

Capital Metro February 2021 Winter Weather After Action Report

August 2021



METRO

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August 18, 2021

Capital Metro Family,

Capital Metro played a critical role in supporting our community during the unprecedented February 2021 Winter Storm. Each of you had a role in ensuring that our neighbors had access to warmth, water, food, and critical transportation. In addition to taking care of our neighbors during this emergency, you took care of each other, feeding, warming, and providing water to members of the Capital Metro family who needed it. The commitment to our community and to each other is a hallmark of the Capital Metro family and I am so humbled and grateful to work with such a dedicated and selfless group of public servants. Together, we:

- Conducted 24 bus trips to transport 372 at-risk individuals to warming centers.
- Provided free shuttle service to water distribution sites across the city.
- Partnered with Meals on Wheels and the Central Texas Food Bank to deliver nearly 100 meals and delivered 500 meals to first responders.
- Transported 1,167 MetroAccess customers, 164 of whom needed dialysis treatments.
- Distributed more than 25 pallets of water to MetroAccess customers and other community members in need.
- Assisted more than 7,300 callers through our Customer Care and MetroAccess call centers.
- Provided a respite bus dedicated to Expo Center for staff working main water staging area.
- Offered free fares to our community from February 14-28.
- Provided free meals, bottled water, and incentive pay to CapMetro staff who reported to our facilities.
- Activated our CapMetro Family Cares team to respond to staff urgent needs and the Disaster Relief Fund, through which staff members could receive assistance with storm related damages.
- Opened our facilities as a warming center for staff and their families.

Part of our commitment to our community is to do better than we have done before, every day, and especially on the days we are needed most. As part of this commitment, we have undertaken a review of where we excelled and where we could have done better during our response to the storm. That review has resulted in over 80 recommendations that will increase our ability to support our community and each other during times of emergency and disaster. [I/We] fully support these recommendations and we thank everyone who took the time to share their thoughts through interviews, surveys, and written comments. We look forward to working with you to implement these recommendations and to make Capital Metro an even more resilient organization.

Sincerely,

Dottie L. Watkins
Chief Customer Officer/Chief Operating Officer

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For more information or to request permission to use all or any of this report, please consult the following points of contact:


Darryl Jamail
Senior Director, Public Safety and Emergency Management
Capital Metropolitan Transportation Authority
(512) 369-7717 – O
(512) 269-1746 - M
Darryl.Jamail@capmetro.org

Alex Abdun-Nabi
Emergency Preparedness Program Manager
Capital Metropolitan Transportation Authority
(512) 369-7784
Alex.Abdun-Nabi@capmetro.org

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(800) 977-8191

Executive Summary

An unprecedented winter-weather incident occurred between February 10 and February 18, 2021, across the South-Central Texas region. This period was defined by an initial arctic air mass that brought 5 to 6 consecutive days of significant snowfall and temperatures in the single digits and teens. Later, a warm air front resulted in freezing rain, sleet, and additional snow. Altogether, this extended winter-weather incident resulted in significant impacts to what is typically a warm-weather region—including effects on the area’s infrastructure (e.g., power grids and water pipes), roadways, and homes—and significantly affected Capital Metro’s operations in the Austin metropolitan area. In particular, the storm’s impact limited the availability of personnel to support both agency operations and expanding response needs in the community.

This after action report (AAR) identifies actions intended to help formalize processes that were seen as strengths and to improve limitations observed in the emergency. The AAR was developed by IEM, an independent emergency management contractor experienced in working with mass transit agencies, based on four information sources:

- A review of internal emails, memos, Microsoft Teams messages, departmental AARs and summaries, and other key documents provided by Capital Metro personnel
- An electronic survey using Microsoft Forms that included multiple-choice/Likert-scale questions and open-ended questions
- A printed survey specifically for bus and Demand Response operators
- A series of qualitative interviews conducted with Capital Metro executive, administrative, and operational employees who were central to the agency’s response; key vendors; and major stakeholders

Analysis and observations are presented in the nine sections in the report.

The major strengths identified for Capital Metro’s preparedness and response are as follows:

- **Capital Metro staff flexibility and adaptability:** Employees understood the importance of the service that they provide to the Austin metropolitan area, and they went above and beyond assigned duties to support movement from transit operations to community response and support operations.
- **Operational coordination:** Establishment of regular calls to coordinate and communicate decisions and identify strategies to meet emerging needs was critical to the success of Capital Metro’s response. Strong centralized coordination toward common agency objectives was observed during in the incident.
- **Established telework capabilities:** Increased capabilities to telework and provide remote assistance due to the COVID-19 pandemic greatly improved the adaptability of personnel to support an event that limited the ability of many employees to be physically in the office to perform their duties.
- **Community response:** Capital Metro adopted many innovative strategies to meet the emerging needs of the community, including access to water, warming

Capital Metro February 2021 Winter Weather After Action Report

centers, and essential medical services. This required enhanced coordination with local decision makers and response agencies.

- **Employee care:** Capital Metro management prioritized employee check-ins to ensure personnel and their families had essential services and were not at risk during the emergency.

The primary areas for improvement and recommended actions are as follows:

- **Formalized plans, policies, and procedures:** Capital Metro needs written plans to support actions taken or required in all hazard events, including winter-weather incidents. These plans should be supported by a rigorous training and exercise program.
- **Bus service suspension:** Decisions made to maintain normal bus operations were not realistic during the early stages of the event based on weather conditions, capabilities of vehicles, and availability of personnel. The delay in deciding to suspend bus service resulted in operational and safety issues for personnel.
- **Consistency of service provider preparedness:** Service providers were found to be not resilient during the emergency. Some lacked plans, policies, and procedures to ensure continuity of services.
- **Logistical support for employees:** Capital Metro was not equipped to support employees during long-term emergency activations such as this winter-weather event, including being unable to provide sufficient quantities of food, cots, sleeping bags, and water.
- **Ability to reach personnel:** Capital Metro lacked information to contact all contract personnel, which affected the ability to quickly communicate service changes and determine personnel availability.

The AAR is intended to guide future planning prioritization, formalize planning processes for all-hazard events, and enhance response by Capital Metro during emergencies.

Table of Contents

Introduction	1
Analysis	4
Pre-Incident Actions	4
Strength 1: “All hands on deck” posture of Capital Metro administration	4
Strength 2: Established telework procedures and technology platforms.....	5
Area for Improvement 1: Formalize a Capital Metro Planning, Training, and Exercising Program.....	5
Area for Improvement 2: Pre-positioning of personnel	6
Area for Improvement 3: Service suspension of MetroBus	6
Operations	7
Strength 1: Strong central operational coordination.....	7
Strength 2: Suspension of rail operations	8
Area for Improvement 1: Delayed decision to suspend bus operations	8
Area for Improvement 2: Bus operator coordination.....	8
Area for Improvement 3: Expand and diversify Capital Metro representation in the EOC	9
Public Information and Messaging	9
Strength 1: Multi-media approach.....	9
Strength 2: Multi-lingual communication	9
Area for Improvement 1: Public expectation management.....	10
Area for Improvement 2: Emergency Public Information training	10
Area for Improvement 3: Integration into City of Austin Public Information activities	11
Internal Communications and Situational Awareness	11
Strength 1: Daily meetings	11
Strength 2: Continued use of Microsoft Teams.....	11
Area for Improvement 1: Use of Emergency Notification System.....	12
Area for Improvement 2: Evaluate staffing for internal communications	12
Area for Improvement 3: Situation reporting	12
Continuity of Operations (COOP)	13
Strength 1: Staff adaptability	13
Area for Improvement 1: Continuity plans and capabilities for contracted service provider	13
Logistics Support	14
Strength 1: Access to food, water, and shelter	14
Area for Improvement 1: On-site accommodations	14
Area for Improvement 2: Winter weather response items	15
Area for Improvement 3: Bus request process	15
Area for Improvement 4: Improve resource availability tracking and communication	16
Infrastructure	16
Strength 1: Preventative cold weather actions.....	16
Area for Improvement 1: Physical infrastructure protection	16
Area for Improvement 2: Contracted facility management	17
Customer/Community Support	17
Strength 1: Demand Response adaptability	17
Strength 2: Customer service call center	18
Area for Improvement 1: Continue to improve coordination with community groups	18

Capital Metro February 2021 Winter Weather After Action Report

Employee Support	18
Strength 1: Staff check-ins	18
Strength 2: Employees providing support in adverse situations	19
Strength 3: Internal disaster support services	19
Area for Improvement 1: Improve personal preparedness	19
Conclusion	20
Appendix A: Improvement Plan	A-1
Appendix B: Incident Timeline	B-1
Appendix C: After Action Review Methods.....	C-1
Appendix D: Interview Participants	D-1
Appendix E: Core Capabilities for Identified Strengths and Areas for Improvement.....	E-1

Introduction

An unprecedented winter-weather incident occurred between February 10 and February 18, 2021, across the South-Central Texas region. Unusually frigid temperatures in the 20s and 30s (°F) arrived on February 10, followed by frozen precipitation events in the Austin metropolitan area, including freezing rain on the morning of February 11 characterized by as much as 0.25–0.50 inches on surfaces. An arctic air mass moved into the region on February 14 and February 15, resulting in snowfall and temperatures in the single digits and teens. A warm front on the evening of February 16 into the morning of February 17 resulted in freezing rain, but, later in the day on February 17, a cold front resulted in mixed precipitation combining freezing rain, sleet, and snow. The entire period was defined by 5 to 6 consecutive days of record-low temperatures and significant snowfall.

The extended winter-weather incident resulted in significant impacts to this typically warm-weather region, including varied impacts to infrastructure (e.g., power grids and water pipes), roadways, and homes. The impact on roadways and utilities significantly affected Capital Metro's operations in the Austin metropolitan area. In particular, the impact to individual Capital Metro employees resulted in limited personnel available to address agency operations or expand the agency's roles as necessary to provide emergency response and support to the affected community.

This after action report (AAR) identifies action items intended to help formalize processes identified as strengths and improve limitations observed during the emergency. Disasters such as this winter-weather incident help focus agencies toward improvements to operational, institutional, and employee-level actions and capabilities for future events. Recommendations are based on analysis of capabilities for area emergency management agencies; preparedness, response, and recovery programs of comparable mass transit agencies; and industry best practices.

Capital Metro Response

Capital Metro's transit operations were significantly affected by the winter-weather incident in large part due to the impact the emergency had on staffing and the traction and movement of bus, rail, and demand response. The emergency resulted in the historic suspension of Capital Metro services, modification of routes and detours, and additional limitations and modifications to specific services. Impacts to services were communicated via MetroAlerts, social media, and conventional media sources.

Capital Metro effectively stood up a coordinated agency response to make decisions to support the incident response, including establishment of regular coordination meetings and Microsoft Teams chats. Capital Metro's response was bolstered by strategies and capabilities developed as part of the agency's ongoing response to the COVID-19 pandemic. Capital Metro was successful in transitioning from transit-focused operations to community-focused transportation support services.

While coordinating Capital Metro team members through emerging and changing agency objectives had numerous successes, the event exposed challenges with personnel availability, limitations in existing planning, and varied standards in emergency preparedness capabilities throughout the agency and its contracted service provider personnel. Particularly, response and operational staff were stretched to their limit during the incident response, and there was no available relief for active positions. It is clear that, in the event of an incident of longer duration, Capital Metro would experience a significant degradation in operational response.

Specific details on Capital Metro's response are included in Appendix B: Incident Timeline.

Methodology

The AAR was developed by IEM, an independent emergency management contractor experienced in working with mass transit agencies, based on four information sources:

- A review of internal emails, memos, Microsoft Teams messages, departmental AARs and summaries, and other key documents provided by Capital Metro project personnel. The outcome of the assessment of this internal information is presented in the timeline in Appendix B.
- An [electronic survey](#) presented through Microsoft Forms including multiple-choice/Likert-scale questions and open-ended questions. This was presented to Capital Metro personnel and supporting contractors from May 3 to May 26. A total of 114 responses were received and analyzed for this report.
- A [printed](#) survey was presented to bus operators to ensure their participation in the survey. A two-page survey including multiple-choice/Likert-scale questions and open-ended questions was provided to bus operators on May 27. A total of 52 responses were received.
- A series of [qualitative interviews](#) conducted with Capital Metro executive, administrative, and operational employees who were central to the agency's response as well as key vendors and stakeholders. These interviews were conducted from May 6 to June 1 via Microsoft Teams. A total of 44 individuals participated in 14 interviews. The interview participants are identified in Appendix D.

After Action Report

The magnitude and length of the ongoing crisis and the resulting emergency response by Capital Metro, its contractors, and its partners established the need for an AAR of lessons learned, best practices, and areas of improvement during the winter-weather incident of February 2021. This AAR represents information gathered during Capital Metro's preparedness for and emergency response to the winter-weather incident between February 10 and 18. The AAR will guide future planning prioritization and formalization of planning processes as well as identify gaps to be addressed by Capital Metro. The AAR is supported by an Improvement Plan prioritizing future actions.

Primary Strengths

The major strengths identified for Capital Metro's preparedness and response to the winter-weather incident are noted below:

- **Capital Metro staff flexibility and adaptability:** Employees understood the importance of the service they provide to the Austin metropolitan area and went above and beyond assigned duties to ensure they could support movement from transit operations to community response and support operations.
- **Operational coordination:** The establishment of regular calls to coordinate and communicate decisions and to identify strategies to meet emerging needs was critical to the success of the agency response. There was strong centralized coordination toward common agency objectives in the incident.
- **Established telework capabilities:** Increased capabilities to telework and provide remote assistance due to the COVID-19 pandemic greatly improved the adaptability of personnel to support in an event that limited the ability for many employees to be physically in the office to perform their duties.
- **Community response:** Capital Metro adopted many innovative strategies to meet the emerging needs of the community, including access to water, warming centers, and essential

medical services. This required enhanced coordination with local decision makers and response agencies.

- **Employee care:** Capital Metro management prioritized employee check-ins to ensure personnel and their families had essential services and were not at-risk during the emergency.

Primary Areas for Improvement

The primary areas for improvement and recommended actions identified for Capital Metro’s preparedness and response to the 2021 winter-weather incident are noted below:

- **Formalized plans, policies, and procedures:** Capital Metro requires development of written plans to support actions taken or required during the February 2021 winter-weather incident. These plans should be supported with a training and exercise program.
- **Bus service suspension:** Decision making to maintain normal operations was not realistic during the early stages of the event based on weather conditions, capabilities of vehicles, and availability of personnel. The delay in deciding to suspend service resulted in operational and safety issues for personnel.
- **Consistency of service provider preparedness:** Service providers were found not to be resilient during the emergency, and some lacked plans, policies, and procedures to ensure continuity of services.
- **Logistical support for employees:** Capital Metro was not equipped to support employees during a long-term activation, including providing food, cots, sleeping bags, and water.
- **Ability to reach personnel:** Capital Metro lacked information to contact all contract personnel, affecting the ability to quickly communicate service changes and to determine the availability of personnel.

Table 1 summarizes strengths and areas for improvement, which are detailed in the analysis section.

Table 1: Summary of Strengths and Areas for Improvement

Topic	Strength	Area for Improvement
Pre-Incident Actions	“All hands on deck” posture of Capital Metro administration	Formalize a Capital Metro Planning, Training, and Exercising Program
	Established telework procedures and technology platforms	Pre-positioning of personnel Service suspension
Operations	Strong central operational coordination	Delayed decision to suspend bus operations
	Suspension of rail operations	Bus operator coordination Expand and diversify operational Capital Metro representation in EOC.
Public Information and Messaging	Multi-media approach	Public expectation management
	Multi-lingual communication	Emergency Public Information training Integration into City of Austin Public Information activities
Internal Communications and Situational Awareness	Daily meetings	Use of Emergency Notification System

Topic	Strength	Area for Improvement
	Continued use of Microsoft Teams	Evaluate staffing for internal communications Situation reporting
Logistics Support	Access to food, water, and shelter	On-site accommodations
		Winter weather response items
		Emergency bus request process
		Improve resource availability tracking and communication.
Infrastructure	Backup generators	Physical infrastructure protection
		Contracted facility management
Customer/Community Support	Demand Response adaptability	Continue to improve coordination with community groups.
	Customer service call center	
Employee Support	Staff check-ins	Improve personal preparedness
	Employees providing support in adverse situations	
	Internal disaster support services	

Analysis

The analysis section reviews the major strengths and areas for improvement identified throughout the AAR process. Each observation is presented as a strength or an area for improvement, identifies associated core capabilities, is based on observations documented through the data-collection process, and, if appropriate, presents recommendations that are specific and actionable. The observations are presented in nine sections: Pre-Incident Actions, Operations, Public Information and Messaging, Internal Communications and Situational Awareness, Continuity of Operations (COOP), Logistic Support, Infrastructure, Customer/Community Support, and Employee Support.

Pre-Incident Actions

This section provides strengths and areas for improvement related to pre-incident actions during the time period of February 11–14, 2021.

Strength 1: “All hands on deck” posture of Capital Metro administration

Observation: Capital Metro personnel pivoted to response mode and worked around the clock and in coordination with the Capital Metro Emergency Operations Center (CMEOC), the Operations Control Center (OCC), and the Austin-Travis County Emergency Operations Center (ATCEOC).

Core Capabilities: Operational Coordination

Analysis: Capital Metro employees understood the value of the services they provide to the Austin community and rose to the occasion during the winter-weather incident. Demand Response employees reported to work without assigned roles to quickly help when a need arose. Marketing and Communications (MarComm) transitioned to 24/7 operations, a first for that group. From the Executive Staff to dispatchers and administrative personnel, Capital Metro employees strived to provide an exceptional level of service during the winter-weather incident. However, due to the

incident's duration and personnel's all-hands response efforts, there were limited options for relief or staffing backup.

Key respondents noted the very real potential for staff to burn out or for exhaustion to affect the quality of work. As a result, according to one interview subject, "everyone got burned out at the same time." Interviewees noted that a longer event duration event could have significantly affected disaster service operations or agency capabilities (e.g., the ability to resume normal operations). Accordingly, Capital Metro was at significant risk of not being able to support emergency operations and maintain facilities, equipment, communications, and community services. The need for staff relief was compounded by ongoing staffing limitations related to the impact of COVID-19 on the agency, particularly since Capital Metro was operating in an extended emergency posture due to the pandemic. Interview participants noted that Capital Metro was already operating at 100% capacity before the winter storm event, so the increase in response needs during the event further stretched available personnel.

Recommendations:

- Develop an emergency staffing plan to support emergency operations to include a range of appropriate roles and responsibilities.
- Develop response schedules for multiple shifts so that all staff are not responding at the same time.
- Identify and assign disaster teams and lead and support roles for critical emergency response functions that can be implemented for all-hazards events.
- Implement disaster shift schedules for key personnel to ensure proper coverage across an extended operational period during an emergency.

Strength 2: Established telework procedures and technology platforms

Observation: Work-from-home procedures and use of Microsoft Teams that began at the onset of the COVID-19 pandemic helped with response to the winter-weather incident.

Core Capabilities: Planning, Operational Coordination

Analysis: Participants referenced the ability to work from home was already in place due to COVID-19 response, and personnel had the items needed (e.g., laptops, Microsoft Teams and other appropriate software) to work remotely. Familiarity with Microsoft Teams was positive, and established daily calls continued during the response. Interviews noted that "response would have been a failure" without these procedures and processes already in place.

Recommendation:

- Continue supporting telework procedures to ensure familiarity with necessary processes and platforms.

Area for Improvement 1: Formalize a Capital Metro Planning, Training, and Exercising Program

Observation: Capital Metro does not have an industry-standard Emergency Operations or Response Plan that is actively used by the emergency preparedness program and reinforced by a training and exercise program.

Core Capabilities: Planning

Analysis: The current Winter Weather Operations Plan is a template for an Incident Action Plan but does not define a formal Emergency Operations Center structure, processes, or points of contact.

Recommendations:

- Develop a Capital Metro Emergency Operations Plan that follows Comprehensive Preparedness Guide (CPG) 101 standards and industry best practices, including a staffing structure, response procedures, and appropriate communication methods among departments.
- Develop customizable templates and checklists for emergency use.
- Train Capital Metro personnel on plans, procedures, and staff responsibilities.
- Exercise the Emergency Operations Plan annually with a variety of tabletop, functional, and full-scale exercises.
- Update plans and procedures annually based on exercise findings.

Area for Improvement 2: Pre-positioning of personnel

Observation: Proactive planning for emergency housing of Capital Metro and service provider personnel was needed. Staff pre-positioned close to Capital Metro facilities were able to report to work even though roadway conditions had deteriorated.

Core Capabilities: Planning, Operational Coordination

Analysis: Many respondents noted the need to increase Capital Metro's capabilities to secure hotel rooms close to facilities to ensure key operational personnel could report to work. Staff pre-positioned close to Capital Metro facilities were able to report to work even though roadway conditions had deteriorated. The incident's impact on power and water resulted in a shortage of hotel rooms for essential personnel who needed accommodations to better facilitate the extended response. The limited accommodations affected administrative and operational response. Due to company policy, service providers began reserving hotel rooms for staff on February 11. Hotels close to Capital Metro facilities were identified and reserved in the event travel conditions became unfavorable the following week. Service provider personnel were able to report to work due to their pre-staged proximity.

Recommendations:

- Establish Capital Metro policy and procurement standards for reserving nearby lodging for personnel and for pre-positioning critical operational employees based on potential weather conditions.
- Develop arrangements with local hotels to expedite securing hotel rooms for personnel.
- Improve internal capabilities to support lodging in Capital Metro facilities in emergencies that restrict employee movement.
- Develop a resource guide for when and how to use the lodging arrangements.

Area for Improvement 3: Service suspension of MetroBus

Observation: Even as the winter weather was affecting the region, Capital Metro continued operating buses as roadway conditions deteriorated.

Core Capabilities: Planning, Operational Coordination

Analysis: Numerous surveys and interviews indicated that Capital Metro was slow to suspend MetroBus service even as the winter weather caused dangerous travel conditions. Operators were reporting icy conditions throughout the day on Sunday, February 14. Numerous buses were stuck and had to be abandoned Sunday night. One bus slid and damaged a wall; however, no operators or members of the public were injured.

Recommendations:

- Develop a service suspension plan based on a range of forecasted conditions.
- Implement safety checks of routes to make sure operators can safely traverse roadways.
- Create an Emergency Response Committee comprised of members from each Capital Metro division to analyze and develop emergency policies and processes.
- Ensure service suspension planning fully considers federal transit guidelines and standards for reporting, including American Public Transportation Association¹ as well as those of the Federal Railroad Administration, the Federal Transit Administration, and the Transportation Security Administration.

Operations

This section provides strengths and areas for improvement related to operations-related activities. Specific information related to capabilities and equipment to move in the snow is included in Logistics Support. Specific information related to community response efforts, including paratransit, dialysis services, people experiencing homelessness, and water delivery services is included in Community Support.

Strength 1: Strong central operational coordination

Observation: Capital Metro staff noted that the centralization of emergency operations improved communication and response actions.

Core Capabilities: Operational Coordination, Operational Communications, Situational Assessment

Analysis: The addition of an Emergency Preparedness Program Manager position to Capital Metro shortly before the winter-weather incident was identified in interviews and surveys as strengthening agency emergency management response and coordination with local response efforts. This position provided Capital Metro with a champion for emergency operational preparedness and response as well as experience to streamline and improve coordination with agency departments. In addition, this position helped guide the CMEOC activities via the Microsoft Teams chat and coordinated response efforts for community needs with the ATCEOC.

Recommendations:

- Identify short- and long-term staffing plans to further build and support the emergency preparedness program at Capital Metro to anticipate future agency growth and planning requirements.
- Continue to participate in ATCEOC operations in county and local exercises and real-world events.
- Conduct an assessment of existing facilities to determine location and capabilities for the CMEOC.

¹ A key reference for service suspension is: American Public Transportation Association (APTA). (2019, November 7). Suspension of Service of a Public Transportation System and Recovery. <https://www.apta.com/wp-content/uploads/APTA-SS-SEM-RP-015-19.pdf>.

Strength 2: Suspension of rail operations

Observation: Capital MetroRail operations were suspended in a timely manner in response to the winter-weather incident.

Core Capabilities: Operational Coordination, Situational Assessment

Analysis: Capital MetroRail operations were suspended when it was determined that power was not available for road crossings and that they lacked equipment to deice the track. Rail representatives noted that they originally determined a decreased rail operations rotation of four trains before suspending operations. This decision was supported by interaction with the rail partner Watco, who suspended operations in the region for a week in response to the winter-weather incident.

Recommendation:

- Exercise and train service suspension and decreased operations for rail operations.

Area for Improvement 1: Delayed decision to suspend bus operations

Observation: The decision to suspend bus operations was made after buses experienced major issues related to traction and safe movement.

Core Capabilities: Operational Coordination, Situational Assessment, Operational Communications

Analysis: Capital Metro started bus operations early in the morning on February 14, 2021. The buses dispatched experienced major issues due to the worsening conditions on the roadway, including limited traction. Capital Metro stated that service would resume two separate times but operations were not possible, which resulted in frustration from the public and with Capital Metro bus operators. The Capital Metro bus fleet was not able to operate safely in the winter weather, particularly articulated buses, resulting in buses being stuck on roadways and abandoned until towing was possible.

Recommendations:

- Develop a policy to require test runs and safety surveys to support the safe operations of buses, particularly larger vehicles in the fleet, during winter-weather incidents.
- Assess capabilities of emerging technologies to support assessment of road and equipment safety.
- Develop a policy to limit the use of articulated buses during winter-weather incidents.

Area for Improvement 2: Bus operator coordination

Observation: A shortage of bus operators affected decision making for Capital Metro operations.

Core Capabilities: Operational Coordination, Situational Assessment, Operational Communications

Analysis: Service restoration for the agency was dependent on the availability of bus operators to meet route needs. Interviews with staff determined that Capital Metro was unsure of the number of MV operators who could report for their shifts, which delayed and impacted operational decision making.

Recommendations:

- Identify staffing requirements to enable emergency-level operations.
- Develop and regularly test a pre-staging policy to ensure operator availability to support a special event or emergency operational needs.

- Develop a cross-training program for bus operators to ensure emergency route coverage.

Area for Improvement 3: Expand and diversify Capital Metro representation in the EOC

Observation: Capital Metro's presence at CMEOC and ATCEOC was primarily supported by Capital Metro Public Safety and Emergency Management (PSEM) division personnel.

Core Capabilities: Operational Coordination, Situational Assessment, Operational Communications

Analysis: Interview participants noted that agency representation in CMEOC and ATCEOC was primarily limited to individuals from Capital Metro PSEM. It was noted in interviews that a greater understanding of operational goals and capabilities of the agency would help improve EOC decision making and coordination support. In previous events, EOC representation involved greater representation from operational personnel at Capital Metro. Because EOC responsibilities were limited to one specific group, individuals at the Operations Control Center (OCC) expressed frustration that they were receiving limited information on EOC needs without full context to support operational decisions affecting their department.

Recommendations:

- Identify and train personnel to represent Capital Metro at CMEOC and ATCEOC.
- Develop a shift change and briefing process between CMEOC and OCC to ensure coordination on operational requirements and decision making.
- Train, exercise, and reinforce operational knowledge for EOC personnel through training, job shadows, ride-alongs, operational support reference tools, and education. Secure and train PSEM personnel to represent Capital Metro at the ATCEOC.

Public Information and Messaging

This section provides strengths and areas for improvement related to all public information and messaging activities.

Strength 1: Multi-media approach

Observation: Capital Metro MarComm staff effectively used a range of media to distribute public information.

Core Capabilities: Public Information and Warning

Analysis: Surveys, interviews, and an assessment of publicly available data indicated Capital Metro used traditional media, social media, the website, and MetroAlerts to communicate service status swiftly and regularly to the public.

Recommendations:

- Sustain current strategy of multi-media communications using a range of social and traditional media and existing alerting systems and technology.
- Continue to work with the ATCEOC staff and Joint Information Center to amplify each other's messages.

Strength 2: Multi-lingual communication

Observation: Communications were provided in English and Spanish.

Core Capabilities: Public Information and Warning

Analysis: Survey response cited Capital Metro for providing service updates in both English and Spanish, effectively reaching a key segment of the non-English speaking population in the Austin metropolitan area. Census data indicates that out of 500,000 households in Travis County, 91% are speakers of English or Spanish, indicating that the messages were able to be read by most residents. An additional 9% of the population speaks a language other than English or Spanish at home, and 6,375 households are limited English speaking among that group. Vietnamese, Chinese, Korean, and Arabic are the most common languages among the populations who speak English less than “very well.”

Recommendations:

- Identify and roster staff internally and/or identify external options (e.g., Language Line or other translation methods) for translation of emergency messages in other languages commonly spoken in the Austin Metropolitan Area.
- In line with Capital Metro plan reviews, update demographic information to ensure Capital Metro’s messages are accessible to the whole community.

Area for Improvement 1: Public expectation management

Observation: Public communications about service restoration times were unrealistic based on forecasted weather conditions.

Core Capabilities: Public Information and Warning

Analysis: The sustained severe weather and extreme cold compounded with limited operational capability to provide service in these weather conditions created operational challenges never before been experienced by Capital Metro systems and staff. Service-restoration timelines communicated to the public were too optimistic for the weather conditions and could not be fully supported by equipment and operational personnel. To maintain trust and establish clear expectations with the public, Capital Metro should have been more conservative with communicating restoration times. Surveys and interviews indicated an operational and communications posture to “under promise and over deliver” would position Capital Metro to exceed public expectations.

Recommendations:

- Determine timelines for suspending service to ensure proper public communication.
- Develop service restoration timelines and triggers for a range of disaster scenarios.

Area for Improvement 2: Emergency Public Information training

Observation: Response capabilities of MarComm staff would be enhanced with specific crisis communication training.

Core Capabilities: Public Information and Warning, Planning

Analysis: MarComm staff understands the pressure of communicating in an emergency and has begun the development of a crisis communication plan. Training for employees on crisis communications and their identified disaster roles will ensure a more capable staff and better emergency response. Additionally, MarComm is working to build a social media ambassadors program as posting photos and videos of ongoing response measures will build trust with the local community that Capital Metro is doing all it can to respond.

Recommendations:

- Develop and implement a social media ambassadors program through planning and training.

- Define a strategy for MarComm staff to receive appropriate emergency public information training from the Federal Emergency Management Agency (FEMA) and Texas Division of Emergency Management (TDEM).

Area for Improvement 3: Integration into City of Austin Public Information activities

Observation: Capital Metro was not effectively integrated into city/county emergency public information processes despite agency efforts to participate in city/county public information and notification process.

Core Capabilities: Public Information and Warning

Analysis: The City of Austin and the ATCEOC were the leads for emergency public information and did not always include Capital Metro in press conferences and briefings. Capital Metro personnel remained available to support public information efforts in local government throughout the event. Capital Metro ultimately hosted press conferences following city press conferences to ensure transportation-related public information was being appropriately disseminated.

Recommendation:

- Identify planning, training, and exercise opportunities with the ATCEOC to more streamline emergency public information and messaging

Internal Communications and Situational Awareness

This section provides strengths and areas for improvement related to all internal communications and situational awareness-related activities.

Strength 1: Daily meetings

Observation: Capital Metro established daily meetings to coordinate response activities.

Core Capabilities: Operational Communications, Operational Coordination

Analysis: Early in the response, Capital Metro quickly established a daily meeting schedule to share information and coordinate actions. These daily meetings helped ensure coordination and communication were provided to ensure proper decisions were made and appropriate actions were taken. All departments were invited to participate and share their actions and needs.

Recommendation:

- Ensure new plans and procedures include the establishment of regular meetings to engage all Capital Metro departments in incident management and operational coordination actions.

Strength 2: Continued use of Microsoft Teams

Observation: The use of Microsoft Teams was effective for collaboration and communications across Capital Metro.

Core Capabilities: Operational Communications, Operational Coordination

Analysis: The COVID-19 response introduced Microsoft Teams to many Capital Metro team members who became comfortable operating in a virtual environment. Surveys and interviews indicated Microsoft Teams allowed for effective interdepartmental communications and coordination. A benefit of Microsoft Teams is the ability to have a broader organization as well as functional

channels for specific response activities. Some duplication of functional areas and channels for coordination were noted and later resolved.

Recommendation:

- Establish and train the use of specific Microsoft Teams channels for specific incident management activities.

Area for Improvement 1: Use of Emergency Notification System

Observation: Not all Capital Metro employees or contractors have registered for alerting with the Everbridge system.

Core Capabilities: Operational Communications

Analysis: The Emergency Notification System (currently using Everbridge) is currently a voluntary system for Capital Metro employees and contractors to register and receive messages. Because it is not a mandatory system and some employees are hesitant to provide their private contact information, the reach of these internal messages is limited. It was noted that many contract staff are not registered to receive notifications in Everbridge.

Recommendations:

- Explore internal policy options for making Everbridge registration mandatory upon employment for Capital Metro staff.
- Develop an Everbridge registration outreach program for contract staff to show the benefits of participating in the system.
- Determine processes and procedures for communicating alerts to operators and other personnel who do not have access to phones or computers.

Area for Improvement 2: Evaluate staffing for internal communications

Observation: No staff was dedicated solely to internal messaging.

Core Capabilities: Operational Communications, Operational Coordination

Analysis: A common theme in interviews and survey responses indicated that internal messaging, specifically to contractors, was lacking, inconsistent, and not well distributed. In particular, there was an issue with communicating roles and responsibilities during the ongoing incident.

Recommendation:

- Develop a scope of support for internal messaging during emergency situations and determine staffing levels and training required to support.
- Identify and train an internal Public Information Officer and support personnel.

Area for Improvement 3: Situation reporting

Observation: Information processing and distribution processes are not formalized internally at Capital Metro or with key response partners at the ATCEOC.

Core Capabilities: Operational Communications, Operational Coordination

Analysis: There is not currently a systematic process in Capital Metro for receiving, processing, and distributing weather or incident information. The OCC generated an Incident Weather Report, but the report included outdated or extraneous information at times, and the report was produced too frequently to be useful. Further, defined processes and tools for situational awareness could allow

better flow of information internally within Capital Metro and to liaisons assigned externally (i.e., the ATCEOC).

Recommendations:

- Determine the appropriate digital location for situation reports to be housed for ease of access for end-users.
- Conduct an internal meeting to define situation report content, key points needed to make operational decisions, and the interval at which they are produced.

Continuity of Operations (COOP)

This section provides strengths and areas for improvement related to continuity-related activities.

Strength 1: Staff adaptability

Observation: Capital Metro staff effectively adapted roles, responsibilities, resources, and availability to help the agency meet needs of its customer base and the community during the winter-weather incident.

Core Capabilities: Operational Coordination

Analysis: The winter weather significantly impacted the ability of many employees and contract personnel to report to perform normal duties. The adaptability of staffing and commitment to their emergency roles allowed for many key actions to be maintained throughout the response period. Surveys and interviews identified the importance that staff flexibility for operational and response roles, particularly to support life safety priorities, played in the agency response. This strength was particularly observed for administrative personnel who, due to the COVID-19 pandemic, was already well equipped to adapt operations as required. While many employees expanded their daily roles and responsibilities to better support Capital Metro's needs, some respondents noted that incident-specific actions were based more on availability and access to resources than position responsibilities.

Recommendations:

- Develop a service suspension plan that clearly identifies program and position-specific expectations during operational suspension.
- Review continuity plans, policies, and procedures to ensure core functions and primary and alternate emergency roles are fully documented and clearly designated across the agency.
- Expand training effort for emergency roles and responsibilities to allow for greater staff flexibility for events that affect the ability of individuals to perform roles and responsibilities.
- Conduct regular exercises to test continuity functions for Capital Metro, particularly during events that limit availability of workforce or key positions in departments.

Area for Improvement 1: Continuity plans and capabilities for contracted service provider

Observation: The continuity and emergency functions of the contracted service provider were noted as ineffective to support operations needs during the winter-weather incident.

Core Capabilities: Operational Coordination

Analysis: Variation in emergency response and continuity capabilities was observed among contracted service provider agencies. Participants in interviews and surveys noted that MV Transportation was not prepared to activate continuity plans and capabilities to provide adequate

support to Capital Metro operations during the winter-weather incident. It was noted that MV Transportation needed to ensure personnel was trained on continuity and emergency processes and that supervisors and key personnel needed laptops to support remote operations.

Recommendations:

- Ensure MV Transportation conducts a comprehensive and independent audit and reviews and develops continuity plans, policies, and procedures as necessary.
- Conduct an audit to ensure Capital Metro and contracted service provider agencies have compatible continuity plans and the necessary equipment to support mobile operations and decision making.
- Develop annexes for contracted service provider agencies in the Capital Metro Emergency Operations Plan (EOP) and Continuity of Operations (COOP) plans to standardize requirements, content, and standards across the agency.

Logistics Support

This section provides strengths and areas for improvement related to logistics-related activities, including food and water and response equipment.

Strength 1: Access to food, water, and shelter

Observation: Capital Metro provided employees onsite with food and water and invited impacted employees to facilities for food and water. Efforts were also made to find hotel rooms for impacted staff.

Core Capabilities: Resource Management, Planning

Analysis: As power and water outages impacted Austin, Capital Metro worked to bring in food via restaurants, Costco purchases, and nearby convenience stores. Additionally, Capital Metro provided water and allowed impacted employees to fill water storage containers. Numerous divisions worked to find hotel rooms for impacted staff to either relocate and continue working or to relocate impacted families as well as opening Capital Metro facilities to families once power and water had been restored.

Recommendation:

- Increase quantities of stored onsite food and water supplies and ensure regular rotation and replenishment of items to help ensure longevity and availability.

Area for Improvement 1: On-site accommodations

Observation: Capital Metro had limited capabilities to house, feed, and provide for employees who stayed at Capital Metro facilities during the winter-weather incident.

Core Capabilities: Resource Management, Housing, Planning, Operational Coordination

Analysis: Interview and survey respondents noted shortages in key supplies—including cots, sleeping bags, personal hygiene items, food, and water—that would facilitate effective shelter-in-place approaches for Capital Metro and contracted service provider employees. Many interview participants noted that their departments used to have supplies of cots and Meals-Ready-To-Eat (MREs), but these items were not accessible or no longer available for use in the incident.

Recommendations:

- Conduct a full assessment of departmental capabilities and gaps to house and support essential personnel onsite for extended emergency operations.

- Re-establish and regularly replenish a supply of cots and blankets and create “shelter in place” kits (food, cots, blankets, toiletry kits, etc.) that are inventoried at least annually and rotated as needed.
- Develop and maintain a tracking system and inventory for emergency supplies across Capital Metro.

Area for Improvement 2: Winter weather response items

Observation: Capital Metro did not have the necessary winter weather response equipment.

Core Capabilities: Resource Management

Analysis: Numerous participants reported that Capital Metro did not have adequate supplies of salt or sand and facilities did not have any shovels or snow chains making it impossible to clear yards to provide any type of service. The contracted service provider was used to clearing yards with a skid-steer loader. Additionally, none of the vehicles at Capital Metro are all-wheel drive.

Recommendations:

- Purchase shovels and increase salt and sand quantities at all yards.
- Purchase snow chains for the number of vehicles needed to assist with providing a reduced level of service.
- Future vehicle purchases for Maintenance and PSEM divisions should consider all-wheel drive vehicles.
- Consider purchasing small equipment that can be adaptable for both snow removal and non-snow-related tasks for each main bus and train yard.

Area for Improvement 3: Bus request process

Observation: The emergency bus request process meant to be used during emergencies was not understood by everyone involved and created a frustrating situation.

Core Capabilities: Operational Coordination

Analysis: A significant number of surveys and interview participants expressed disappointment and frustration with the emergency bus request process. Unofficial processes mixed with official processes created confusion. The process seemed to change and expand throughout the event. The lack of a defined request process and resulting confusion created long response times or when a bus was dispatched, it was sent to a location with no one present.

The emergency bus request process led to operator and dispatcher frustration. Operators noted that there were times they were sent to locations without a clear objective or to defined passengers. In other situations, operators noted that trips were modified or expanded by dispatch. Dispatchers at the OCC and requestors at the ATCEOC expressed frustration at the turnaround time for buses. An additional failure point was the bus service provider’s ability to timely fill dispatch requests received from the OCC, which was a result of lacking emergency plans and inadequate staff to support.

Recommendations:

- Define the emergency bus request process in the Emergency Operations Plan.
- Train all Capital Metro and contracted service provider personnel on the request process.
- Ensure contracted service provider is trained and equipped to fill emergency bus dispatch requests.

Area for Improvement 4: Improve resource availability tracking and communication

Observation: There was inconsistent communication during the emergency bus request and fulfillment process between ATCEOC, the OCC and the contracted service provider.

Core Capabilities: Operational Coordination

Analysis: Dispatchers at the OCC and requestors at the ATCEOC reported inconsistent communication regarding limitations in operators or vehicles from the contracted service provider. The method for the contracted service provider to report readiness and capabilities related to vehicles, operators, and supervisors was inconsistent.

Recommendations:

- Define standardized process for contracted service provider to report on availability of buses, personnel, supervisors, and other assets.
- Develop a template to support request submissions and fulfillment and tracking of requests, and define the Emergency Bus Request Process in the Emergency Operations Plan.
- Enhance training efforts to ensure emergency bus request coordination between Capital Metro and the contracted service provider.

Infrastructure

This section provides strengths and areas for improvement related to all infrastructure activities.

Strength 1: Preventative cold weather actions

Observation: Capital Metro has backup generators at select locations and was prepared with salt and sand on trucks for distribution.

Core Capabilities: Infrastructure systems

Analysis: Capital Metro conducted regular testing of backup power generators at each location.

Recommendations:

- Ensure a preventative maintenance schedule for all generators is regularly maintained and conducted.
- Identify a list of infrastructure systems, potentially including rail crossings, that require generators.
- Develop comprehensive lists for each Capital Metro-owned or -used generator and identify which is and which is not powered within buildings operating on generator power.

Area for Improvement 1: Physical infrastructure protection

Observation: Much of the physical Capital Metro infrastructure (facilities, utility lines, supporting systems) was not prepared or protected to limit the impact of extreme cold.

Core Capabilities: Infrastructure systems

Analysis: According to information provided in interviews and surveys and analysis of incident records, Capital Metro's physical infrastructure was not prepared to withstand the forecasted freezing temperatures. Pipes were exposed to the air and susceptible to freezing at North Ops and South Base, resulting in pipes bursting. Frozen parking lots and lack of power caused operations to cease.

Recommendations:

- Develop plans, policies, procedures, and employee checklists to improve and protect facilities.
- Provide backup generators or uninterruptible power supply (UPS) to all locations.

Area for Improvement 2: Contracted facility management

Observation: Contracted facility management service providers were not prepared to respond to developing needs and did not provide the level of response required.

Core Capabilities: Infrastructure systems, Operational Coordination

Analysis: Service Providers did not properly respond to the winter weather even after Capital Metro proactively coordinated with the providers. Capital Metro Facilities Management did a large portion of the service providers' responsibilities due to lack of response and ineffective coverage. Information provided by the service providers was not as accurate as necessary and when they did respond, it was based on specific requests with very few proactive measures. An emergency contact number was not staffed by an employee who knew key supervisory staff contact information. Following a water leak at a MetroAccess location, Capital Metro found a plumber after the service provider stated they could not find one. Numerous other issues occurred that resulted in Capital Metro taking ownership of responsibilities that should have been performed by the service providers.

Recommendations:

- Review service providers' emergency preparedness plans and clearly define response expectations.
- Include emergency response plans as a specific scoring metric in future Requests for Proposals.

Customer/Community Support

This section provides strengths and areas for improvement related to all customer/ community-related activities.

Strength 1: Demand Response adaptability

Observation: Demand Response adapted quickly to conditions and provided remarkable service to the Austin community.

Core Capabilities: Operational Coordination

Analysis: Demand Response immediately recognized the significant impacts the power outages and roadway conditions would have on their clients. Staff proactively contacted dialysis centers throughout the week to determine if centers were open before scheduling trips and mass callouts to customers informing them of service suspensions and dialysis closures. MetroAccess vehicles provided transportation to shelters for people experiencing homelessness and for those without power. Many operators went above and beyond and assisted with customer bags. Eventually, response activities pivoted to water and food deliveries. Paratransit vehicles were better suited for traversing the roadways and became the heart of operations.

Recommendations:

- Create a temporary emergency service strategy that relies on paratransit vehicles for emergency response functions in severe winter-weather incidents, particularly before winter-ready fleet and equipment are secured.
- Develop and maintain every 6 months an emergency contact list for dialysis centers other than the publicly available number in order to reach someone when the locations are closed.

Strength 2: Customer service call center

Observation: The customer service call center was able to meet the needs of the clients even with an increase in demand.

Core Capabilities: Public Information and Warning

Analysis: The Customer Service Call Center experienced a significant increase in demand as the Capital Metro Mobile App was unable to keep up with the service changes and detours. Customers needed to contact the call center for trip planning assistance. Administrative and customer service personnel who would normally be out in the service area pivoted and assisted with taking customer calls.

Recommendation:

- Develop a call center guide to standardize operator performance for emergency call centers.

Area for Improvement 1: Continue to improve coordination with community groups

Observation: Community Engagement needs to continue to coordinate and share information with local community groups to better understand response preparedness and response needs in the community.

Core Capabilities: Public Information and Warning

Analysis: Capital Metro provided some outreach to community groups but needs to continue these efforts to ensure all partners have a better understanding of needs and capabilities before an incident. Capital Metro communicated with community partners daily to determine needs. It was identified that transportation support would be promised by the community partner, but the request was sometimes never relayed properly to Capital Metro.

Recommendations:

- Continue to grow outreach and education program with community partners.
- Formalize the emergency bus process and ensure all employees both understand the process and can explain and enforce it with all community partners.

Employee Support

This section provides strengths and areas for improvement related to all employee support activities.

Strength 1: Staff check-ins

Observation: Capital Metro management effectively checked in on employees throughout the winter-weather incident to determine access to resources, safety, and family needs.

Core Capabilities: Situational Assessment, Operational Coordination

Analysis: Interviews and surveys indicated the success of employee check-in efforts from Capital Metro management, particularly in identifying specific areas of need or limitations related to the winter-weather incident. Participants noted that this level of concern demonstrated a strong “family first” policy from agency management. In addition, check-ins were valuable to support daily assessments of capabilities and changing needs of the employee base located throughout the metropolitan region.

Recommendations:

- Develop a formal policy to ensure staff safety check-ins are built into emergency preparedness and response plans for Capital Metro and all contracted service provider employees.
- Develop and maintain contact information—including secondary household members—information for all Capital Metro and contracted service provider employees.

Strength 2: Employees providing support in adverse situations

Observation: Capital Metro employees who were able to report to perform their duties provided exemplary support to the agency and community.

Core Capabilities: Operational Coordination

Analysis: Interviews and surveys strongly indicated the quality of support provided by agency staff during extreme conditions. Most employees surveyed experienced significant issues at home due to infrastructure impact but still managed to exceed their normal daily responsibilities, allowing Capital Metro to expand community support efforts. Some employees noted frustrations that both those employees who continued to work and those who did not work during the event received the same regular pay during the incident.

Recommendation:

- Consider an employee incentive program that can be provided to employees who maintain transportation operations or special operations objectives during service suspension.

Strength 3: Internal disaster support services

Observation: Capital Metro established programs to provide financial and mental health support to employees.

Core Capabilities: Environmental Response/Health and Safety

Analysis: Interviews and surveys strongly approved of the quality of support provided by Capital Metro. The agency established the Family CARES program to support employees in need during the COVID-19 pandemic and pivoted the program to support personnel in this response effort. Another employee support program was activated to support employee disaster assistance funding needs related to the February 2021 winter-weather incident. This funding was provided to help pay for deductibles for insurance policies. Capital Metro also established mental health support services for employees.

Recommendation:

- Expand and promote employee support programs for personal home recovery and other resources for future events.

Area for Improvement 1: Improve personal preparedness

Observation: An agency-wide effort to improve personal emergency preparedness would increase staff comfort level for participating in response efforts.

Core Capabilities: Planning, Operational Coordination

Analysis: Interview and survey respondents noted that improvements to employee personal preparedness efforts would improve agency response efforts as staff would be more comfortable leaving their homes and families if they had time to prepare. Staff preparedness may include home preparation (food and water supplies for family members), the communication of simple strategies to

ensure steady communications (access to battery-powered radio transmissions and tips to ensure cellular devices are charged during long-duration power outages), tips for driving in inclement weather, and the preparation of “go bags” including key personal implements, medication, and position-specific equipment.

Recommendations:

- Develop and promote a comprehensive personal preparedness program for all employees, including both all-hazards and event-specific preparedness actions.
- Develop an employee awareness campaign for personal preparedness actions, including incentives to participate in the program such as a starter emergency household kit for those who complete training.

Conclusion

Capital Metro’s response to the unprecedented February 2021 winter-weather incident and the resulting operational reductions due to infrastructure impacts and staff availability was a success but presented areas for improvement that will greatly benefit both Capital Metro personnel and the community at large. Capital Metro’s commitment to modify operations and provide community support for dialysis patients and water distribution is an outstanding example of an agency contributing to the greater good even in the worst of circumstances.

Capital Metro and its service providers are encouraged to use the results of this report to further refine response and recovery efforts as well as plans, procedures, and trainings for operating and supporting emergency response efforts in future emergencies and disasters. Some of the strengths and areas for improvement can be addressed immediately to strengthen Capital Metro preparedness. Others will require longer-term focus and development but are highly encouraged to broaden agency-wide knowledge and response capabilities. Formalizing learned best practices will allow Capital Metro to build capabilities for future events.

Appendix A: Improvement Plan

The Improvement Plan (IP) was developed for Capital Metro as part of the *Capital Metro February 2021 Winter Weather After Action Report (AAR)* process and is published separately and rolled into the working Corrective Action Matrix Observations and recommendations in the IP was established as part of the AAR process. Outstanding IP tasks will be rolled into the final after action review process.

IP content to be developed following review of the AAR from Capital Metro staff.

Reference	Core Capability/ Capabilities	Observation	Recommended Action(s)	Assigned Agency/Organization	Agency POC	Start Date	End Date

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Appendix B: Incident Timeline

The following timeline documents key events and actions regarding the development of the February 2021 winter-weather incident as it related to Capital Metro. The timeline includes information regarding developments necessary to fully establish the incident using events and actions that are agency, county, and City of Austin-focused in nature.

Thursday, February 11, 2021

NWS Weather Report

The National Weather Service begins weather briefings regarding the freezing temperatures and snow anticipated in the Austin area from Sunday, February 14 to Tuesday, February 16.

Capital Metro Actions

Capital Metro begins internal winter weather calls and launches the Cold Weather Operating Action Plan. Essential employees are to report to work, nonessential employees are to work from home if possible.

Key Events

The City of Austin Homeland Security and Emergency Management Office begins holding Big five Policy and Situational Awareness calls. Big five refers to The University of Texas, City of Austin, Travis County, Austin Independent School District, and Austin Community College.

Friday, February 12, 2021

NWS Weather Report

Winter Weather Advisory in effect. Freezing drizzle occurring, additional ice could occur on elevated surfaces. Increasing confidence for freezing rain/sleet Saturday and Saturday night. Major winter storm expected Sunday night and Monday.

Capital Metro Actions

Capital Metro Senior Executive Team and Senior Management Team review plans for expected winter weather over the weekend.

Capital Metro begins providing transportation for people experiencing homelessness.

Key Events

Governor Abbott issues a Disaster Declaration for all 254 counties in Texas.

Saturday, February 13, 2021

NWS Weather Report

Winter Storm Warning and Wind Chill Advisory in effect. Winter storm will move throughout the region from Sunday afternoon through Monday morning. Freezing rain and sleet expected with a changeover to all snow Sunday night. Travel will be difficult if not impossible. Scattered power outages could occur.

Capital Metro Actions

Full service provided although some routes detoured due to ice on bridges.

Continued providing transportation for people experiencing homelessness. Because of the inclement weather, Capital Metro does not deny a ride to anyone due to lack of fare.

Capital Metro stages three warming buses (bid out RAD buses) to deploy if needed after Texas Gas warns of potential gas outages.

Key Events

Concern on the power grid. Electric Reliability Council of Texas (ERCOT) discussed rolling brownouts Friday but ended up not needing them.

Austin Public Health cancels all vaccination clinics.

Sunday, February 14, 2021

NWS Weather Report

Winter Storm and Wind Chill Warning in effect. Freezing rain throughout the day caused icy roadways with road conditions continuing to deteriorate throughout the evening. Major winter storm will move across the region overnight followed by bitterly cold air. Scattered power outages could occur.

Capital Metro Actions

6:00 am operations update reports no icy conditions. Capital Metro runs full service intending to suspend service at 8:00 pm or as conditions warrant. Multiple routes impacted by a labor shortage and inclement weather.

Announcement of fare suspension through Tuesday, February 16.

Conditions begin deteriorating as snow begins falling. Roads are closed due to ice with numerous reports of black ice and many buses become stuck. One operator transferred for slip and fall injury, one operator slid into a wall damaging the front of the bus.

Late start bus service proposed for Monday, February 15, and Tuesday, February 16. All other services will be suspended.

Non-essential staff to continue to work from home if possible, Capital Metro issues the following notice to employees: With the anticipated weather conditions from now through Tuesday continuing to be icy, any employee who can perform their duties from home should stay off of the roads. If school or childcare closures affect your ability to work from home, please advise your manager. If your duties require reporting to work and you are not able to due to the weather or childcare issues, please contact your

Capital Metro February 2021 Winter Weather After Action Report

manager daily to report your status. Our major goals are the safety of our staff while providing essential services to our customers.

Continued providing transportation for people experiencing homelessness using Demand Response vehicles to support shuttling to shelters.

Capital Metro Operations Control Center begins 24-hour coverage from February 14 to February 18, 2021.

Key Events

Austin Travis County EOC in-person activation begins at 5:00 pm, Capital Metro personnel report remotely.

President Biden issues an Emergency Declaration for Texas (EM-3554-TX).

Monday, February 15, 2021

NWS Weather Report

Three to five inches of snow, isolated pockets of more. Hard freeze, wind chill, and winter storm warnings in effect. Travel is near impossible. Dangerous travel conditions, temperatures, and wind chill values continuing into Tuesday and Wednesday.

Capital Metro Actions

At 4:00 a.m. operations report details regarding road conditions as continuing to deteriorate and power outage reported at the Administrative Building. Bus service will start late at 7:00 a.m. with no other services provided.

At 6:00 a.m. operations report delays, bus services start no later than 7:00 a.m. A foot of snow is reported at North Ops. Power outages are now reported throughout the Austin region.

At 7:20 a.m. Austin Transportation Department (ATD) and Austin Public Works advise that if Capital Metro does not have chains on the buses, they shouldn't be on the roads. They are working on a street clearance plan, but do not have true plows. No ETA on the start of street clearing.

At 10:00 a.m. operations update and suspends service until roadway conditions improve. The following message is issued by MarComm: Capital Metro will not provide service Monday, February 15. We are shifting all our available resources to supporting emergency response with the City of Austin. This will be the final update regarding Monday's service. We will send out another communication this evening about the plan for Tuesday, February 16.

Demand Response will continue to provide life-critical trips beginning Tuesday at 10:00 a.m. if conditions allow and facilities are open.

Capital Metro requests a large tow truck to assist with buses stuck on roadways from February 14.

Capital Metro facilities begin experiencing power outages; all service providers and CMTA staff at facilities will be supported with basic needs. Locations of cots and blankets are distributed to staff. No heat was reported at the rail maintenance facility.

Non-essential staff told to stay home Tuesday and Wednesday.

Dell Seton requests transportation assistance from Capital Metro to pick up 50-75 medical staff staying at nearby hotels and transport them to Dell Seton. Standby until after shift change and depart for a return trip to the hotels with medical staff coming off duty. Process would occur from 6:00 a.m. to 8:00 a.m. and 6:00 a.m. to 8:00 p.m. Request assistance begins Tuesday, February 16.

Capital Metro February 2021 Winter Weather After Action Report

Capital Metro daycare is closed for Feb.16.

MarComm issues another service suspension message for Tuesday, February 16: Capital Metro is suspending all services Tuesday, February 16 and this will be the final update regarding services on Tuesday. We're focusing all efforts on emergency operations with the City of Austin to support those at cold weather shelters and those needing life-saving trips. We'll continue to evaluate conditions for Wednesday, February 17, but at this time we anticipate service will be impacted Wednesday as well.

Key Events

Rolling power outages begin.

Austin Independent School District cancels school for the week.

Tuesday, February 16, 2021

NWS Weather Report

Winter Storm Warning in effect. Bitterly cold temperatures and dangerous wind chills. Melting snow has refrozen creating black ice. More freezing rain is expected Tuesday night into Wednesday morning. Travel will continue to be dangerous tonight into Wednesday morning.

Capital Metro Actions

At 6:00 a.m. operations report identifies issues at bus yards as snow removal exposes underlying ice. Snow removal efforts continue to support a 10:00 a.m. bus service start. No other bus or rail service will be provided. Demand Response will continue to provide life-critical trips and transport to/from medical appointments and dialysis if possible. All other scheduled trips are canceled.

Dell Seton Cold Weather medical transportation support starts with traction support. Continuing to support requested emergency transportation to shelters and warming centers.

10:00 a.m. operations report suspends all service for Tuesday as roadway conditions are unsafe and staff cannot report to garages.

Capital Metro requests Austin Police Department (APD) support to South Park Meadows for stuck buses that are being occupied and started.

At 4:30 p.m.: Service for Wednesday, February 17 is suspended. The following message is issued: Capital Metro will continue suspending all services Wednesday, February 17. Unfortunately, conditions have not improved today, and this evening's weather is expected to bring freezing rain that will make travel even more unsafe. We'll continue focusing all efforts on emergency operations with the City of Austin to support those at cold weather shelters and those needing life-saving trips. Once conditions allow us to resume service this week, Capital Metro will continue to suspend fare collection through Sunday, February 21.

Wednesday, February 17, 2021

NWS Weather Report

Winter Storm Warning continues until 6 a.m. Thursday. Highs in the low 30s. Freezing rain and snow expected overnight with lows in the 20s.

Capital Metro Actions

All service was suspended for Wednesday. Fares suspended through Sunday, February 21.

Non-essential staff told to stay home the rest of the week. Phone tree activated for wellness checks. Care teams were activated to help staff with emergency needs. Facilities made available to staff and families as warming centers with bathrooms.

Preparations and notices were sent for how to capture costs for possible FEMA reimbursement.

Capital Metro continues to support requested emergency transportation to shelters and warming centers. Several high-priority requests to relocate shelters and assisted living facilities due to power outages.

Key Events

The City of Austin issues a Boil Water Notice.

Thursday, February 18, 2021

Capital Metro Actions

Dell Seton Transport Traction Support concludes at 9:00 am.

Limited Bus Service resumes at 10:00 a.m. and continues until 8:00 p.m. MetroAccess runs corresponding service and prioritizes life-sustaining trips and emergency operations center requests first. Rail service to resume, Monday, February 21 due to track and signal issues from the freeze.

More than 100 bus operators reported to work and more service than anticipated is provided.

Many facilities have power and water restored although still under a boil water notice. Assessing any damages and outstanding needs and preparing to return to normal operations.

MetroAccess vehicles and buses are meeting requests from the EOC to move residents to and among shelters and warming centers.

Continuing to shuttle Dell hospital staff between emergency lodging and the hospital.

Pipes burst at 509 Thompson facility.

MarComm customer call volume is high. Call center processes about 250 calls. On Thursday, February 18, 800 calls were received with half the staff to answer.

Cap Metro App and trip planner experience issues keeping up with trip data. Most reliable source is the Customer Service GO Line, working on add personnel to support call volumes, as a limited number of reps have power and internet. Customer Service has added four new agents to the softphone platform to help take calls.

Key Events

Palmer Shelter reaches capacity and cannot take more people. Capital Metro assists with relocations.

Friday, February 19, 2021

NWS Weather Report

Hard Freeze Warning until 10 a.m. Final night of below freezing temperatures. Precipitation has ended, however, some residual icing on roadways is possible. Warmer temperatures are expected from Saturday afternoon through next week.

Capital Metro Actions

Limited Bus Service, 8 a.m. – 9 p.m. Demand Response following same service window.

Capital Metro response efforts begin shifting toward water and food distribution.

On Friday evening, Capital Metro issues a message to existing Metro Access clients about water delivery: Capital Metro is working together with community organizations to assist with providing access to clean drinking water for our MetroAccess customers. We have access to a limited supply of bottled drinking water available for delivery to our customers as supplies last. Please use this resource if you have not requested water from another organization. Please call 512-369-6050 to request drinking water delivery as available.

A council member amplifies the messaging on Twitter causing a spike in calls. Call center adds staff that is off to answer the water queue line. Call center is open 8:00 a.m.– 5:00 p.m. Saturday and Sunday and 7:00 a.m.– 6:00 p.m. weekdays with a 3:00 p.m. water delivery request cutoff to create manifest and build runs for the next day.

Saturday, February 20, 2021

Capital Metro Actions

Bus Service runs from 7:00 a.m. to 10:00 p.m. Completed 350 MetroAccess trips.

Rail staff inspecting and repairing lines for Monday service start.

Drinking water containers are placed at the North Operations garage and allow for the filling of personal containers.

Water deliveries begin using MetroAccess resources. Capital Metro caps water deliveries at 200 per day.

Key Events

President Biden signs a Major Disaster Declaration, inclusive of Travis County (DR-4586-TX). Capital Metro was alerted on February 19 that the declaration was coming.

Sunday, February 21, 2021

Capital Metro Actions

Fare suspension announced through February 28.

Bus Service runs from 7:00 a.m. to 10:00 p.m. UT Shuttle service resumes. MetroAccess provides regular service.

Capital Metro February 2021 Winter Weather After Action Report

Rail staff complete test runs for Monday service.

Bottled water for employees placed at all Capital Metro garages and one location allows for filling of personal containers.

Lakeline Station becomes a water distribution site.

Monday, February 22, 2021

Capital Metro Actions

Full, regular service resumes with fares suspended through February 28.

Demand Response continues home water deliveries and assists with POD distribution using shuttles.

Tuesday, February 23, 2021

Capital Metro Actions

Lakeline Station closes as a water distribution site.

Water deliveries continue.

Key Events

The City of Austin lifts the boil water notice.

Long-Term Actions

Capital Metro continued to assist with transporting people from shelters to homes. Capital Metro's water delivery services (typically in bottled form) took place until March 12, 2021.

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Appendix C: After Action Review Methods

The After Action Report (AAR) and the Improvement Plan (IP) involved a multi-step process moving from data collection through establishing the IP. The following overview notes the implementation of the approach.

Step 1: Data Collection

The AAR data collection process used a combination of online surveys, written online surveys to reach bus operators, review of departmental self-assessment documentation, teleconference interviews, one-on-one outreach, and meeting notes.

Online Survey Design

Capital Metro Security and Emergency Management issued a survey to agency employees who were involved in the Capital Metro response to the severe winter weather. The following survey was issued to agency and organization representatives from May 3, 2021, to May 26, 2021, using an online survey tool. The survey received 114 responses.

The survey was designed with branches that could potentially introduce follow-up questions depending on the participants' answers. This was developed to streamline the user experience in the event that the individual completing the survey was not heavily involved in specific areas such as decision making.

Survey Outline

Data fields gathered for the survey distributed to Capital Metro email accounts were as follows:

Section 1: Survey Respondent Information

- Name
- E-mail address
- Please list your title and incident-specific position, if different
- Incident-specific position or role

Section 2: Evaluation of Response and Recovery Activities

- Incident readiness: Please rate Capital Metro's preparedness actions and readiness for the severe winter-weather incident in February 2021.
- Describe any strengths of Capital Metro's preparedness actions or best practices.
- Describe any areas for improvement or challenges with Capital Metro's preparedness actions.
- Coordination: Please rate Capital Metro's internal and external coordination processes.
- Describe any strengths of Capital Metro's internal and external coordination processes, systems, and resource support.

Capital Metro February 2021 Winter Weather After Action Report

- Describe any areas for improvement or challenges with Capital Metro's internal and external coordination processes, systems, and resource support.
- Public Information: Please rate Capital Metro's public information, messaging, and media communications during the severe winter weather response.
- Describe any strengths of Capital Metro's public information and/or public messaging or best practices.
- Describe any areas for improvement or challenges with Capital Metro's public information and/or public messaging.
- Personnel Support: Please rate Capital Metro's support for essential and non-essential personnel to continue operations during the severe winter-weather incident.
- Describe any strengths of Capital Metro's internal staff support or best practices.
- Describe any areas for improvement or challenges with Capital Metro's internal staff support.

Section 3: Operations

- Did you work in Operations during the severe winter-weather incident?
- Did you get the necessary vital resources to carry out operations during the severe winter-weather incident?
- What resources did you request and not receive to support your response efforts?
- In your opinion, what were the obstacles to receiving the equipment or resources you needed, if applicable?
- Were there any improvements to the resource process or timeline to receive resources that you would recommend?
- Please describe the most significant challenges to service restoration.

Section 4: Decision Making

- Did you have a management or decision-making role during the severe winter-weather incident?
- Decision making: Please rate Capital Metro's decision making related to service levels, fare suspensions, and service policies based on the situation and weather forecast.
- Describe any strengths of Capital Metro's operational decision-making processes or best practices.
- Describe any areas for improvement or challenges with Capital Metro's operational decision-making processes.

Future Preparedness

- Describe any planning or training opportunities you feel may assist in improving future response and recovery efforts for severe winter weather, extended power outages, or other major disasters.
- List any resource requirements (personnel or equipment) your department, agency, or organization may need to improve future response and recovery efforts.
- Please provide any additional comments regarding the severe winter weather preparedness, response, and recovery actions.

Operators Survey Outline

Data fields gathered for the survey distributed to bus operators at depot locations were as follows:

- Please select your employer: MTM, MV, Capital Metro, Herzog, Other

Incident Readiness

- Please rate Capital Metro's preparedness and readiness for the severe winter-weather incident in February 2021.
- Describe any strengths of Capital Metro's preparedness actions or best practices.
- Describe any areas for improvement or challenges with Capital Metro's preparedness actions.
- Personnel Support: Please rate Capital Metro's support for essential and non-essential personnel to continue operations during the severe winter-weather incident.
- Describe any strengths of Capital Metro's internal staff support or best practices.
- Describe any areas for improvement or challenges of Capital Metro's internal staff support or best practices.

Resource Support

- Did you receive the necessary vital resources to carry our operations during the severe winter-weather incident?
- What resources did you request and not receive to support your response efforts?
- In your opinion, what were the obstacles to receiving the equipment or resources you needed, if applicable?
- Are there any improvements to the resource process or timeline to receive resources that you would recommend?
- Please describe the most significant challenges to service restoration.

Decision Making

- Please rate Capital Metro's decision making related to service levels, fare suspensions, and service policies based on the situation and weather forecast.
- Describe any strengths of Capital Metro's operational decision-making processes.
- Describe any areas for improvement or challenges with Capital Metro's decision-making processes.

Optional Information

- Name
- Title
- Phone or e-mail (best contact method)

Interview Questions

The following questions were used to frame out discussions with individuals and groups over the Microsoft Teams platform:

Capital Metro February 2021 Winter Weather After Action Report

- What are your daily responsibilities and did your role change in the February 2021 winter-weather incident?
- Provide an overview of Capital Metro's preparedness actions and readiness for the severe winter-weather incident in February 2021.
 - What were the specific strengths or best practices you observed in the event?
 - What were the primary challenges or limitations you observed in the event?
- What were the most significant issues that the winter-weather incident presented to your agency role/departmental functions?
- Describe coordination efforts with internal and external stakeholders that were central to your role in the event.
- Did key individuals in your department require a specific resource or logistic support to help maintain critical functions? Please describe what was required and resource support that was received or lacking.
 - How did you determine what your resource needs were in the incident?
 - Describe effective strategies to address emerging needs.
 - Describe obstacles to your department or personnel receiving necessary support.
- Please describe your role in decision making in the event, including support or challenges observed in decision making.
 - Were you dependent on decisions from other decision makers or personnel? Did this impact your ability to make timely decisions? What improvements are needed to enhance this process in the future?
 - Did you have the information you needed to support providing a realistic timeline for service resumption, if necessary? What could have improved this process?
 - What were the challenges you were seeing around decision making for service levels?
- What are the greatest areas of need to improve preparedness at Capital Metro for future events, including weather and other hazards? (Probe for resources, capabilities, equipment, training, exercises, and planning needs.)
 - What improvement would have most benefitted your role in this event?
 - Would a written service suspension plan be useful for future events? (Probe for who should be involved and how flexible the plan could be to address a range of events.)
- What is the greatest lesson learned that should be incorporated into planning for Capital Metro? Were there effective strategies that can be documented and enhance in future planning?

Step 2: Data Analysis

Findings from the data collection process were analyzed to identify primary strengths and areas for improvement, which were used to group key observations and document corresponding core capabilities under each priority focus area. Information from interviews, surveys, and bus operator surveys were analyzed, grouped, and categorized in this document.

Step 3: Establishing the Improvement Plan

Key observations and associated recommended actions were presented in the AAR and the appended IP. In addition, the IP prioritizes areas for improvement, indicates the agency or organization assigned to

lead a response to each identified area for improvement, and establishes a timeline for completing associated actions (i.e., start and completion dates).

Step 4: Implementing the Improvement Plan

The IP remains a living tool to help guide the process of addressing areas for improvement and will be used at follow-up meetings to check the status of outstanding areas for improvement and corresponding activities. Capital Metro will continue to guide the improvement process, but responsible agencies and organizations will lead a response to their assigned areas for improvement. Capital Metro will establish an accountability process, involving quarterly meetings to assess progress with appropriate stakeholders.

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Appendix D: Interview Participants

Participants in the interviews included the following departments/individuals:

- Public Safety and Emergency Management—conducted May 6, 2021
 - Darryl Jamail
 - Alex Abdun-Nabi
 - Troy Officer
 - Brian Robinson
 - Teresa Pedrosa
 - Jeffrey Downey
 - Holly Winge
 - Tracie Collier
 - Rylma Olvera
 - Israel Herevia
 - Blair Spikes
- Chief of Staff—conducted May 14, 2021
 - Kerri Butcher
- Executive Vice President of Safety/Public Safety/Emergency Management/Accessibility Services—conducted May 17, 2021
 - Gardner Tabon
- MarComm Team—conducted May 15, 2021
 - Brian Carter
 - Sam Alexander
- Executive Vice President of Administration/HR/Diversity—conducted May 15, 2021
 - Donna Simmons
- Chief Operating Officer—conducted May 15, 2021
 - Dottie Watkins
- Rail—conducted May 16, 2021
 - David Dech
 - Muriel Friday
- Community Engagement—conducted May 20, 2021
 - Jo Anne Ortiz

Capital Metro February 2021 Winter Weather After Action Report

- Yannis Banks
- Operations Control Center—conducted May 21, 2021
 - Laurie Michel
 - Valerie Rivera
 - Victoria Tang
- Demand Response—conducted May 21, 2021
 - Chad Ballentine
 - Suzie Edrington
 - Sara Sanford
 - Julie Lampkin
 - Roberto Velasquez
- MTM—conducted May 24, 2021
 - Ricardo Boulware
- Facilities—conducted May 24, 2021
 - Ken Cartwright
 - Russell Baumbach
 - Fidel Campos
- Operations, Management, and Oversight (OMO)—conducted May 27, 2021
 - Rafael Villareal
 - Tammy Quinn
 - Cathy Spence
 - Jeff Denning
 - Michael Clement
- MV Transportation (MV)—conducted June 1, 2021
 - Gary McCray
 - Yolanda White
 - Brecke Hill
 - Kevin King
 - Gareth Graham

Appendix E: Core Capabilities for Identified Strengths and Areas for Improvement

The core capabilities, established in the National Preparedness Goal, are referenced in many national preparedness efforts, including the National Planning Frameworks. The Goal groups the capabilities across the relevant five mission areas. Some core capabilities fall within a single mission area, while others apply to multiple or all mission areas. Core Capabilities were identified for each of the Strengths and Areas for Improvement in the Capital Metro After Action Plan.

- **Pre-Incident Actions**
 - Strength 1: “All hands on deck” posture of Capital Metro administration
 - ◆ Core Capabilities: Operational Coordination
 - Strength 2: Established telework procedures and technology platforms
 - ◆ Core Capabilities: Planning, Operational Coordination
 - Area for Improvement 1: Formalize a Capital Metro Planning, Training, and Exercising Program
 - ◆ Core Capabilities: Planning
 - Area for Improvement 2: Pre-positioning of personnel
 - ◆ Core Capabilities: Planning, Operational Coordination
 - Area for Improvement 3: Service suspension of MetroBus
 - ◆ Core Capabilities: Planning, Operational Coordination
- **Operations**
 - Strength 1: Strong central operational coordination
 - ◆ Core Capabilities: Operational Coordination, Operational Communications, Situational Assessment
 - Strength 2: Suspension of rail operations
 - ◆ Core Capabilities: Operational Coordination, Situational Assessment
 - Area for Improvement 1: Delayed decision to suspend bus operations
 - ◆ Core Capabilities: Operational Coordination, Situational Assessment, Operational Communications
 - Area for Improvement 2: Bus operator coordination
 - ◆ Core Capabilities: Operational Coordination, Situational Assessment, Operational Communications
 - Area for Improvement 3: Expand and diversify operational Capital Metro representation in EOC

- ◆ Core Capabilities: Operational Coordination, Situational Assessment, Operational Communications
- **Public Information and Messaging**
 - Strength 1: Multi-media approach
 - ◆ Core Capabilities: Public Information and Warning
 - Strength 2: Multi-lingual communication
 - ◆ Core Capabilities: Public Information and Warning
 - Area for Improvement 1: Public expectation management
 - ◆ Core Capabilities: Public Information and Warning
 - Area for Improvement 2: Emergency Public Information training
 - ◆ Core Capabilities: Public Information and Warning, Planning
 - Area for Improvement 3: Integration with City of Austin Public Information
 - ◆ Core Capabilities: Public Information and Warning
- **Internal Communications and Situational Awareness**
 - Strength 1: Daily meetings
 - ◆ Core Capabilities: Operational Communications, Operational Coordination
 - Strength 2: Continued use of Microsoft Teams
 - ◆ Core Capabilities: Operational Communications, Operational Coordination
 - Area for Improvement 1: Use of Emergency Notification System
 - ◆ Core Capabilities: Operational Communications
 - Area for Improvement 2: Evaluate staffing for internal communications
 - ◆ Core Capabilities: Operational Communications, Operational Coordination
 - Area for Improvement 3: Situation reporting
 - ◆ Core Capabilities: Operational Communications, Operational Coordination
- **Continuity of Operations (COOP)**
 - Strength 1: Staff adaptability
 - ◆ Core Capabilities: Operational Coordination
 - Area for Improvement 1: Continuity plans and capabilities for contracted service provider
 - ◆ Core Capabilities: Operational Coordination
- **Logistics Support**
 - Strength 1: Access to food, water, and shelter
 - ◆ Core Capabilities: Resource Management, Planning
 - Area for Improvement 1: On-site accommodations

- ◆ Core Capabilities: Resource Management, Housing, Planning, Operational Coordination
- Area for Improvement 2: Winter weather response items
 - ◆ Core Capabilities: Resource Management
- Area for Improvement 3: Emergency bus request process
 - ◆ Core Capabilities: Operational Coordination
- Area for Improvement 4: Improve operational readiness
 - ◆ Core Capabilities: Operational Coordination
- **Infrastructure**
 - Strength 1: Preventative cold weather actions
 - ◆ Core Capabilities: Infrastructure systems
 - Area for Improvement 1: Physical infrastructure protection
 - ◆ Core Capabilities: Infrastructure systems
 - Area for Improvement 2: Contracted facility management
 - ◆ Core Capabilities: Infrastructure systems, Operational Coordination
- **Customer/Community Support**
 - Strength 1: Demand Response adaptability
 - ◆ Core Capabilities: Operational Coordination
 - Strength 2: Customer service call center
 - ◆ Core Capabilities: Public Information and Warning
 - Area for Improvement 1: Continue to improve coordination with community groups
 - ◆ Core Capabilities: Public Information and Warning
- **Employee Support**
 - Strength 1: Staff check-ins
 - ◆ Core Capabilities: Situational Assessment, Operational Coordination
 - Strength 2: Employees providing support in adverse situations
 - ◆ Core Capabilities: Operational Coordination
 - Strength 3: Internal disaster support services
 - ◆ Core Capabilities: Environmental Response/Health and Safety
 - Area for Improvement 1: Improve personal preparedness
 - ◆ Core Capabilities: Planning, Operational Coordination

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