



ResilientALX Report

Prepared for Alexandria City Council by
Alexandria Citizen Corps Council

March 25, 2023



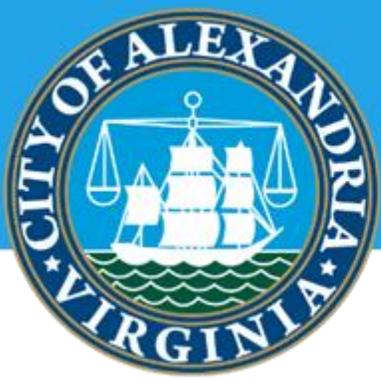


Table of Contents

<i>Project Introduction</i>	2
<i>ResilientALX Action Plan</i>	4
1. Increase Emergency Training and Exercises.....	4
Recommendations	4
2. Invest in Emergency and Non-Emergency Communication Systems	5
Recommendations	5
3. Invest in Infrastructure to Mitigate Risks	6
Recommendations	6
<i>ResilientALX Contact Information</i>	7
<i>Responsibilities in the City Emergency Operation Plan</i>	7
<i>Alexandria City Public Schools (ACPS)</i>	8
<i>Alexandria Health Department (AHD)</i>	10
<i>Alexandria Police Department (APD)</i>	15
<i>Code Administration</i>	19
<i>DASH</i>	22
<i>Department of Emergency and Customer Communications (DECC)</i>	25
<i>Planning and Zoning (P&Z)</i>	27
<i>Recreation, Parks, and Cultural Activities (RPCA)</i>	29
<i>Sheriff's Office</i>	32
<i>Transportation & Environmental Services (T&ES)</i>	35



ResilientALX Report

Project Introduction

On November 12, 2019, Chairman Patrick Moran of the Citizen Corps Council, a City Council-appointed commission of members of the community, experts in emergency management, and representatives from emergency preparedness volunteer organizations, first presented the ResilientALX Charter to City Council. It detailed our initiative that the Citizen Corps Council propose needed updates to the Alexandria Strategic Plan to promote a more resilient Alexandria.

The City Council approved and unanimously passed a motion asking us, the Alexandria Citizen Corps Council (CCC) to examine aspects of resilience in the City of Alexandria. Specifically, we agreed to complete the following steps:

1. **Conduct assessments of community preparedness and resilience.**
2. **Report on the preparedness and resilience findings.**
3. **Provide recommendations on how Alexandria can achieve strategic goals for preparedness and resilience in the form of a ResilientALX Action Plan.**

The Office of Emergency Management (OEM) provided staff support to CCC throughout the implementation of this initiative, and we are grateful for the time and support of the individuals who have committed their time to support the Citizen Corps Council throughout. From the Office of Emergency Management, we say thank you to Kevin Coleman, Brent Ruggles, Ray Whatley, and Corey Smedley.

In a review of the ResilientALX Charter, our initial intent was to conduct a community-wide survey that included quantitative data from questionnaires issued to a broad range of organizations, businesses, and residents. However, the COVID-19 Pandemic State of Emergency and related resource constraints required that we reconsider our strategy. For this report, we completed a qualitative assessment of our community preparedness by conducting interviews with key City departments and partner agencies conducted from January 2022 through July 2022.

The following Tier 1 and Tier 2 organizations participated:

- Alexandria City Public Schools (ACPS)
- Alexandria Health Department (AHD)



- Alexandria Police Department (APD)
- Code Administration (Code)
- DASH
- Department of Emergency and Customer Communications (DECC)
- Planning and Zoning (P&Z)
- Recreation, Parks and Cultural Activities (RPCA)
- Sheriff's Office (Sheriff)
- Transportation and Environmental Services (T&ES)

Sandy Habib, project student intern and esteemed former member of the CCC, and Marjorie Windelberg, ResilientALX Subcommittee Chair and CERT Coordinator conducted interviews. Progress continued through monthly meetings which included bi-monthly Citizen Corps Council to review progress and discuss challenges and interim bi-monthly ResilientALX subcommittee meetings to focus on technical details.

The interview responses were organized by key disaster preparedness and resilience themes and topics and are included herein. We have also provided executive summaries of common concerns we observed and opportunities for enhanced community resilience. Our recommendations are actionable steps to increase resiliency and preparedness in the City of Alexandria.

This report was jointly authored by Patrick Moran, Marjorie Windelberg, and Sandy Habib with support from the entire Citizen Corps Council membership, and our participating volunteer organizations: Community Emergency Response Team (CERT), Medical Reserve Corps (MRC), Red Cross, Volunteer Alexandria, and the Alexandria Radio Club. Citizen Corps Council members who served and participated in the completion of the ResilientALX initiative not mentioned previously include Taryn Wilkinson, Glen Roe, Michelle McIntire, Donna Reuss, Robert Love, Stephen Hart, Spencer Schargorodski, Brian Lundeen, Robin McWilliams, David Koscinski, and Natalia Lane.



ResilientALX Action Plan

The primary cross-cutting theme that emerged throughout the interviews amongst City Staff was the **importance of, and need for, ongoing interagency collaboration, training and exercises, enhanced communication resilience, and acute risk mitigation.** In a review of our findings, observations, and research, the Citizen Corps Council recommends the following actions be taken to improve Resilience in Alexandria:

1. Increase Emergency Training and Exercises

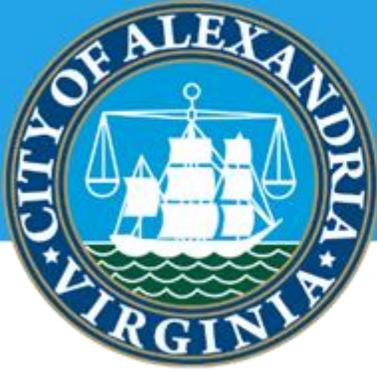
Training and exercises are essential for the execution of emergency plans and are generally well-received by participants. However, the COVID-19 pandemic negatively impacted all organizations' abilities to conduct training and exercises, both internally for staff and externally with various partners.

Looking to the future, the value of training and exercises cannot be overstated. Every department interviewed stated a need and desire for training and exercise participation, both interdepartmental and cross-departmental. Training and exercises should not stop at the tabletop exercise discussion level. They should also include exercises to test and promote Alexandria's capabilities through resource mobilization.

From experience yielded during the COVID-19 State of Emergency, we found that departments and organizations with a staffed emergency manager (or similar role) were easier to liaise with and better able to integrate into the City's COVID response efforts. Identifying this need and appointing an emergency manager can make a big difference when it comes to being prepared to respond quickly and efficiently to any emergency or disaster whether it be public health, natural, or man-made.

Recommendations

- 1. CCC recommends expanding the roles of existing staff to include embedded emergency managers to increase cross-department coordination, planning, training, and overall communication.**
- 2. CCC recommends that department staff attend FEMA Emergency Management Institute (EMI) hosted training.**
- 3. CCC recommends establishing city-wide standards for exercises and drills and increasing the frequency and breadth of trainings that are at the internal department level, cross-department, multi-organizational, and with mutual-aid partners.**



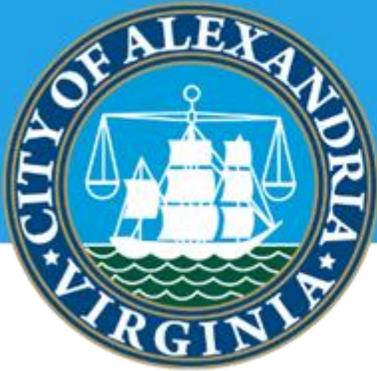
2. Invest in Emergency and Non-Emergency Communication Systems

Our interviews probed both internal communications with staff and external communications with partners, between one another and the public. **Physical or cyber disruption of communications is a concern of several departments and partner organizations and has long been a concern among members of the CCC.** From these interviews, we identified the following needs and opportunities for improvement:

- Better understanding and development of emergency communication contingencies and backup plans if primary communication systems based on cellular technology or the internet are inoperable or degraded.
- Public education on what the City service does and does not do, how public safety responds and prioritizes responses to emergency and non-emergency requests, and how emergency service requests will be delayed in a disaster or emergency environment. This includes the need for improved communication across City and non-City entities during routine operations and when emergencies occur. This includes education and messaging related to impacts from special events, including road closures, bus route changes, parking restrictions, etc.

Recommendations

1. **Upon a thorough assessment of those capabilities, we recommend that there be a plan to mitigate 911 communication system risks and invest in communication contingencies across Alexandria. In an environment in which many households no longer use landline telephone service and instead rely on cellular and internet services alone, emergency communication lacks resilience. We recommend an assessment of community-based call boxes and the broader use of radio backup to ensure emergencies and potential emergencies may be communicated to emergency personnel as quickly as possible if primary systems are impacted.**
2. **CCC recommends that action be taken to improve technology disaster resilience through a city-wide review of systems, technologies, and procedures to increase disaster readiness and identify areas of improvement in technology resiliency against cyber-attacks. This should include investment in meeting 911 internal communications needs when primary lines of communication are disrupted or degraded. It should also include an analysis of challenges with cross-organization system compatibility and information sharing, which can lead to confusion and inefficiency.**

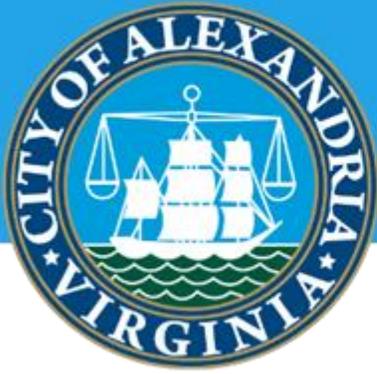


3. Invest in Infrastructure to Mitigate Risks

In addition to the aforementioned recommendations, there were several concerning points raised by interviewees that echoed concerns previously voiced by members of the CCC. We have included these points with our recommendations for mitigating risk and enhancing resilience.

Recommendations

- 1. CCC recommends investment in electrical systems to accommodate backup electricity generation at all of Alexandria’s emergency shelters. This recommendation is based on our finding that emergency shelters do not currently have generators installed, severely limiting the shelter’s resilience in serving the community during a disaster and related power outage. We recommend that permanent generators be installed at these shelters that utilize proximate natural gas pipelines to fuel the generators and each building’s critical systems if power is down. Alternatively, we recommend rooftop solar arrays with battery where tree cover and existing open space would permit such an installation.**
- 2. CCC recommends long-term planning to move power and communication transmission lines underground. We commend current guidance that requires underground transmission lines in new developments, and we recommend action be taken to move above transmission and communications lines in older and historic neighborhoods underground. This will protect power and communication lines from weather-related hazards and improve the quality of life for Alexandrians while enhancing economic vitality.**
- 3. CCC recommends continued investment in Sewers and stormwater infrastructure to mitigate flood risk, prevent property damage, promote water quality, and promote public health.**
- 4. CCC recommends that investments be made to install stronger, more permanent barriers that can be raised or lowered for emergency service vehicles as needed to improve pedestrian safety and mitigate risk on the 100 block of King Street.**



ResilientALX Contact Information

Please direct any questions concerning this report to Citizen Corps Council Chair, Patrick Moran at patrick@moranstrategies.com and ResilientALX Committee Chair, Marjorie Windelberg at coordinator@alexandriavacert.org

Responsibilities in the City Emergency Operation Plan

City departments and partner organizations are assigned responsibilities in the City’s 2021 Emergency Operations Plan. The EOP is published at https://www.alexandriava.gov/sites/default/files/2022-01/EOP2021BasicPlan_0.pdf. The responsibilities are organized into Emergency Support Functions (ESFs), with organizations assigned a primary role as shown in the table below. During interviews, individual departments referred to their ESF roles. Note that the list includes some organizations that were not interviewed for this report.

ESF Title	Primary Organizations
ESF #1: Transportation	DASH, General Services, APD, T&ES
ESF #2: Information Technology & Communications	Information Technology Services
ESF #3: Public Works & Engineering	T&ES
ESF #4: Firefighting & Emergency Medical Services	AFD
ESF #5: Information & Planning	OEM
ESF #6: Mass Care, Emergency Assistance, Temporary Housing & Human Services	RPCA
ESF #7: Logistics Management & Resource Support	Finance
ESF #8: Public Health, Behavioral Health & Medical Facilities	AHD
ESF #9: Technical Rescue	AFD
ESF #10: Oil & Hazardous Materials Response	AFD
ESF #11: Agricultural & Natural Resources	None
ESF #12: Energy & Water Supply	T&ES
ESF #13: Public Safety & Security	APD, Sheriff
ESF #14: Cross-Sector & Business Infrastructure	None
ESF #15: External Affairs	Communications & Public Information



Alexandria City Public Schools (ACPS)

Interview with

- John Contreras, Director of Safety & Security Services
- Carlton Gerald, Coordinator, Security and Emergency Operations

Emergency Operations Plan Responsibilities

Primary Emergency Responsibilities

- N/A

Supporting Responsibilities

- Perform emergency repair, debris clearance, and damage assessment for school properties and also support these efforts elsewhere in the City.
- For public health emergencies, provide nursing personnel, facilities, and other resources.
- Support public information distribution to students and their families during emergencies.

Summary

- ACPS feels that they work well with other City departments, but since they are in supporting roles during emergency situations, they would need resources from other City departments. Because of these required collaborations, it would be useful for all parties involved to participate in training and exercises.
- ACPS is a strong proponent of FEMA's Emergency Management Institute (EMI) training, which can go through every all-hazard scenario with the team as well as other City departments. ACPS believes that other City departments, including OEM, should support EMI. They just need to reach out to EMI and schedule the training at a time that works for the ACPS team.

Disaster Readiness and Resilience

Finding the time to prioritize emergency planning. It is very difficult to find the time to sit with leadership, teachers, and schools to explain why they need to do drills. There is so much else going on that emergency preparedness does not always get the priority it deserves. It is also difficult to get schools to do evacuations and real-life scenarios. In the summer, when most students are out of school, many teachers are also off.

Continuity of Operations Plan. Prior to the pandemic, ACPS did not have a Continuity of Operations Plan (COOP). Now, they are all in alignment up the chain that they need to have a COOP plan prepared and ready to implement. ACPS now has a COOP draft that is currently being reviewed.



Training and Exercises

They conducted a tabletop exercise a few months ago with school system leadership. In the next few months, they want to move into the next phase of exercises, using Emergency Evaluation Guides. OEM will do the introduction. They also mentioned that they would like to bring Emergency Management Institute partners in for school training to prepare them for emergency operations. This free two-day course of instruction will help school leaders understand the importance of having and working through an all-hazards plan.

ACPS knows what they need to do for training and exercises, and they feel that the training and exercises will take them to the next level in emergency preparedness.

Communications and City Partnerships

- Working with Capt. Ray Whatley and the OEM team has been great.
- Working with APD and their Public Information Officer has also been useful.
- ACPS also worked well with AHD, especially regarding COVID. ACPS hosted covid testing Points of Dispensing (PODs) and vaccine clinics. ACPS was able to disburse information easily during this time.

Mitigation Opportunities

A cyberattack is a threat for ACPS. If such an attack were to occur, they would potentially not be able to adequately support their schools. Likewise, they would have difficulty communicating with parents and the public.

They acknowledge that this should be a top-of-mind threat that is addressed via an all-hazards approach. To date, they do not have adequate cyber safeguards in place.



Alexandria Health Department (AHD)

Interview with

- Dr. Anne Gaddy, Deputy Director
- Jasmin Johnson, Assistant Public Health Emergency Management Coordinator

Emergency Operations Plan Responsibilities

Primary Emergency Responsibilities

- Emergency Support Function #8 Public Health, Behavioral Health, & Medical Facilities, including mass fatality management

Supporting Responsibilities

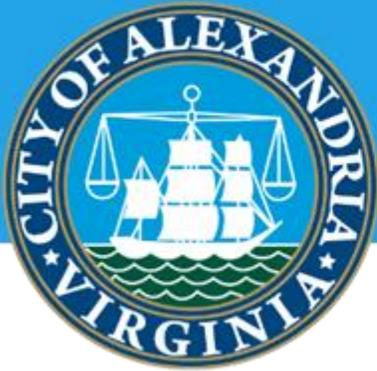
- Ensure health standards for food and water are maintained and provide needed health services at sites where mass care is offered.
- Provide volunteers through the Medical Reserve Corps program.
- When utilities are disrupted by an emergency or disaster:
 - Inform the public how to assure food and water consumption are safe.
 - Coordinate surveillance for potential health effects.
 - Coordinate inspections of grocery stores and restaurants.
- Support response, recovery, and remediation for hazardous materials incidents.

Disaster Readiness and Resilience

General Level of Disaster Readiness. Readiness is high, due to staff readiness and the Epidemiology and Emergency Management divisions. Both divisions have plans, training, and a first responder mindset. AHD has developed plans and conducted exercises and training, so they felt extremely prepared at the time of this interview.

Other Factors Leading to Disaster Readiness

- AHD had an Emergency Operations Plan for a pandemic and was, therefore, able to implement the Incident Command System structure quickly, including planning, operations, communications, and meetings. These basic functions were invaluable.
- Basic testing and vaccination plans were already in place. AHD just needed to scale up and make them work in real life.



- The Emergency Management division coordinates with nursing, environmental health, etc. for various roles those people might take on in a response and completes training and exercises for various threats.
- The City facilitated COVID communications and operational plans. For example, City employees shifted from their pre-pandemic jobs to the COVID call center.

Challenges with Disaster Readiness

- Several facets of the AHD infrastructure made it difficult to scale up quickly, such as the Information Technology and Human Resources systems.
 - Their IT system, for example, had compatibility issues with other departments and did not allow for the sharing of health information.
 - The Department was short HR and administrative staff.
- The City's loan of an employee with the skill set to provide data analysis and IT systems solutions to strategic and operational problems benefited AHD in critical ways, including by identifying priorities and gaps in outcomes, improving operational efficiencies, and enabling public interface capabilities. AHD has identified this role as being a crucial position to have permanently to ensure adequate public health emergency response both by increasing preparedness through the general improvement of IT data and systems infrastructure, as well as being an active part of responses.
- In addition, due to pre-existing vacancies there were some capacity gaps, such as with operations and communications.
- Various inadequate equipment and IT systems hindered the Department's efficiency as well, including conference room equipment, internet bandwidth, and virtual meeting platforms.

Other AHD Readiness Tools

- Project Public Health Ready is an accreditation process submitted every 5 years which demonstrates that an agency meets public health preparedness capabilities. AHD was accredited in 2020. This project is administered through the National Association of County and City Health Officials (NACCHO).
- An Operational Readiness Review is conducted to assess AHD's capability fulfillment. They do this annually, and the Centers for Disease Control and Prevention (CDC) does an audit every 3 years.



Training and Exercises

The Department is now starting to focus on trainings and exercises with current and new staff. This includes larger training and exercise efforts with external partners that have been pushed back due to COVID. While AHD feels ready should a large natural disaster hit Alexandria and knows its roles, it could use more training for specific scenarios. More training with City partners would also be beneficial.

Mitigation Opportunities

- City departments could benefit from having a first responder or emergency manager on their team. Having a first responder/emergency manager within every agency/department makes a big difference when it comes to preparing for a disaster and scaling up quickly. Departments and organizations that had emergency managers were easier to liaise with and better able to integrate into the COVID response and provide the needed support.
- For a great response, you need a solid infrastructure built up with depth and robustness to support the whole system.
- Individuals supporting Emergency Support Function #6 Mass Care for Isolation and Quarantine (I & Q) resource support (hotel, food, supplies) changed multiple times during COVID: AHD, OEM, and other departments. AHD would have benefited from having a consistent coordinator for I & Q support functions who was housed outside of AHD to coordinate these functions. AHD spent a significant amount of time and effort, including after-hours and weekend work, designing processes, coordinating the staff from other departments, and providing logistics for this purpose. However, these functions do not fall under AHD's ESF #8 responsibilities.

Communications

Internal Communications

- Overall, internal communications have been good, but the Department is still continuously looking for ways to improve them.
- They conduct all-staff meetings and email to maintain communications between meetings and with others who need the information as well. Communication channels with various teams such as the contact investigation team, the outreach team, and others were maintained.
- During the busiest times and on the longest workdays, maintaining communications and general awareness was hardest.
- AHD was able to effectively communicate priorities and goals.



- AHD uses Health Alert Network (HAN) alerts as a rapid notification system to staff when they are needed for an emergency response, while the City uses Everbridge to send notifications to all staff.
 - Monthly HAN alert drills are reminders to AHD staff that they are first responders and ensure they know how to use and respond to the system.

Inter-Departmental Communications

- COVID has been a good experience in terms of building relationships with other City departments and partners.
- A big disaster response requires that all City partners collaborate, but this works best when all the right people are in the room.

External Communications

- AHD feels that they did a good job communicating externally with the public and partners.
- Perhaps external communications could have been better had there been someone in their Communication Officer role. The Department could have also benefitted from a permanent internal graphic designer/marketing person; they hired a temporary person in this role with COVID funding. Having more in-house resources would have streamlined communications to send materials more quickly.
- The City assisted with communication, which was beneficial at times and more complicated other times. The partnership with the City was great, but the additional channels and personnel sometimes makes things take longer.

Equity

- AHD is extremely conscious of equity and prioritizes it.
- AHD leveraged partnerships to reach out to vulnerable populations to assess their needs and experiences, and AHD provided resources accordingly.
- A great deal of AHD COVID analyses was based on the cases, vaccination rates, and testing of vulnerable populations. AHD used social vulnerability indexes for tracking and outreach purposes.
- Access and functional needs training is conducted regularly.
- AHD is also mindful of those with disabilities and/or limited English proficiency and directs resources to both populations.



COVID Response & Readiness

Plans, Supplies, and the Supply Chain

- Plans for existing annual flu shot clinics and vaccination/testing sites were already in place when COVID reached the U.S. At the time, in early 2020, AHD had a core set of supplies such as N95 masks and alcohol wipes on hand for terrorism and pandemic readiness. While AHD was not ready to serve the entire population at the time, they did have enough supplies to last while they scaled up. There were always enough masks for staff and volunteers. The Virginia Department of Health sent AHD additional supplies in the early months.
- Over time, N95 masks were running short, but overall, there were enough supplies. Now AHD knows what is needed for future readiness.
- An electronic inventory system was desired, but unable to be procured because of extensive approval process required by the state.

Volunteers

- The majority of Alexandria's COVID volunteers came to AHD via Medical Reserve Corps (MRC). MRC does background checks and trainings for volunteers. The pre-pandemic volunteer pool was 400 people; today it is over 2000. Having a Volunteer Coordinator was critical.

Challenges with COVID Funding

- There were multiple funding streams to juggle, which added to the administrative and finance team burden.



Alexandria Police Department (APD)

Interview with

- Lieutenant Ed Milner, Emergency Readiness and Operational Planning

Emergency Operations Plan Responsibilities

Primary Emergency Responsibilities

- Emergency Support Function #13 Public Safety and Security
 - Coordinate response to identify incident sites requiring law enforcement and security services.
 - Ensure the operation of police dispatch and reporting systems and provide alternate communication links if necessary.
 - Ensure public safety and welfare are being implemented through such actions as evacuation, crowd and traffic control, property protection, security at designated facilities, and incident perimeter control.
 - Coordinate security for City facilities, evacuated areas, and supply distribution points.
- Emergency Support Function #1 Transportation
 - Provide traffic control assistance.
 - Assist with determining the most viable transportation networks to, from, and within the emergency area and regulate the use of these transportation networks.

Supporting Responsibilities

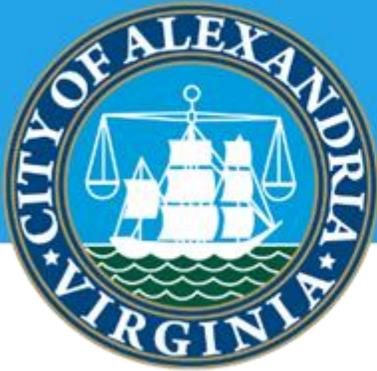
The Police Department has numerous supporting responsibilities during emergencies. They provide traffic control and scene security for Fire and Emergency Management Services (EMS), public works and engineering, mass care, public health, hazardous material response, and search and rescue.

Regional Partnerships

When APD needs additional officers and none are available, they have mutual aid agreements with neighboring jurisdictions and can call upon officers from Arlington and/or Fairfax. They do not do this often, but the option is there if needed.

Summary

- APD wears the most hats of any City department, and they respond to all types of events 24/7. They manage many events that fall under other departments, especially when the events occur unexpectedly during the night or on a weekend.



- The City should provide more communications with the public regarding APD and their role in keeping people safe.
- Sometimes there is a gray area in terms of the enforcement of laws and mandates. APD may not have the authority to enforce every law and mandate.
- Resource shortages have an impact on APD's ability to fulfill its mission.
- Preparedness efforts are critical. Some of these efforts have suffered in recent years due to the pandemic and resource shortages.

Disaster Readiness and Resilience

1) If it is an APD event, then APD has a plan in place, and other City departments support their plan.

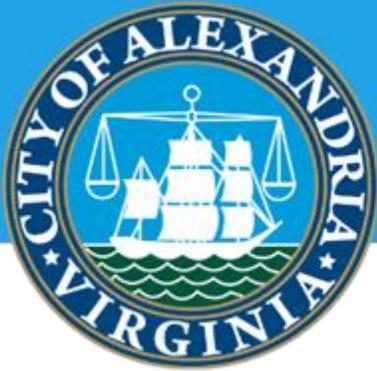
- APD takes the lead in heavy rain events on nights/weekends. Instead of reacting to unexpected floods, APD monitors rain gauges at three locations: South Pickett Street at Cameron Run, Mt. Vernon at Four Mile Creek in Del Ray, and Old Town. To address Old Town flooding, APD has barricades nearby (at the waterfront park storage shed) so they can handle the emergency quickly.

2) If it is outside the realm of an APD event, then the Office of Emergency Management or another City department owns the plan, and APD may support the event.

- In a hurricane, for example, the Emergency Operations Center is activated, and APD carries out supporting police functions. APD has Standard Operating Procedures (SOPs) that dictate APD's response for each type of event.
- APD often manages floods even though floods fall under Recreation, Parks & Cultural Activities. APD moves cars from flood zones and closes streets. RPCA is responsible for flood preparation, clean-up, and restoration.

3) If there is an unanticipated event after hours and on weekends, it is difficult for police to get support. APD owns many night/weekend events by default. In such a scenario, APD needs to jump in and assist, but if there are not enough officers on duty, they cannot respond to other calls, such as traffic crashes. Also, if there is an armed robbery at the same time as the emergency or disaster, the armed robbery would be the priority as APD needs to protect life first and foremost; the disaster response would follow when resources become available.

- One example is a surprise snowstorm on a weekend, when there is no one to treat the roads because T&ES (which is responsible for all roads, transportation, street salting, snow removal/emergencies, potholes, curbs, flooding, sandbags, barricades, etc.) is only on-duty Monday-Friday during normal business hours.



Training and Exercises

APD has callback procedures and drills twice a year. APD callbacks can get an adequate staff presence within 30-60 minutes. A call-back with 60 officers can be achieved in 2 hours.

They also test resources twice a year. They review policies and procedures annually, and then they write after-action reports and make changes accordingly. Training exercises have been cancelled since August 2019 due to COVID, social distancing, and staffing shortages. APD used to conduct training exercises with the fire department. Some tabletop training may be acceptable, but other types, such as active shooter training, are inadequate in a tabletop format.

Communication

Lt. Milner provided examples of challenges with communication to the public. A root cause he identified is that the public does not have a clear understanding of the APD's mission and capabilities.

Communication Priorities: In the Summer of 2020, there were several Black Lives Matter protests in various locations in Alexandria. APD could appreciate the public's expression of their First Amendment rights, but APD had traffic and safety messages to communicate. Sharing messages about closed streets, parking locations, and COVID safety measures was difficult.

Communications Skills: External communications have suffered due to the pandemic. There is not enough staff and not enough training for staff.

Mitigation Opportunities

APD has various ideas to mitigate disaster/emergency situations, but they do not have the funding to bring these ideas to fruition. There are scaled-down versions of these mitigation ideas, but none of them will be as effective as the ideal.

Barricade System on King Street. Now that much of Old Town has streets blocked off for pedestrians and dining in the street areas, APD would like to construct barricades that would stop a truck from driving into the area and hurting/killing people. This kind of barricade system on King Street would cost \$200,000, an amount that exceeds what the City will fund. Without a safeguard in place, the City is leaving itself vulnerable.

Communicate APD Priorities. Messaging needs to come from more than APD on a more consistent basis; perhaps messaging should come from the City. Also, the public may not understand that there is a hierarchy regarding the importance of which calls get priority. The public needs to realize that a more important incident will take precedence over their call, and it may take a few days to get a response.



More Staffing. APD would like to hire more officers. This would enable the department to be able to provide more than just basic services to citizens. The department often must choose between traffic enforcement or community engagement. They lose approximately 3.5 officers per month (quitting or retiring), and it is difficult to hire enough to replace those who leave. This means the department is stretched thin, performing basic functions, which is service on the streets. With more officers, they would be able to do more disaster/emergency exercises and community engagement.

- APD does utilize volunteers to fill some needs. Volunteers help make officers more productive by completing tasks such as fingerprinting and translations when they ride with officers. Volunteer services help improve APD's services to the public's safety.
- Lt. Milner also noted the impact of COVID-related quarantining on staffing levels. APD requested 4,000 COVID rapid tests, but they have not yet received them. Without these tests, they must quarantine officers who may or may not be sick. This reduces the number of officers available at any given time, thereby reducing readiness.

Challenges: Enforcement of Certain Laws

Lt. Milner discussed challenges that APD has and can face regarding enforcing certain laws.

Mask Mandates: When the COVID pandemic began in February/March 2020, the Health Department (AHD) advised the City to require that masks be worn; legislative mandates were soon passed requiring the public to wear masks in public places. The City officials who passed this mandate, however, did not consider how it would be executed and enforced. Residents were calling AHD and APD about mask violations. APD was unsure how to enforce mask usage and how to respond to 911 calls reporting mask violations. APD does not have the authority or resources to enforce masks or issue fines or punishments. APD is not the mask police. There is no mask-enforcing party.

Mandatory Evacuations: Mandatory evacuations are not enforceable either. APD cannot force people to leave. They can only warn residents that they may not have access to services for a few days.



Code Administration

Interview with

- Gregg Fields, Director

Emergency Operations Plan Responsibilities

Primary Emergency Responsibilities

- N/A

Supporting Responsibilities

They provide subject matter expertise on structural engineering and building stability for Public Works and Engineering (Emergency Support Function #3) and Firefighting (ESF #4) and support response activities with respect to structural issues for Search and Rescue (ESF #9) and Hazardous Materials (ESF #10). For Mass Care (ESF #6), Code Administration inspects shelter facilities to assure safety and suitability for occupancy. During COVID, staff helped the City by delivering meals, helping on the phones, and working at vaccination Points of Dispensing.

Regional Partnerships

Code Administration has mutual aid agreements with neighboring jurisdictions and can share resources. They used these agreements when the earthquake struck. As needed, they can also obtain resources from elsewhere in the state.

Department Overview

Code Administration is responsible for building safety: construction of buildings, construction safety, and building systems. They make sure that new construction follows Virginia's construction code and existing construction follows maintenance code. In the City, their primary partners are Planning and Zoning, Transportation & Environmental Services, Fire, Health Department, and Office of Historic Alexandria.

Disaster Readiness and Resilience

After a major storm such as a hurricane, Code Administration conducts damage assessments and provides reports to the WebEOC system, which tracks damage for both the City and the State. This is a required part of the application process for relief money from FEMA. Historically, they have used current staff and that has been sufficient.

While Code Administration already had an emergency Continuity of Operations Plan (COOP), it was not pandemic-specific. However, in November 2019, they had implemented a new permitting system that



allowed them to work remotely with ease during COVID. They also implemented a customer service portal so applicants could apply online and submit documents electronically and not have to come into Code Administration's office. And in 2021, they had their busiest year ever: they did 42,300+ inspections.

Director Fields noted that during COVID, there would be 200-300 building contractors and developers on site, and some sites had high infection rates. He also praised the Alexandria Health Department's readiness and response for COVID.

Training and Exercises

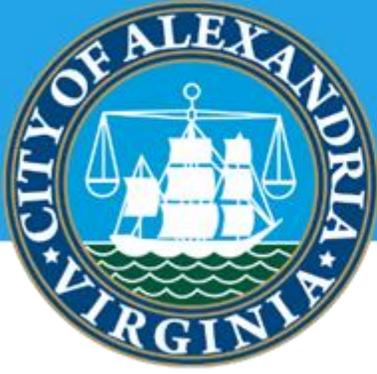
- Cross-trainings with other departments are useful: They create relationships and points of contact. People learn who does what and they all establish coordination. It has been a while since they held these trainings.
- Many trainings are usually led by the Office of Emergency Management, which offers training compliant with the National Incident Management System (NIMS). The NIMS protocols and leadership structures are emphasized. These trainings have included Police and Fire personnel.
- The inspectors and leadership in Code Administration are NIMS-certified. Being NIMS-certified is required training for his team, and they take that training on their own.
- Code Administration recently trained with T&ES recently to coordinate those services that terminate in the street. Code Administration does the buildings, T&ES does most everything else near the building.
- They have not done training with mutual aid partners for a few years because of COVID. Prior to COVID, they did this training every 1-2 years. It has probably been 3 years since the last training.

Communication

- Internal: The department is small, so there is good, constant communication.
- External: Communications with the City and other departments is generally good. Director Fields knows all the directors and leadership and thinks that everyone's intention is to coordinate and know each other's roles.

Mitigation Opportunities

- There is a huge opportunity for Code Administration and other City departments to put a higher emphasis on equity and its implications in Alexandria. Getting ahead of housing issues in disadvantaged neighborhoods is a huge mitigation initiative.



- If the City were to provide funding, Code Administration would like to spend it on housing issues in vulnerable communities.

Equity

- Code Assessment partners with the Health Department and the Housing Department on equity issues.
- They assess compliance, maintenance codes, health and welfare issues.
- Code Administration does initial fire alarms and carbon monoxide (CO) detector inspections when homes are first built. After the smoke alarms are installed, the Fire Department ensures they are maintained and tested.
- Director Fields would like to look deeper into resources and be proactive in managing equity issues.
 - Many compliance issues with vulnerable populations are complaint-driven from the tenants. Code Administration makes sure there are no issues with damage, like leaky buildings, and mold.
 - Tenants used to complain, but now they are not complaining as much. Director Fields speculated that they may fear the government.



DASH

Interview with

- Josh Baker, General Manager/CEO

Emergency Operations Plan Responsibilities

Primary Emergency Responsibilities

- DASH will provide primary support for Emergency Support Function #1 Transportation, in close coordination with Transportation & Environmental Services. In emergencies, they are to provide buses, drivers, maintenance mechanics, and fuel.

Supporting Responsibilities

- DASH will provide transportation for
 - Persons with minor injuries following a mass casualty incident.
 - Persons without transportation who need to go to a shelter after a disaster.

Disaster Readiness and Resilience

- Buses can be used for warming shelters and/or as special transports in evacuations; DASH works closely with the Police and Fire departments. Standby buses that are not being used can go straight to a disaster.
- They are prepared for routine snowstorms, minor flooding, and brief power outages.
- They are not prepared for a hurricane that brings severe river flooding, an earthquake, or other significant disaster that impacts their facility.
 - Their facility is equipped with a backup generator; this facility houses administration and the buses. They have 100 buses in the fleet. This facility houses 90 of them. They have no smaller backup locations.
 - This facility is prone to flooding, and water intrusion may be a serious problem, affecting maintenance functions. The City has been working to mitigate the flooding.
 - If this facility were damaged to the point it could not function, it would probably substantially hurt their ability to function in any meaningful way. In that case, they could probably just respond on a basic level. The organized, reliable system they have today would cease to function.



- DASH has an Operations Control Center; the OCC tries to assess what is happening on the roads.
- There is not a specific hurricane evacuation plan in place.
- COVID Preparedness. Just prior to COVID, DASH hired a Safety and Security Manager, who led the COVID response and provided direction. Now, they want to expand the Safety and Security Department for health and preparedness purposes, but they are not sure if there is funding for it.
 - They are hoping to receive federal funds that mandate a safety management system, which includes everything, including disaster preparedness.
- Terror Attack Preparedness. The facility is adequately secure, but it is not totally secure. There is a gate and video surveillance. The video surveillance system needs to be updated.
 - In terms of terrorism, vandalism, intentional sabotage of services, hostage situation scenarios, the Safety and Security Manager is working on plans. This is why they want to ramp up this one-person department to five people.
 - DASH is currently linked up with the Department of Homeland Security.
 - If there is a situation, such as a shooting at a Congressional baseball game, DASH will prioritize its buses/routes to get Congressional people back to the Capitol. In the past for this type of situation, DASH took two buses out of circulation to divert them to the emergency need.

Trainings and Exercises

- They have not had any training for major hurricanes that necessitate City-wide evacuations. There are no plans as of now for such trainings.

Internal Communications

- Internal communications are good under normal times. They do a fair to good job in an emergency or with a major project.
- People do not always think of passing information down through the channels. One person may come up with a disaster plan, but it is not shared widely: Not all parties are given all the information that they should have.
- DASH's Internal Communications Manager coordinates with the City's Office of Communications and Public Information. Two staff members in DASH's Communications department handle social media and the website. The Communications department works directly with Operations to get information out to the public.



Interactions with the City of Alexandria and the State

- **City**
 - The City Manager sends an email to department heads, but this email might miss the DASH team because DASH is not an official City department. There is information that is valuable to DASH, and they would benefit from being on City email distribution lists.
 - The City does reach out to DASH, like they did with COVID mask information. If the City has some resources to share, they may ask if DASH needs it too; DASH gets other things through the Federal Transit Administration and the Virginia Department of Rail and Public Transportation.
 - DASH is now talking about how to improve integration with the City. DASH is now a few layers down from conversations at the top and this information does not always make its way down. DASH does not need to follow City directions, but it is good to have their guidance and shared resources whenever possible.
- **State**
 - When there is a snow emergency in the State and Governor declares an emergency, the state reaches out to DASH to see what is needed; the State also gives guidance and direction.
 - When the CARES (Coronavirus Aid, Relief, and Economic Security) Act came out, the Virginia Department of Rail and Public Transportation gave money to the City of Alexandria, which then passed money on to DASH. The City runs the finances for DASH operations. In a disaster, the City can help with recovery more quickly. If DASH operated its own finances, it would need to carry a reserve. For disaster recovery, a reserve is needed. Under the current arrangement, the City provides the reserve.

Mitigation Opportunities

- Policies and plans specific to DASH safety and security and operations.
- Better communication and more information sharing from City departments to DASH.
- They have talked about moving some mobile operations and retired transit fleet away from the facility in case the DASH facility is unusable. This initiative has never been an official project and has never been done. There is a cost to set it up and there is a separate investment needed to be able to maintain operations; this has kept them from following through.
 - The City built automatic flood doors on the north side of the DASH facility; these doors help keep the water out on the north side. It does not stop the flooding, but it keeps the flooding outside and not in the building.



Department of Emergency and Customer Communications (DECC)

Interview with

- Renee Gordon, Director

Emergency Operations Plan Responsibilities

Primary Emergency Responsibilities

- N/A

Supporting Responsibilities

- DECC may assign trained, qualified dispatch personnel to the Emergency Operations Center to assist with the EOC communications functions.
- DECC is responsible for managing radio system capabilities.
- DECC is also responsible for coordinating with other jurisdictions on the regional cache of radios and mutual aid.

Department Overview

DECC handles 911 emergency calls and 311 requests for City services, such as resolving issues with streetlights, signs, and trees. While 80% of calls to 911 are non-emergency, the call takers provide vital emergency support to callers, guiding them on performing cardiopulmonary resuscitation (CPR) and giving first aid to keep people alive until medics arrive.

Calls for 911 come in via phone lines or text messages. Calls for 311 are received via a web portal, mobile app, on Facebook and Twitter, by phone, or in person. They will soon support video as well. DECC works closely with their counterparts in the District of Columbia because mobile phone calls can bounce from DC to Alexandria or vice versa. All the emergency call center teams in the National Capital Region coordinate, to promote interoperability.

Disaster Readiness and Resilience

DECC believes that as an organization, they have been resilient. They had planned all-hazards scenarios prior to COVID, though it was not an in-depth pandemic plan. They fleshed out that planning quickly. When COVID hit, all call takers were in the same building and could not spread out. And off-duty call-takers could not quickly jump on calls and work. The City quickly provided equipment that supported remote work. The 311 call-takers were the first to work remotely, and the 911 call-takers did so later. Alexandria's 911 call center was the first in the country to implement a remote call-taking program. The



volume of calls during COVID increased greatly. People with a fever or other potentially serious issue were forwarded to a nurse triage line who would determine if the called needed emergency services, primary care services, or should go to the emergency room. Calls to 311 for vaccine information were directed to the Alexandria Health Department.

The ability to work remotely and use off-duty staff would have been valuable during the Congressional baseball practice shooting at Simpson Field in 2017, due to the extraordinarily high volume of calls.

Training and Exercises

DECC conducts trainings and exercises throughout the year. Even during the pandemic, they continued training for other disasters. They are probably more prepared for a hurricane than other disasters.

Communications

News broadcasts are always watched, to maintain situational awareness.

External communication with other departments is good, due to having liaisons with those departments. Internal communications are very good, particularly within the physical call center.

Mitigation Opportunities

- 911 Service Outage Mitigation Plan. A major concern is if the 911 phone lines go down or performance is seriously degraded. No plans or training are in place for DECC or its City and regional partners. And the planning needs to incorporate informing the public what to do. One objective would be to have various kinds of outreach to the public. For example, the Office of Communications and Public Information would notify City residents what to do when 911 service was out and how to get help; one idea is to post City staff in key locations.
- Supporting Increasing Numbers of City Residents. As the number of City residents grows, with a concomitant growth in the volume of 911 and 311 calls, DECC will need hire and train more call-takers.



Planning and Zoning (P&Z)

Interview with

- Karl Moritz, Director

Emergency Operations Plan Responsibilities

Primary Emergency Responsibilities

- N/A

Supporting Responsibilities

When the Emergency Operations Center is activated, Planning and Zoning supports the Planning Section Chief.

Department Overview

Planning and Zoning is a future-focused department. They perform analyses with respect to many community-related topics. They maintain City demographics and statistics and are involved with neighborhood planning, development, land use and zoning, and historic preservation. They work closely with Transportation & Environmental Services and with economic development personnel.

Disaster Readiness and Resilience

- 2011 Earthquake. In the aftermath of the August 2011 earthquake, they needed to inspect damages to the City's historic buildings, then make sure that repairs did not damage the buildings' historic integrity.
- COVID. Because Planning and Zoning's expertise includes business recovery, they helped accommodations of zoning ordinances to let restaurants have outdoor dining during the pandemic.

Training and Exercises

They have done evacuation training, fire drills, and active shooter training, but it has been a while since any of these were conducted.

Communications

Both internal and external communications during the pandemic were good. They have discovered that Microsoft Teams chat is more effective than email for internal communications.



They see an opportunity for new and expanded community-focused communications plans because the Department of Emergency and Customer Communications and the Office of Communications and Public Information also do community communications.

Mitigation Opportunities

Flooding Mitigation. This is their primary focus. As part of their long-range planning, they work with flood maps and adjust plans to reflect 100-year flood plains. Buildings in flood plains need to meet codes.

Waterfront Plan. The waterfront plan they developed incorporates mitigation elements for both open spaces and construction. The responsibility for this has now passed to the Project Implementation department.

Barricade System on King Street. Another mitigation idea is to close part of King Street to vehicles. Currently, there are temporary barriers, but ideally there would be larger barriers to block vehicle ramming but can be opened for Fire and EMS vehicles if needed. Transportation & Environmental Services is looking for solutions.

Active Attack. For their own offices, Planning and Zoning implemented a system to minimize the risk of an active shooter attack. Now a pass is needed to get into both of their doors, so the wrong people cannot get in and the staff will not be trapped inside.

Equity

Planning and Zoning does outreach to diverse communities in the City for their own responsibilities and on behalf of other departments.



Recreation, Parks, and Cultural Activities (RPCA)

Interview with

- James Spengler, Director

Emergency Operations Plan Responsibilities

Primary Emergency Responsibilities

RPCA, in association with the Red Cross, coordinates activities and resources for Mass Care, Emergency Support Function #6. This includes providing temporary sheltering and associated services, housing and feeding of displaced and/or sheltered persons, and bulk distribution of relief supplies. They are also part of the City's programs to provide warming and cooling centers and support animal care in City emergencies.

RPCA is also responsible for flood preparation, clean-up, and restoration and works in partnership with the Police Department and Fire Department. They also handle hurricane preparedness for the marina and boaters.

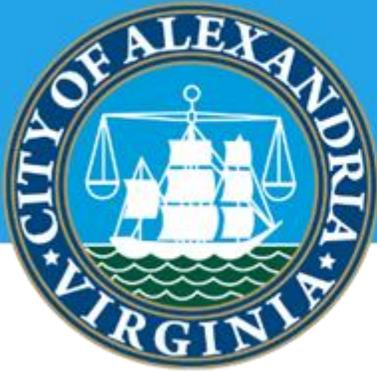
Supporting Responsibilities

RPCA has a variety of roles. One is to provide vehicles and drivers to meet transportation needs, to assist with emergency debris removal, and assist the Fire Department's technical rescue operations and hazardous materials responses. RPCA's facilities may also be used as points of dispensing for public health emergencies as well as annual flu shot events.

Disaster Readiness and Resilience

Routine Emergencies. RPCA is very ready to operate warming/cooling stations and animal care; they are also prepared to assist with apartment fire responses. They have done all these responses in the past, so they are confident in their ability to handle them again.

Major Disasters. RPCA is somewhat ready to respond to a major disaster. In a mass sheltering/mass care capacity, they have Red Cross cots and know how and where to set them up. But these capabilities have not been put to the test in a real emergency over at least the past dozen years. Furthermore, there is more to mass care than opening a shelter with cots. They are unsure where the food will come from or how long the water and sewer systems would hold up after a disaster. None of their mass care sites have emergency generators. These may prove to be large gaps in a response, especially if hundreds of people need mass care services.



Acts of Terrorism. After the Boston Marathon bombing, safety at large public gatherings became a major concern. The Special Events committee works on logistics and safety at large gatherings; they coordinate with police and other agencies.

COVID Response. RPCA was involved in a variety of activities:

- They handled childcare services for emergency workers. Kids went to the Rec Center during the day to do lessons when they did not have a parent at home to take care of them.
- They handled meal distribution for children who were dependent on school meals.
- They assisted with Meals on Wheels deliveries to seniors.
- They assisted with setting up COVID testing centers in parks and next to the Rec Center.
- They helped get the health department set up to do contact tracing in the Rec Center.

Continuity of Operations Planning. RPCA is in the process of tweaking their Continuity of Operations Plan (COOP); the pandemic taught them that they need to treat it like a living document and keep it updated. The pandemic also led them to blow up the hierarchy and instead organize the department into 6 strategic teams. One of these was a COOP team. Another team was tasked with service recovery to pre-pandemic levels. The City and the Office of Emergency Management do a good job of having departments keep their COOP up to date.

Training and Exercises

To date, RPCA exercises have been mainly tabletop, discussion-based exercises; they have not done an official exercise. Even pre-COVID, they never did an exercise.

RPCA would like to benefit from more robust training and practice, especially with other City departments. Specifically, more training would be useful as every emergency is unique.

As a suggestion, it might be helpful for the City and/or the Office of Emergency Management to organize fire drills and other emergency drills for individual departments. Having centrally driven drills would provide a clear, City-wide standard.

Communications

Internal communications are good, using a variety of technologies such as email, texting, phone trees, and Microsoft Teams calls.

Director Spengler praised communications from other City departments, citing the Office of Emergency Management's Emergency Operations Center, the Office of Communication and Public Information, and, during the pandemic, the Health Department.



Mitigation Opportunities

Technology and Procedures

- It would be helpful to assess technology, systems, and procedures so that all City departments can ramp up their emergency response faster in the future.

Communications

- The City could provide a consolidated texting platform with all employees' phone numbers and tiers of employees in groupings. This might make it easier for departments to create a holistic communications system and would be much more useful and efficient than each department having to do it on their own.
- More departments should have mobile radios. When the 2011 earthquake occurred and cell phone reception was down, the departments with mobile radios were okay, but those without were not.

Equity Considerations

The RPCA Service team must consciously think about where to offer services because what is most convenient may work against equity. Because so much can be done outdoors and parks are everywhere, it is easy to incorporate equity considerations. That said, more outreach needs to be done. Certain groups are easier to communicate with, and communicating with people who do not do mainstream media takes more effort and thinking.



Sheriff's Office

Interview with

- Sean Casey, Sheriff

Emergency Operations Plan Responsibilities

Primary Emergency Responsibilities

- Emergency Support Function #13 Public Safety and Security. The Sheriff's Office coordinates support with the Police Department and provides personnel and other resources for law enforcement activities. They also provide security at the Public Safety Center (2003 & 2001 Mill Road), the Williams G. Truesdale Adult Detention Center (2001 Mill Road), the Alexandria Courthouse (520 King Street) and, when activated, the Emergency Operations Center. If City property is damaged, they provide traffic control and security at those locations when requested by APD.

Supporting Responsibilities

- The Sheriff's Office has numerous supporting roles during an emergency. They assist with general traffic control, control ingress and egress at emergency work sites or sites of hazardous materials incidents, set up barriers to close off damaged areas of buildings, bridges, roads, etc., and provide security at public works facilities. If needed, they will provide drivers and vehicles to transport patients. At shelters, at facilities that provide health and medical services, and at supply distribution sites, they are deployed to maintain security and facilitate resource distribution.

Partnerships. Mutual aid agreements are in place with other sheriff's offices in the region.

Disaster Readiness and Resilience

The Sheriff's Office is confident in their disaster readiness abilities for both the jail and the Courthouse.

Plans for the jail incorporate these factors:

- A safe, efficient inmate evacuation, using Sheriff's Office fleet, plus arrangements with Arlington and Fairfax to transport and accommodate evacuated inmates.
- A shelter-in-place scenario, which would put people in places in the jail facility to keep them safe.

Plans for the Courthouse ensure that Courthouse staff are prepared. Fire and security emergencies have occurred in the past, and the team has done a good job with responding and sheltering in place.



COVID Response

Prior to COVID, they did not have a well-established pandemic response plan. At various times, 7-8 officers were out of work each week. They needed to modify jail housing units to make them COVID-safe and developed COVID quarantine housing units. Inmates can be heavily restricted due to COVID isolations and quarantining. When outbreaks occur, they move inmates based on COVID status, such as positive with positive. Inmates are given wireless N95 masks and eat inside their cells.

Now they have a 30-page pandemic operations plan that they have shared with internal and external partners and City department heads they interact with. They also have 6 months of personal protective equipment on hand.

Potential Disaster Readiness Challenges

Staffing levels at the Courthouse and jail remain low. Not having enough staff can compound any potential emergency. Sheriff Casey is confident that they would be able to manage with current staff but having more staff would be optimal.

The Sheriff's Office low staffing is due to multiple reasons:

- The public perception of their profession. It is hard, non-glamorous work that is physically and mentally demanding. People in general are very selective about where they are working now. It is also difficult to recruit, and many people that apply are not qualified. This struggle is not unique to the Sheriff's Office. Law enforcement agencies across the country are having these same issues.
- Financial constraints. The starting salary is \$58,000. People have a hard time living in Alexandria on that salary, which forces them to commute from much further away.

In addition, personnel work a lot of overtime so public safety will not be compromised.

Training and Exercises

In the jail, they do many fire drills and other types of drills. In the past, the Sheriff's Office did full-scale exercises with other departments. However, staffing constraints and COVID have been big obstacles to continuing training and exercises. Sheriff Casey would like to do more tabletop exercises now with the Office of Emergency Management and the Emergency Operations Center.

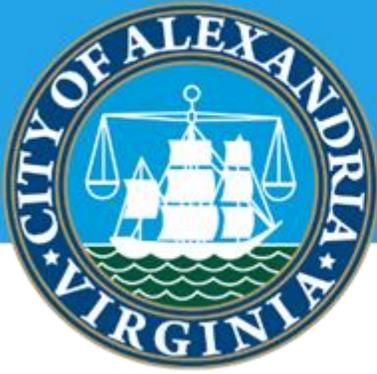


Communications

External Communications. Sheriff Casey feels that they have a good Public Information Officer and that their website and social media presence are good ways to communicate information. He also noted that the Department of Emergency and Customer Communications is a great partner.

Internal Communications. To prepare for emergency situations, they have a callback roster and do regular callback notifications to see how long it takes staff to come in when requested. All Sheriff Office supervisors have city cell phones, and the Public Safety Center (PSC) at 2003 Mill Road has an internal public address system that allows for immediate emergency notifications. They have an emergency response system as well. The purpose of the emergency response system is to alert employees for response to an active shooter, medical emergency, and/or a disorderly/combative person emergency occurring in non-secure areas of the PSC. The emergency response alert is delivered via the intercom features on designated desk phones in the PSC. Lastly, they have a comprehensive policy that outlines emergency notifications at the Sheriff's Office. The Sheriff's Office is always working on improving emergency communication with Office-wide training in addition to individual team/section training.

There is a reliable radio signal in the jail and throughout the City to support radio communications; amplifiers in the Courthouse also create better connectivity.



Transportation & Environmental Services (T&ES)

Interview with

- Yon Lambert, Director
- Alton Weaver, Division Chief, Resource Recovery
- David Kurtz, Division Chief, Public Works

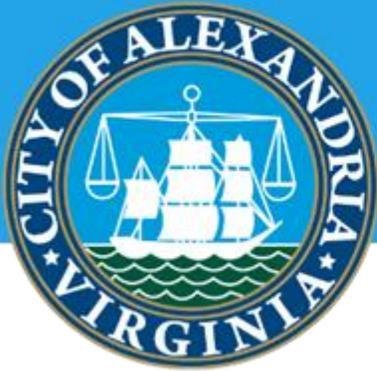
Emergency Operations Plan Responsibilities

Primary Emergency Responsibilities

- Emergency Support Function #1 Transportation
 - Covers all aspects of transportation: road, rail, and bridges. Responsible for maintaining all roads in the City except I-395 and I-495. Emergency planning focus is on transportation disruptions, and they work with the Virginia Department of Transportation (VDOT), Virginia Railway Express (VRE), ACPS, and others. Typically, it is a snowstorm that causes disruptions. Have a Traffic Operations Center to monitor and manage transportation.
- ESF 3 Public Works and Engineering
 - Sandbag distribution is for events with notice such as coastal flooding or tropical storms; flash flooding is a no-notice event. Deal with events such as sewer main breaks such as the Holmes Run trunk sewer and the closure of the bridge at West Glebe Road.
- ESF 12 Energy and Water
 - This is primarily a coordinating role, with two aspects: 1) talking to various utility companies such as Virginia American Water and Alex Renew; and 2) ensuring communications to stakeholders when disruptions occur. The 2012 derecho was the last major event disrupting power. More minor events are commonly water main breaks. Stated that sewer lines for Alex Renew and Fairfax County run through the City.
- Support Annex 6 Debris Management
 - Have a written debris management plan, and when there is an emergency that requires, for example, tree removal, they work with both Recreation, Parks and Cultural Activities and with outside contractors.

Supporting Responsibilities

They have supporting roles for many of the other ESFs, such as #2 Information Technologies and Communications, #6 Mass Care, #7 Logistics, #9 Technical Rescue, and #10 HazMat Response. They work with Code Administration to support Damage Assessments.



During COVID, served as the City's Operations Section Chief for the first six months.

Regional Relationships

T&ES has strong relationships with Arlington and Fairfax counties as well as with VDOT, but do not have formal mutual aid agreements. Noted that in a major winter event, every jurisdiction is on its own; T&ES cannot, for example, borrow supplies or equipment from a neighboring jurisdiction. There is a monthly meeting with peers across the region.

They participate in six or more subcommittees on the Metropolitan Washington Council of Governments, including infrastructure, solid waste, stormwater, transportation, and transit. During a weather event, T&ES participates in regional coordination meetings held by MWCOG: Local jurisdictions, the Federal government, and transit providers discuss operating statuses during the event.

Disaster Readiness and Resilience

T&ES is not designed or organized for massive disasters but has in-house capabilities for routine or small-scale emergencies. While they focus on having solid staff, equipment, and resources, they do not have big trucks or large amounts of resources on hand. Instead, they augment their capabilities by bringing in contractors. Finance and Procurement provides support and helps solve problems.

All T&ES employees are given an annual reminder that they have emergency roles and are considered essential employees. During COVID, T&ES continued to provide its front-line services.

They have a weekly stand-by sheet for after-hours support and share this with the Office of Emergency Management, General Services, and Recreation, Parks and Cultural Activities. When asked about placing barricades at the waterfront when there is flooding, they noted that there is an existing Rules of Engagement that this is the responsibility of the Alexandria Police Department.

Staffing challenges: One is turnover of staff. Another is employees have regular duties for daily service delivery, with special duties during emergencies. For example, during a snow event people will be reassigned to work as plow operators or staff the Traffic Operations Center. T&ES has to cope with both the emergency and maintaining some level of regular service delivery.

T&ES updates its numerous Standard Operating Procedures (SOPs) on a four-year cycle, to maintain its accreditation with the American Public Works Association. It is a challenge, though, to institutionalize what they do, such as having a common file area for forms.

Director Lambert commented that they are only as good as the last event. He stated that they do After Action Reviews for major emergencies, such as the flooding in August 2021. A challenge is keeping up



with significant infrastructure changes. The example was how to treat the new bike lanes during a snow event, and they did an After-Action Review (AAR) for that.

Training and Exercises

Training is driven heavily by safety considerations for employees, plus the type of emergency to be addressed. Their safety department is responsible for employee training and maintaining records of training. Training include working with sewers and in confined spaces, debris management, snow management, and traffic operations. For example, they have held a mock snow event training.

They also have taken advantage of training and exercises put on by the Office of Emergency Management. Training on the National Incident Management System was also mentioned, as they like to be NIMS-compliant.

Communications

T&ES has communications plans for big events such as snowstorms and flash flooding. The communications plans contain sample messages and recommended intervals for issuing communications. They are pleased that the City has effective communications through the Office of Communications and Public Information, and this includes use of social media.

A challenge is informing the public during emergencies that T&ES must prioritize its emergency services and that its regular, everyday services will continue, but at a slower pace or lower level. Another challenge is reports from residents, who may think a situation is terrible, but is not in the larger scheme of things.

Mitigation Opportunities / Lessons Learned

Repair, maintenance, and upgrade programs are very important. The stormwater system changes are the biggest effort, stretching over ten years and at a cost of \$500 million. This entails both capital projects and intervals of maintenance. A second priority is having appropriate budget for repairing sanitary systems and bridges; there are over 50 bridges in the City. T&ES also has the goal to evaluate every road every three years, but they are finding it difficult to keep pace with that goal.

Equity Considerations

Equity factors into flood planning and the \$500 million investments, particularly with respect to storm water mitigation. Factors are a) geographic and b) income, so Arlandria is a priority. Both transportation services and snow response attend to areas with the densest population, so that also addresses equity.

