

OFFICE OF THE GOVERNOR  
**COMMONWEALTH OF MASSACHUSETTS**  
STATE HOUSE • BOSTON, MA 02133  
(617) 725-4000

**CHARLES D. BAKER**  
GOVERNOR

**KARYN E. POLITO**  
LIEUTENANT GOVERNOR

March 27, 2015

The President  
The White House  
1600 Pennsylvania Avenue, N.W.  
Washington, D. C. 20500

Through: Paul F. Ford, Acting Regional Administrator  
Federal Emergency Management Agency, Region I  
99 High Street, 6<sup>th</sup> Floor  
Boston, MA 02110

Dear Mr. President:

As you are aware, the Commonwealth of Massachusetts recently experienced an unprecedented and disastrous pattern<sup>1</sup> of severe winter weather with record-breaking snowfall and persistent cold temperatures. Over a 28-day period we not only experienced ongoing significant snowfall resulting in nearly 9-feet of snow, but we also faced consistently sub-freezing temperatures across central and eastern Massachusetts. Despite our experience in dealing with harsh winter conditions, this severe winter pattern brought the Commonwealth to a virtual standstill for days at a time. Twenty-five people died. Hundreds more were injured. Our public transit system collapsed, and private sector commerce, government services and healthcare suffered severe disruptions. We acted quickly and decisively throughout the extended period, but the efforts required overwhelmed state and local capabilities. We estimate the total costs to state and local government from this year's

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<sup>1</sup> As cited in the FEMA Disaster Operations Legal Reference, Version 2.0, July 2013, page 3-38, the National Weather Service defines a weather pattern as a broad meteorological phenomenon that can result in multiple weather systems over a long period of time, extending from days to weeks.

severe winter weather pattern to be near \$400 million, which depleted snow removal budgets and left the state and its municipalities with huge unanticipated costs.

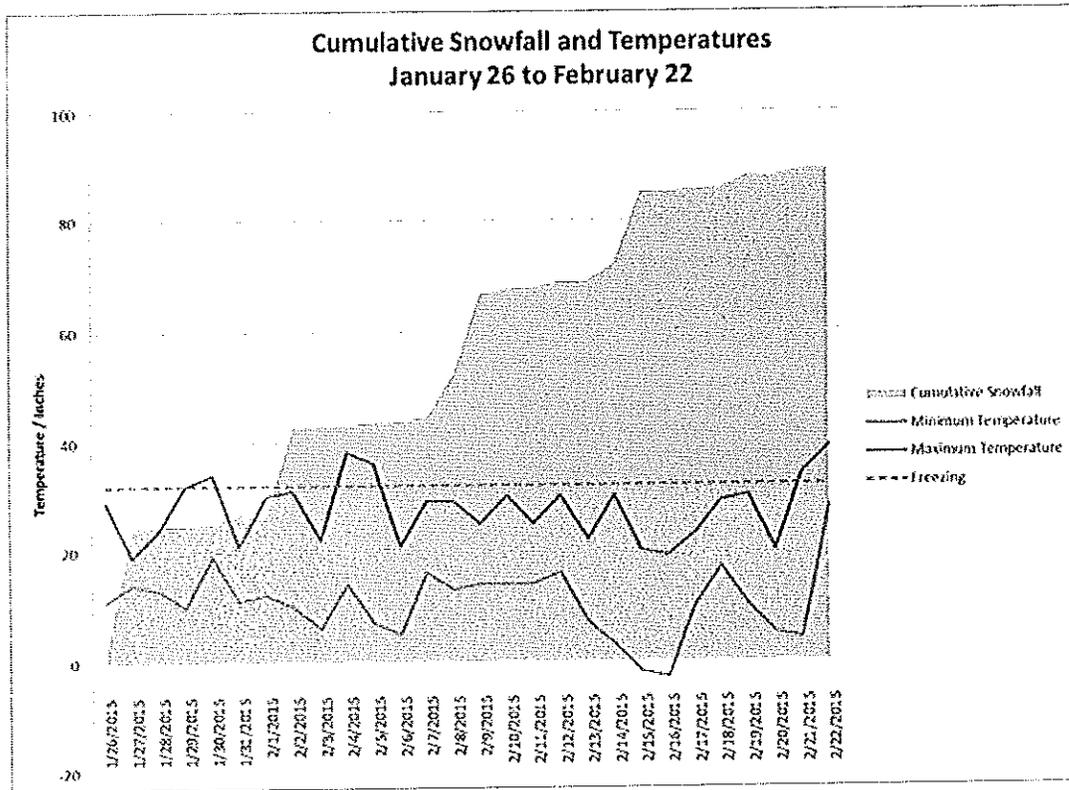
Notwithstanding the standard interpretation of FEMA policy to limit snow assistance to 48 or 72-hours after an individual storm, the Stafford Act and federal regulations allow you to determine the duration of major disaster based on the circumstances of an event and authorize snow assistance for a longer duration of time. I am confident that after reading the report that follows, you will agree that this unusual severe weather pattern which the University of Oklahoma determined to be a once-in-26,000-year event (See Attachment A) merits being treated as a single disaster of 28-days, and warrants the authorization of snow assistance for the entire incident period.

### Overview

The persistent severe winter weather pattern that caused such severe impacts began with a blizzard in late January 2015 that brought record-breaking snowfall to much of Massachusetts. Even as the initial snow clearing and removal operations were underway, the severe weather pattern brought relentless storms over four weeks that included a second, and then a third, and then a fourth period of heavy snowfall. Overall, Boston received measurable snowfall on more than half of the days in February (a record) while the National Weather Service (NWS) Taunton Office recorded measurable snowfall on 24 of 33 days between January 24 and February 25, 2015.

Under normal circumstances, some of the snow may have been melted by the sun and warming temperatures. However, extreme cold temperatures were another component of the weather pattern. In February, the average mean temperature in Boston was just 19 degrees—second only to the February of 1934—and the maximum temperature remained under 32 degrees for a record 22 of 28 days, 15 of which were in a row. These unusually cold temperatures prevented any melting between periods of significant accumulation, and the burdens from the snow increased day-after-day throughout the duration of the severe winter weather pattern.

**Graph 1: Cumulative Snow and Temperature**



We engaged in proactive and decisive actions to best position Massachusetts to recover as quickly as possible from the virtually endless snow and cold temperatures. I declared successive states of emergency, instituted a travel ban for 24 hours, and deployed the National Guard. State offices and schools were closed on a number of days; some schools were closed for as many as five consecutive days. Nevertheless, the resources necessary to respond to the impacts of this weather pattern were well beyond the capabilities of the Commonwealth, requiring us to seek out-of-state and private-sector resources from as far away as Pennsylvania and New Jersey. It has taken us many weeks to recover from this severe winter weather pattern, and in fact, our commuter rail system is not set for full service until next Monday, March 30, 2015.

Accordingly, under the provisions of Section 401 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. §§ 5121-5207 (Stafford Act), implemented by 44 CFR § 206.36 (major disaster declaration requests), and in accordance with 44 CFR §206.227 (snow assistance), as a result of cumulative impacts from this historic winter weather pattern, I respectfully request you take the following actions:

1. Issue a Major Disaster Declaration for Public Assistance for 10 counties (Barnstable, Bristol, Dukes, Essex, Middlesex, Nantucket, Norfolk, Plymouth, Suffolk and Worcester) that have verified Public Assistance costs that exceed their countywide per capita indicators. In addition,

include Snow Assistance for nine (9) counties: seven (7) (Barnstable, Bristol, Dukes, Middlesex, Plymouth, Suffolk and Worcester) which met record historical snowfall totals as maintained by the National Climactic Data Center (NCDC) and two (2) (Essex and Norfolk counties) which met FEMA's "contiguous county" criteria related to snowfall. This Major Disaster Declaration request is based on the record and near-record snowfalls during the blizzard of January 26-28 that initiated the month-long persistent weather pattern, the associated damage to public infrastructure and the costs of emergency protective measures, including snow removal. This should include authorization of the FEMA post-disaster Hazard Mitigation Grant Program (HMGP) on a statewide basis.

2. Define the incident period for this Major Disaster Declaration as January 26, 2015 through February 22, 2015 as a result of the near-catastrophic snowfall associated with the unprecedented, historic and unrelenting month-long weather pattern. As demonstrated in this letter and its enclosures, the Commonwealth experienced a severe, persistent weather pattern that triggered a four-week period of unrelenting snow and cold temperatures. The impacts of this severe winter weather pattern required extensive emergency protective measures - including snow removal operations - to protect life, health and property, and critical services for a period of time extending from January 26 through February 22. As discussed later in this letter, federal law and regulation allows you, as President, to establish an incident period that mirrors the length of the prolonged weather pattern. While we acknowledge that disaster declarations relating to snow storms are most often limited in duration—what Massachusetts experienced this winter was not merely a big blizzard at the end of January. This was, instead, a month-long weather pattern the likes of which has never before impacted our state. It was an extraordinary 28 days of mounting snow, freezing cold and massive impacts on the citizens of our state and on the public and private sectors of the Commonwealth.
3. Include as eligible costs all Category B Emergency Protective Measures – including but not limited to all costs of snow removal operations - conducted throughout the defined incident period. Because of the unprecedented impacts of the successive major snowfalls, including \$350 million in snow removal costs, I am requesting that snow removal costs incurred between January 26 through February 22 be considered eligible emergency protective measures, and as such, be reimbursed at the rate of at least 75 percent. As detailed later in this letter, federal law and regulation allows you, as President, to authorize reimbursement to the Commonwealth of at least 75 percent of all snow removal costs incurred during the entire incident period.

Below I provide more details about both the severe winter pattern itself, as well as the initial blizzard and the cumulative effects on the Commonwealth over the duration of the severe winter pattern. Additional details can be found in the Enclosures and Attachment A attached hereto and incorporated herein.

## I. Persistent and Severe Weather Pattern

Between January 26, 2015 and February 22, 2015, the Commonwealth of Massachusetts experienced an extraordinarily rare, severe winter weather pattern, which, as defined by NWS, is a meteorological phenomenon that results in multiple weather systems over a long period of time which may extend from days to weeks.<sup>2</sup> For Massachusetts, the 28-day severe weather pattern brought both periods of significant snowfall and record cold temperatures. The combined conditions resulted in snowfall amounts nearing nine feet in the majority of the affected areas and no natural melting. Please see Enclosure D-3 for additional details related to snow accumulations between January 26, 2015 and February 22, 2015.

During this severe weather pattern, the Commonwealth experienced four weeks of significant snow accumulation—including two blizzards.

- **Week 1:** The January 26-28 blizzard resulted in record snowfall totals of 36 inches and brought high winds, coastal flooding and whiteout blizzard conditions for multiple hours.
- **Week 2:** The Commonwealth received an additional 20-24 inches in the impacted areas.
- **Week 3:** The Commonwealth received an additional 29 inches of snow in the impacted areas.
- **Week 4:** The Commonwealth received an additional 20-28 in the impacted areas, with periods of strong winds and blizzard conditions.

Official NWS observation sites at Boston's Logan Airport, Blue Hills Observatory in Milton, NWS Office in Taunton, and Worcester all recorded their snowiest February and snowiest thirty-day period on record. Between January 26, 2015 and February 22, 2015, the City of Boston received 94.4 inches of snow, 38% more than its prior 30-day record of 58.8 inches which included the infamous Blizzard of 1978. As of mid-March, Boston has recorded its snowiest winter season ever; Blue Hills Observatory was less than half an inch shy of its snowiest season on record. These comparisons are particularly significant given that the records for Boston and Blue Hills go back to 1875 and 1885, respectively.<sup>3</sup> Similarly, Worcester received 94.6 inches of snow during a 30-day period, exceeding its prior monthly record (66.2 inches) by nearly 43%.

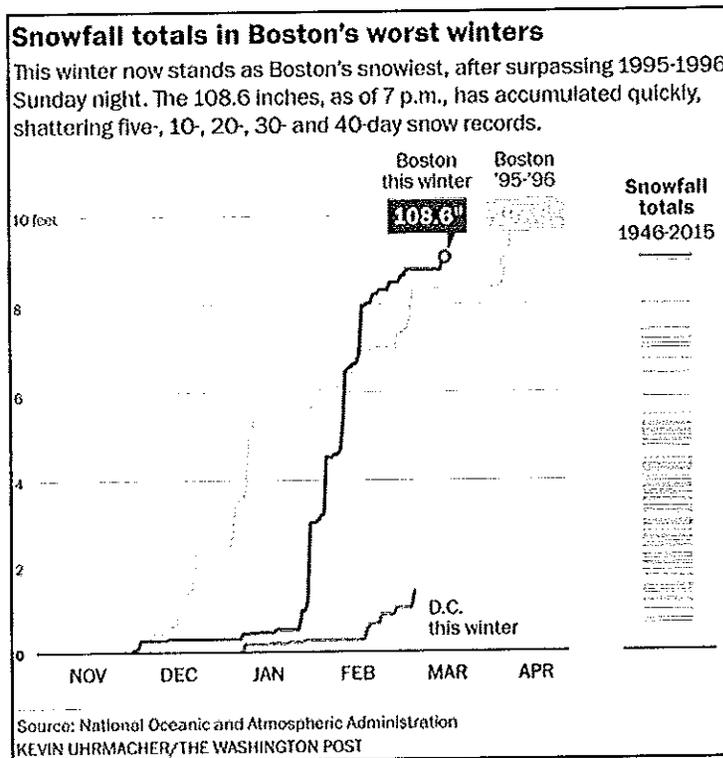
During the month of February, Boston received measurable snowfall on a record number of 16 days, including three separate days with more than 12 inches of snow. In the 33-day stretch from January 24, 2015 through February 25, 2015, the NWS Taunton Office recorded measurable snowfall on 24 days.

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<sup>2</sup> FEMA Disaster Operations Legal Reference, Version 2.0, July 2013, page 3-38

<sup>3</sup> See March 17, 2015 letter attached hereto from Robert Thompson, Meteorologist-in-Charge, NWS, Taunton, MA (Enclosure D-4).

Graph 2: Boston Snowfall Totals



Notably, the snowfall was accompanied by sustained cold temperatures throughout this period. The average mean temperature for Boston during February was 19 degrees, in second place behind the all-time record cold monthly average temperature of 17.5 degrees set in 1934. A record 22 days—15 of which were consecutive—featured *maximum* temperatures below 32 degrees.

The rarity of this severe winter weather pattern has been the subject of professional and academic analysis and studies. The NWS Taunton Office stated that this weather pattern is unprecedented and historical. A statistical analysis completed by the University of Oklahoma defines the weather pattern as anomalous and so rare that is it unlikely to be repeated for another 26,000 years.

## II. January 26-28, 2015 Blizzard

The initial snowfall from the persistent weather pattern was the January 26-28, 2015 blizzard, bringing 36 inches of snow to two counties and more than 30 inches of snow to seven counties, crushing snowfall records.

In addition, strong to damaging winds accompanied the snowfall, including sustained winds of 50 to 60 mph along the coast, with some areas experiencing hurricane force wind gusts of more than 75 mph. Nantucket experienced sustained winds of 59 mph, with gusts recorded of almost 80 mph. Each of the impacted counties experienced blizzard conditions for extended periods of time, with blowing and drifting snow and whiteout conditions. Winds also contributed to 100% of the island of Nantucket being without power for a 24-hour period of time during freezing temperatures.

This period of significant snowfall was also accompanied by areas of moderate, and pockets of major, coastal flooding along the east coast of the Commonwealth. This flooding damaged dozens of homes in coastal areas and rendered many coastal roads impassable. Across the southeastern Massachusetts coast, there was also extensive beach and dune erosion in numerous communities as well as damage to publicly-owned seawalls and other coastal infrastructure. On Nantucket, a town-owned pier with more than 100 boat slips was severely damaged. This pier is one of the busiest on the east coast of the United States during the summer and serves both commercial and recreational users. Preliminary damage estimates collected during FEMA's Preliminary Damage Assessment (PDA) process indicate that the cost of repair to the pier and associated pump-out facilities is approximately \$1.2 million dollars.

The Massachusetts Bay Transportation Authority (MBTA) was forced to suspend all services on January 27 including its subway, buses, ferry and commuter rail service. In addition, Amtrak and most regional transit systems also suspended service, and Logan Airport saw more than 1,400 flights into, and out of, the airport cancelled. The Steamship Authority suspended all ferry service to Martha's Vineyard and Nantucket on January 27 and cancelled 20 additional round trips the following day because of storm conditions. Portions of the MBTA system reopened on January 28, but operated with significant delays. Many parts of the subway system had to be replaced with bus service, contributing to significant delays across the mass transit system.

#### State Actions

In response to the extreme threat posed by these conditions, I undertook appropriate action under state law, including the following:

- Activating the State Emergency Operations Center to Level III (Full Activation);
- Declaring a statewide emergency on January 26, 2015;
- Directing the execution of the State Emergency Operations Plan in support of the statewide emergency declaration in accordance with Section 401 of the Stafford Act;
- Directing non-emergency state employees not to report to work for two days and closing state offices;
- Ordering a statewide travel ban, prohibiting non-emergency travel on all roads in the Commonwealth;
- Calling up the Massachusetts National Guard, placing 278 soldiers on active duty to support missions related to public safety and emergency protective measures;
- Issuing a waiver of certain staffing requirements for emergency medical services to allow an increased number of ambulances to operate at the paramedic level, and a waiver to authorize transport to alternate care facilities such as shelters;
- Prepositioning emergency response capabilities in critical areas across the Commonwealth, including staging high water/high access rescue vehicles in coastal communities to assist with evacuations from flood prone areas or communities experiencing flooding;

- Prepositioning high access rescue vehicles at State Police barracks throughout the Commonwealth to assist state and local law enforcement with emergency response through heavy snow and rescuing stranded motorists;
- Committing all available state resources to support state and local emergency protective measures, including snow removal;
- Issuing an Emergency Management Assistance Compact request for heavy equipment;<sup>4</sup> and
- Hiring private sector resources to support emergency protective measures, including snow removal, when state assets were overwhelmed.

Without these preventative actions and on-going responses it seems clear that the risks to health and public safety would have been much higher. We expect the likelihood of a higher incident of accidents and deaths would have followed.

### Local Actions

Approximately 122 cities and towns declared a local state of emergency, with 87 of those activating their local Emergency Operations Centers (EOCs). Many local jurisdictions, including the City of Boston, closed government offices. Thirty-six shelters were opened, many supported by American Red Cross volunteers. The extensive and varied impacts suffered by many of our communities are described in greater detail in the statement of impacts attached to this request.

### Preliminary Damage Assessment Estimates

Initial cost estimates for damage and snow removal costs related to the blizzard that began the month-long persistent weather pattern were provided to MEMA by state agencies and local communities and exceeded \$87 million. The Commonwealth partnered with FEMA to conduct follow-on, joint Preliminary Damage Assessments (PDAs) which verified and validated over \$35 million worth of eligible PDA and snow assistance costs, more than triple the FEMA statewide PDA cost threshold of approximately \$9.2 million.<sup>5</sup>

Joint FEMA/State preliminary damage assessments were conducted in all ten counties included in this declaration request. More than 87 percent (\$30.7 million) of the verified PDA costs were for Category B Emergency Protective measures. The majority of these costs are directly related to snow removal. Additionally, 11 percent (\$3.9 million) of PDA estimates were for Category G (Parks, Recreation and Other) damages, which include verified damage estimates for coastal infrastructure such as seawalls and piers. Additional cost estimates were verified for damages in PDA Categories C (Roads and Bridges), Category E (Buildings and Equipment) and Category F (Utilities) as detailed in Enclosure B (Estimated Stafford Act Requirements for Public Assistance).

Detailed PDA documents are included as Enclosures B, C and D. In addition, a more comprehensive statement of impacts is attached hereto and incorporated herein (see Attachment A).

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<sup>4</sup> This request was subsequently cancelled when private sector assets were available to address the resource needs.

<sup>5</sup> FEMA stopped validating and verifying reported costs once the Commonwealth was satisfied that state and county PA cost thresholds were met or exceeded. The actual total eligible costs are expected to be significantly more than the \$35 million validated through the PDA process.

I have determined that this incident was of such severity and magnitude that effective response was beyond the capabilities of the Commonwealth and affected local governments, and that supplementary federal assistance is necessary.

### **III. Compounding Impacts Resulting from Weather Pattern and Associated Ensuing Significant Snowfall Accumulations**

The weather pattern continued beyond January 28, bringing significant snow accumulation and cold temperatures that impacted the Commonwealth through February 22. The Commonwealth and our communities were faced with increasing challenges each week of this ongoing severe weather pattern, receiving 36 inches of total accumulation in the first week, nearly 60 inches by the second week, nearly 85 inches by the third week and approaching more than 100 inches by the fourth week.

In response to the extreme threat posed by the disaster conditions brought on by this severe weather pattern, I once again undertook appropriate action under state law, including the following:

- Activating the State Emergency Operations Center to Level III (Full Activation) which continued through February 22.
- Declaring a statewide emergency on February 9 and continuing until February 25.
- Directing the execution of the State Emergency Operations Plan in support of the statewide emergency declaration in accordance with Section 401 of the Stafford Act.
- Directing non-emergency state employees to not report to work, closing state offices.
- Ordering a call up of the Massachusetts National Guard and placing 576 soldiers on active duty to support missions related to public safety and emergency protective measures.
- Committing all available state resources to support state and local emergency protective measures, including snow removal.
- Issuing a waiver of certain staffing requirements for emergency medical services to allow an increased number of ambulances to operate at the paramedic level.
- Issuing an Emergency Management Assistance Compact request for heavy equipment.
- Issuing an Emergency Management Assistance Compact request for additional personnel to work in the State Emergency Operations Center.
- Hiring private sector resources to support emergency protective measures, including snow removal, when state assets were overwhelmed.
- Issuing waivers for hours of service to ensure prompt delivery of critical fuel commodities, including gasoline, diesel, home heating oil and propane.

Some specific impacts are described below, and a more comprehensive statement of impacts is attached hereto and incorporated herein (see Attachment A).

### Deaths and Injuries

There were 25 deaths related to this weather pattern. Eight resulted from cardiac episodes related to shoveling and similar activities, and 17 resulted from blunt force trauma ranging from pedestrians struck by motor vehicles to falls from roofs or stairs while clearing snow to slips on the ice.

In addition, more than 1,500 individuals were transported by ambulance to hospitals with storm-related injuries and illnesses.

### Resource Deployment

The compounding effects of this continuous weather pattern and its weeks of successive snowfalls exponentially expanded the extent of emergency protective measures that were necessary to mitigate the resulting health and safety impacts. By mid-February, as the snow continued to fall without any real rise in the temperature, the Commonwealth had exhausted its resources and needed to supplement in order to effectively implement emergency protective measures.

The State Emergency Operations Center was inundated with requests from more than 150 cities and towns for resources to support clearing snow and opening roads and critical transportation routes. With essentially all in-state heavy equipment resources already engaged in snow removal operations, the Commonwealth was required to issue a request for resources through the Emergency Management Assistance Compact (EMAC). As a result of this EMAC request, five states deployed a total of 151 pieces of heavy equipment from eight agencies to Massachusetts.

Assistance was received from the following:

- Maine National Guard
- New Jersey Department of Transportation
- New York City Department of Sanitation
- New York State Department of Transportation
- New York Thruway
- Pennsylvania Department of Transportation
- Pennsylvania Turnpike
- Vermont National Guard

Additionally, the Massachusetts Emergency Management Agency (MEMA) contracted with private vendors in two states to supply nearly 100 additional pieces of heavy equipment for emergency snow removal operations. The Massachusetts National Guard (MANG) also deployed heavy equipment and soldiers to support snow removal operations.<sup>6</sup>

To manage the influx of heavy equipment resources into the Commonwealth, MEMA, in collaboration with the MANG, the Massachusetts Port Authority and the Massachusetts Department of Fire Services, stood up a state staging area that operated on a 24/7 basis from

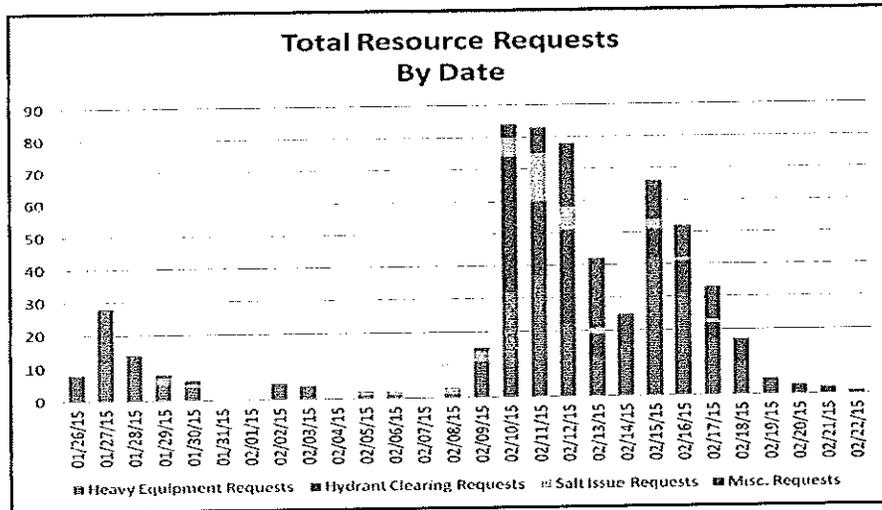
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<sup>6</sup> By February 22, the MANG removed more than 120,000 yards and 3,000 truckloads of snow, clearing 52 Bus stops, 174 miles of road, and over 4 miles of MBTA track.

February 11-22. This required a vast amount of support resources, including a Type III Incident Management Team, two mobile command posts, and numerous personnel to ensure the effective and timely deployment of equipment to the most heavily impacted areas of the Commonwealth.

There was no opportunity for the Commonwealth or its communities to recover from any period of heavy snow accumulation and be in a position to effectively respond to subsequent snowfall. As depicted in Graph 5 below, requests for state resources (heavy equipment, hydrant clearing and salt) increased significantly in response to these weeks of successive snowfalls.

**Graph 3: Total Resource Requests January 26, 2015 through February 22, 2015**



The light and fluffy consistency of the snow combined with strong winds exacerbated response and snow removal operations throughout the weather pattern as the snow was constantly blowing and drifting. In many cases this blowing and drifting of snow required areas to be repeatedly cleared by crews that struggled to maintain roads in a safe, passable condition.

The sheer volume of accumulated snow left no community with an available place to push snow; large volumes of snow were required to be lifted and hauled away—not merely pushed and plowed—as an emergency protective measure to provide emergency access and open roads, and to maintain public safety. Communities hauled snow in trucks to snow dumping locations (“snow farms”) in parks, vacant lots, and other open areas. As snow farms grew to enormous heights and exceeded capacity, many communities were forced to look to open water disposal of snow. Dumping snow in waterways is considered the last alternative for snow disposal and is very rarely invoked. Yet the conditions imposed upon the Commonwealth by the weather pattern required that this option be exercised to bring relief to communities. The Massachusetts Department of Environmental Protection (MassDEP) coordinated emergency requests for open water disposal of snow. These requests also needed concurrence from the local conservation commissions, and coordination with the US Environmental Protection Agency. MassDEP continues to perform

ongoing inspections with local officials at snow dumping locations to assess any residual impacts from the disposal.

### Roadways and Pedestrian Routes

The unrelenting snow and non-existent melting created dangerously high snowbanks along roadways and pedestrian routes that greatly inhibited line of sight and afforded little to no room for snow to be plowed from roadways. Each significant snow accumulation further narrowed streets and roadways, rendering many of them impassable or nearly impassible for days at a time. Many urban areas were forced to convert streets narrowed by snow from two-way traffic to one-way travel.

Sidewalks and pedestrian walkways remained unplowed for days and even weeks on end, creating significant life-safety issues by forcing pedestrians to walk the narrowed roadways, and requiring them to share this space with moving cars, plows and emergency response vehicles. In fact, six pedestrians were struck and killed by snow plows or moving vehicles during this time period.

The narrowed roadways also greatly impacted the flow of traffic; indeed, the narrowed streets in the City of Boston resulted in hours-long gridlock during morning and evening commutes in the days after significant snowfall accumulations. These gridlock conditions created public safety issues as emergency vehicles were incapable of quickly navigating through traffic. In addition, there was a great impact on the economy as the workforce was not able to commute to their places of business in a timely manner. Commutes for many were increased by 400 percent, turning a typical 30-minute commute to a two-three hour process.

On-street parking was banned in many urban areas for weeks, and in areas where parking was permitted, streets were typically so narrow that parking was not feasible, as parked vehicles would block traffic. The unavailability of parking had costly impacts to local businesses and restaurants which saw a drastic decrease in business in part due to the lack of parking options for their customers.<sup>7</sup>

### Government Offices and Schools

State offices were closed for multiple days during this severe winter weather pattern. The City of Boston also closed city offices during the severe weather pattern, and kept them closed for multiple days.

The majority of school districts in the affected areas closed schools during the severe winter weather pattern, with many schools remaining closed for multiple days. Some school districts missed more than 10 days of classes as result of weather related closures. This number would have been greatly increased had it not been for the February school vacation week that fell in the middle of this prolonged weather pattern. The consequences of school closings are ongoing as school

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<sup>7</sup> A survey conducted by the Retailers Association of Massachusetts of more than 1,600 small businesses measured weather-related lost sales between January 26 and February 22, 2015. Retail and restaurant employers reported a 49% drop in sales and 14% drop in payroll costs over this time period.

districts struggle with meeting the state-mandated 180-day school year requirement as a result of having missed so many days of school.

### Public Health and Medical Services

The severe weather pattern significantly impacted the region's emergency medical services, including the ability to swiftly transport patients to hospitals. The Massachusetts Ambulance Trip Recovery Information System (MATRIS) includes reports of over 950 delayed emergency transports as a result of road and weather conditions.

This severe weather pattern also posed exceptional challenges for the Commonwealth's healthcare infrastructure. Healthcare service must operate on a 24/7 basis, and hospitals across the region expended significant amounts of money clearing snow. Although facilities did not experience a high number of power outages, difficulties with maintaining staffing levels (due to reduced transportation access), snow removal and facility damage combined for serious harm to the healthcare system.

In particular, ensuring staff - both direct clinical care givers and support staff – could travel to work was extraordinarily challenging throughout this weather pattern. The MBTA's suspended and reduced services as well as the narrowing of roads contributed to the daily commute difficulties.

In response to these challenges, hospitals, nursing homes and long-term care facilities had to take extraordinary measures to accommodate staff and meet their clinical responsibilities. These included multiple clinical shifts with associated overtime, providing taxi vouchers and other means to get into work, and on a number of occasions, finding hotel rooms for staff unable to get home.

In addition, ongoing snow removal and facility damage (e.g. broken pipes and roof damage) greatly impacted healthcare facilities. Through the use of private contractors, these facilities were able to maintain access in and out of their institutions but at great cost.

As one example, Brigham and Women's Hospital, a major teaching hospital in Boston, expended \$400,000 clearing snow and ice and saw overtime increases of \$700,000 due to the inability to bring in personnel for regular shifts. Another Boston hospital, Faulkner Hospital, spent more than \$560,000 clearing snow and ice between January 26 and February 22.

### Transportation

The Massachusetts Bay Transportation Authority (MBTA), the country's fifth largest mass transit system, provides public transit service to 176 cities and towns with a total population of nearly 5 million. The MBTA system includes a number of transit modes, including three rapid transit lines and five light rail lines, four trackless trolley lines, 13 commuter rail lines, 183 bus routes, paratransit service, and ferry service. The MBTA has a large ridership, including healthcare professionals, who rely on its services to get to and from work each day. Average weekday ridership for the entire MBTA system is approximately 1.3 million passengers.

The MBTA was forced to suspend services system-wide on three occasions as a result of this persistent weather pattern and its record cold temperatures and repeated significant snowfall.

Even when some modes of transit were able to come back online, they ran far below normal service levels for weeks while the MBTA worked to recover from the impacts of the snow and cold. Railyards were snowed in, reducing the ability to get additional rail cars in service. Switches were frozen and rendered inoperable. Roads were too narrow for buses to maneuver. Bus stops were piled with snow forcing passengers to wait on narrowed, active streets. The resources of the MBTA for clearing snow and ice from tracks, railbeds, platforms, maintenance yards, bus stops and commuter lots were significantly overwhelmed. The specialized equipment used for track clearing operations could not handle the large scale, system-wide impacts, leaving the MBTA with the need to hand shovel accumulated snow, ice and snowdrifts from more than 15 miles of track.<sup>8</sup>

In addition to accumulations of snow and ice, the record cold temperatures brought about significant equipment failures. This resulted in fewer cars on the rail lines, and failures of equipment while they were mid-service, creating public safety issues and requiring the evacuation of disabled rail cars.

The weeks of shutdowns and prolonged service reductions had significant impacts on public safety, including forcing mass transit riders into vehicles and increasing congestion on narrowed, gridlocked and often snow-covered roads, and inhibiting the ability of critical healthcare workers to travel to hospitals, nursing homes and long-term care facilities.

Attachment A details some of the delays on the various modes of transport.

To date, the MBTA has identified approximately \$40 million in projected storm costs that include labor, equipment, materials, police and supplemental bus services. Of this amount, approximately \$4.7 million is attributed to revenue loss. The full costs of the weather impacts and recovery is likely to exceed these amounts.

In addition to the impacts on the MBTA, other essential transit services were affected throughout the severe winter weather pattern. Amtrak and most regional transit systems also suspended service multiples times, and an additional 1,800 flights in and out of Logan International Airport were cancelled. The Steamship Authority, which provides ferry services to the islands of Martha's Vineyard and Nantucket, was forced to cancel nearly 50% of all scheduled routes between January 26 and February 22 (142 route cancellations of 291 scheduled routes) because of severe weather conditions.

### Essential Services

**Plum Island Sewer System:** In addition to coastal infrastructure damages, and substantial snow removal costs, the combination of extreme cold and deep snowpack also contributed to the failure of the City of Newburyport's sewer system on Plum Island. The City's air-vacuum sewer system serves hundreds of local residents. This system experienced frozen valve pits, and feet of accumulated snow blocked air vents which keep the system operational. The results were sewer

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<sup>8</sup> It took several days and more than 850 personnel and hired laborers, 325 soldiers and 140 inmates to hand-shovel the tracks and right of way.

back-ups into dozens of homes and a prohibition on the use of water for basic household needs. Residents were urged to refrain from using water, including flushing toilets, doing laundry and taking showers until the system function was restored. The system was impacted for approximately four weeks and prompted the City to place approximately 60 households into local hotels for approximately two weeks. To assist impacted residents, an information center was established and staffed by City officials as well as representatives from the American Red Cross, Massachusetts Division of Insurance, state and local public health officials, Massachusetts Department of Housing and Community Development and the Massachusetts Emergency Management Agency.

Fuel Delivery: The ability to deliver gasoline, diesel, propane and home heating oil also was impacted by this weather pattern because of road conditions and extreme cold temperatures. To ensure continued capability and capacity to deliver these critical commodities, I issued waivers to allow extended hours of service for delivery of gasoline, diesel, home heating oil and propane. These waivers were initially issued from February 8-21, 2015, but were expanded through March 7, 2015 to address the ongoing need.

Fire Systems: Numerous communities experienced a significant public safety threat when fire hydrants were repeatedly buried by snowfall and plowed snow banks. Municipalities did not have adequate resources to continually clear hydrants from snow. To mitigate any threat of untimely response to fires, the Commonwealth deployed Massachusetts National Guard soldiers into communities to clear snow from nearly 7,400 hydrants.

#### *Building Collapses*

As snow continued to fall, many structures across the impacted area began to fail under the weight of the snow. The Commonwealth has seen 268 structural collapses since February 9. The impacted facilities include homes, schools, businesses, recreational facilities and agricultural facilities such as barns.

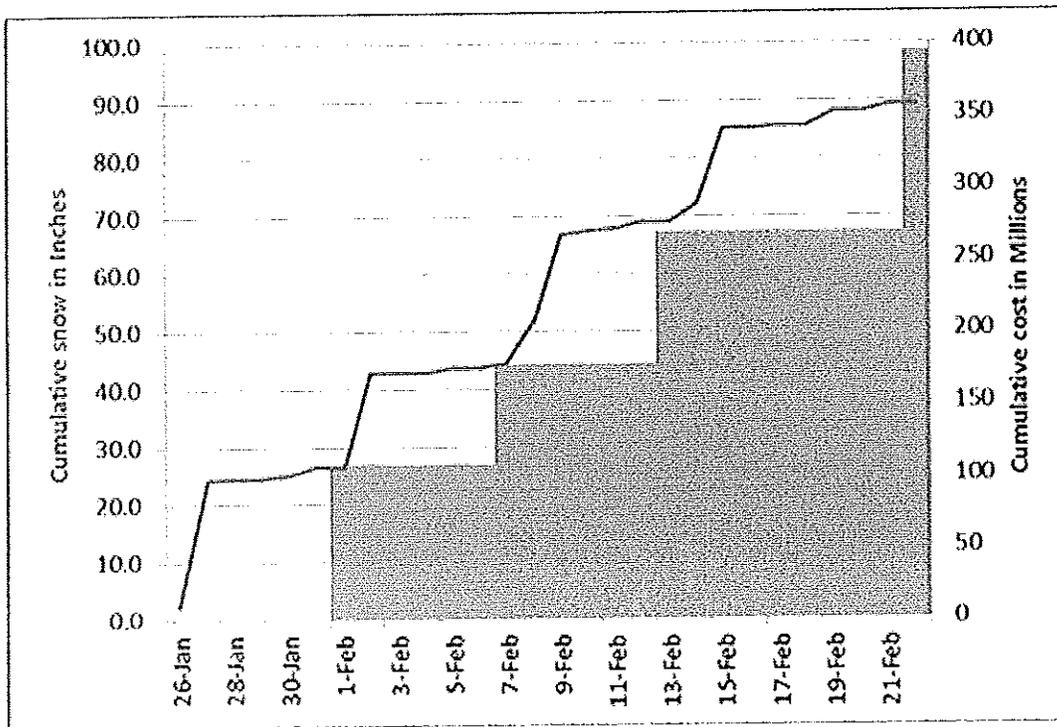
#### *Emergency Dune Restoration*

We continue to work with impacted coastal communities to determine the need for emergency dune restoration, but at this time have not been able to ascertain or quantify the level of damage to dunes. However, we request the option of emergency dune restoration as part of this declaration request to enable communities to obtain placement of temporary berms for the purposes of eliminating or lessening the threat of additional damage from a five-year event. We have confirmed that preliminary damage assessment costs captured to date and included in Enclosure B do not include any beaches that might fall under the authority of the United States Army Corps of Engineers or other federal authorities.

#### *Economic Impacts*

The financial impacts of this severe winter weather can be measured in both the additional costs associated with protecting lives and property along with the economic losses associated with the service disruptions to industry, retail and commercial businesses.

**Graph 4: Cumulative State and Local Snow Removal Costs**



The Massachusetts Municipal Association (MMA) recently conducted a survey of local snow and ice budgets versus expenditures for this winter season. 142 communities in central and eastern Massachusetts responded to the survey, reporting that they had budgeted approximately \$66 million for this winter season. These same communities reported that they had expended more than \$153 million on snow removal to date this year.

The Massachusetts Department of Transportation (MassDOT) Highway Division had budgeted \$56 million for snow and ice operation for the entire winter season. To date, MassDOT has expended more than \$164 million on snow and ice removal, hired equipment, and vehicle repairs.

On a statewide basis, cost estimates for damage to public property and emergency protective measures (including snow removal) related to the severe winter weather pattern from January 26 through February 22 were provided to MEMA by state agencies and local communities. These initial costs estimates are calculated to be nearly \$400 million.

A more comprehensive statement of impacts is attached hereto and incorporated herein (see Attachment A).

#### **IV. Governor’s Request for a Major Disaster Declaration**

Given the vast extent and unprecedented nature of impacts to the Commonwealth as a result of this significant, long-duration weather pattern, I submit to you the following three-part request.

- 1. Issue a Major Disaster Declaration for the Commonwealth Based Upon the Record and Near-Record Snowfall and Impacts Resulting from the January 26-28, 2015 Blizzard.**

Under the provisions of Section 401 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. §§ 5121-5207 (Stafford Act), and implemented by 44 CFR § 206.36 (major disaster declaration requests), and in accordance with 44 CFR §206.227 (snow assistance), as a result of cumulative impacts from winter storms and snowstorms, I request that you issue a major disaster declaration for the Commonwealth of Massachusetts on the basis of the record snowfall and its impacts during the January 26-28, 2015 blizzard.

Specifically, I am requesting Public Assistance (PA), Categories A through G, for the following ten Massachusetts counties that have verified Public Assistance costs that exceed their countywide per capita indicators:

- Barnstable
- Bristol
- Dukes
- Essex
- Middlesex
- Nantucket
- Norfolk
- Plymouth
- Suffolk
- Worcester

This would include authorizing at least 75 percent reimbursement for all ten counties for emergency protective measures, as well public infrastructure that was damaged or destroyed.

I am also requesting Snow Assistance for the following nine counties that have met record historical snowfall totals as maintained by the National Climactic Data Center (NCDC) or have met FEMA's "contiguous county" criteria as defined in DAP 9523.1 related to snowfall:

- Barnstable (core with 2-day record snowfall)
- Bristol (core with 1-day record snowfall)
- Dukes (core with 2-day record snowfall)
- Essex (contiguous with Suffolk County)
- Middlesex (core with 2-day record snowfall)
- Norfolk (contiguous with Suffolk and Plymouth counties)
- Plymouth (core with 2-day record snowfall)
- Suffolk (core with 2-day record snowfall)
- Worcester (core with 2-day record snowfall)

This would include authorizing at least 75 percent reimbursement of snow removal costs incurred as emergency protective measures.

In addition, I am requesting that post-disaster Hazard Mitigation Grant Program (HMGP) funding be made available on a statewide basis.

I have determined that this incident was of such severity and magnitude that effective response was beyond the capabilities of the Commonwealth and affected local governments and that supplementary federal assistance is necessary.

**2. Define the Incident Period for this Major Disaster Declaration as January 26, 2015 through February 22, 2015.**

In Title I, § 101(a)(2) of the Stafford Act, *as Amended*, Congress declared that “because disasters often disrupt the normal functioning of governments and communities, and adversely affect individuals and families with great severity; special measures, designed to assist the efforts of the affected States in expediting the rendering of aid, assistance, and emergency services ... are necessary.” Congress further stated its intent “by this Act, to provide an orderly and continuing means of assistance by the Federal Government to State and local governments in carrying out their responsibilities to alleviate the suffering and damage which result from such disasters by – (1) revising and broadening the scope of existing disaster relief programs; ... and (6) providing Federal assistance programs for both public and private losses sustained in disasters.” Stafford Act, § 101(b)(1),(6)

Because of the catastrophic impacts suffered by the Commonwealth as a result of a pattern of severe winter weather, I request that you grant a major disaster declaration with an incident period from January 26 through February 22, 2015. As demonstrated in Sections I and III of this letter and its enclosures, the Commonwealth experienced a severe, persistent weather pattern that triggered a 4-week period of unrelenting, and seemingly unending snow, in what one researcher has determined was a 1-in-26,000-year event. The snowfall accumulation, compounded by freezing temperatures which did not allow for any melting of snow, required extensive emergency protective measures—including snow removal operations—to protect life, health and property, and critical services. The implementation of emergency protective measures began on January 26 and continued through at least February 22, when the Commonwealth determined conditions allowed for the dismissal of all EMAC assets.

As President you have sole authority under the Stafford Act to issue major disaster declarations. This extended incident period is also consistent with federal regulations regarding snow assistance which state that “federal assistance will be provided for all costs eligible under 44 CFR 206.225 for a specified period of time which will be determined by the circumstances of the event.” 44 CFR § 206.227 (emphasis added). My request for disaster relief for the entire disaster period does not conflict with FEMA Policy (DAP 9523.1 - Snow Assistance and Severe Winter Storm Policy) which recognizes the criteria within the policy are “solely for use by FEMA in making recommendations to the President and in no manner restricts the ability of the President, in his discretion, to declare . . . major disasters pursuant to the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended.” The circumstances surrounding this weather event as described in this request provide ample grounds for the requested incident/snow assistance period even if FEMA considers itself bound to recommend to you a shorter period under its policy.

**3. Include as Eligible Costs All Category B Emergency Protective Measures – Including but Not Limited to All Snow Removal Operations - Conducted throughout the Defined Incident Period.**

Federal law and regulation allows the President to establish an incident period that mirrors the length of the prolonged weather pattern, and to authorize reimbursement to the Commonwealth of at least 75 percent of all snow removal costs incurred during the entire incident period. Because of the unprecedented impacts of the successive major snowfalls, I am requesting that the \$350 million in snow removal costs incurred during the entire incident period be considered eligible emergency protective measures, and as such, be reimbursed at the rate of at least 75 percent.

More specifically, I am requesting that eligible Category B emergency protective measure work include activities related to snow removal, establishment and operation of snow dumps/snow farms, de-icing, salting and sanding of roads and other facilities essential to eliminate or lessen immediate threats to life, public health, and safety. I am also requesting that other prudent actions and activities undertaken by the Commonwealth and local government to eliminate or reduce an immediate threat of significant damage to improved public (or private) property through cost-effective measures be considered eligible. This would include the cost of removing accumulated snow from roofs of applicant-owned and eligible facilities to eliminate or reduce the immediate threat to life, public health and safety, and costs associated with sheltering of residents, search and rescue operations and other snow related public safety operations such as snow clearing of fire hydrants.

The Commonwealth understands the intention of FEMA's Snow Assistance and Severe Winter Storm Disaster Assistance Policy (DAP) 9523.1 which establishes a 48 hour period (with an opportunity for expansion to 72 hours) for snow assistance. In typical severe winter storms, even with record-breaking snowfall amounts, states and their municipalities can and should reasonably be expected to complete snow removal operations and open their roadways within 48 hours, even when state and local capacity is overwhelmed. In fact, Massachusetts was issued two major disaster declarations with snow assistance for record breaking snow events, one in 2011 and one in 2013. For these events, the application of a 48-hour period for snow removal operations was appropriate and reasonable. However, this event is unlike those previous incidents or any other. It is quite different, distinct and unique. This unique and unprecedented event, which included record cold temperatures and persistent, significant snow accumulation that dumped nine feet of snow, severely crippled essential services, including transportation networks, for many weeks. With each significant snow accumulation, extensive emergency protective measures, including snow removal, had to be implemented. Simply plowing and pushing the snow was not an option. The Commonwealth's response was forward-leaning, aggressive and extremely costly, and requires a broader, more comprehensive response from the federal government than is contemplated in FEMA's Snow Assistance Policy. Quite simply, allowing only a 48-hour, or 72-hour period of snow

assistance for an event that involved 4-weeks of record-setting accumulating snow would not begin to provide the extent of federal disaster assistance this Commonwealth requires.<sup>9</sup>

Moreover, as noted above, the policy provides that its criteria are “solely for use by FEMA in making recommendations to the President and in no manner restricts the ability of the President, in his discretion, to declare . . . major disasters pursuant to the Stafford Disaster Relief and Emergency Assistance Act, as amended.” Given the unprecedented and historic nature of this weather pattern and its impacts on the Commonwealth—this was an event that will happen approximately once every 26,000 years—the requested assistance, including reimbursement for at least 75% of all snow removal costs during the 4-week incident period, is reasonable, appropriate, and necessary under these extraordinary circumstances.

As detailed in this letter, our snow removal efforts were necessary to save lives and protect the public health and safety. Accordingly, they qualify as emergency protective measures. Emergency protective measures are defined as the work necessary to meet an immediate threat to life and property and essential to saving lives and protecting public health and safety, and to lessen or avert the threat of catastrophe. In fact, 44 CFR § 206.225(a)(1) specifically states “emergency protective measures to save lives, protect public health and safety, and to protect improved property are eligible.” 44 CFR § 206.225(a)(3) goes on further to state that, “In order to be eligible, emergency protective measures must: (i) eliminate or lessen immediate threats to live, public health or safety; or (ii) eliminate or lessen immediate threats of significant additional damage to improved public or private property through measures which are cost effective.” Through this severe weather pattern, which brought a record-breaking snow period unlike any the Commonwealth has experienced in the past, or expects to experience again in the future, emergency protective measures in the form of snow removal and hauling were critically necessary to eliminate or lessen the immediate public safety threats occasioned by the compounded snowfall accumulations and cold temperatures. These emergency protective measures could not be effectively completed in a 48- or even 72-hour period of time, as the impacts were so severe that recovery between significant snow accumulations was nonexistent.

#### **V. Commonwealth’s Ability to Respond to and Recover From Damages Caused by Severe Winter Weather**

While the Commonwealth has been fortunate that no major disasters have occurred in the past 12 months, on-going disaster recovery efforts at the local and State level continue for a significant number of open and active federal disaster declarations. Since January 1, 2011 the following federal major disasters and emergencies have been declared in Massachusetts:

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<sup>9</sup> It is also worth noting that FEMA is actively working with the National Emergency Management Association (NEMA) to review and potentially revise its current Snow Assistance Policy (FEMA DAP 9523.1) which was published in 2009. These discussions between FEMA and NEMA were initiated last fall and, may be moving towards policy revisions and a pilot program next winter.

- FEMA-1959-DR designated Berkshire, Essex, Hampshire, Middlesex, Norfolk, and Suffolk Counties for the Public Assistance Program, Categories A and B. These counties suffered over \$34.5 million dollars in damage as a result of a severe winter storm.
- FEMA-1994-DR designated Hampden County and the Towns of Sturbridge and Southbridge for the Public Assistance Program as a result of damage from tornadoes. These counties suffered over \$49.2 million dollars in damages.
- FEMA-4028-DR designated Barnstable, Berkshire, Bristol, Dukes, Franklin, Hampden, Hampshire, Norfolk and Plymouth Counties for the Public Assistance Program, Categories A-G. These counties suffered over \$35.6 million dollars in damage as a result of Tropical Storm Irene.
- FEMA-4051-DR designated Berkshire, Franklin, Hampden, Hampshire, Middlesex and Worcester Counties for the Public Assistance Program. These counties suffered over \$94.9 million dollars in damage as a result of a severe winter storm in October 2011.
- FEMA-4097-DR designated Barnstable, Bristol, Dukes, Nantucket, Plymouth and Suffolk Counties for the Public Assistance Program. These counties suffered over \$12.4 million dollars in damages as a result of the devastation caused by Hurricane Sandy in October 2012. As a result of an on-going FEMA internal review of projects from this disaster, approximately \$2.5 million in awarded funds are awaiting reimbursement. This internal review impacts approximately 58 local communities and agencies.
- FEMA-3362-EM designated Suffolk, Middlesex, Norfolk and Bristol Counties for emergency work costs as part of the Public Assistance Program. Communities and State agencies in these counties suffered more than \$8.3M in emergency costs associated with the 2013 Boston Marathon bombings.
- FEMA-4110-DR designated all fourteen (14) counties in Massachusetts for the Public Assistance Program. These counties suffered more than \$54.8 million in damages as a result of the severe winter storm, snowstorm and flooding in the February 2013 Blizzard. As a result of an on-going FEMA internal review of projects from this disaster, approximately \$10.1 million in awarded funds are awaiting reimbursement. This internal review impacts approximately 98 local communities and agencies.

The State and local cost share for these seven declared disasters and emergencies since 2011 exceeds \$72 million dollars, stretching state and local resources to the breaking point. Based upon the Commonwealth's experience responding to these past disasters and current budgetary constraints on state and local governments, I am of the opinion that without federal disaster assistance, Massachusetts does not have the resources required to adequately respond to and recover from the impacts of this severe winter weather.

In further support of this opinion, on February 3, 2015 Secretary Kristen Lepore of the Commonwealth's Executive Office for Administration and Finance identified a significant budget shortfall of \$768 million for Fiscal Year 2015, which ends on June 30, 2015. At my direction, she

implemented certain enhanced fiscal controls to close the budget gap, including a hiring freeze for Executive Branch agencies, a reduction in administrative expenses and one-time use of capital gains revenues that were scheduled to deposit into our stabilization fund. Secretary Lepore also identified a projected \$1.8 billion budget shortfall for Fiscal Year 2016, beginning July 1, 2015, which we addressed in a budget proposal filed on March 4, 2015. Against this backdrop, I respectfully request that you exercise your discretion and decision making authority to declare a major disaster for the Commonwealth of Massachusetts that includes an extended incident period and FEMA snow assistance.

I have designated Kurt N. Schwartz as the State Coordinating Officer for this request. He will work with the Federal Emergency Management Agency in continued damage assessments and write-ups and may provide further information or justification on my behalf.

I thank you for the support we have received from the Federal Emergency Management Agency throughout this challenging period, and for your consideration of this request for a Major Disaster Declaration.

Sincerely,



Charles D. Baker  
Governor

cc: Daniel Bennett, Secretary, Massachusetts Executive Office of Public Safety and Security  
Kurt N. Schwartz, Director, Massachusetts Emergency Management Agency

Enclosures:

- FEMA Form 010-0-13, Request for Presidential Disaster Declaration
- Enclosure B: Public Assistance, Final PDA Matrix
- Enclosure C: Requirements for Other Federal Agency Programs
- Enclosure D: Historic and Current Snowfall Data
- Enclosure D-1: National Weather Service Taunton – Event Summary for Jan. 26-28 Blizzard
- Enclosure D-2: National Climatic Data Center (NCDC) - Historic Snowfall Data for 1-, 2- & 3-Day Events
- Enclosure D-3: Cumulative Snowfall Total Matrix January 26, 2015 – February 22, 2015
- Enclosure D-4: National Weather Service Taunton Memo Regarding Severe Weather Pattern

Attachments:

- Attachment A: 2015 Severe Winter Weather Pattern Impacts - Supplemental Information