction of the Governor. During the evening of January 28, the Governor activated the Georgia NG in an effort to assist local and state authorities dealing with issues such as stranded school buses of children and citizens in need of help on icy streets. The Georgia NG mobilized 50 Humvees and 2 cargo trucks with 203 personnel who were on state active duty. GEMA assigned the Georgia NG 10 separate missions that involved assisting motorists with movement to shelters, providing blankets, water, food and fuel to stranded motorists, providing logistics transport for medical supplies, clearing travel lanes, conducting reconnaissance of routes around the area, and providing a presence to augment local

authorities. Over the next few days, the Georgia NG continued to conduct these missions and to provide assistance to local and state authorities and private citizens.

The Georgia Department of Natural Resources was also actively engaged during the event in responding to the impact of the storm on Georgia's citizens. DNR directed their Law Enforcement Division Captains to offer assistance to sheriffs, local EMAs, and local police departments, as needed, as early as Monday. The State Parks Division assigned some of their law enforcement trained personnel to be on standby for a possible response as well.

In the first 24 hours of the event, DNR responded to metro interstates and assisted stranded motorists by delivering food, water and blankets, while also opening two state parks as temporary shelters for these motorists. DNR assisted with the security of schools that were sheltering students and helped remove students stranded on school buses. They also provided food and drinks to these students. DNR further assisted other agencies, such as the Georgia Forestry Commission, as their joint staffs coordinated on the dispersal of food, water, and blankets, delivery of critical medical supplies to area hospitals, and providing assistance to local Law Enforcement agencies. In addition, the department assisted by clearing roadways, towing stuck vehicles and providing the search and rescue of a dementia patient. 65 DNR Rangers checked 886 vehicles and 11 school buses and assisted 56 children. One hundred eighty vehicles either were towed or their occupants transported to shelter. In all, 845.5 staff hours were worked by the department.

At 11:00 p.m. Tuesday evening, the Governor held a news conference on the storm and the state's response. Participants in the news conference included GDOT Commissioner Keith Golden, DPS Commissioner Colonel Mark McDonough, DOD Deputy Adjutant General Joe Garrard and GEMA Director Charley English. Also attending and participating was Atlanta Mayor Kasim Reed. This was followed up with another news conference on Wednesday at 11:30 a.m. with these same key leaders.

At 12:52 p.m. on Wednesday the National Weather Service announced that the Winter Storm Warning would expire at 1:00 p.m. that day statewide. However, the State of Emergency remained in effect for all of Georgia. GEMA requested that travel be limited to emergencies during this time. On Wednesday, 16 trucks/spreaders and 2 mechanics arrived from various GDOT districts to work in metro Atlanta.

On Thursday, January 30 at 1:30 p.m. another news conference was held by the Governor to continue updating the public on the state's response to the severe weather. It included GDOT Commissioner Keith Golden, DPS Commissioner Colonel Mark McDonough, DOD Adjutant General Jim Butterworth, DNR Commissioner Mark Williams and GEMA Director Charley English.

On February 3 a news conference was held by the Governor to announce the formation of the Severe Winter Weather Warning and Preparedness Task Force, calling for a report within 60 days reviewing the events of the storm of January 26-30. He called for recommendations for future storm preparedness, as well as an internal review of the state's action during the most recent weather event.

## **B. Action Plan**

During the week of February 3, Governor Deal convened a number of meetings with agency heads involved in emergency planning and execution. As a result of those meetings, an Action Plan has been completed that is being readied for full implementation.

**1. Weather Alert System:** Similar to the current Amber Alert system, a weather alert system will send messages regarding severe weather conditions to the public via cell phone. GEMA has an existing contract with the Emergency Management Network (EMNet), a procured hardware and software solution that has the capability to transmit messages similar to the Amber Alert process. GEMA is in full compliance with and has been issued a digital certificate to gain access to the Integrated Public Alert and Warning Systems Open Platform for Emergency Networks. This capacity has been tested and a careful analysis conducted by the vendor to be certain it provides the state of Georgia the necessary capabilities needed in times of emergency. This was successfully demonstrated by multiple wireless emergency alerts sent to cell phones in impacted counties during the most recent winter storm event on February 12 and 13.

**2. Weather Advisory Group:** Consultation between meteorologists from Atlanta's four major network affiliates and the National Weather Service will help officials make the most informed and timely decisions during storm events. Contact information has been provided to GEMA by these meteorologists (including their alternates) so they can be reached to schedule conference calls in the event of expected severe weather. The Weather Advisory Group was activated before the severe winter weather event of February 10-13, and consulted with GEMA throughout the storm to discuss the most current weather models and predictions. GEMA will consult continuously with these local meteorologists on evolving weather forecasts.

**3. Notification of School Superintendents:** A key concern and high priority is the safety and security of Georgia's school children. Georgia's Action Plan will include a fail-safe measure to ensure early communication with school superintendents and their staff. In coordination with the Georgia School Superintendents Association (GSSA), GEMA completed an email database of all 180 Georgia school superintendents. An example of how this valuable database was used occurred on February 5, when GEMA sent an email to superintendents in affected counties notifying them of a "fast evolving weather event." It is critical that GEMA continues to coordinate with the GSSA, the Weather Advisory Group, and other subject matter experts to ensure superintendents receive the most up-to-date weather forecast information as they determine the need for school closings.

**4. The Ready Georgia Application:** The *Ready Georgia* mobile app, created by the Georgia Emergency Management Agency and the Georgia Department of Public Health, is an interactive tool that assists Georgians in preparing for emergencies. The state will update the app with available shelters, alternative transportation routes and other emergency-related information. To expand the app's capability, GEMA has consulted with the *Ready Georgia* app

contractor as well as Georgia Tech and the Weather Channel. This effort will also include a strong marketing campaign so that the app will be of use to as many citizens as possible.

### C. Summary Recommendations from Agency Heads:

Since the storm event of January 26-30, Governor Deal, his executive team and the key agency heads (GEMA, DPS, GDOT, DOD, DNR and several other agencies) have compiled both short-term and long-term recommendations for needed actions, including the Action Plan (Paragraph B) which is continuing to be developed for full implementation.

The following is a narrative summary of these recommendations, some of which have already been used during the storm event which occurred on February 10-13. These include:

1) Legislative changes to:

- (a) Strengthen enforcement and punishment of violators of the current state law regarding commercial vehicles being equipped with tire chains or other equipment during a declared State of Emergency during inclement weather (OCGA 40-6-51)
- (b) Codify in state law GDOT Board rules governing truck traffic on metro Atlanta highways during times of inclement weather

2) It is recommended that Strike Teams be used in future inclement weather conditions. Each Strike Team would be comprised of 7 vehicles per team, and there would be 35 teams in the metro Atlanta area staged at strategic locations.

Each team would be comprised of one each of the following:

- Georgia Forestry Commission Spreader/Scraper
- Georgia Forestry Commission Pickup Truck with sand and gravel
- DOD LMV (Light multi-role vehicle)
- DNR Pickup Truck and All-Terrain Vehicle
- Motor Carrier Compliance Division Officer
- State Trooper
- DOD Hummer

Pre-positioned Strike Teams could be mobilized around specifically assigned metro areas, keeping them clear, and would provide the necessary vehicles and tow trucks to release bottlenecks on an emergency need basis.

3) It is critical that GDOT prepare now for future weather emergencies, and this will involve some significant investments to keep them in a state of readiness. The following is a summary of the most needed types of equipment and facilities:

- 5 brine production units

- 5,000 gallon steel tanker trailers
- 5,000 gallon brine storage tanks
- more salt barns/salt storage facilities
- Ice control-sprayers
- Tow plow with equipped trucks
- Bulk salt storage shed
- Ground monitoring pavement sensors
- Additional phone capacity into the Transportation Management Center

4) The state of Georgia should pursue a program of installing ground monitors at key locations to monitor road and air temperatures in an effort to determine if ice is or will be forming. These monitors would provide significant and helpful information at key locations and therefore deserve further refinement and funding. Such data would be invaluable, not only to state entities such as GDOT, but also to local officials and businesses as leaders in our communities must decide to close schools or delay openings. GDOT is also currently refining necessary technical specifications and costs associated with approximately 30 sensors that could be distributed throughout the metro Atlanta highway system.

5) During inclement weather, coordinate with the Georgia Motor Coach Operators Association, Georgia Motor Trucking Association and the American Trucking Association to assist in message delivery to commercial vehicle operators in the region.

6) During threatening weather, the state should maximize its efforts to establish a Joint Information Center (JIC) with representatives from participating state agencies. This will allow for the development and broadcasting of consistent, coordinated messages to the public across both commercial and social media platforms, including Facebook, Twitter and Instagram.

7) Work closely with the Outdoor Advertising Association of Georgia to use electronic billboards to advise the driving public during weather watches, advisories and warnings and to ensure the most effective communication throughout.

8) Contact Georgia's counterparts in Nashville, Birmingham and Dallas/Fort Worth to learn from their experiences with comparable weather and similar demographics.

9) To enable emergency personnel to gain access when needed, explore the possibility of installing small (15 feet) sections of removable barriers in place of existing concrete walls at certain points along the interstate system.

10) Evaluate the use and efficiency of CB radio transceivers with linear amplifiers being installed at DPS headquarters and metro area weigh stations to communicate with vehicle operators during inclement weather.

- 11) Evaluate the purchase of low power AM transmitters to be installed at DPS headquarters and metro area weigh stations to provide vehicle operators with information during inclement weather.
- 12) Pre-record PSAs to be broadcast over AM transmitters and CB radios to advise vehicle operators of road closures and limited access.
- 13) Coordinate with GDOT to ensure that traffic advisory signs provide relevant information to vehicle operators during inclement weather. Additionally, request the installation of signs notifying motorists to tune in to designated AM radio frequencies for instructions during inclement weather.
- 14) During the winter season, prepare for pretreatment by keeping steel tankers full of fresh product that is ready for use.
- 15) The Motor Carrier Compliance Division of DPS should undertake periodic, concentrated patrols to enforce commercial vehicle travel restrictions inside the I-285 Perimeter.
- 16) The DPS should maintain its own Command Center to provide an area for their command personnel, housing of equipment and supplies, and a staging area for law enforcement operational personnel.
- 17) Personnel from outside the metro area may require accommodations during protracted weather events. In-house facilities need to be designated or arrangements made with vendors so that accommodations will be available for personnel in times of storm events.
- 18) In coordination with GEMA, DPS and DOD need to maintain a stockpile of water, MREs, snack foods, blankets, etc., for issuance as needed. Perishable items need to be rotated prior to expiration.
- 19) The state, coordinated by GEMA, should work with local governments to identify and inventory potential large distribution centers to serve as staging areas for resources, vehicles and personnel. Furthermore, the state should work with the American Red Cross and local governments to identify additional facilities that could shelter individuals, which should include police stations, fire stations, recreation centers and libraries, among others.
- 20) All agencies should review their roles found in the Snow and Ice Plan created in 2011.
- 21) Continue regularly scheduled meetings with local EMA directors. Exercises will be valuable training experiences for all participants.

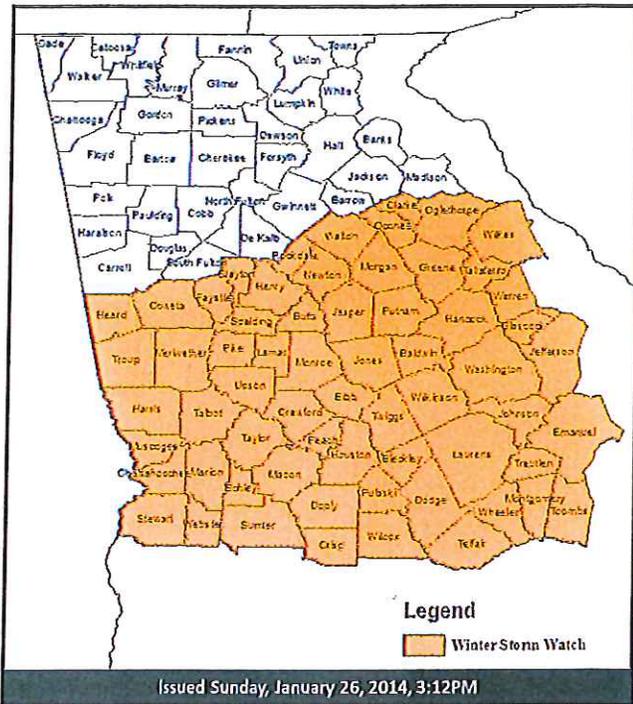


Figure 1. Winter Storm Watch issued Sunday, January 26 at 3:12 PM



Figure 2. Winter Storm Watch issued Monday, January 27 at 4:53 AM

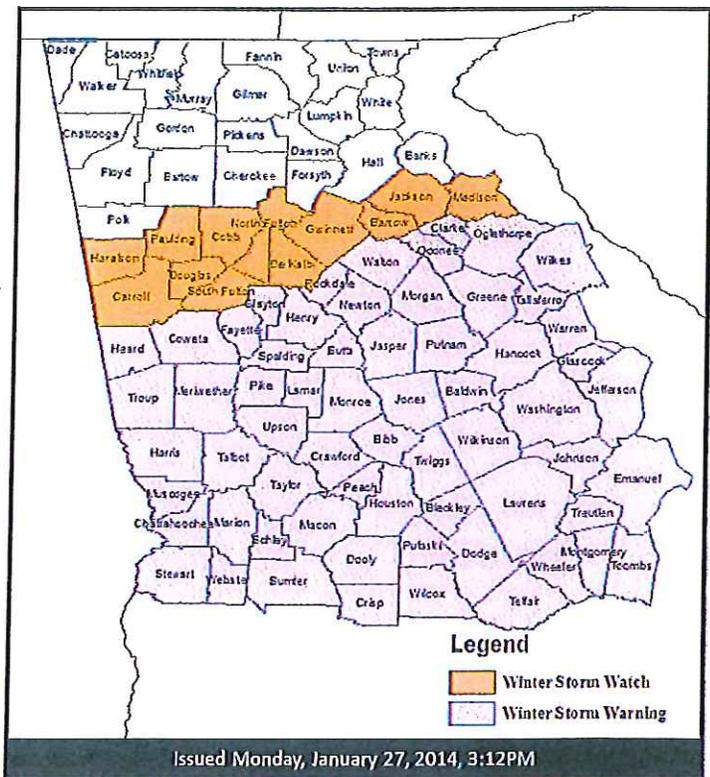


Figure 3. Winter Storm Watch/Warning issued Monday, January 27 at 3:12 PM

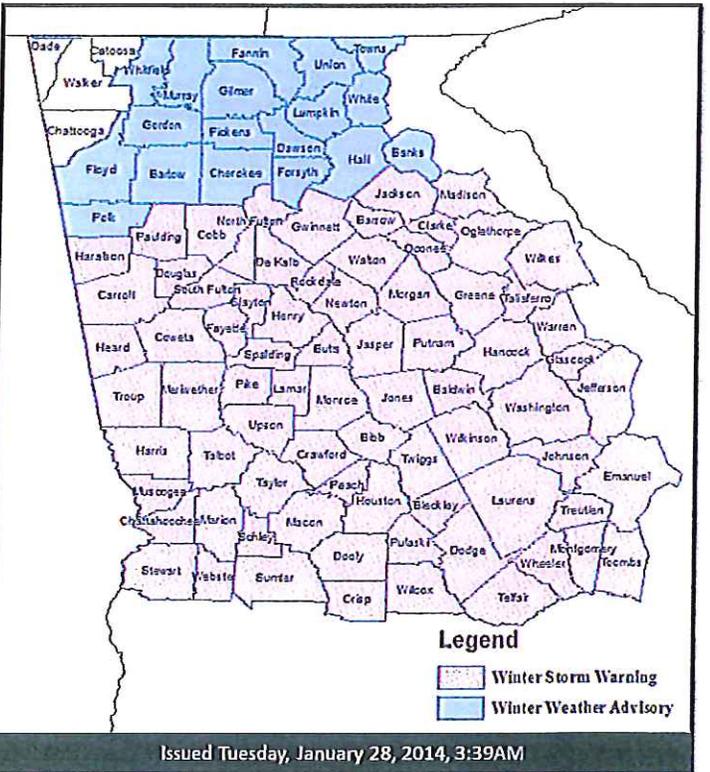


Figure 4. Winter Storm Warning/Winter Weather Advisory issued Tuesday, January 28 at 3:39 AM

## **APPENDIX D**

### **Executive Order Establishing the Emergency Operation Command**



# THE STATE OF GEORGIA

## EXECUTIVE ORDER

BY THE GOVERNOR:

**WHEREAS:** The State of Georgia recognizes the importance of safeguarding the citizens of this State against the effects of natural disasters, emergencies, and the possibility of a threat or act of terrorism; and

**WHEREAS:** The coordination and control of the State's response to such events falls under the immediate authority and leadership of the Director of Homeland Security and Emergency Management ("the Director"); and

**WHEREAS:** It is essential that a unified command at the agency head level be established to coordinate the response to such events among the various participating units of state government to ensure that the State fulfills its appropriate role in a manner consistent with the best interests of the citizens of the State of Georgia; and

**WHEREAS:** No existing organizational unit of state government is presently charged with the responsibility of such a unified command operation.

**NOW, THEREFORE, PURSUANT TO THE AUTHORITY VESTED IN ME AS GOVERNOR OF THE STATE OF GEORGIA, IT IS HEREBY**

**ORDERED:** That there is hereby created and established the Emergency Operation Command, which shall operate as the central state governmental office for the protection of public safety, facilitation of law enforcement and coordination of state personnel in response to the effects of natural disasters, emergencies, and threats or acts of terrorism, which will be allocated and dispatched as necessary in response to such events.

**IT IS FURTHER**

**ORDERED:** That the Emergency Operation Command, as needed or otherwise required by the Director, report to the Governor, and shall consist of the following individuals: the Director of the Georgia Bureau of Investigation, the Commissioner of the Department of Public Safety, the Adjutant General, and such other persons as may be directed by the Governor or Director and as may be required by the nature and magnitude of the event. The Emergency Operation Command shall be activated at the discretion of the Director in consultation with the Governor. The Emergency Operation Command shall report to the Governor through the Director for all command decisions with the Governor having the final authority.

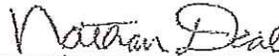
IT IS FURTHER

**ORDERED:** That all State Boards, Departments, Agencies, Associations, Institutions, and Authorities shall cooperate fully with the Emergency Operation Command and the Director by providing any personnel, equipment, information, or any other assistance that may be requested by the Governor, the Director, or the Emergency Operation Command in order to coordinate all response efforts consistent with this Order and pursuant to further direction of the Governor.

IT IS FURTHER

**ORDERED:** That the Emergency Operation Command, by and through the Director, may enter into those agreements and memoranda of understanding as are necessary and proper to effectuate the actions called for pursuant to this Order.

This 24<sup>th</sup> day of January, 2011.



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GOVERNOR