


City of Alexandria, Virginia

MEMORANDUM

DATE: JUNE 11, 2010

TO: THE HONORABLE MAYOR AND MEMBERS OF COUNCIL

FROM: JAMES K. HARTMANN, CITY MANAGER 

SUBJECT: AFTER-ACTION REVIEW OF 2009/2010 SNOW EMERGENCIES AND IMPLEMENTATION PLAN FOR 2010/2011 WINTER PREPAREDNESS

ISSUE: Review of City after-action report on the 2009/2010 snow emergencies and implementation plan for 2010/2011 winter preparedness.

RECOMMENDATION: That City Council receive this report.

BACKGROUND: Between December 19, 2009, and February 10, 2010, the City received approximately 54.9 inches of snow, including 20 inches in 24 hours on December 19, 2009, and two back-to-back storms of 17.8 inches on February 5 and 6 and 10.8 inches on February 10. These weather emergencies placed extreme stress on the City's resources, which are typically sufficient for an average annual accumulation of 15 inches and spread out over several events in the 4-to-8 inch range. The Blizzards of 2010 – coupled with a prolonged stretch of cold weather – created severe mobility challenges across the region with major disruptions to roads and transit. All City services were impacted and schools were closed for 12 days in response to the February storms. The National Weather Service ultimately declared the winter of 2009/2010 the snowiest on record; a total of 56.1 inches fell at Reagan National Airport over the winter of 2009/2010, the most since 1898/1899.¹

In an effort to continually improve the City's response to snow and other major weather-related emergencies, the City Manager in February directed staff to conduct an after-action review of the City's response to the Blizzards of 2009/2010. This review process involved 14 departments and was intended to focus on lessons learned and action items for implementation. The review identified items of high priority which are being undertaken prior to the 2010/2011 winter season and others that will require additional resources such as funding or staff and thus will take longer to implement. The City's internal review also incorporated recommendations from a Metropolitan Washington Council of Governments Leadership Forum on Snow Response, with an emphasis on regional coordination.

¹ National Weather Service Precipitation Summary and Temperature Observations for Washington, DC and Baltimore, MD area, <http://www.nws.noaa.gov/os/presto/2010febcover.pdf>.

This memo includes a recap of the City's snow response, an overview of the City review process, updates on staff's after-action report and an implementation plan for use prior to the 2010/2011 winter season. Attachment 1 is a comprehensive work plan outlining staff's 61 recommended changes to existing City policies, processes or resources.

DISCUSSION: At the January 12 and February 16 Council legislative sessions, the City Manager and staff provided oral reports and updates to Council on snow removal efforts during the winter storms. These meetings allowed staff to identify lessons learned and provided City Council with an opportunity to relay constituent concerns regarding better City/School System coordination, dispatch of communications during emergencies, flexibility of City snow policies and prioritization of streets for clearing. Certain adjustments to policy were actually made prior to the February events and implemented during the February storms. Other lessons learned added to the knowledge base and identification of enhancement areas for future events, and have been incorporated into this document.

Standard City Response to Snow Clearing and Removal

The City has snow clearing responsibility for 521 lane miles of roadways, 20 miles of publicly-owned sidewalks, walkways and pathways and 44 acres of municipal parking lots and publicly owned squares. For a typical storm, the City relies on approximately 35 City-owned trucks, approximately 20 pieces of heavy equipment by contractors and hand clearing efforts by City laborers using dozens of small pieces of equipment (blowers, shovels, and small plows). In February in response to the heavy back-to-back snowfalls, the City also purchased two sidewalk clearing vehicles (Bombardiers) which were used in February and will be integral pieces of equipment during future storms. The City's standard response is a coordinated effort that includes operational support from City departments such as Transportation & Environmental Services, Recreation, Parks and Cultural Activities, General Services and the Public Safety agencies, as well as essential personnel from departments such as the City Manager's Office, Finance, Planning & Zoning and other departments as needed.

Many snow events are managed from the Snow Operations Center at 2900 Business Center Drive. More significant weather emergencies are managed from the City's Emergency Operations Center (EOC) which includes a primary incident command at the Lee Center, 1108 Jefferson Street. Staff at different locations across the City communicate using WebEOC, a web-enabled crisis information management system.

City snow response crews are provided standard operational objectives during snow storms which include focusing on roadways classified as Primary (Red), Secondary (Blue) and Residential/Other (Gray) in 11 different zones across the City. Primary routes provide critical emergency and essential vehicle connections on arterial roads, bus routes and streets adjacent to 24-hour facilities, warming centers and hospitals. Secondary routes address locations significant to internal mobility or with topographic challenges such as hills or curves. Streets classified as Residential/Other are generally neighborhood or lower-volume streets. During and immediately after snow events, City crews and contractors also simultaneously clear snow from City-owned sidewalks near critical (24-hour) facilities and major multi-modal transportation corridors such as near Metro stations. The clearing of snow from sidewalks near other City-owned properties such as schools, libraries, administrative offices, recreation centers and parks is also undertaken in priority order with an emphasis on public safety. The priority order of snow clearing and removal activities is established by an Incident Commander.

Blizzards of 2010: Coordinated Citywide Response

During the Blizzards of 2010, the City operated under a local emergency declaration and the City Manager, as primary Incident Commander, provided general control objectives in 12-hour intervals for snow plowing and other incident response. The City was one of few local jurisdictions to open its EOC prior to the February storms and begin advance planning prior to the onset of the storms. Staff from multiple departments convened in the Emergency Operations Center, Snow Operations Center and Fire Operations Center to allow for a coordinated response with regular videoconferences between the centers and continual updates on the status of utilities, warming centers and other critical City infrastructure. Attachment 2, "EOC Organization Assignment List," is an example of an organization chart that demonstrates the roles filled by City staff members for the different branches within the Emergency Operations Center. Similar charts are created at 12-hour intervals during emergency events.

During the February storms, the City's primary objectives as outlined by the Incident Commander included:

- a) providing for general safety of residents, visitors, business and employees;
- b) supporting medical needs of residents and visitors;
- c) providing essential services to community and, when possible, supporting mutual aid requests; and
- d) keeping all personnel well informed with adequate communications.

The City's primary objectives because of the severity of the snowfall emphasized the emergency nature of the storms with a priority given to making all streets Citywide, regardless of their classification, *passable for emergency vehicles*. This was a major operational change from past practices and intended to emphasize that many streets would not be cleared curb-to-curb or down to bare pavement. Instead, all streets were first plowed to "passable" status to allow emergency access. Once emergency access had been provided Citywide, crews made subsequent passes on streets in priority order (Primary, Secondary and Residential) to continually improve conditions and mobility.

During their shifts, snow plow operators and hand-clearing crew supervisors provided reports on clearing activities to the Snow Operations Center which were subsequently entered into a database, Geographic Analysis and Research Interface (GARI). Snow plow operators typically provide reports via radio to the Snow Operations Center. One code/radio call sign is used to communicate that a plow has made a pass on a certain route or has treated a route with an application of salt (in some situations, typically prior to accumulation when plows would be needed, trucks may only treat roads with salt). This call is typically made to indicate that a street is passable for emergency vehicles or in other limited capacity. Snow plow operators will provide a second and final call to the Snow Operations Center when a facility (or street) is clear and no further action is required. Streets are also spot-checked by zone supervisors to ensure accuracy.

This radio notification system was coordinated with WebEOC to provide situational awareness to decision makers and the Incident Commander. During the February storm, City staff from Code Enforcement also served as "snow spotters" in the field to perform objective condition assessments in each of the City's 11 zones for roads, sidewalks and fire hydrants. Inspectors

provided information on each Primary, Secondary or Residential route within each zone according to the following criteria which corresponds to the Snow Operations indications:

Condition Assessment	
Clear	The facility, road, sidewalk or hydrant is complete and no further action will be required.
Passable	The facility, road, or sidewalk is usable but unsafe. It is available in a limited capacity or for limited use.
Impassable	The facility, road, sidewalk or hydrant is completely unsafe, inaccessible or impassable, by all but emergency personal or those with exceptional equipment.

This information was ultimately cross referenced with data provided to Snow Operations supervisors and coordinated with Incident Command to continually improve situational awareness during the course of the event and allow branch chiefs within the EOC to direct operations accordingly. City senior management also periodically did field reviews to increase their situational awareness.

Blizzard of 2010: Resources Employed

Snow maintenance crews worked around the clock in 12-hour shifts during the storms and ultimately more than 300 City staff members worked alongside contracted labor during each storm event. As in most storms, crews from multiple departments worked simultaneously on different aspects of the operation. For instance, while snow plow drivers focus on their assignments, hand crews conduct secondary and tertiary snow clearing including the removal of snow from fire hydrants to allow for emergency response, removal of snow from curb ramps/intersections, clearing sidewalks near Metro/transit and in high-density areas and schools. Because of safety, most sidewalk and hand clearing activities are limited to daytime although utility inspections and tree removal occurs around the clock.

The chart below is a snapshot of City resources employed during the storms:

RESOURCES	December	February
City Departments Involved	14	14
City Staff Hours	3,650	35,000 (approx)
Individual City Employees Involved	300+	300+
Contracted Snow Removal Workers	71	90
Pieces of Snow Removal Equipment (light/heavy)	91	108

Streets and Sidewalks

The City used over 100 pieces of heavy and light equipment during the Blizzards of 2010, including trucks provided by contractors and crews from as far away as Buffalo, New York during the February storms. A National Guard contingent of 14 from the Norfolk/Virginia Beach area also provided operational support in Alexandria in February. City of Alexandria crews and contractors applied more than 4,000 tons of salt and 8,000 gallons of calcium chloride on roadways and sidewalks. Additionally, City crews hauled 3,500 tons of snow from intersections, retail and commercial centers to a storage area at Potomac Yard and another 7,000 tons to a storage area at Victory Center on Eisenhower Avenue.

Snow removal from sidewalks was prioritized with the goal of ensuring citizen safety and assuring mobility to critical facilities and transit stops. City and Alexandria City Public School crews cleared school sites and heavily traveled sidewalks near schools while, in many locations, parents and school employees worked on their own in an unofficial capacity to clear snow from sidewalks, bus stops and school entrances. The City's existing Snow Buddies program provided volunteer assistance to approximately 37 low or fixed income homeowners and renters who could not clear snow from their property because they are elderly or disabled.

During the February 5-6 storm event, the Incident Commander temporarily suspended enforcement of the City's sidewalk snow clearing ordinance (§ 5-2-21) of the City Code which requires residents and business owners to clear snow from all paved sidewalks abutting their property within 24 hours of the end of the snowfall or be fined \$50. However, beginning February 19 inspectors from the Construction & Inspection Division of T&ES began issuing warning letters to property owners and ultimately distributed 52 letters from February 19 to 23. Staff from Code Administration also distributed 160 letters during the course of the February event for a total of 212 letters issued to residents or businesses for failure to comply with § 5-2-21. Compliance by letter recipients was mixed and the Code Administration staff ultimately issued 12 civil fines.

Fire Hydrants

In addition to snow clearing efforts on roadways, sidewalks and from intersections, City crews were heavily involved in removal of snow from the City's 3,000 fire hydrants and hundreds of storm drains to prevent flooding. Using fire zone maps, Sheriff Inmate Teams and City laborers conducted hydrant clearance. Supervisors collected data from the crews every six hours and recorded the data on a master map which was revised regularly by staff, reviewed by a team leader and ultimately provided to the Incident Commander. Because Alexandria firefighters had quick access to a fire hydrant, a two-alarm fire on Bashford Lane in February was contained to only about \$340,000 in damage to one home and smoke damage to two other adjacent homes.

Utilities, Trees and Roofs

City tree removal crews and contractors worked in 12-hour shifts to remove hundreds of broken tree limbs and downed trees while utility companies, particularly Dominion Virginia Power, responded quickly to reports of downed lines and power outages including many reported through the City WebEOC or called in to the Call Center. At the peak of the February storm, more than 2,000 Alexandria customers were without power.

Due to the snowfall from the back-to-back events in February, many City of Alexandria critical facility roofs were considered in danger of structural failure due to snow load. Staff developed a plan for organizational structure, personnel, equipment resources/assets, and procedures for vulnerable facility assessment, identification, and snow removal. A special Roof Snow Removal Group was established to conduct roof snow load assessments and coordinating contractor support for the removal of snow from critical facilities deemed highest priority and most vulnerable.

Facilities were assessed and categorized according to the following priority levels:

- Level 1 – Facility is deemed a critical facility, and is essential to emergency operations, public safety, or mass care.
- Level 2 – Facility is deemed a critical facility, supports City operations or is a large, privately-owned public gathering place.
- Level 3 – Facility is non-City owned, is a public transportation facility, or a tier-3 City facility.

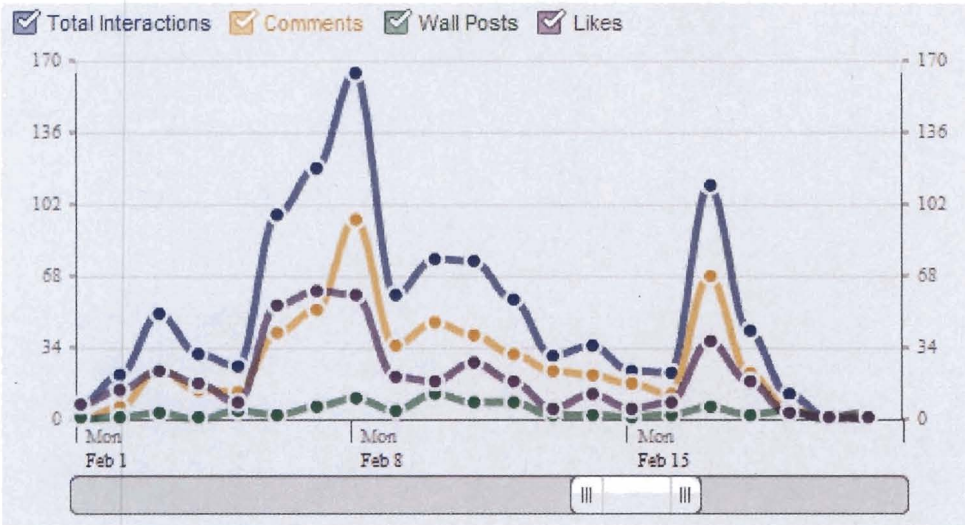
Communications & Information Technology

The City also undertook a major communications effort during the blizzards, including staffing of a Call Center, regular eNews releases and website updates, coordination with City Council and use of social media such as Twitter and Facebook. The primary goal of the City’s communication efforts was to provide timely and accurate public information during the storms.

A brief summary of communications efforts is below. The table below does not reflect all emails sent directly to staff from citizens.

COMMUNICATION	December	February
Views of alexandriava.gov	478,978	598,284
Biggest day of website views	Dec. 9, 2009: 22,535	February 8, 2010: 33,268
Total “Contact Use” messages	854	1,031
Snow-Related Web Page Updates	68	23
Tweets	53 (plus 38 Re-Tweets)	126 (between Feb. 2-23)
Facebook posts	51	86 (between Feb. 2-16)
Citywide news releases/media advisories	15	17
Local media inquiries	12	16
Updates to City Council	8	26
Telephone Calls	Call Center Not Operational	3,600

The City’s social media efforts were heavily used with up to 170 total interactions on the peak day (Monday, February 8) on Facebook and a period of seven straight days with between 34 and 100 comments each day.



The City’s Call Center was also heavily used during the February storms and recorded approximately 3,600 calls during the 10-day stretch from February 5-15.

Alexandria Mayor William Euille provided 16 live or taped interviews to local television and radio news outlets during the storm. The Mayor appeared on all the local television and radio stations including radio station WTOP, WMAL, WAMU, and television stations WRC, WTTG, WJLA, NewsChannel 8 and WUSA. Communications Officers provided on the record information to the Associated Press, *The Washington Post*, *The Washington Times*, *The DC Examiner*, *The Alexandria Times*, *The Alexandria Gazette* and *Alexandrianews.org* throughout the storm. CNN was also live for several days in Alexandria reporting on the storm. Mayor Euille was live on CNN's American Morning, and Communications Officers provided CNN background information about how Alexandria handled the snow storm.

Another major initiative during the Blizzards of 2010 was to provide better situational awareness to decision-makers by way of regularly updated maps and condition assessments. Staff from the City’s Information Technology Department and Planning and Zoning’s Geographic Information Systems Division created an external (on-line) Snow Report “tracker” for use by citizens during the storms. Internal maps were also produced to provide graphical representation of incident objectives during each operational period. These maps were produced at 12-hour intervals during the beginning of the storm. A separate map series also tracked progress of snow plows and was used by the Snow Operations staff to redirect resources as needed. Attachment 3, “Incident Objectives February Snow Event (February 5, 2010),” is an example of a map produced by staff that visually represents City plowing priorities on February 5, 2010. Attachment 4, “Plow Activity,” shows plow activity as reported through Thursday, February 11, 2010, at 3:30 p.m.

Visits to the Alexandria website (598,284 total) dwarfed the snow information and Snow Report application, suggesting that for many visitors the web boxes and alert boxes provided all the information they needed about City snow removal efforts.

Blizzard of 2010: Aftermath

The City's emergency response efforts during the unprecedented snowfall of the Blizzard of 2010 were largely successful. Emergency response crews were able to respond to fires, the threat of power loss at Inova Alexandria Hospital and a downed traffic signal pole on Duke Street. Although high winds and blizzard conditions made conditions hazardous and the prolonged, cold temperatures quickly froze snow into large drifts, snow was plowed from City streets within a reasonable amount of time given the unprecedented nature of the storms.

During and after plowing operations, large amounts of snow were removed from sidewalks near critical City facilities, major transit stations and from intersections using front end loaders and dump trucks. This labor intensive operation was intended to improve mobility and safety for other modes of transportation such as pedestrians, transit vehicles and bicyclists. Despite the City's efforts, mobility was severely affected throughout the event and for many days afterward with added problems on narrow streets and streets with cul-de-sacs. The maneuverability of plows was compounded by the volume of snow, downed utility lines, parked cars and a lack of places to store snow. In many instances, crews would plow snow from streets onto sidewalks and private contractors would plow snow from driveways or parking lots back onto the streets.

Services across Alexandria were limited for days with cancellations to events, prolonged closures of City facilities through February 16 and major impacts to on-street parking into the week of February 22. Debris removal and solid waste pickup were affected by the storms and City crews continue to deal with damaged trees and debris created by the storms. Damage to intersections, concrete curbs, catch basins and other infrastructure remains an ongoing concern that is requiring continual staff time and resources from the T&ES Maintenance Division.

Lessons Learned and Implementation Plan

As noted previously, the City Manager in February directed staff to conduct an after-action review of the City's response to the Blizzards of 2010. The overarching goal of the City's review process was to continue to institutionalize a coordinated, Citywide response to snow emergencies that is scalable and applicable to other emergency situations.

This review process involved 14 departments and allowed staff to identify lessons learned that could be converted directly into action items for implementation prior to future storms. Representatives from each department involved in the snow response were organized into five work group teams categorized to reflect key elements of the snow emergencies. The work group teams were: (1) Logistics & Planning, (2) Operations, (3) Communications & Technology, (4) Finance & Administration and (5) Legal.

The review ultimately identified 61 specific, measurable action items with recommended changes to existing City policies, processes or resources. These recommendations have been consolidated into a work plan with items of high priority which are being undertaken prior to the 2010/2011 winter season and others that are mid- or long-term action items. Pending resource availability, some action items may be implemented in 2010/2011, while others may require consideration in a future City budget process.

The City's internal review also incorporated recommendations from the Council of Governments Board which reviewed a Proposed Implementation Agenda at its meeting on April 14, 2010. The COG Board recommended major steps to improve the region's performance during major storms, many of which are consistent with the City's internal review such as the need to:

- Conduct an annual review/revision of the City's snow plans.
- Develop consistent parking practices and coordination.
- Improve communications and public messaging.

Short-Term Implementation Items & Work Plan

A significant implementation item to be addressed by City Staff prior to the 2010/2011 winter season includes development of a Snow Emergency Classification System with three Levels that: (a) defines threat/emergency conditions for the public and (b) guides the appropriate City response. As an example, the State of Ohio has developed a Snow Emergency Classification system for severe weather awareness with the following levels:

SAMPLE LEVEL 1: Roadways are hazardous with blowing and drifting snow. Roads may also be icy. Motorists are urged to drive very cautiously.

SAMPLE LEVEL 2: Roadways are hazardous with blowing and drifting snow. Roads may also be very icy. Only those who feel it is necessary to drive should be out on the roads. Contact your employer to see if you should report to work. Motorists should use extreme caution.

SAMPLE LEVEL 3: All roadways are closed to non-emergency personnel. No one should be driving during these conditions unless it is absolutely necessary to travel or a personal emergency exists. All employees should contact their employer to see if they should report to work.

Staff from the City's primary operational departments for snow response are developing coordinated plans using the National Incident Management System (NIMS) and Incident Command System (ICS) that will enable responders from all City departments and across all to work together more effectively and efficiently. In the future, the City will use the NIMS-ICS structure to respond to all winter storms which is a significant operational change.

Other major implementation items on the work plan include:

1. Improved coordination with Alexandria City Public Schools.
2. Trainings and tabletop exercises by operations staff leading to an annual readiness review by October 1 and an annual report for City Council by November 1.
3. Annual media outreach by the City's Office of Communications to occur in November.
4. Development of Geographic Information System (GIS) based flexible "Snow Plan" data models and methodology for more effectively capturing snow clearing logs/updates for purposes of condition assessment.
5. Revision of internal Finance & Administration process, policy and resource changes designed to ensure continuity of operations.

A complete list of recommendations including short-term action items with expected completion schedules may be found in Attachment 1.

NEXT STEPS: After considering input from City Council, the existing work group team leaders will implement high-priority action items that do not require additional funding. The items within the work plan (those shaded gray in Attachment 1) designated as high-priority are projected for completion in October 2010. Staff is also continuing progress on mid-priority work plan items and future budget requests (FY 2012) may be submitted for items with funding implications. Staff will provide an update and readiness report to Council in November 2010.

FISCAL IMPACT: For all the snow events of FY 2010, the City spent some \$8.8 million for snow removal response and related costs. It is estimated that the Federal and State governments will reimburse \$6.4 million of the \$8.0 million spent on the two snow events in December and February declared national disasters. For the future, staff is still developing funding estimates but all funding required for implementation will need to derive from either planned FY 2011 budget resources, or future FY 2012 budget requests.

ATTACHMENTS:

Attachment 1: Snow Emergency Implementation Work Plan/Matrix

Attachment 2: EOC Incident Organization

Attachment 3: Incident Objectives February Snow Event (February 5, 2010)

Attachment 4: Plow Activity Map

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Snow Emergency Review: Winter 2010-11 Implementation Plan

Workgroup Team #1: Logistics & Planning

Item	Category	Recommendation	Deadline	Priority	Funding
1	Policy	Formalize structure for use of NIMS-ICS (National Incident Management System- Incident Command System) in the management of all emergencies in the City according with the NIMS doctrine.	Oct-10	High	No
2	Process	Develop a Snow Emergency Classification System with three Levels (Level 1, Level 2 and Level 3) that (a) define threat/emergency conditions for the public and (b) guides the appropriate City response.	Oct-10	High	No
3	Process	Winter storms classified as Level 1 (for instance when less than 8" snow is forecast or in other threat situations when conditions warrant) will be managed by the Snow Operations Center utilizing an Incident Command Structure (ICS). The Director of T&ES, or his authorized designee, will be responsible for developing the structure in accordance with the NIMS doctrine unless other threats dictated the opening of the EOC.	Oct-10	High	No
4	Process	Winter storms classified as Level 2 or 3 (for instance when more than 8" snow is forecast or in other significant threat situations) will be managed by the Emergency Operations Center in accordance with the City's Emergency Operations plan utilizing the Incident Command Structure (ICS). The City Manager, as the Director of Emergency Management for the City, will be responsible for developing the structure in accordance with the NIMS doctrine.	Oct-10	High	No
5	Process	Conduct annual readiness review no later than October 1 with designated departmental invitees.	Oct-10	High	No

Shaded rows indicate high priority items.

Item	Category	Recommendation	Deadline	Priority	Funding
6	Process	Develop written plan for snow and ice for ACPS that is consistent and coordinated with City plans.	Oct-10	High	No
7	Process	Produce and publish maps annually demonstrating priorities for: Streets, Sidewalks, Curb/Ramps/Intersections, Schools, Fire Hydrants, Storm Drains, Roofs, City Facilities. The map update process will be dynamic and may occur during events.	Oct-10	High	No
8	Process	Develop GIS based flexible "Snow Plan" data model so adjustments to plans can be updated quickly (as plan scales up and down) and information disseminated across the enterprise via GARI (Geographic Analysis and Research Interface) system. (GIS database development)	Oct-10	High	No
9	Policy	Amend City Ordinance (§5-8-132) regarding snow emergency routes to reflect only the following streets Route 1 (city limit to city limit), Washington Street (city limit to city limit), Duke Street (Washington Street to western city limit) and King Street (Union Street to western city limit).	Dec-10	Mid	No
10	Policy	Amend Snow emergency plan No. 4, parking (§5-8-133), to allow for opening of existing city-owned, public parking garages to encourage off-street parking during significant snow events.	Dec-10	Mid	No
11	Policy	Amend City Ordinance §9-12-132, section 10 to provide more detail on when taxi surcharges should be lifted.	Dec-10	Mid	No
12	Policy	Amend City Ordinance (§5-2-21) to prevent private entities or operators from plowing snow from driveways, parking lots or private streets onto city streets.	Dec-10	Mid	No

12

Snow Emergency Review: Winter 2010-11 Implementation Plan

Workgroup Team #2: Operations

Item	Category	Recommendation	Deadline	Priority	Funding
13	Resource	Purchase and install reflective flagging for fire hydrants to assist with location in deep snow.	FY2012	Mid	Yes
14	Process	Ensure logistics branch chief (ICS) handles duties such as processing unsolicited and solicited contractors.	Oct-10	High	No
15	Resource	Secure annual agreements for snow/debris storage in accordance with existing debris management plan and include locations in the annual readiness review report.	Oct-10	High	No
16	Resource	Secure the rental use of a snow melter to assist with snow removal and reduce the need for storage and hauling.	FY2012	Mid	Yes
17	Resource	Replace planned purchase of some sedans in public safety departments (which are scheduled to be replaced) with comparably priced 4WD vehicles (e.g., Ford Explorer 4x4 instead of Crown Victoria for Police) to ensure better mobility and more available vehicles during snow events.	FY2012	Mid	Yes
18	Process	Conduct WebEOC training for Snow Ops staff (T&ES, RPCA, General Services) to expand institutional knowledge and consider desired functionality improvements to WebEOC (i.e. archiving).	Oct-10	High	No
19	Policy	Conduct annual review of RPCA MOU with ACPS for snow removal.	Oct-10	High	No
20	Process	Develop methodology for capturing and sharing condition assessment relative to storm event goals that is interoperable with other City systems and sharable through GARI (GIS application development/integration).	Oct-10	High	Yes
21	Process	Develop methodology for capturing, communicating and managing ad hoc situations during an emergency event. This would focus on those which can be anticipated but not fully mitigated in advance and would be interoperable with other City systems such as CRM/Cityworks.	Oct-10	High	Yes

13

Shaded rows indicate high priority items.

Snow Emergency Review: Winter 2010-11 Implementation Plan

Workgroup Team #3: Communications

Item	Category	Recommendation	Deadline	Priority	Funding
22	Policy	Communicate updated, defined goals and objectives to the community prior to the winter season using all communication tools; hold a preseason push in October-November.	Oct-10	High	No
23	Process	Improve call center access to information for call center staff, provide more public information over the phone and web.	Oct-10	High	No
24	Process	Build shared system (ACPS and City) to update snow related changes and cancellations simultaneously during snow or other emergencies.	Oct-10	High	No
25	Process	Consolidate information from field crews, call center, FD/PD and other communications to provide real time data for the GIS built GARI (Geographic Analysis and Research Interface) system, and newly created Snow Reports. Promote during preseason push; ensure interoperability.	Oct-10	High	Yes
26	Process	CRM/Cityworks is currently under development by ITS and Communications with an expected early summer launch. Cityworks will assist with situational awareness and provide real time problem solving, and updated information for GARI and snow reports.	Oct-10	High	No

14

Snow Emergency Review: Winter 2010-11 Implementation Plan

Workgroup Team #4: Finance & Administration

Item	Category	Recommendation	Deadline	Priority	Funding
27	Process	Ensure processing of payroll: In worst-case scenario, pay under standard hour basis. Adjust and/or correct in next pay period.	To be completed as resources allow	Mid	No
28	Process	Identify official, authorized payroll contacts within a Department and within Finance to ensure payrolls are run.	To be completed as resources allow	Mid	No
29	Process	Identify, train and equip more logistics personnel for emergencies.	To be completed as resources allow	Mid	No
30	Policy	Identify official, authorized contract-purchase order-purchase card contacts within Departments and within Procurement to adjust purchase card limits and for emergency use of critical contracts. Provide list to Procurement.	To be completed as resources allow	Mid	No
31	Resource	Designate at least one Procurement staff (buyer) on every shift to negotiate cost of items being purchased or leased	To be completed as resources allow	Mid	No
32	Process	Publish an electronic list of vendors available to the Logistics section of an ICS structure in the event that a purchasing agent or buyer is not available to obtain items or negotiate contracts.	Oct-10	High	No
33	Resource	Provide temporary delegations, for back-up or temporary assignment, to Departments from General Services for emergency repairs to facilities and for fuel purchases (if General Services unable to respond)	To be completed as resources allow	High	No

15

Item	Category	Recommendation	Deadline	Priority	Funding
34	Resource	Provide temporary delegations, for back-up or temporary assignment, to Departments for critical vehicle repairs should City Shops be unable to accommodate the needed repair with existing City-provided emergency resources	To be completed as resources allow	Mid	No
35	Policy	Overarching coordination will be achieved through use of NIMS-ICS organizational structure and operation of the EOC	To be completed as resources allow	Mid	No
36	Process	Each Department should identify its principal Point-of-Contact (POC) during the emergency. He/she should be empowered to represent his/her Department and be held accountable for all his/her actions.	To be completed as resources allow	Mid	No
37	Resource	Because of space constraints within the City's temporary EOC, only those City employees with assigned emergency response responsibilities shall report to the EOC	To be completed as resources allow	Mid	No
38	Resource	Identify respective POCs within Departments and City support units	To be completed as resources allow	Mid	No
39	Process	Maintain updated "telephone/e-mail trees/list" of critical personnel within each Department and City support unit, by expertise that could be called in by Department POCs during an emergency. This listing should be updated periodically (every three months) and well-publicized within each Department and City support unit.	To be completed as resources allow	Mid	No
40	Process	Having fall-back plans should alleviate a majority of administrative issues that could occur with a short-term or even long-term emergency, i.e., decisions on re-running prior pay period payrolls, increasing limits on purchase cards, and ability to utilize critical contracts.	To be completed as resources allow	Mid	No
41	Process	Give clear instructions and purpose of the tasks assigned at the call center. A manual to train call center staff should be created.	To be completed as resources allow	Mid	Yes

91

Shaded rows indicate high priority items.

Item	Category	Recommendation	Deadline	Priority	Funding
42	Resource	Annually train staff on available computer technologies to support mission critical communications.	To be completed as resources allow	Mid	No
43	Resource	Clarify that in future emergency events, lodging shall be handled by the logistics sections in the EOC.	To be completed as resources allow	Mid	No
44	Process	Only the City lodging lead shall be empowered to make room reservations on behalf of the City. The City lodging lead shall contract with hotels for housing of critical employees during an emergency and for identifying hotels and numbers of available rooms during an emergency.	To be completed as resources allow	Mid	No
45	Process	The department lodging lead/POC shall identify the numbers of rooms required for department personnel and for which nights. The department lodging lead shall ensure that reservations are made by employee name to minimize confusion among employees and the contracted hotels and in anticipation that the City can secure potential reimbursement from State or Federal sources. In order to minimize lodging costs, it is recommended that two employees share a single room, where feasible.	To be completed as resources allow	Mid	No
46	Resource	Designate a day time and night time logistics person to handle food delivery to places such as the EOC or Snow Ops.	To be completed as resources allow	Mid	No
47	Process	Establish agreements in advance with local restaurants that are likely to remain open during an emergency so that city staff can readily find places to eat during the emergency.	To be completed as resources allow	Mid	No

17
Shaded rows indicate high priority items.

Item	Category	Recommendation	Deadline	Priority	Funding
48	Process	If a City, State, or National Emergency is declared, CFO issues an OCA and accompanying direction for that emergency, e.g., the OCA must be used for emergency-related expenditures. CFO will ensure, during the emergency, that all Departments are using the emergency OCA so that when a final accounting of emergency expenses is required, the City's accounting system can calculate expenses.	To be completed as resources allow	Mid	No
49	Resource	Secure lists of POCs within each Department who will receive the OCA and accompanying CFO instructions	To be completed as resources allow	Mid	No
50	Process	Within each Department, the POCs will alert emergency staff managers and supervisors of the OCA and issue instruction on use for payroll and for purchase of good and services.	To be completed as resources allow	Mid	No
51	Policy	For payroll purposes, each Department should identify under what situation an employee will be paid using an emergency OCA. (For example, during the December 2009 snow emergency, the Fire Department had to adjust its payroll to distinguish between those <i>Fire and EMS</i> personnel who were already scheduled to work overtime versus those who were specifically called into work and were paid overtime due to the snow emergency.) A City-wide AR is recommended; however, it is strongly recommended that all City Departments are provided an opportunity to contribute to the AR.	Oct-10	High	No
52	Resource	Ensure adequate support staff exists in field operations centers and in the field for accurate tracking of snow plower drivers and equipment, both internal and external, and for good maintenance and safe record keeping of supporting documentations for FEMA submission.	To be completed as resources allow	Mid	Yes

81

Shaded rows indicate high priority items.

Item	Category	Recommendation	Deadline	Priority	Funding
53	Process	Provide standardized forms and procedures for consistency and efficient/effective tracking (accuracy of data being tracked for equipment used, standard format of the data entry for staff/contractor's name on shift).	Oct-10	High	No
54	Process	Maintain utilization logs for equipment used (in tree removals, drains, inlets etc).	To be completed as resources allow	Mid	Yes
55	Process	Capture and track internal and external equipment cost.	To be completed as resources allow	Mid	Yes
56	Resource	In the event of a post-emergency opportunity to secure compensation for City expenses, the City should identify one individual responsible for collecting the information for all City-wide expenses, e.g., payroll records and invoices	To be completed as resources allow	Mid	Yes
57	Process	Issue standard guidance, formats and templates to all Departments for reporting emergency expenses.	To be completed as resources allow	Mid	No
58	Process	Rely primarily on official City accounting records for reporting emergency-related expenditures to one cost center.	To be completed as resources allow	Mid	No
59	Process	Move expenditures or make JV transfers to record all expenditures in one cost center.	To be completed as resources allow	High	No
60	Process	Consider employee safety in decision making on City operation/closure – Recommended solutions: availability of telecommuting, delayed openings.	To be completed as resources allow	Mid	No
61	Policy	Clearly define "Essential staff" which should be established by position and not include names.	To be completed as resources allow	Mid	No

19

Attachment 2

1. Incident Name Alexandria Snow Ops		2. Date Prepared 02/13/2010		3. Time Prepared 0300		ORGANIZATION ASSIGNMENT LIST	
4. Operational Period Date: 02/13/2010 ongoing Time: 0700-1900							
5. Incident Commander & Staff				9. Operations Section			
IC - Day	Jim Hartmann [REDACTED]			Chief-Day	Adam Thiel [REDACTED]		
IC - Night	Tom Gates [REDACTED]			Chief-Night	Brian Hrick [REDACTED]		
Deputy-Day	Mark Penn [REDACTED]			Branch Director	Mitch Bernstein [REDACTED]		
Deputy-Night	Ashley Ehrhart [REDACTED]			Branch Director	Bill Skrabak [REDACTED]		
Safety Officer-Day	Wendy Brown [REDACTED]			a. Streets/Roads Group			
Safety Officer-Night	Rick Wilsey [REDACTED]			Division/Group	Ray Brown [REDACTED]		
Inform. Officer-Day	Tony Castrilli [REDACTED]			Division/Group			
Inform. Officer-Night	Craig Fifer [REDACTED]			Division/Group			
6. Agency Representatives				Division/Group			
				Division/Group			
				Division/Group			
				b. Hydrants/Metros Group			
				Division/Group	Steve Tompkins [REDACTED]		
				Division/Group	Walter Powell [REDACTED]		
				Division/Group			
7. Planning Section				Division/Group			
Chief-Day	Joe Hoffmaster [REDACTED]			Division/Group			
Chief-Night	Byron Andrews [REDACTED]			c. General Services/Facilities Group			
Deputy				Division/Group	Archie Robinson [REDACTED]		
Resources Unit				Division/Group	Mark Kitta		
Situation Unit				Division/Group	Tony Hirz [REDACTED]		
Documentation Unit				Division/Group			
Demobilization Unit				Division/Group			
Technical Specialists				d. Trees Group			
Check In Recorder				Division/Group	Jerry Deiruf [REDACTED]		
				Division/Group	Ron Hill [REDACTED]		
					John Walsh [REDACTED]		
8. Logistics Section				e. Dispatch Group			
Chief-Day	Stafford Farmer-Lee [REDACTED]			Division/Group			
Chief-Night	John Mead [REDACTED]			Division/Group			
Deputy				Division/Group			
Supply Unit				Division/Group			
Facilities Unit	Lodging Contact until 02/12/10 0830			Division/Group			
	Cindy Catlett [REDACTED]			10. Finance Section			
Facilities Unit	Lodging Contact after 02/12/10 0830			Chief			
	Courtney Foddrell [REDACTED]			Deputy			
Ground Support Unit				Time Unit			
Communication Unit				Procurement Unit			
Medical Unit				Compen./Claims Unit			
Food Unit				Cost Unit			

Prepared By (Resource Unit Leader)
Abi Lerner



Incident Objectives February Snow Event February 5th, 2010

- Legend**
- Priority**
- RTCLASS
 - Primary
 - Secondary
 - Residential
- Facilities**
- 4. Sidewalks at Metro
 - 5. 24 Hour Facilities & Schools
 - 6. Sidewalks
 - Schools
 - Trails
 - Libraries
 - Snow Plow Zones
 - Metro Stops
 - Flea Stations

0 500 1,000 2,000 Feet

N

This map was prepared by the GIS Division of the Department of Planning and Engineering, City of Baltimore, Virginia.

Map Date: 02/04/2010

Map Time: 10:00 AM

Plow Activity

Thursday, Feb 11, 2010
(as of 3:30 pm)

Legend

- Plowed at least once
- Treated at least once

M Metro Stations

- City Boundary

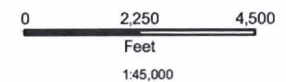
- Streams

Surface Water

Schools

Parks And Easements

City of Alexandria



This map was produced by the GIS
Division of the Department of Planning
and Zoning, City of Alexandria, Virginia.
Mapping Standards:
Coordinate System - NAD83 State Plane Virginia North
Projection - Lambert Conformal Conic
Map Units - Feet
Map Produced Date

