

Mayor and Council

For the meeting on: July 12, 2010
Department: City Manager
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Subject

Briefing on the 2009-2010 Snow Response.

Recommendation

Staff recommends that the Mayor and Council receive a briefing on the 2009-2010 snow response and the work to improve the city's response to future snow events. Staff also recommends bringing the following to the Mayor and Council for approval before the 2010 - 2011 winter season:

- Comprehensive, multiple award, Master Agreements for the brokering of services related to handling snow storm and other emergency events,
- Amendment to the City Code to allow the City Manager, upon declaration of an emergency and notification of the Mayor and Council, to award contracts up to \$500,000,
- Amendments to the City Code to require property owners to clear snow from fire hydrants adjacent to their property and to give property owners 72 hours to clear a snow accumulation of more than 10 inches from sidewalks adjacent to their property, and
- Amendment to the snow emergency parking provisions in the City Code.

Discussion

The DC metropolitan region received unusually large snowfalls during December 18-20, 2009 and February 5-11, 2010. City departments' coordinated response included salting, plowing, shoveling and snow removal; vehicle maintenance; facility monitoring and maintenance; emergency public safety response; communications and outreach; coordination of volunteer and contractor snow clearing services to senior citizens and persons with disabilities; and enforcement of sidewalk clearing. The overall effort was a success and a learning experience. Following both storms, staff conducted after-action meetings and reports to examine what worked well and what could be improved in the future. The City also participated in a Metropolitan Washington Council of Governments (COG) After Action Leadership Forum on Snow Response.

This agenda item provides an overview of the following:

- The City's emergency management planning;
- Strategies and actions taken for the 2009 - 2010 storms;
- Issues that the City will continue to address in preparing for and responding to future snow storms;
- FEMA reimbursements; and
- Recommended "next steps" for Mayor and Council direction.

Emergency Plans

The City conducts detailed and comprehensive planning to ensure that city government is prepared for and operating during all types of emergencies, including severe snow storms. In addition to preparing plans, staff participates in tabletop exercises with other jurisdictions and adjusts our emergency plans based on relevant findings from these exercises. Staff also maintains contacts with officials in other organizations, such as Pepco and WSSC, to assist as we respond to emergencies.

The Montgomery County Emergency Management Group (EMG) is the lead agency on emergency operations in the County. The City is a member of the EMG and has a representative present in Montgomery County's Emergency Operations Center (EOC) during emergencies involving the City of Rockville. The Rockville Police are included in all EOG decision-making and play an integral part in the emergency operations.

The Police Department took the lead over the past year in updating Rockville's Emergency

Operations Plan (EOP) and Continuity of Operations Plan (COOP), with involvement of all City departments. The University of Maryland and the firm of Dewberry & Davis provided guidance and assistance in preparing the plans, through a grant to municipalities. The COOP is complete and work to update the EOP is still underway. These plans apply to any emergency event that may occur in the City, ranging from a snow event to a fire at City Hall to a train accident.

The EOP is a manual to guide the City through an emergency response. It defines what the City needs, who will be involved and how the emergency will be managed. The COOP identifies how the City will reinstate operations after a serious incident in order to continue providing critical services. The Police Department will share the new plans with the Mayor and Council and conduct training for all City employees on the new EOP and COOP.

December 2009 Snow Storm

Approximately 20 inches of snow fell in Rockville between December 18 and 20. The City took action prior to December 18 to prepare for the event and implemented snow removal operations through the weekend. All departments involved in the snow response prepared after action reports and participated in an after-action meeting on December 23, 2009. The Mayor and Council received a memo highlighting the December storm response and the City's follow-up activities on January 6, 2010 (Attachment A). The City spent approximately \$213,842 responding to the December storm and received \$160,381 (75%) in reimbursement from the Federal Emergency Management Agency.

February 2010 Snow Storm

The two snow events in February were even more severe than the December storm. Rockville received at least forty inches of snow over six days, beginning February 5. Intense 24/7 snow operations were underway continually over eight days and to a more limited extent for another six days. Staff anticipates expenses for the February storm to total approximately \$1 million. Staff is preparing the materials to apply for FEMA reimbursement.

Previous experience and the specific lessons learned in December were valuable, but the unprecedented accumulations in February created new challenges. Following the February storms, a series of "bottom-up" (from first-line field level employees to executive management) after-action sessions were conducted, and after-action reports were prepared. The City Manager also established six work groups to thoroughly assess the challenges faced and identify areas for improvement.

1. Successes

While extremely challenging, the City's overall response to the storms was successful, and equalled or surpassed other local governments in the area. Specific successes include:

Snow Operations

- Excellent cooperation, teamwork and communication by personnel within and across all departments.
- Prompt acquisition of contract loaders and dump trucks enhanced the snow removal work of City employees and equipment.
- Successful adaptation to conditions by devising and implementing "gang plowing" techniques, whereby multiple plows work on major arteries in a team fashion, particularly immediately after shift changes.
- Twelve-hour shifts and shift change meetings were utilized by DPW for optimal communication. A new leader's pre-shift planning and status meeting was implemented by DPW for even better coordination.
- Recreation and Parks staff operated on twelve-hour shifts as well and also held shift change meetings.
- A standard operating procedure (SOP) was developed for providing *ad hoc* priority snow clearing for medical emergencies and emergency personnel.
- Fleet Services provided a regular report of the condition of snow equipment, attended the DPW pre-shift change meetings and supported decision-making regarding fuel.
- Utility crews were on standby to respond to unexpected emergencies.
- Forestry Maintenance staff were on standby and responded to over 200 tree-related incidents, both during and after the event. Incidents included trees across roadways, limbs down on sidewalks and trees down in backyards.
- The City successfully hauled snow in addition to standard plowing, and utilized three drop off locations for snow hauled from City streets.
- King Farm used Pleasant Road to dump snow removed from private streets; DPW maintained communications with the King Farm property manager and Recreation and Parks during the storm to expand the authorization to use Stepanek Park.
- DPW used Recreation and Parks staff and equipment during the event to clear streets and intersections.
- Contractors were used to clear selected major pedestrian routes.

Public Safety

- Police provided ongoing, daily surveys of conditions of roads, intersections, sidewalks and bridges that were used for planning purposes.
- Police/Code Enforcement worked with residential and commercial property owners to promote enforcement of the sidewalk clearing ordinance.
- Police/Dispatch served as a communication conduit for residents and businesses.
- The reassignment to the Police Department of four-wheel drive vehicles not initially needed during the storm helped the Police safely travel on patrol and to calls.

Purchasing

- Stockroom staff were available on-site during the storm.
- Purchasing Division staff were able to work from home to assist with emergency procurement needs, including acquisition of loaders and dump trucks for hauling snow.

Communication

- Created additional e-mail accounts to facilitate information sharing among staff working the storm and between residents and staff.
- Used the City's website (6-12 updates each day), facebook (55 posts by the City and 75 comments from residents), and Twitter (with every Web update and press release) to keep residents informed about the snow response.
- Special reports about the snow response on Rockville 11 also kept residents informed.

2. Improvements

Based on the after-action meetings and the work groups' efforts, the City is following up on a number of issues and needs described below. Several of these items were also topics of discussion in the Council of Governments (COG) After Action Leadership Forum on Snow Response.

Snow Operations

- Snow and Ice Standard Operating Procedure (SOP). COG requests that before the next snow season each member jurisdiction review and revise its snow response plan based on lessons learned during the 2009-2010 winter. COG also encourages local governments to develop special plans for snow accumulation above 15 inches.

The City's update of Standard Operating Procedures (SOP) for snow and ice operations began with the February 2010 after action meetings, and is well underway. Procedures for all departments involved in snow and ice operations will be included. The SOP addresses predefined response levels based on expected accumulation, plans for securing all necessary contractual support, coordination with the County's Emergency Operations Center, public information policies and procedures, spending authority, and documentation and procedures to apply for federal reimbursement.

The predefined response levels identify the specific response to be implemented for a Level 0 (no precipitation anticipated, normal winter preparations) through Level 5 (12+ inches of snow anticipated over extended period) storm. The SOPs are built around the defined response levels and will identify how all relevant departments will proceed as soon as a storm is predicted. A draft outline of the response levels and associated activities is provided in Attachment B. The draft includes content for DPW and will be populated with information for all other departments as work on the SOP continues this summer.

- Snow Plow Routes. Route adjustments are underway using GIS. Current routes resulted in some plows finishing primaries well ahead of others. This caused staff to be into secondary route clearance in some areas of the City before all primaries were finished. This has not been a problem in smaller storms where this time difference was imperceptible to the residents due to the overall short duration of the snow response. During this significant snowfall it became more pronounced and adjustments were made; however, unplanned route adjustments usually are not as efficient as balanced preplanned routes.

Previous snow plow routes also were planned based upon 100 percent vehicle availability. This rarely happens due to the unavoidable wear and tear from the stress placed on vehicles during snow and ice operations. During the February storm, the sustainable plow truck availability was approximately 70-75 percent. The loss of DPW-assigned vehicles was mitigated by reassigning Recreation and Parks vehicles and equipment to duties normally handled by DPW. However, new routes will be based upon reduced plow availability with plans for how to use extra vehicles, when and if they are available.

In conjunction with the route adjustments, staff will examine changes to the name and definition of the street categories that Rockville uses to prioritize streets for plowing. At this time streets are categorized as "primary" or "secondary" with primary streets the priority for snow plowing. Staff will examine whether a third category would better reflect actual priorities, especially during longer snow events, and be more consistent with neighboring municipalities. Revised categories, if implemented, will be included in the SOP and communicated to Rockville residents.

- Sidewalk Clearing. Securing sidewalk access to schools and popular commuter routes is important. Recreation and Parks staff cleared sidewalks adjacent to City facilities and parks, sidewalks that are used as major pedestrian routes to Metro Stations and other commuter destinations, bike paths, routes to school, and road crossings throughout the storm. Recreation and Parks secured contractors just after the storm passed to assist with sidewalk clearing in the vicinity of schools, Metro Stations and other areas with high pedestrian use. Contractors will be used again in the future when needed.

During the February storm, snow hauling was performed primarily to open turn lanes and second and third travel lanes on main arteries. Hauling snow is very time consuming and expensive, and often must be completed at night due to vehicle traffic. Front end loaders also pushed snow off the road to clear as much roadway for vehicles as possible. The snow pushed off the road by the front end loaders resulted in significant snow piles on sidewalks that was extremely difficult to remove with the existing Recreation and Parks equipment and staffing. It also created challenges for adjacent property owners attempting to meet the Code requirements for sidewalk clearing. In future storms, contractors operating the loaders will be instructed to avoid depositing snow at intersections, if possible, and additional equipment that proved most useful for clearing high volumes of snow from priority sidewalks will be secured through contracts.

- Snow Emergency Parking COG encourages member jurisdictions to adopt uniform parking practices during major storms. COG suggests requiring residents to park vehicles on a designated side of the street to help facilitate snow clearance.

Staff is examining the snow emergency parking policy in the City Code (Chapter 23. Traffic, Article II, Section 23-25. Snow Emergencies), provided in Attachment C. The City will continue to encourage residents to park in driveways prior to any snowfall. Removal of as many cars as possible from the streets helps ensure high quality plowing and improves resident satisfaction. For properties that do not have driveways, staff recommend that the City direct residents to park on one side of the street any time it snows, with signs identifying the designated side of the street. Plows will then have full access to the remainder of the street.

Staff further recommend deleting the requirement to move cars to the opposite side of the street after initial plowing. This portion of the current policy is confusing, has never been implemented with consistent success, and is a cause of much resident dissatisfaction. Resident feedback has been overwhelming in favor of not returning for more plowing after streets are made passable, because they do not want to clear their driveways, sidewalks and on-street parking spaces any more than necessary. While many of the City's major arteries already restrict parking on a routine basis, staff is identifying those roadways where parking during snow events should be prohibited on both sides of the street. This approach is in line with the COG recommendations and will be shared with residents for feedback and comments.

The City also will designate City-owned parking lots and garages for parking if a private driveway is not available. Recreation and Parks will plow those City-owned locations as soon as possible after the storm to allow residents to access their vehicles.

- Salt During the February event, regional salt supplies became critically low and our salt contractor became incapable of supplying salt both immediately prior to and during the storm. During the storm it was apparent that the contractor was not only supplying Montgomery County, whose contract we were riding, but also the State Highway Administration (SHA). The contractor was simply overextended, and the City responded during the storm by establishing emergency contracts with a vendor with access to salt from Delaware, and another vendor for vehicles to conduct an around the clock salt hauling operation to and from the Port of Baltimore. The salt shortage caused the City to severely limit its salting during much of the storm. Only after the second storm did the City begin to effectively salt the roads.

We will endeavor to keep the salt dome continuously full. That can be challenging when multiple storms come through the region in a short time period. Having multiple salt vendors under contract and a contingency hauling plan using contract trucks will also be used. The contingency hauling plan will be detailed in the snow SOP, and the trucks will be included in the Master Agreements described below.

Purchasing and Spending Authority

- Master Agreements. The Purchasing Division's ability to secure a national contractor to supply front end loaders, large dump trucks and operators, and the successful integration of the equipment in the City's efforts, was critical to success in removing snow from cul-de-sacs and widening travel and turn lanes on larger roads. To help increase our chances of receiving needed support in a timely manner in the future, staff recommends that the Mayor and Council approve the procurement of comprehensive, multiple award Master Agreements for brokering of services related to handling emergency events.

It is important to note that such agreements do not provide an absolute guarantee of performance, and they might not be enforceable during extraordinary widespread emergency events, when federal, state, county and municipal agencies could be competing for the same resources. Nevertheless, having Master Agreements in place with multiple vendors will help to avoid problems that Rockville could face securing the resources we need in future emergencies.

This recommendation is in line with COG's recommendations for the DC region. COG's after action report recognized that several jurisdictions called on contractors from outside the region during the February storm. COG encourages jurisdictions to have contractors in place before the next snow season and, when their plowing is completed, to share those resources with other governments.

- Contracting Authority. City Code indicates that contracts above \$100,000 shall be awarded by the Mayor and Council (Chapter 17. Purchasing, Article II, Sec. 17-39. Awarding authority). That language from the Code is provided in Attachment D. During the February 8, 2010 Mayor and Council meeting, the City Manager was authorized an additional \$300,000 in contract spending authority, having determined that the ongoing storm would require additional spending. To support timely approval and processing of contracts during future emergencies, staff recommends allowing the City Manager to award contracts up to \$500,000. Under this additional contracting authority, the City Manager would be required to declare an emergency and notify the Mayor and Council. The additional contracting authority would apply to the Master Agreements described above and other emergency contract needs.

During the COG forum, many local officials stated they had provisions for higher emergency limits for their executives. Others stated they would be examining this.

- Vehicles and Equipment. Some improvements to our existing vehicles and equipment will enhance future snow removal operations. Upgrades for selected equipment will be accomplished at the time of scheduled replacement. Examples are: replacing some two-wheel drive with four-wheel drive vehicles; equipping more pickup trucks with plows and spreaders; increasing the size of one front-end loader; and replacing two dump trucks with larger dual-axle trucks. Staff also recommends adding two plow tractors, which proved to be extremely useful in cul-de-sac clearing, and a front-end loader as finances may allow.
- Supply Management. Larger quantities of supplies were required for the 2009 – 2010 storm response than during typical winter operations. These included not only Stockroom supplies, but also Fleet Services, DPW Operations and Recreation and Parks items, such as shovels, plows, snow chains and vehicle parts. In the future, DPW, Recreation and Parks and Stockroom staff will meet regularly to prepare for emergency events and conduct regular walk-throughs of the stockroom. Staff will also review the stockroom catalog to help ensure products of sufficient quantity and quality are available for emergency situations. To better handle future emergency situations, while continuing to ensure funds are spent appropriately, DPW and Recreation and Parks will also work with the Stockroom to review and update lists of personnel authorized to purchase supplies and equipment during emergency events.

Staff Support and Policies

- Training A larger cadre of employees trained to operate snow plowing trucks and other equipment is needed to ensure we have adequate stand-by operators for extraordinary snow and ice operations. New employees also need pre-winter season training. New plow routes and SOPs will be in place before the 2010-2011 winter season, making comprehensive training particularly important this year.
- Food, shelter and transportation for staff The extent of the February storms revealed needed improvements in how the City shelters, feeds and transports employees involved in front line storm operations. For example, in preparing for future storms staff will secure hotel accommodations as far in advance as possible. City Hall staff will help to manage food and lodging for employees working the snow event. Meals Ready to Eat (MREs) and potable

Attachment B

water will be available in case power outages at hotels and restaurants limit food availability. Transportation between hotels and City facilities will be coordinated in advance.

- Policies We are reviewing all policies related to storm events to ensure that they are updated and sufficient for purposes of securing federal reimbursement. In some cases, improved documentation and clearer definitions may help the City to secure maximum reimbursement for emergency events.
- Telecommuting COG encourages local governments to increase employees' capability to "telework" and notes that governments may need to better define policies for telework and administrative leave. City employees took advantage of technology during the February storms to access City e-mail accounts, phones, and on-line documents in order to continue providing services to the community throughout the storms. For example, on-line Summer Camp registration began during the thick of the February storm and generated nearly 100 registrations. Improving the technology that makes telecommuting feasible for as many employees as possible is a priority.

Communication

COG recommends improving communication during storms using both traditional and new social media outlets. The goal is to improve public compliance with rules and set realistic expectations for government actions. COG notes that messaging for non-English speakers is also needed. Planned activities to improve communication during future storms include:

- Rockville 11 Without subjecting employees to undue risk, the City will continue to use Rockville 11 recording and coverage throughout the storm to inform residents of the work underway and progress made on the snow operations. The type of storm and level of City response will dictate the extent of Rockville 11 coverage, which will be defined in the communication portion of the SOP. Plans will be made to ensure camera and editing crew can access equipment when necessary.
- City website, facebook and Twitter For Rockville residents who prefer Web-based storm updates, staff will continuously update the website, facebook and Twitter. The home page will include "Breaking News" and video for some updates. The "Frequently Asked Questions" posted on the web will be reviewed and revised based on the February storm experience.
- Implement an Automated Vehicle Locating (AVL) System - The City Manager awarded a contract in June 2010 to InterFleet Inc for \$46,736 for an automated vehicle locating system. This type of GIS-based system is gaining popularity and was used last winter in other jurisdictions, such as the District of Columbia and Howard County. Besides increasing efficiencies by providing snow managers the ability to redirect plows more quickly and spend less time obtaining better situational awareness, these systems allow residents to track on-line the real time status of plows. The Department of Public Works also will use the AVL system for recycling and refuse and leaf collection vehicles.

Other Services

- Snow Removal Enforcement. The Code Enforcement/Community Enhancement Division in the Police Department enforces the requirement for property owners to remove snow from sidewalks abutting their property. The City focuses its enforcement on sidewalks in the vicinity of schools. Following the December and February storms, Recreation and Parks and Police secured contractors to assist with snow removal on critical pedestrian routes to schools and transit, where property owners could not reasonably comply in a timely manner. The City will continue to use contractors in the future to ensure timely snow removal from critical sidewalks.

The large amount of snow made timely removal by property owners more difficult than usual. The City was as flexible as possible in enforcement, recognizing the difficulty that the average person had shoveling such a high accumulation. Since there was so much pedestrian traffic during and just after the storm, that flexibility with enforcement also generated complaints from many who struggled to navigate the sidewalks.

The City Code gives residents 24 hours to clear snow and ice from the sidewalk when accumulation is less than three inches, and 48 hours if accumulation is more than three inches. That portion of the Miscellaneous Provisions of the Property Maintenance Code is in Attachment E. One option for the Mayor and Council to consider is adding a third tier that gives property owners 72 hours to clear a snow and ice accumulation of more than 10 inches. Staff also recommends adding a requirement that property owners remove snow from fire hydrants adjacent to their property to enhance public safety in the event of a fire.

- Water Treatment Plant. Improvements at the City's Water Plant will ensure continued water service during snow emergencies. The emergency generator and automated switch gear at the plant are now fully operational. A contract for emergency fuel deliveries is in place. Some improvements to the Water Plant access road are underway to make the plant more accessible on a regular basis and during snow emergencies.

Federal Reimbursement

The City secured reimbursement from the Federal Emergency Management Agency (FEMA) for eligible expenses from the 48-hour period from December 11-12, 2009. Applications were submitted for expenses incurred by the Department of Recreation and Parks, the Town Center Management District (TCMD) and DPW. The City received payments totaling \$160,381.14 or approximately 75% of the City's expenses.

On May 7, 2010, an emergency declaration was issued for the February 2010 storms. Staff participated in an applicant briefing on June 21, 2010, and is preparing the application materials for the reimbursement. While it was hoped that a 72-hour emergency window would be declared based on the two back-to-back storms, only a 48-hour window was approved. The Director of Public Works has set the City's 48-hour time frame from midnight Wednesday, February 10 to midnight Friday, February 12.

COG plans to address the limitations of the FEMA 48-hour rule and "record or near record" rule. According to the 48-hour rule, the Federal government will only reimburse jurisdictions for snow removal during a designated 48-hour period when a record or near-record snowfall impacts a state and the President issues a disaster declaration. The rule limited to two days the financial assistance available for the February storm even though the storm lasted over a week. The requirement that snow accumulation be "record or near record" to secure FEMA assistance is also problematic. That means the City will not be reimbursed again for future storms unless the snowfall reaches the 40-inch record from last February. COG's Emergency Managers Committee and Chief Administrative Officers Committee will advise the COG Board on requesting FEMA and/or Congressional delegation review of the 48-hour rule and the "record or near record" rule.

Mayor and Council History

The Mayor and Council received regular updates from the City Manager during both storms. A memo following the December 2009 storm was distributed to the Mayor and Council the first week of January 2010 (Attachment A). The Director of Public Works provided a full briefing on the status of the February snow response during the City Manager's Report portion of the February 8, 2010 Mayor and Council meeting.

Next Steps

Many changes and improvements in snow operations were undertaken during the 2009 - 2010 storms, and more have been identified. As next steps, staff proposes bringing the following to the Mayor and Council for approval before the 2010 - 2011 winter season:

- Comprehensive, multiple award, Master Agreements for the brokering of services related to handling snow storm and other emergency events,
- Amendment to the City Code to allow the City Manager, upon declaration of an emergency and notification of the Mayor and Council, to award contracts up to \$500,000,
- Amendments to the City Code to require property owners to clear snow from fire hydrants adjacent to their property and to give property owners 72 hours to clear snow and ice accumulation of more than 10 inches from sidewalks adjacent to their property, and
- Amendment to the snow emergency parking provisions in the City Code.

Staff will continue implementing additional improvements to prepare for the next winter season, including:

- Complete standard operating procedures and revised snow plow routes,
- Train employees,
- Address vehicle and equipment needs,
- Improve supply management,
- Enhance policies and staff support during snow storms,
- Implement the automated vehicle locating (AVL) system, and
- Continue the process to secure Federal reimbursement for the February 2010 storms.

Attachments

Attachment B



ATTACH A December snow response.pdf



ATTACH B Snow Response Levels.pdf



ATTACH C Snow emergency parking.pdf



ATTACH D Contract awarding authority.pdf



ATTACH E Property Maintenance Code.pdf

Department Head:

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Approved on: 07/01/2010

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Approved on: 07/05/2010