



# **CITY OF ALEXANDRIA**

## **2026 Winter Storm Fern Response and Recovery After Action Executive Report**

March 23, 2026



# STORM OVERVIEW AND RESPONSE

The winter storm that began January 24, 2026, known as Winter Storm Fern, was the most significant weather event in the region since Winter Storm Jonas in 2016, when the City received 23 inches of snow and blizzard conditions over a three-day period. The cascading impacts of these conditions required a multi-week response and recovery effort, with citywide impacts to all City and regional governments, including transportation networks, schools, and municipal services. This event received both a Virginia State of Emergency and a Federal Declaration of Emergency. The City also declared a Local Emergency and a Snow Emergency, providing the legal and operational authorities necessary to expedite resource mobilization, implement emergency traffic restrictions, and sustain essential services.

For 24 hours a day between January 24, 2026 and February 13, 2026, the City of Alexandria managed a prolonged, complex, rare winter storm response characterized by significant snowfall (up to 8 inches), several additional inches of sleet and freezing rain, coupled with a sustained period of subfreezing temperatures that created concrete-like hardened accumulations, often referred to as “snowcrete.” In fact, the temperature did not rise above freezing until February 2, 2026. The forecast continuously evolved in advance of the storm, with sleet and freezing rain materializing just prior to the onset of the event. The resulting extreme conditions required the use of specialized construction equipment to break apart and haul to off-site storage locations to support the recovery efforts.

While it has scaled back significantly, the City’s response remains in a recovery mode as staff continues to address cleanup of snow storage sites and repairs to infrastructure damaged during the ice removal process.

## Response

### Pre-Storm Event

City staff began preparing for Winter Storm Fern on Tuesday, January 20, 2026 (Four days before the event). Mult-departmental efforts included:

- Coordination, preparedness, and information sharing activities as outlined in the City’s Emergency Operations Plan (EOP). The EOP is a multidisciplinary all-hazards plan that establishes a comprehensive framework for the management of major emergencies and disasters within the City. The EOP is utilized when it becomes necessary to mobilize the resources of participating departments and agencies to save lives, protect property, and/or preserve the environment.
- Implementation of the Incident Command System (ICS) and the National Incident Management System (NIMS). We use these national standards because NIMS and ICS align with national best practices and federal standards in incident management, and are required by local, state, and federal emergency plans and grant guidelines.
- Daily coordination calls with the National Weather Service, surrounding jurisdictions, and the Virginia Department of Emergency Management.

# STORM RESPONSE

## Response cont.

- Once or more daily meetings with City departments and agencies, including Transportation & Environmental Services (T&ES), Office of Emergency Management (OEM), Recreation, Parks and Cultural Activities (RPCA), General Services (DGS), Human Resources (DHR), Alexandria Police Department (APD), Alexandria Fire Department (AFD), Department of Community and Humans Services (DCHS), Office of Communications and Community Engagement (OCCE), the City Manager's Office (CMO), Alexandria City Public Schools (ACPS), and DASH. Over 100 City staff were involved in pre-storm operations.
- Storm preparedness efforts increased and became more targeted as the forecast became clearer, and resources were mobilized to treat roadways several days before the first snow fell.
- Preparing emergency shelters for use if needed, to include restocking food and supplies. The City's winter shelter stayed open around the clock to ensure the unhoused had a place to stay during the extreme cold and incoming storm.
- The Emergency Operations Center (EOC), Snow Command, and the Alexandria Police Department Operations Center (APDOC) all activated prior to the storm's arrival to coordinate and support citywide response and recovery activities. Activation means that key staff across multiple Departments are collocated in command and coordination centers to manage response and recovery activities, coordinate information sharing, resource management, and financial documentation, and ensure that City leadership has access to information with which to make decisions.
- OCCE-led external communications to residents started January 19 and continued into January 24. In coordination with T&ES communications, 50 pre-storm safety posts were shared across all digital platforms: .gov, eNews, X (Twitter), Instagram, Facebook, and Bluesky. The goal for this messaging phase was to provide awareness/education, preparation guidance, and advisory updates to the community. During this period, content garnered:
  - **149,319** impressions (*number of times content is displayed [including repeat views]*)
  - **5,903** engagements (*likes, shares, comments*)
  - **121** post clicks
  - **229** new followers



The Emergency Operations Center activated as part of citywide response activities.

# STORM RESPONSE

## Active Storm Event Operations

During the event, from Saturday, January 24, through Sunday, January 25, 2026, the City moved into the Emergency Operations Command approach fully. Specifically, staff implemented the following:

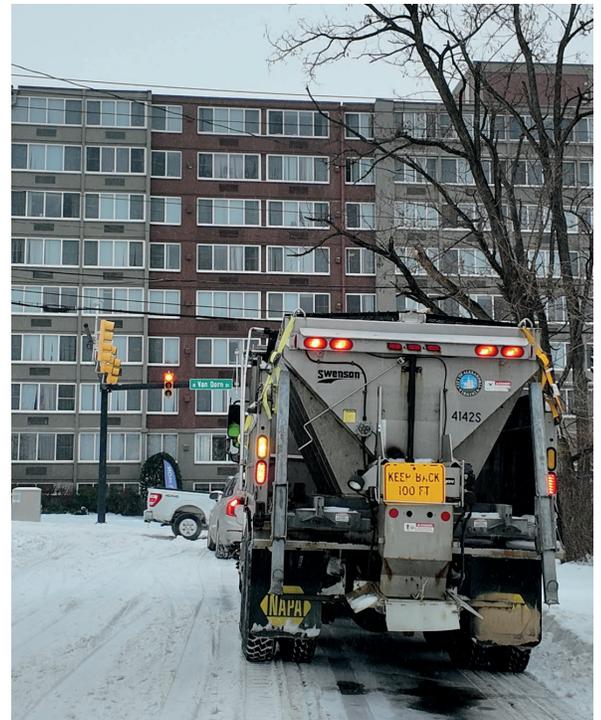
- Snow/Ice Removal Operations
- City crews and contractors with specialized construction equipment focused on snow clearing and ice removal activities on primary and secondary roadways.
- Field operations (e.g., snow removal, public safety responses, etc.) were conducted around the clock during extremely challenging conditions safely and without incident.

## Public Safety

- The City's Office of Emergency Management coordinated initial planning and activated the City's Emergency Operations Center at 6:30 pm on Saturday, January 24, 2026. The EOC remained active until 7 pm on Monday, January 26, 2026.
- Multiple departments (Police, Fire, Emergency, and Customer Communications) maintained essential services and responded to emergencies, including providing services to unhoused and vulnerable populations.
- DECC always maintained 911 and 311 and had no major issues or unmet needs.
- Public Safety departments modified schedules and adjusted operations. For instance, APD reduced responses to some calls for service due to roadway safety. AFD increased operating support as needed, including adding suppression pieces to EMS runs.

## Communications

- Throughout Active Storm Operations Jan. 24 -25, OCCE maintained 24-hour in-person support of the Emergency Operations Center. In collaboration with responding teams, T&ES, OEM, DCHS, VDH, and Public Safety personnel, OCCE posted/shared 38 pieces of content across all digital platforms.
- During the storm, messaging priority shifted from awareness/education and preparation content to safety and City operations. This content amplified transportation safety, general snow removal updates, and "how to contact the City" information.
  - **195,748 impressions** (*number of times content is displayed [including repeat views]*)
  - **8,427 engagements** (*likes, shares, comments*)
  - **761** post clicks
  - **328** new followers



1,143 truck loads of salt were used throughout the storm response.

# STORM RESPONSE

## Response cont.

### City Workforce

- Over 400 staff in T&ES, RPCA, and GS worked in 12-hour shifts to support the storm response.
- The City's operating status was closed on January 26 and 27, and open beginning on January 28, with the option for employees to take unscheduled leave.
- Hotels and meals were provided to staff to ensure they were available to support the response efforts.

### Post Primary Event

City staff continued to significantly respond to the storm event after January 25. The full 24-hour response continued through February 13, and daily shifts continued through March 2. Due to the significant amounts of snow and ice accumulation and the equipment necessary to respond, some elements of the response are ongoing.

### Snow/Ice Removal Operations

- 24-hour shifts of City crews and contractors continued to clear snow and ice from roadways, intersections, sidewalks, bus stops, schools, City facilities, parks, and paths through February 13.
- City crews and contractors continued to work daily shifts through March 2, completing work on intersections, sidewalks, parks, and paths. Smaller crews remained mobilized 24-hours to address refreezing.
- Dump truck operations hauled snow to 6 stockpile sites.
- Crews continue to clear debris from melting stockpile sites.
- Infrastructure repairs are addressing damage to roadways, parking areas, curb and gutter, and drainage structures caused by the use of heavy construction equipment to remove ice from the roadway and parking areas.

### Public Safety

- Services for the vulnerable and medically fragile were maintained, and shelters and warming centers were made available for those in need.
- DECC maintained 911 and 311 during this period, including through several operational periods where 311 received twice the normal daily call volume (up to 600 calls per day).
- Police returned to normal operations by January 28, 2026, and the Fire Department continued to provide enhanced, modified operations (with suppression units supporting EMS runs) or reduced response on certain call types.

# STORM RESPONSE

## Communications

- Daily coordination continued with City departments and agencies through the Snow Command operation.
- Daily with ACPS via phone calls, emails, and texts ensured school facilities, parking areas, and bus routes were cleared.
- 311 tickets were mapped, addressed, and responded to.

## External Communications

- From January 26 to February 1, OCCE's proactive messaging strategy was to encourage resident support to clear sidewalks, snow, and ice safety across roads and waterways, provide SnowReport Tracker updates, and share City operations. Throughout this timeframe, 85 posts were shared across all digital platforms.
- In addition to the proactive approach taken, post-storm communications shifted to crisis response and platform management. On January 26, there was an uptick that sustained through the following days. OCCE received and responded to more than 1,380 comments and messages related to weather, a 124% increase in messages and responses. By comparison, City platforms recorded 324 storm-related messages and comments between January 19 and 25.
  - **447,823** impressions (*number of times content is displayed [including repeat views]*)
  - **25,799** engagements (*likes, shares, comments*)
  - **968** post clicks
  - **1,083** new followers

# WHY THIS STORM EVENT WAS DIFFERENT

Includes Fern + Jonas + Typical Storm Equipment

Includes Jonas + Typical Storm Equipment

Includes Typical Storm Equipment



**Typical Storm**  
(~2 to 3 plow passes)



**Jonas**  
(Repeated passes but less than Fern)



**Fern**  
(Over 12 plow passes in some locations)

The comparison above uses Alexandria's storm-level framework to distinguish routine winter events from major storms. The City's Snow and Ice Control Plan categorizes winter storms as Level 0 through Level 3.

- **Under Level 0 and Level 1 conditions**, the City's Snow and Ice Control Plan relies on anti-icing and standard plowing operations focused on primary and secondary roads, hills, and other special areas, with anticipated clearing times measured in hours rather than days.
- **Level 2** reflects a sustained recovery phase following a major event. During Winter Storm Jonas, once primary roadways were completed, operations transitioned from Level 3 to Level 2, with full roadway clearance expected to take up to five days.
- **Level 3** represents the City's highest operational posture, associated with heavy precipitation, cold temperatures, and multi-day response and recovery. Both Winter Storm Jonas and Winter Storm Fern required this level of response, exceeded the normal Level 0–1 baseline; Jonas due to snowfall volume and regional impacts, and Fern due to the combined effects of snowfall followed by sleet, freezing rain, and sustained cold that hardened accumulations and extended recovery.

# WHY THIS STORM EVENT WAS DIFFERENT

## Storm Response Contributing Factors

| Comparison                 | Routine Winter Storm  | Winter Storm Jonas (2016)  | Winter Storm Fern (2026)  |
|----------------------------|---|--|---|
| <b>Storm Profile</b>       | <p>Level 0-2 Storm</p> <p>8 in. snowfall or less; followed by days of warmer above freezing weather</p>   | <p>Level 3 Storm</p> <p>22 in. snowfall; followed by 6 days at or above 60°, including a warmer Feb avg. of 39.9°F</p>   | <p>Level 3 Storm</p> <p>10 in. snowfall, sleet/freezing rain; followed by 15 days at or below 32°F, including a colder Feb. avg. 36.3°F</p>   |
| <b>Operational Period</b>  | <p>Typical response is 8–16 hours and in some cases 24 hours for Level 1 or 2 events</p>  | <p>Jan 22–23 storm event; multi-day response; all City roads passable by Jan 29, in 6 days</p>   | <p>Jan 25-26 storm event; multi-week response; all City roads passable by Jan 29, in 3 days</p>   |
| <b>Equipment Deployed</b>  | <p>Approx. 70 citywide response units (plows, spreaders, brine units, and trucks)</p>   | <p>Approx. 70 citywide response units + 12 heavy equipment units (dump trucks)</p>   | <p>Approx. 100 citywide response units + 50 heavy equipment units (loaders, skid steers, Bombardiers, and dump trucks)</p>  |
| <b>Roadway Restoration</b> | <p>Primary Roads passable in 12 hours; Residential roads passable in ~ 24 hours</p> <p>Corridors typically stabilized after 2–3 passes before shifting to the broader roadway network</p> | <p>Primary roads passable in ~24 hours; Residential roads passable in ~144 hours</p> <p>Corridors typically stabilized after 4–5 passes before shifting to the broader roadway network</p> | <p>Primary roads passable in ~15 hours; Residential roads passable in ~ 48 hours</p> <p>Corridors typically stabilized after 8-12 passes before shifting to the broader roadway network</p> |
| <b>ACPS Milestones</b>     | <p>ACPS in-person learning resumes within 1-3 days, with 2-hour delay</p>   | <p>ACPS in-person learning resumed after 6 days, Jan 29 with a 2-hour delay</p>  | <p>ACPS in-person learning resumed after 8 days, Feb 03 with a 2-hour delay</p>   |

# FOCUS ON SAFETY

## Focus on Safety

The highest priority of the response revolved around safety. Crews prioritized primary roadways and emergency routes during the storm and immediately following. As a result, 911 response times for police and fire were not impacted. The City suffered no major infrastructure damage or power outages during or after the storm. Responding staff did not suffer any significant injuries.

Primary corridors such as Duke Street are prioritized during winter storms because they carry the highest traffic volumes and support emergency response and transit operations. While these routes typically require two to three plowing passes during a normal event, Winter Storm Fern required more than a dozen passes in some locations, extending the time needed to stabilize these corridors before resources could be shifted to the broader roadway network.

## Response Indicators

The following indicators highlight the response activities and resources involved:

- Primary roadways were safely passable within approximately 15 hours
- Secondary roadways were safely passable within approximately 35 hours
- 97% of all roadways were safely passable by Wednesday, January 29
- School sites were cleared by Sunday, February 1, and school-adjacent parking areas were substantially cleared by Monday, February 2
- Parks were cleared by February 16
- 1,606 311 tickets received
- 4,582 tons of salt used
- 1,143 truckloads of salt
- Approximately 8,500 dump truck loads of snow and hardened accumulation were removed
- Approximately 266 City personnel worked 9,600 total hours and 200 contractor staff supported continuous 24-hour operations across multiple shifts from January 24 through February 13, for 19 straight days at 38 total shifts
- Over 150 pieces of roadway equipment were deployed per shift, including standard plows, V-plows, spreaders, backhoes and rear loaders, rubber-tire loaders, skid steers (bobcats), bombardiers, ATV sidewalk/pathway equipment and pickup trucks.

# COST OF RESPONSE

## Winter Storm Fern Response Cost

The City's total cost to date for the response to Winter Storm Fern is \$9.6 million. The largest category of cost is contractor support necessary to supplement the City crews and equipment. Due to the specialized construction equipment needed to remove the ice from roadways and other surfaces, outside support was needed. In addition to the equipment, contracted operators and supervisors participated in 12-hour shifts, 24 hours a day. City employees worked 12-hour shifts. Employees in multiple departments were housed in local hotels to ensure they were available for the response.

The table below breaks down the cost categories as of March 19, 2026.

## Winter Storm Fern Response Cost by Category

| Employee Labor | Contract Services | Non-Personnel Costs<br>(Lodging, Materials,<br>Supplies) | Total              |
|----------------|-------------------|--|--------------------|
| \$647,154      | \$8,350,983       | \$666,228  | <b>\$9,664,365</b> |

# REPORT METHODOLOGY & KEY FINDINGS

## Report Methodology

Information for this report was obtained from various sources using several methods, including:

- Over a dozen debriefing sessions were held with frontline staff, supervisors, and response leadership serving in a variety of roles during the response. Departments and agencies included the City Manager's Office, Office of Emergency Management, Police Department, Fire Department, Transportation & Environmental Services Department, General Services, Recreation, Parks & Cultural Activities, Office of Communications and Community Engagement, Sheriff's Office, Code Administration, Department of Emergency and Customer Communications, and DASH.
- Anonymous surveys were completed by 18 individuals who participated in or supported the response and recovery.
- Data such as pieces of equipment, total crews, and the number of staff on shifts were pulled from situation reports and information collected during the response by the EOC, Snow Command, and other command and operations centers.

## Key Findings

The City's overall response successfully created and maintained the ability to safely respond to emergencies city-wide during and following the storm event. While the response took several days to reach every residential street, Alexandria's response was consistent with or better than the response of neighboring jurisdictions. Staff have identified several strengths of the response, as well as areas for improvement in advance of future storm events.

### Strengths

The City's practice of advanced preparation, coupled with training and exercises to prepare for emergency events, particularly around snow, allowed staff to seamlessly move into preparedness, response, and recovery roles.

- Staff in over a dozen City departments participate regularly in emergency preparedness training and scenario-based exercises related to their roles in the Emergency Operations Center (EOC) and departmental operations centers. This past year alone, three EOC exercises were held related to snowstorm and hurricane/severe weather scenarios, and three advanced-level NIMS/ICS training courses were held for departmental response teams and City leadership. Over 75 individuals participated in these activities (several of whom participated in multiple events). Over the past three years, hundreds of individuals have participated in similar activities designed to enhance preparedness citywide.
- The City's Snow and Ice Control Plan is reviewed and updated annually, and staff participate in specific training related to their roles and responsibilities. In addition, all 25 Departmental Continuity of Operations (COOP) plans are updated and tested annually, and the City's Emergency Operations Plan (EOP) underwent a full revision this past year, which involved input from all City departments and a host of external partners, including ACPS and DASH.

# KEY FINDINGS

## Strengths (cont.)

- The City's Fleet Management annually inspects, services, and prepares 216 snow response assets, including trucks, loaders, plows, spreaders, brine tanks, snowblowers, brushes, and related attachments, for winter operations.
- Staff coordinates with ACPS via meetings, emails, calls, and texts before and during the winter season to develop and maintain a shared understanding of response needs and priorities. Planning for this event began in the week before the storm onset with coordinated forecast monitoring, impact assessment, and operational planning among City Snow Operations, OEM, ACPS, the National Weather Service, regional partners, and neighboring jurisdictions.
- Throughout the year, the Office of Emergency Management works with its regional counterparts, the Virginia Department of Emergency Management, the Metropolitan Washington Council of Governments, the National Weather Service, and neighboring jurisdictions to strengthen local and regional preparedness for emergencies. This collaboration includes regional planning, training, and exercise activities, as well as ongoing coordination on weather monitoring, operational readiness, and response decision-making for winter weather and other hazards.

## Well-organized initial response:

- Early activation of response staff and the EOC provided a head start on planning.
- Senior leadership support was sustained through the event, allowing rapid mobilization and decision-making.
- Strong internal communications and citywide coordination across departments enhanced situational awareness during sustained operations. A regular cadence of planning and coordination meetings supplemented with Teams chat groups, radio communications, and situational reports took place prior to and during the storm response.
- Staff in leadership roles identified, adjusted, and reassigned resources and staffing as conditions changed. Challenges with the accuracy of the snow tracking map were quickly identified and corrected.

## Opportunities

While the response demonstrated several strengths, it also highlighted opportunities for improvement, notably in the areas of planning, public communications, and greater use of technology.

### Planning:

- Enhanced focus on priorities during each shift to ensure organization-wide response remains focused on the most critical activities. Building additional staffing depth, both by providing additional training to staff in the primary response departments (T&ES, RPCA, General Services) and expanding training to staff from across additional City departments, will reduce operational strain during prolonged responses.
- Expanding the prioritization of pedestrian networks, intersections, transit corridors, business corridors, and school access routes included in the Snow Operations Plan will assist in prioritizing operations during storm events of this magnitude, with prolonged impacts to these networks occurring city-wide. This will formalize these network priorities similarly to how the plan currently prioritizes roadways.
- Expanding and updating contracts for snow event support will allow for enhanced resource management, surge capacity, and contractor management.

# KEY FINDINGS

## Opportunities (cont.)

### Stronger Public Communications:

- Establish a process to proactively identify and communicate anticipated operational updates, ensuring transparency, addressing safety and security concerns, and managing public expectations of the City's response.
- Where possible and appropriate, continue to customize content by engagement platform to ensure the best placement and setting for critical information and awareness messaging.
- Establish a streamlined interdepartmental approval process for operational content to share how the City is prioritizing response, priority shifts, progress, and setbacks.
- Leverage community stakeholder groups to amplify City messaging and calls to action.

### Technology:

- Updating snow routes with GPS-enabled routing devices will minimize missed streets and improve reporting accuracy.
- Enhanced use of vehicle tracking technology for both City and contractor equipment will support improved real-time information sharing on the City's Snow Tracker map- such as the number of plow passes completed on each roadway. Tracking pucks carried in each vehicle will transmit this data directly to the mapping tool, increasing visibility for the community.
- Enhancing the capabilities of 311's ability to collect, track, and respond to community concerns will include additional snow reporting categories, targeted responses to provide more frequent updates, and improved tracking abilities for staff.

## Policy Considerations

Throughout storm response, staff identified several policies for further evaluation in the coming months. These efforts will focus on the following areas, with recommendations to be developed and presented to City Council in the fall:

- Updating City code requirements regarding sidewalk clearing to allow for greater flexibility during significant events with unusual circumstances, such as an expanded recovery period, significant ice, and an emergency declaration.
- Evaluating options to limit on-street parking before and during major storm events. These could include limiting parking to one side of the street in certain locations.
- Considering a policy to allow the reservation of on-street parking spaces in residential areas for the use of essential workers and teachers.

# ADDITIONAL CONSIDERATIONS

## **ACPS Coordination:**

While the overall coordination with ACPS prior to, during, and after the storm event was strong, improvements can be made and are underway.

- Snow response mapping is being updated to include school bus routes, bus drop-off areas, and school bus stops.
- Enhanced coordination and timing around school operating status decisions will allow City response resources to be appropriately prioritized and deployed.
- Stronger emphasis on a single point of contact for communicating response needs will streamline resource allocation.

## **VDOT Coordination:**

VDOT provides snow response in neighboring Counties. Staff will hold discussions with VDOT to understand what, if any, resources could be made available to support the City's response in future events.

## **Metropolitan Washington Council of Governments (COG) Coordination:**

COG facilitates regional coordination and planning throughout the year through various multidisciplinary committees (e.g., emergency managers, fire chiefs, police chiefs, transportation heads, etc.). These groups meet regularly and collaborate on a host of preparedness-related activities. Staff will work with COG to discuss lessons learned regionally from this event.

## **DASH and WMATA Coordination:**

Both transit agencies are interested in supporting the clearing of bus stops. Staff will work to establish roles and responsibilities to include in the Snow Operations Plan.

## **FY27 Budget:**

Additional funding is proposed for the FY27 Operating Budget to support the snow response program, including Volunteer Alexandria's Snow Buddies program.

# NEXT STEPS

Work has already begun to address the opportunities outlined above. The following table highlights the timeframes anticipated for addressing these opportunities.

## Snow Response Action Timeframe

| Timeframe          | Follow-Up Action  | Lead Agency |
|--------------------|---|-------------|
| Annually           | Update Snow Operations Plan <ul style="list-style-type: none"> <li>Incorporate ACPS Bus Routes &amp; Drop-offs</li> </ul> | T&ES        |
| Annually           | Conduct Quarterly Training and Exercises for a Broader Range of City Staff  | OEM/T&ES    |
| Immediate          | Evaluate and Update Support Contracts   | T&ES        |
| Summer/Fall 2026   | Enhance GPS Routing and Equipment   | T&ES/ITS    |
| Summer/Fall 2026   | Expand Vehicle Location Capabilities to Include Contractor Equipment  | T&ES        |
| Spring/Summer 2026 | Update 311 Snow Categories/Responses  | DECC/T&ES   |
| Fall 2026          | Provide Policy Evaluations and Recommendations  | T&ES        |

