Team Springfield
Joint Elected Official Meeting
Tuesday
December 3, 2024
5 p.m. – 7 p.m.
Springfield Justice Center - EOC (2nd Floor)
230 4th Street (On-street parking available)

Virtual Attendance
Registration Required:
Attend from your computer, tablet, or smartphone:
Zoom
Meeting ID: 829 8070 2931
https://us06web.zoom.us/webinar/register/WN_1LtrNJa-RzSDL8p7H2nnBg
To dial in using your phone in Listen Only Mode:
Dial 1 (971) 247-1195
Toll Free 1 (877) 853-5247
Oregon Relay/TTY: 711 or 800-735-1232

---

1. 5:00 Dinner and networking
2. 5:30 Call to order and introductions
3. 5:40 Welcome and goals for the meeting (CAOs)
4. 5:50 Review of January 2024 Ice Storm
    - Perspectives and lessons learned from each agency
5. 6:45 Additional discussion and next steps
6. 7:00 Adjourn

Springfield Utility Board

Winter 2024 Ice Storm

December 3, 2024

Springfield Utility Board

“I’ve seen this before…after a hurricane.”

SUB Mutual Aid Partner

The Scale of the Storm: Springfield

- Ice isolated residents and impacted working conditions during the first 5 days
- Extreme cold hit while power was out with below freezing for most of the first 5 days
- Internet and cell phone service was interrupted
- Ice and extensive tree damage impaired communications

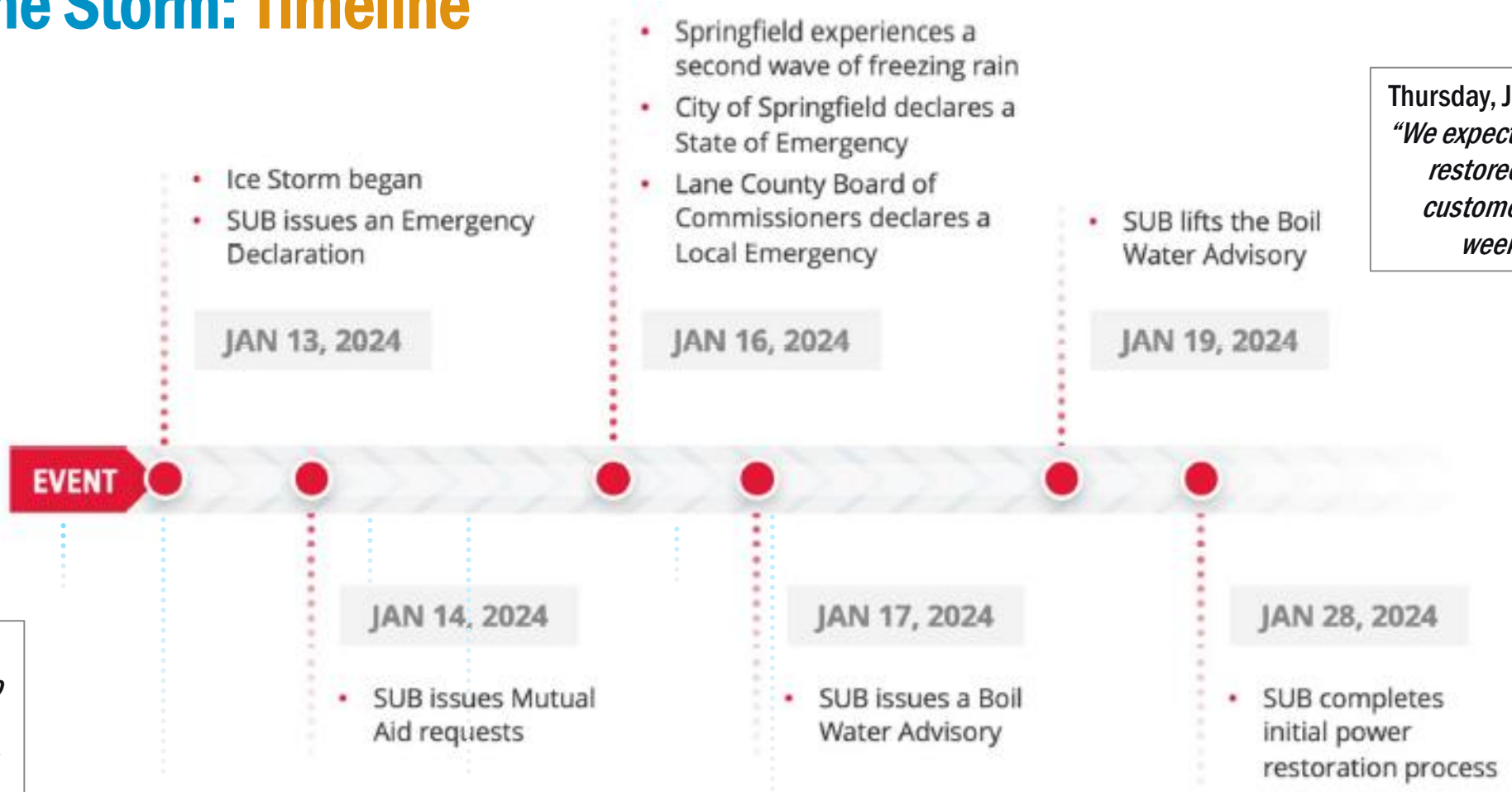






Springfield Utility Board

The Scale of the Storm: Timeline



Sunday, January 14th
"Customers should plan to be without power for an extended period that may last several days."

Wednesday, January 17th
"Plan to be without power for more than a week."

Thursday, January 25th
"We expect power to be restored to most customers by this weekend."

Springfield Utility Board

The Scale of the Storm: SUB Systems

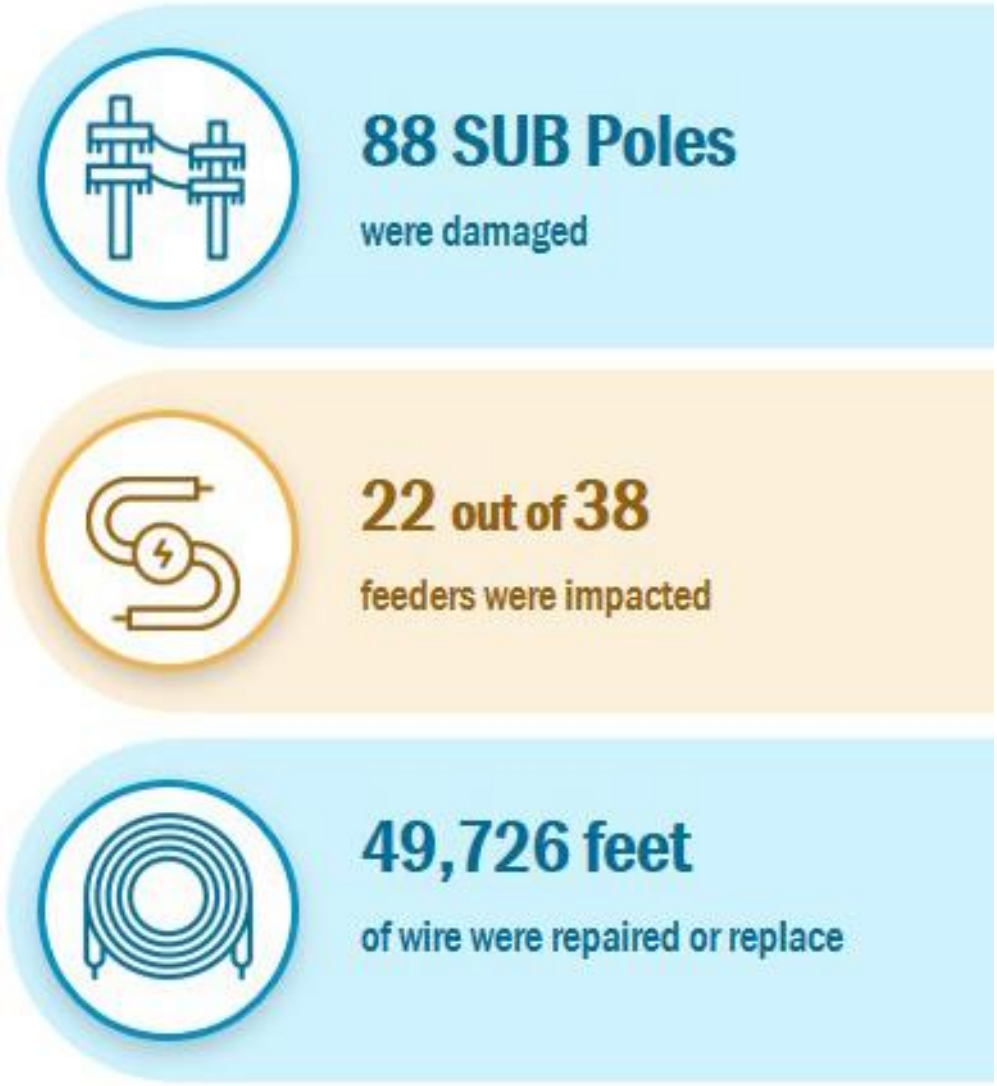
Ice Storm
2014 vs 2024

	2014	2024
Lost poles	7	80+
Feeders* restored system-wide	1 day	16 days
Feeders affected (out of 38)	4	22
Mutual aid & contract crew members	0	71
Days of storm	<1 day	5

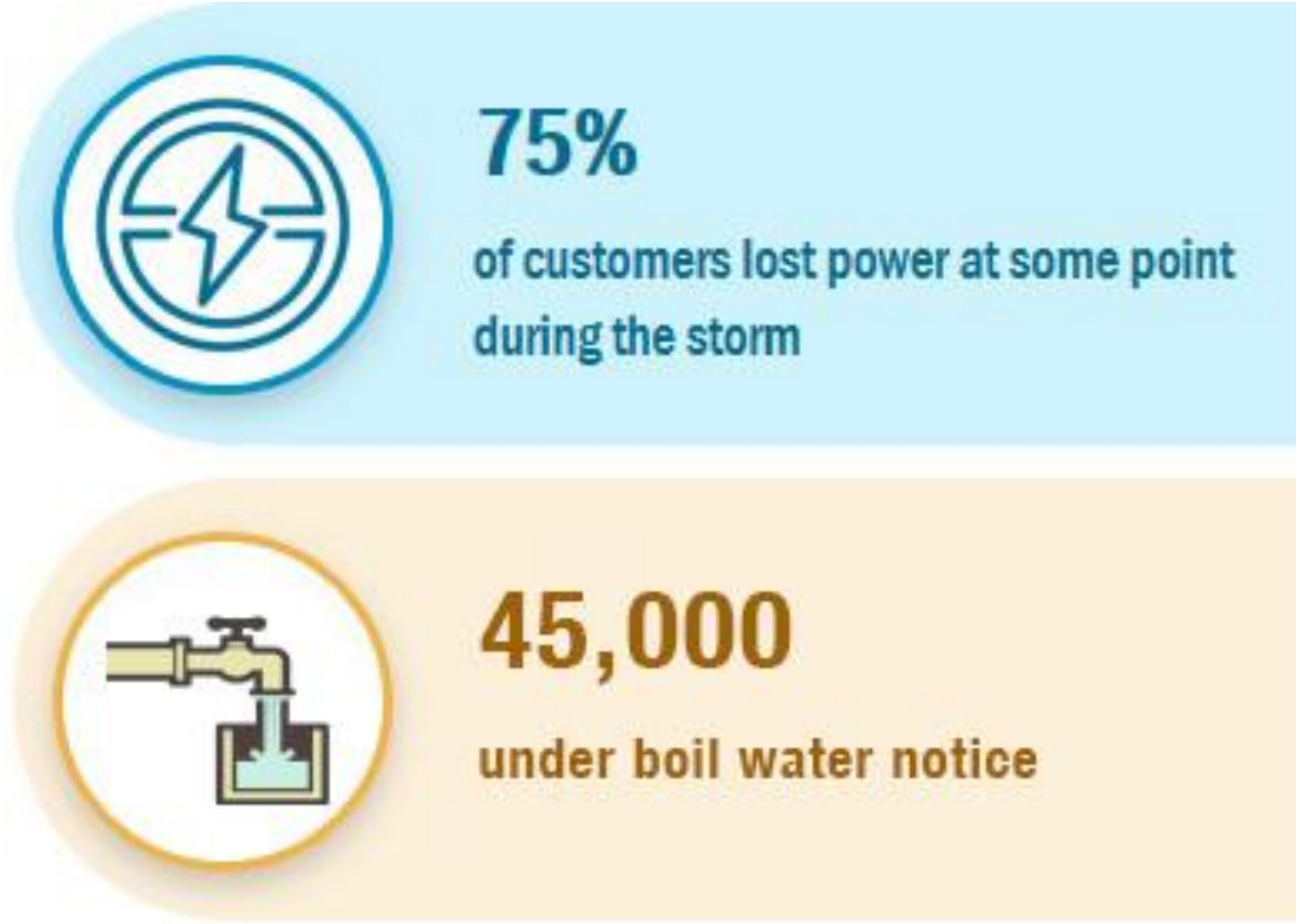
What are feeders?

Feeders take power from substations to areas that serve about 1,000 customers. Each substation serves multiple feeders.

The Scale of the Storm: Infrastructure Impacts



The Scale of the Storm: SUB Customers and Stakeholders



The Scale of the Storm: SUB Personnel and Stakeholders



SUB's After-Action Process

- **Customer Feedback**
  - In person/online listening session and comment portal
- **Internal After-Action Report**
  - Summary of Staff observations
- **External After-Action Report**
  - Extensive consultant review, including SUB Staff and external stakeholder interviews

Learning from Experience: Immediate Actions

- Launched an interactive boil water map - *February 2024*
- Changed processes around billing - *March 2024*
- Added online reporting functionality - *April 2024*
- Initiated joint-utility Emergency Preparation campaign - *October 2024*
- Trained all staff on FEMA's Incident Command Structure - *October 2024*
- Updated internal alert system for emergencies - *December 2024*

Learning from Experience: Actions In Process

- Information Sharing
  - Lane County (widespread boil water notices)
  - City/County (regarding roles/expectations)
  - Map sharing with the City
  - Customer understanding of SUB's outage reporting system

Learning from Experience: Actions In Process

- Operational Coordination
  - Additional and improved emergency operations annexes
  - Resiliency funding grant
    - National Renewable Labs grant led by Lane County who applied in 2024 –SUB is one of two utilities participating

Learning from Experience: Actions In Process

- Resources and Technology
  - Backup generation for critical facilities (Grant submitted 2022)
  - Procurement of mobile water distribution trailers (Proposed 2025 Budget)
  - Process to research new technologies (Strategic Plan – Information Technology Roadmap)
  - Zero-percent loan pilot program for generators and transfer switches (Planned for December 2024)

Learning from Experience: Next Steps

- Final External After Action report with recommendations received from consultant in November 2024
  - Staff to provide Board with recommended next steps
  - SUB Board to review recommendations and staff recommended next steps
  - Final approved and operationalized plan to be released March 2025


Questions?



Springfield Utility Board

2024 Ice Storm After Action Report

November 2024

HAGERTY

Table of Contents

Executive Summary 1
Introduction 3
Incident Overview 4
Observations and Recommendations 7
Conclusion 18
Appendix A 19

Executive Summary

The January 2024 Ice Storm was unprecedented in both scale and impact on Springfield Utility Board's (SUB) service territory. In recent years, SUB has demonstrated its ability to respond to emergency incidents and support other utilities in their response. However, in 2024 it was SUB who requested help as it rebuilt parts of the electric backbone in punishing conditions, while battling telecommunications and water infrastructure challenges. SUB employees worked tirelessly, working long shifts for days on end both in the office and in the field to restore service to their community. Each employee demonstrated a commitment to their roles in aiding restoration as they navigated a level of damage far beyond what any member had seen before.

SUB is not alone in their efforts to adapt to novel extreme weather. As global conditions change, utilities of all sizes are struggling to prepare for and respond to incidents that surpass their current capabilities. The issue is further complicated since it is not only utilities that face this challenge. This event also tested the capabilities of the City and County emergency response.

Through each interview conducted by Hagerty, the willingness and desire for SUB employees to make improvements so that they can be better positioned when the next event occurs was evident. This report analyzes the elements of SUB's response that were effective as well as the elements that could be improved. It is broken into three categories: Information Sharing, Operational Coordination, and Resources and Technology. Hagerty made eight observations and a total of 16 recommendations spanning the three categories.

1. **Observation 1**: SUB's communications to the public did not meet customers' needs.
2. **Observation 2:** The scale of the boil water notice exceeded SUB's established procedure for water quality notifications.
3. **Observation 3:** Internal coordination and communications were not adequate for the scale of the storm response.
4. **Observation 4:** SUB and the City of Springfield had differing understandings of their roles and responsibilities following an event of this magnitude.
5. **Observation 5:** SUB's restoration prioritization did not appear to be widely understood by partners
6. **Observation 6:** SUB's outage reporting system could not handle the scale of the incident.

7. **Observation 7:** SUB struggled to provide restoration timelines to the public.
8. **Observation 8:** SUB relied on forecasting that did not consider specific impacts to electric utility infrastructure.

We commend SUB's commitment to improving the organization's emergency preparedness and response, as demonstrated by engaging in both an internal and external AAR process. We look forward to SUB's continued development of its emergency preparedness program.

Introduction

Purpose

Following the Ice Storm, SUB conducted an internal after-action report (AAR), during which time they solicited feedback from employees and customers and aggregated the findings into key themes, strengths, and weaknesses. Due to the unprecedented nature of the incident, SUB elected to hire an independent vendor to conduct an external AAR to validate their findings and identify any additional gaps.

SUB enlisted Hagerty Consulting (Hagerty) to provide an outside perspective on their response to the 2024 Ice Storm.[1] This AAR captures key lessons learned from the event and identifies actionable recommendations to ensure SUB is best postured for future events.

Methodology

Hagerty's AAR process consisted of reviewing emergency preparedness and event-specific documents and facilitating a series of stakeholder interviews.

The document review provided a foundational understanding of the activities that occurred in response to the event and how those activities compare to the expected actions outlined in SUB's emergency plans (i.e., what occurred versus what SUB expected to occur).

Individual and group interviews allowed Hagerty to obtain additional or clarifying information. The Hagerty team pursued a bottom-up approach to scheduling stakeholder engagements with SUB, starting with operational personnel, such as field crews. These initial interviews informed Hagerty's questions to management and executive SUB personnel. Hagerty also conducted interviews with external partners involved in SUB's emergency response, including personnel from the City of Springfield and Lane County. For a list of documents reviewed and individuals interviewed, please see Appendix A (Appendix A, p.19).

[1] Hagerty Consulting is an emergency management consulting firm with experience working with government, commercial, and utility clients to help them prepare for and respond to disasters.

Incident Overview

Event Summary

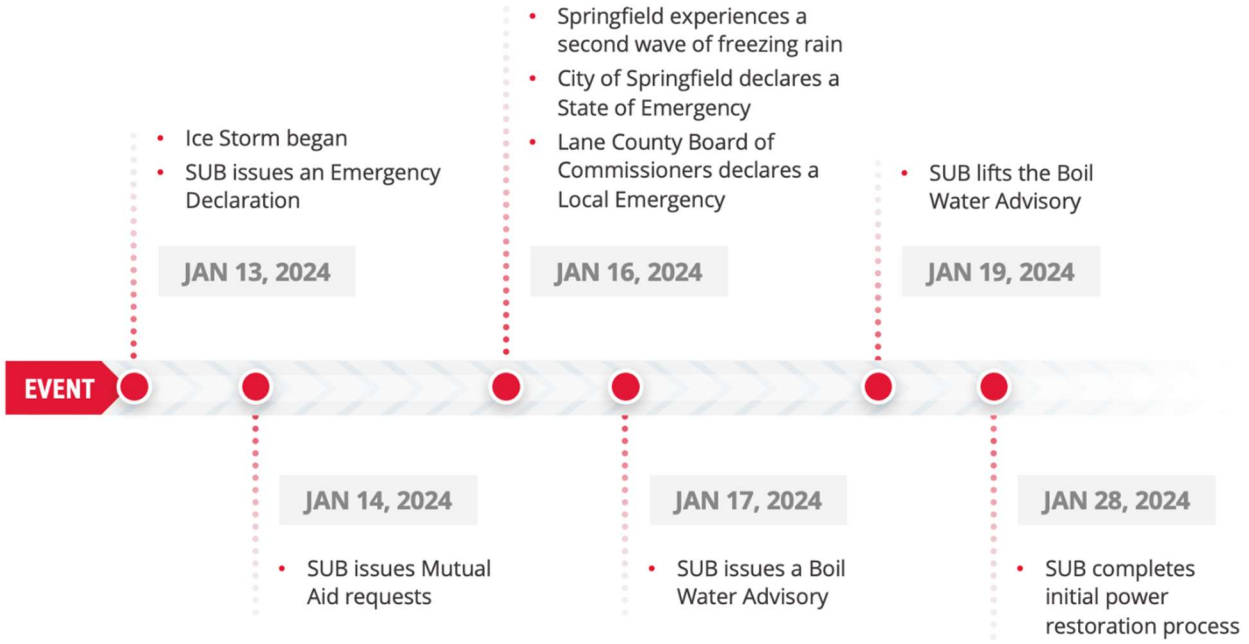
The 2024 Ice Storm was one of the most severe and damaging winter storms to hit Springfield, Oregon. Weather forecasts anticipated freezing rain in Lane County, but the forecasts were unable to accurately predict the areas that would be most impacted. The Eugene-Springfield area experienced more precipitation than other parts of the Willamette Valley, which combined with the low temperatures to create heavy icing on roads, trees, and power infrastructure.

The initial freezing rain created dangerous road conditions and led to some outages in SUB's service area. Once the weather subsided, SUB began the power restoration process only to have most of their work undone by a second wave of freezing rain. These subsequent weather events, further compounded by cold load pick up, caused extensive damage to SUB's assets.

This damage resulted in unprecedented restoration times, lasting for 11 days following the five-day storm.



Event Timeline



- **Friday, January 12, 2024:** SUB was tracking storm predictions slated to impact their service area. SUB worked with the City of Springfield and Lane County as they prepared for the storm ahead. **Due to the uncertainties in the weather forecast**, **the SUB Executive Management Team (EMT) did not fully activate their storm response pre-emptively.**
- **Saturday, January 13, 2024: The ice storm began**. By 13:15 SUB had received reports of initial power outages and activated field crews to respond. At 18:30, SUB reported that they had resolved some outages but that new outages were also being reported. By 20:30, **SUB issued an emergency declaration** and reported that crews would rest overnight before continuing restoration in the morning.
- **Sunday, January 14, 2024: SUB issued mutual aid requests** to neighboring utility companies to support the response. At this point, SUB estimated that 6,000 customers were without power. SUB warned that customers could face an extended period without power. By 12:00, warming weather caused new damage to infrastructure as melting ice stressed trees. At 15:45, SUB shared their restoration priorities with the public.
- **Monday, January 15, 2024: SUB issued a request for replacement distribution poles**. SUB estimated 11,000 customers were without power. SUB shared on their website that their team were making progress with the restoration, but that more weather was

forecast to slow restoration and cause new damage to the already weakened infrastructure.

- **Tuesday, January 16, 2024: Springfield experienced a second wave of freezing rain**. SUB reiterated via their daily update page that customers may face extended time without power. Despite continuing restoration efforts, more poles fell, and SUB updated their estimate to 25,000 customers losing or going to lose power due to the storm. **The City of Springfield declares a state of emergency and the Lane County Board of Commissioners declares a local emergency**.
- **Wednesday, January 17, 2024: SUB issued a boil water advisory**. **Lane County activated their Emergency Operations Center (EOC). SUB released its first estimated restoration time.** Mutual aid crews arrived. The freezing rain the day before set the restoration process back significantly due to the freezing and warming of trees. SUB said that over 40 poles were down. SUB stated that customers without power should prepare for a week-long outage.
- **Thursday, January 18, 2024:** SUB reported that their meter readers were conducting wellness checks and delivering water to customers.
- **Friday, January 19, 2024: SUB lifted the boil water advisory**. SUB announced that a map of the current power outages was available on the SUB website.
- **Tuesday, January 23, 2024:** Repairs continued. SUB expected to restore power to most customers by the weekend (January 27-28).
- **Thursday, January 24, 2024:** The City of Springfield EOC split off from County EOC, which was deactivated.
- **Sunday, January 28, 2024:** SUB announced that the **initial power restoration process was complete**.

Observations and Recommendations

The observations and recommendations Hagerty identified fall into three categories: Information Sharing, Operational Coordination, and Resources and Technology. Each category includes a series of observations, each of which provides a narrative summary and associated recommendations. This report is not structured in order of priority, though some recommendations have been grouped thematically.

Information Sharing

Observation 1: **SUB's communications to the public did not meet customers' needs.**

External communications were overly reliant on social media and internet access. SUB used Facebook and the SUB website as the primary modes of communication, which were not accessible to all customers due to the power outage. This limited SUB customers' ability to receive updates on response and restoration progress, and in turn made it difficult for customers to make decisions in response to the storm, e.g., remaining in their primary residence or departing.

Other modes of emergency communication to SUB customers were not sufficiently tested and were therefore unable to be used during the event. Prior to the Ice Storm, SUB had been developing a text message system to be used for employees in emergency situations. However, this system was not ready to be deployed to communicate with customers at the time of the Ice Storm. SUB has since begun developing this capability for wide-spread notifications.

In addition to the modes of communication, SUB's emergency plans did not provide clear guidance on the process of developing, approving, and distributing public messages or an ideal cadence. These challenges relating to external communications led to delays and frustration from personnel involved in the response, and from customers who wanted more frequent updates.

- **Recommendation 1.1:** SUB should develop the capability to notify their customers of outages and estimated restoration times through text. SUB should prepare templated language for emergency text messages in English and Spanish, reducing the time between impacts and public messaging. This system should also include messaging

relating to boil water notices. *See Observation 2.* SUB should also test their emergency text message system internally with their employees bi-annually.

- **Recommendation 1.2:** SUB should build internal capacity to proactively engage in diverse means of communication by incorporating strategies into their Emergency Communications Plan and practice using those methods. SUB employed many methods of communication during this event including television, radio, social media, and website updates, however there could be efficiencies made in the rate at which these strategies were employed.
- **Recommendation 1.3:** SUB should identify two staff from the EMT, in addition to the Public Information Officer (PIO), to be responsible for serving as the public face of SUB. Public facing communication should be limited to these three representatives and they should receive media training once every two years. Having multiple individuals trained for public communication allows SUB to have a selection of employees to draw on and decide who is appropriate for each scenario.

Observation 2: The scale of the boil water notice exceeded SUB's established procedure for water quality notifications.

Four days into the storm, the power outage impacted SUB's source water facility, prompting SUB to issue a boil water notice to an area larger than it had ever had to provide such a notice. SUB's typical boil water notice procedure was effective for small areas that could be notified with physical notes placed on customers' homes. However, issuing a boil water notice at such a large scale during a large outage and in the face of treacherous road conditions exceeded SUB's capabilities.

The process for issuing the boil water notice at this scale caused confusion amongst SUB's customers, and did not reach customers without internet. While SUB did publish a map of the impacted area, the map did not provide sufficient detail to identify precisely who was impacted, making it difficult for impacted customers to determine whether they were in the impacted area. SUB has since implemented a system that can provide more accurate information to SUB's customers.

Many customers called SUB's customer service center seeking clarification. However, at the early stages of the notice SUB's call center staff were not aware of the boil water notice. While they had been notified through email, this was not regularly monitored by call center staff, leaving them unable to comment on the notice, compounding customers' frustrations.

- **Recommendation 2.1:** SUB should engage Lane County Public Health to understand how it can support SUB in issuing boil water notices in the future. SUB may benefit from the County's experience communicating public health and water quality issues to the public. For such a relationship to be effective, SUB will need to leverage its new boil water notice system to provide more granular information to Lane County.

Operational Coordination

Observation 3: Internal coordination and communications were not adequate for the scale of the storm response.

The internal coordination referred to in this observation is specific to communication outside of the impacted business unit. The operational communication between the Incident Commander and electric operation staff was continuous and robust throughout the response.

Internal coordination within and between SUB's leadership and divisions during the response did not always occur at a regular or preplanned cadence involving the entire leadership team, impeding the collective situational awareness of SUB's leadership team and operational personnel.

For example, interviewees noted that while EMT calls did occur daily, the EMT's relationship to the Incident Command structure was not clearly articulated in emergency plans. SUB's emergency plans also did not articulate the distinction between the roles and responsibilities of the EMT during normal operations, the EMT during an emergency, and Incident Command structures during an emergency event.

While this issue was inter-divisional, coordination challenges also existed within divisions. Operational personnel within the Water Service Center (WSC) explained that they did not receive regular updates on the status of SUB's response, limiting the WSC's situational awareness.

Beyond EMT, Electric Service Center (ESC), and WSC structures, SUB also faced other challenges relating to internal communications. Of note, the process in place for the internal review and dissemination of public communications required multiple layers of approval before they were published. This resulted in delayed messaging to both SUB personnel and their customers.

The communications challenges identified in this report reflect the need for strengthened planning, training, and exercise efforts for communication that integrate the operational communication with the supporting business units. This will ensure leadership in supporting business units and government partners have a clearer understanding of their roles and responsibilities during a response.

SUB had not recently trained or exercised their emergency response plans in an integrated manner. SUB has two emergency response structures, one for ESC and one for WSC. While the ESC stood up its Incident Command, the WSC did not stand up its Incident Command during the response. An incident of this scale would typically require an organization-wide response. While SUB personnel responded to the best of their abilities, improved planning, training, and exercise activities would have enhanced SUB's response.

Further, the Electric Service Emergency Procedures for Large Outages Plan and SUB Emergency Operations Plan (EOP) provide conflicting information on which individual is responsible for internal communication, and neither plan identifies the details and expectations of that responsibility. As a result, internal communications were lacking during the response and situational awareness varied across different groups within SUB.

- **Recommendation 3.1:** While detailed job descriptions for EMT roles exist in the EOP, there is an opportunity to develop more robust emergency response job aids for the EMT and for every staff member staffing Incident Command. Each EMT and Incident Command member should have access to a job aid that provides a checklist for priority activities following an incident. These documents will help ensure SUB's response is repeatable, and that staff can be trained and exercised in preparation for a real-world event.
- **Recommendation 3.2:** EMT and Incident Command staff should conduct a joint tabletop exercise annually that focuses on extended outages. This exercise cadence will help SUB identify planning and training needs at all levels of the organization.
- **Recommendation 3.3:** SUB should identify an individual responsible for leading internal communications during an emergency, and more clearly articulate that individual's roles and responsibility.
- **Recommendation 3.4:** The ESC and WSC should train on and exercise the SUB EOP, WSC Emergency Response Plan, and ESC Emergency Procedures for Large Scale Outages on an annual basis. While annual training and review of these plans occurs every Fall, there is an opportunity to expand these trainings to the entire organization. SUB may also consider developing a Multi-Year Training and Exercise Plan (MYTEP) that outlines a long-term training and exercise strategy and associated goals. This should include exercising the Incident Commands of both ESC and WSC together.

- **Recommendation 3.5:** While SUB does have a list of annexes that cover a range of issues, SUB should add the following annexes to its EOP. While some of these issues are covered in existing material, SUB's personnel and its partners could benefit from more detail.
  - **Boil Water Annex:** SUB should develop Boil Water Notice annex to its Emergency Operations Plan. The annex should be developed in partnership with City and County government partners, including departments of public health and public works. Such an approach will encourage information sharing at crucial junctures during incident response.
  - **Call Center Annex:** SUB should document in greater detail its internal Call Center capability into the EOP to describe how it will support operations and information sharing during incidents, how it will ensure gaps and unmet needs are being triaged and directed to external partners, and training to ensure staff can effectively augment call center capacity.
  - **External Communications Annex:** An external communications annex should be developed in partnership with key stakeholders and include reference to how SUB communicates with SUB customers and government agencies (including but not limited to emergency operations centers, public safety, and public health) during an emergency, to include the specifics of a liaison function and a joint information system. A process for documenting and vetting all external messages should be included, in addition to a detailed job aid and associated checklist that clarifies the roles, responsibilities, and expectations for the PIO.
  - **Operational Coordination Annex:** The annex should include templated meeting agendas and cadences for leadership and all-staff calls, the information needs of the EMT, and a process for providing operational updates to all staff. Roles and responsibilities for leaders on each call should also be established.

    At a minimum, this should include:
    - Morning and evening Operations Briefing (Incident Command, led by the Incident Commander)
    - Morning and evening EMT-Incident Commander Briefing (Incident Commander briefing EMT)
    - Morning All Staff Briefing (email)
    - Ad hoc All Staff updates (email), e.g., boil water notifications

- **Resource Mobilization Annex:** Per recommendation 3.6, SUB should include a plan for how it will access non-operational resources (e.g., food and water, heating centers, personnel lodging, PIOs, community volunteers) during an incident using local, regional, and state government and utility resource networks.
- **Other Annexes to consider:** Information Technology, Cyber, Business Continuity Plan

- **Recommendation 3.6:** SUB should engage Lane County Emergency Management to explore opportunities to request additional PIO and communications specialist support through regional and statewide networks. Additional personnel will increase SUB's capacity to communicate with their broad collection of stakeholders and improve collaboration with broader information systems that might be activated by government partners during regional and statewide events. This can also be achieved by establishing contracts for PIO assistance under blue sky conditions.

Observation 4: SUB and the City of Springfield had differing understandings of their roles and responsibilities following an event of this magnitude.

While this report focuses on SUB's opportunities for improvement, utilities are only a piece of the response to a weather event, and understanding SUB's operational relationship with government partners is critical in identifying areas for improvement.

Interviews with both SUB and the City showed a mutual misunderstanding regarding who was responsible for elements of response and restoration. For instance, citizens' unmet needs – or humanitarian elements of incident response – are typically the responsibility of government entities, whereas restoring power is typically the responsibility of the utility. This is reflected in SUB's EOP. Hagerty's interviews with both SUB and the City indicated that each party assumed the other would be responsible for meeting citizens' unmet needs.

For example, early in the response, SUB identified a need for wellness checks for community members in Springfield and asked that the City activate the Community Emergency Response Team (CERT). The City denied this request due to the hazardous weather conditions, reports of threats against SUB employees, and the scale of the task, and instead expected SUB to fulfil this role. SUB was also not equipped to meet this need.

Emergency response responsibilities between cities and utilities are often determined through mutual planning efforts. Such efforts would determine activation thresholds

defining the severity of the incident and associated response actions by each entity. Neither were apparent in Springfield. The June 2023 Eugene-Springfield Multi-Jurisdictional Emergency Operations Plan does not provide detail on government-utility ways of working during an incident. There is no Incident Annex relating to extended power outages and the Incident Annex relating to winter storms offers limited detail. The document does note that Emergency Managers in Springfield are responsible for managing training and exercises in the City. The Hagerty team could not identify recent examples of SUB being invited to participate in City-led emergency management training or exercise initiatives.

A more proactive emergency management partnership between the City and SUB would undoubtedly have been helpful, and responsibility for the extended outage does not fall on the City. However, following the Ice Storm the City EOC almost immediately integrated into the County's EOC structure. This hindered SUB's ability to leverage its City relationships, which was further complicated by the County appointing an acting emergency manager in the absence of a full-time emergency management professional.

The nature of the SUB-City of Springfield response is indicative of a lack of joint planning for an event of this magnitude, with each entity making assumptions about the other's responsibilities during an emergency, impeding the response. For example, SUB's call center fielded calls relating to system outages and restoration, but also to citizens' welfare and unmet needs, overloading SUB's telephone lines. SUB also allocated staff to conduct welfare checks, as opposed to focusing on their primary objective of restoring power. There is an opportunity for both parties to strengthen their emergency management partnership and readiness.

- **Recommendation 4.1:** SUB and the City of Springfield, in partnership with Lane County as appropriate, should establish regular planning, training, and exercise activities. This could include a facilitated Ice Storm debrief between the Mayor, the City Emergency Manager, and SUB's EMT.

  Establishing a deeper blue sky emergency management relationship – through planning, training, and exercise activities – would allow each entity to validate who is responsible for what during a response and codify it in their respective plans. Agreeing who is meeting the public's unmet needs, such as welfare checks, heating centers, and water delivery, should be a priority for this process. It is common practice for the City or County to meet these humanitarian needs during a natural disaster.

Observation 5: SUB's restoration prioritization did not appear to be widely understood by partners, staff, and customers.

SUB has an established order of restoration that they followed in January 2024. However, SUB was not successful in communicating restoration prioritization to external partners. Ensuring SUB's restoration prioritization is defensible, repeatable, and widely understood will minimize uncertainty from the public and from government partners and minimize the opportunity for the ad hoc restoration of circuits.

Customer uncertainty around restoration timelines and prioritization dominated the narrative relating to SUB's response, reducing the opportunity for positive stories relating to the hard work of the SUB team. A closer partnership between the City and SUB would ensure SUB better manages the expectations of its customers and City partners.

- **Recommendation 5.1:** SUB should hold restoration prioritization workshops with their internal staff as well as the City of Springfield, during which time SUB would share its restoration prioritization criteria and protocols and elicit feedback from City partners, e.g., identifying additional critical loads. While SUB does provide information surrounding prioritization in customer bills prior to storm season, this workshop would also provide an opportunity for SUB to explain how circuits are restored, and what exigencies might impact circuit restoration (such as those experienced during the Ice Storm).

Resources and Technology

Observation 6: SUB's outage reporting system could not handle the scale of the incident.

The call-based reporting system led to redundant work orders, limited internal visibility on restoration progress, and confusing messaging for customers surrounding power outages.

SUB's call center system exceeded its capacity, preventing outgoing calls. In addition, SUB did not have an alternative method of receiving outage information such as online reporting.

- **Recommendation 6.1:** Per earlier observations and recommendation 3.5, SUB should develop more detailed plans relating to call center protocols during an emergency such as an annex to be used by customer service. More detailed planning may minimize the load on SUB's existing network, e.g., by ensuring calls for welfare checks can be redirected.
- **Recommendation 6.2:** While SUB is a utility that is built around a call-based system, it could be useful to explore systems that integrate an online outage submission option. This would both allow for increased input from customers and provide the ability to filter for emergency issues such as downed powerlines. SUB could also explore systems with more robust features such as automatically identifying adjacent outages to predict if the issue is a single house, a lateral, or a feeder.

Observation 7: SUB struggled to provide restoration timelines to the public.

SUB did not provide estimated timelines for restoration to its customers. The lack of visibility of their system status prevented SUB from giving customers an idea of when to expect their power to be restored. Additionally, the level of damage exceeded SUB's traditional estimation methods.

- **Recommendation 7.1:** Per earlier observations and recommendation 3.6, SUB should include a protocol for regular communications to impacted customers. While SUB may not be able to provide accurate estimated timelines for restoration, it is critical for SUB to provide general estimates on a targeted timeline to allow customers the ability to make other arrangements if necessary.

Observation 8: SUB relied on forecasting data that was later identified as insufficient.

Prior to the storm, SUB leadership participated in meetings with a representative from the Portland office of the National Weather Service. This information was used to determine the severity of impact and determine what resources to activate. It was later identified that there are radar gaps in the Springfield Area and more detailed weather analysis could have assisted leadership in decision making.

Recommendation 8.1: SUB should explore free or subscription-based meteorology services to ensure it has a clearer understanding of how inbound weather will impact SUB's infrastructure. SUB could also explore partnering with the City of Springfield or Lane County to access more advanced meteorology services, or alternatively explore partnering with neighboring investor-owned utilities.

Conclusion

Despite unprecedented damage to their infrastructure, the SUB team showed their dedication to Springfield through their tireless efforts to restore service to its customers. Team members repeatedly went above and beyond to support their colleagues, often taking on roles that were outside of their day job and working extremely long hours.

The challenges SUB faced in this incident are not uncommon to utilities, irrespective of their size, and many of the findings were familiar to the Hagerty team.

Hagerty has offered recommendations to support SUB as it strengthens its emergency preparedness program. The following two recommendations are those that Hagerty recommends SUB prioritizes to ensure SUB is best placed to respond to a future incident. These priorities acknowledge SUB is operating in a resource constrained environment, and that the success of SUB's response is contingent on robust partnership working with its government partners.

- **Recommendation 3.4:** The ESC and WSC should train on and exercise the SUB Emergency Operations Plan, WSC Emergency Response Plan, and ESC Emergency Procedures for Large Scale Outages on an annual basis. While annual training and review of these plans occurs every Fall, there is an opportunity to expand these trainings to the entire organization. SUB may also consider developing a Multi-Year Training and Exercise Plan (MYTEP) that outlines a long-term training and exercise strategy and associated goals. This should include exercising the Incident Commands of both ESC and WSC together.
- **Recommendation 4.1:** SUB and the City of Springfield, in partnership with Lane County as appropriate, should establish regular planning, training, and exercise activities.

Appendix A

List of Documents Reviewed

Plans, Polices, and Procedures

1. SUB Emergency Operations Plan 2023
2. Water Service Center Emergency Response Plan
3. Eugene-Springfield Area Multi-Jurisdictional Natural Hazards Mitigation Plan
4. Electric Service Emergency Procedures for Large Outages
5. Electric Large Outages Roles
6. Communications Liaison Role Plan
7. SUB Event Reporting Operating Plan
8. SUB Organizational Chart
9. Springfield City Code Chapter XI, Sections 36-46
10. Information and Technology Emergency Response and Data Restoration Plan
11. March Annual Event Reporting operating plan 2024

Ice Storm Documents

1. SUB Internal AAR
2. AAR Strengths and Weaknesses Feedback
3. January 2024 Ice Storm Weather Event Summary
4. Ice Storm Customer Email Comments
5. Ice Storm AAR Internal Survey Questions
6. Ice Storm AAR Internal Survey Responses
7. SUB EOC Situation Reports (12)
8. Sanjeev's Daily Update Emails

List of Interviews

1. Electrical Operations and Fleet (group interview)
2. Water Operations (group interview)
3. Customer Service and IT Representatives
4. David Embleton
5. Meredith Clark
6. Jeff Nelson
7. Sanjeev King
8. Greg Miller
9. Tracy Sutten
10. Eric Smith
11. Nicole Dalke
12. Cynthia Scoble
13. Nick Amann
14. Brandon Harper
15. City Emergency Management/First Responders
16. County Emergency Management
17. Board Member Teri Dillon
18. Board Member Ryan Thomas
19. Board Member John DeWenter
20. Board David Willis

Springfield Utility Board January 2024 Ice Storm After Action Report and Improvement Plan



Springfield Utility Board



March 2024

This After-Action Report (AAR) and Improvement Plan is focused solely on the activities of Springfield Utility Board (SUB) for the January 13 – January 28, 2024 January Ice Storm event. Strengths to maintain and areas needing improvement were gathered from SUB staff, SUB Board members, and Team Springfield and community partners who worked this event.

Table of Contents

Background and Purpose 1
Executive Summary 1
Incident Overview 3
Analysis of Core Services 5
- Core Service: Public Information 5
  - Strengths 5
  - Weaknesses 5
- Core Service: Electric 5
  - Strengths 5
  - Weaknesses 6
- Core Service: Water 6
  - Strengths 6
  - Weaknesses 6
- Core Service: Telecommunications 7
  - Strengths 7
  - Weaknesses 7
- Core Services: Customer Service 7
  - Strengths 7
  - Weaknesses 7

Common Themes 8
- Theme: Commitment and Character 8
  - Strengths 8
  - Weaknesses 8
- Theme: Organizational Structure 8
  - Strengths 8
  - Weaknesses 8
- Theme: Public Information 9
  - Strengths 9
  - Weaknesses 9
- Theme: Internal Communication 9

Strengths 9
Weaknesses 9
- Theme: Leadership 10
Strengths 10
Weaknesses 10
- Theme: Capabilities & Resource Availability and Visibility 10
Strengths 11
Weaknesses 11
- Theme: Training & Knowledge 11
Strengths 11
Weaknesses 11
- Theme: Technology 12
Strengths 12
Weaknesses 12
- Theme: Agency Relationships 12
Strengths 12
Weaknesses 12
Appendix A: Figures A-1
Feedback by Core Service Area A-1
Feedback by Functional Area A-1
Strengths and Weaknesses by Functional Area A-2
Feedback by Common Theme A-2
Strengths and Weaknesses by Theme A-3
DRAFT Appendix B: SUB Staff Solutions B-1
DRAFT Appendix C: Improvement Plan C-1

Background and Purpose

The purpose of this Springfield Utility Board (SUB) After Action Report (AAR) and Improvement Plan is to provide a comprehensive overview of SUB's emergency response and recovery activities following the *January 2024 Ice Storm* event that occurred from January 13 to January 28, 2024. This report aims to highlight the strengths exhibited during the response, identify areas for improvement, and propose actionable solutions to enhance SUB's response capabilities in future events.

To achieve this objective, SUB assembled a five-person *After Action Report* team who:

- Determined a list of SUB Core Services and functional areas to be assessed.
- Solicited feedback from employees and community partners through online survey and in-person.
- Conducted in-person brainstorming sessions with SUB staff.
- Consolidated and aggregated feedback into common themes.

This AAR is still in progress. The next step is to re-engage with SUB staff for suggested solutions and corrective actions by common themes. The final version will include appendices listing those suggestions, as well as a listing of those changes implemented.

Executive Summary

Overall Successes:

- SUB employees showed an incredible level of commitment and character throughout the entire event, as seen internally and by the community.
- Designated staff stepped into pre-determined roles and coordinated efforts within their divisions productively.
- SUB improved its processes for responding to a large outage by implementing previous lessons learned.
- SUB did an outstanding job of providing sustenance for their teams in emergency response which helps everyone do their job more effectively.

Areas for Improvement:

- SUB *must* do a better job at communicating information to the public.
- SUB needs a more detailed and implemented overall Emergency Response organizational structure in place.
- Internal communication was lacking within and between departments and divisions.

- SUB needs to bring their technological resources up to date.
- Both community and staff perception was that there was bias on how restoration was prioritized.

Bottom Line:

- The high level of effort and resources spent during the event was mirrored by the engaged participation of SUB employees with this internal After Action Report. There is anticipation by those employees surrounding the upcoming focus on finding and implementing solutions to make our response better for future events.

Incident Overview

This overview provides a summary of the *January 2024 Ice Storm* event.

- Number of Damaged Poles - 80+
- Number of Days of Ice Storm – January 13 through 17, 2024 (5)
- Number of Days Restoring Power (16)
    - (22) Which is 1/17 through 2/7 when we were able to energize the cell tower in the Thurston Hills Natural Area. Individual services with customer work is still going on.
- Number of Feeders Out
    - 22 Unique Feeders out of 38 locked out
    - 2 transmission lines out of service, both SUB owned however only one with load
    - 1 BPA transmission feed out of service with load
- Total Number of Homes and Businesses that Lost Power During Storm
    - Considering the feeders that locked out and the transmission lines that opened up, at least 23,000 meters out of service at some point during this event.
- Number of Miles of Wire That Needed Repair or Replacement (so far)
    - ~1.7 miles of service/secondary wire
    - ~7.7 miles of primary wire
    - 400+ splices
    - 1 mile of guy wire
    - 157 cross arms
    - ~3 miles of fiber optic cable
- Number of Transformers That Needed Repair or Replacement
    - 42 new transformers in the field so far
- Number of Temporary Electrician Permits
    - 150+ Supervising Electrician Form
    - ~200 electrical permits for mast/meter base repairs
- Number of Outside Line Crews and Contract Crews Who Helped
    - Forest Grove – 2 crews (12 people)
    - Ashland – 1 crew (5 people)
    - McMinnville – 1 crew (6 people)
    - Riverline contractor – 6 crews (40 people)
    - West State Flagging – 3 crews (6 people)
    - Mid State Vactoring – 1 crew (2 people)

- Number of Critical Services Restored by Crews
    - McKenzie Willamette Hospital (several medical offices area surrounding hospital)
    - SUB and Rainbow Water wellfields and pump stations (Willamette Heights, Willamette Wellfield, Thurston Wellfield, 35th and Olympic, SP/Maia, Weyco, EXT, Chase)
    - Traffic signals on main corridors
    - Urgent Care on 58th and Main Street
    - Regional fuel station providing fuel to emergency service crews

- Meals – Saturday January 13th – Monday January 29th
    - 47 meals
    - 4,345 individual servings

- Hotel rooms – Monday January 15th – Sunday January 28th
    - 1/15 – 13 rooms
    - 1/16 – 16 rooms
    - 1/18 – 32 rooms
    - 1/24 – 28 rooms
    - 1/28 – cancelled all rooms
    - Total = 377 stays

- Fuel – Saturday January 13th – Monday January 29th
    - 1,368 gallons of unleaded
    - 2,982 gallons of diesel
    - Total = $11,448.81

Analysis of Core Services

Feedback was requested related to the key functional areas of safety, leadership, communications, resources, and training within SUB's Core Services of Public Information, Electric, Water, Telecommunications, and Customer Service. Below is a summary of the common strengths and weaknesses of those Core Services SUB experienced during the *January 2024 Ice Storm* event.

➢ Core Service: Public Information

Strengths

- Multiple avenues were utilized for getting information to the public.
- Public feedback was heard and SUB responded by providing increased information output as the outage progressed.
- SUB employees showed commitment and character when interacting with the public, even when there was limited information to share.

Weaknesses

- At times there was information shared with the public without adequate internal awareness.
- Some known channels of public communications such as IVR, text messaging notification, and other external agencies were not used.
- The structure to manage, disseminate, and receive information on a real time basis was lacking.
- Information wasn't frequent enough or provided quickly enough.
- Staffing for communication duties was not adequate for this level of event.
- Compared to our peer utilities within our county and local areas, SUB postings did not provide equal levels of communication in frequency, format, or detail.

➢ Core Service: Electric

Strengths

- None of our teams or partners reported sustained injuries as reported in this survey.
- Middle management did a great job coordinating and prioritizing Electric Service Center's efforts.
- Commitment and response of the electric team was exceptional.
- Resources were located and utilized as quickly as possible.
- Internal communication within Electric Service Center (ESC) was exceptional.
- There was cross-utilization of support staff from various departments in the utility.

- Resources were mutually shared with our neighboring utilities to both advance our electric efforts and support other utility company's needs when possible.

Weaknesses

- There was a lack of visibility of the electrical system at all times. There may be gaps both in technology and personnel trained to oversee and update real time.
- The triage process created several duplicate trips to the same location.
- Restoration efforts were not communicated with Main Office personnel effectively or timely during the first half of the event.
- The internal communication between ESC and Customer Service Representatives (CSRs) was inefficient in regard to processes, such as:
  - Energization and de-energization for outside electricians,
  - Database entering of multiple calls (this could have been a database issue as well)
  - How to answer customer questions specific to safety and field operations
  - Crew locations, planned outages, etc.
- There was no automated outage management system.
- SUB's antiquated technology used during the event was not comparable to standard practices and technologies used by neighboring utilities of a similar size.
- Capabilities and resources available throughout SUB were not fully known and utilized by ESC.

➢ Core Service: Water

Strengths

- The staff was willing to help anywhere their skills could be used in this event.
- Personnel responded quickly to requests for action and events as they developed.
- There was good coordination providing an external emergency water supply and utilizing outside agencies.

Weaknesses

- Internal communication around the boil water notice was lacking.
- External communication around the boil water notice was not adequate.
- The maps provided in reference to the water service areas were inaccurate and led to inaccurate public information.
- Needed equipment was not available.
- Knowledge about the Incident Command Structure (ICS) and training was inadequate.

- There was a lack of preparation regarding structure, defined roles and responsibilities, procedures, checklists, and training for combined emergency events.

➢ Core Service: Telecommunications

Strengths

- The utility-wide team effort was great in bringing up telecommunications.

Weaknesses

- Other outage issues took priority over telecommunications issues.
- There was no designated team or structure identified before the event.
- The available resources were insufficient and outdated.
- The loss of fiber was not communicated well to internal stakeholders.

➢ Core Services: Customer Service

Strengths

- The Customer Service team exhibited the heartbeat of SUB by being dedicated, committed, helpful, and caring team.
- Around the clock customer service shifts was positive for the community.
- Regular outage training for the database kept the CSRs proficient.
- Every resource available was utilized, including staff helping from other departments.
- The needs for the public were communicated the throughout the utility.
- Management availability to the team and customers was evident.

Weaknesses

- Information regarding status was not timely and oftentimes not accurate.
- Phones were full and there were long waits at various points in time, even for emergency service.
- Outdated technology did not help with updating information.
- Supporting personnel had insufficient training and knowledge for the roles performed.
- There was an inadequate structured emergency plan that outlines roles, schedules, and responsibilities.
- Incident Command Structure training was absent or had not been kept current.

Common Themes

Once feedback was given, the AAR team aggregated it into common themes. The following themes were identified as being substantially present within the feedback results. The following strengths and weaknesses clearly identified throughout the results:

➢ Theme: Commitment and Character

SUB employees demonstrated a willingness to be dedicated to the restoration effort, care for the community and coworkers, and an ability to deal with difficult, upset, and/or dangerous situations efficiently and/or effectively.

Strengths

- SUB staff were dedicated, committed, empathetic, and willing to do whatever was needed to support the restoration efforts in every aspect, sometimes to the disadvantage of their own personal lives.
- SUB employees were kind and respectful, even when they were not receiving the same from customers, local community members, and even community leadership.
- The SUB team takes great pride in their work and, while doing a tremendous job, were fully engaged in examining how they could do better.

Weaknesses

- None

➢ Theme: Organizational Structure

The organizational structure is in place for leadership to make appropriate and timely decisions from a SUB-wide view during an emergency event. Clear roles and responsibilities are identified, the chain of command during the emergency is clear, and key operational locations and plans are identified.

Strengths

- Internal to Electric Service Center, a command center was quickly established to coordinate restoration of the electrical system for this event.
- Leadership identified a need for additional locations to manage operations.

Weaknesses

- Our divisions each function as their own silos and do not bridge the gaps between other divisions to function as a whole. This limits the response to critical SUB wide functions, including internal and public information.
- A lack of a defined SUB level structure to manage resources, disseminate information, and provide guidance hindered responsiveness.

- As staff assume a position within the emergency response structure to support restoration efforts, personnel were not assigned to backfill and assume normal essential duties.

➢ Theme: Public Information

Event-related information presented and available to the community and outside agencies.

Strengths

- Multiple avenues for getting information to the public were utilized.
- Public feedback was heard and resulted in increased and improved information output as the outage progressed.
- With limited information to provide, SUB employees showed commitment and character when interacting with the public.

Weaknesses

- There was information shared with the public without adequate internal awareness.
- Some known channels of public communications such as IVR, text messaging notification, and other external agencies were not used.
- The structure to manage, disseminate, and receive information on a real time basis was lacking.
- Information wasn't frequent enough or provided quickly enough.
- Staffing for communication duties was not adequate for this level of event.
- Compared to our peer utilities within our county and local areas, SUB postings did not provide equal levels of communication in frequency, format, or detail.
- General understanding of SUB electric, water, and telecommunication systems was not sufficient to effectively provide public information.

➢ Theme: Internal Communication

Information to be communicated within and throughout the SUB organization.

Strengths

- There were daily briefings at Electric Service Center regarding operations progress.
- Teams worked hard to make sure their peers and external support staff were made aware of any updates and changes

Weaknesses

- The structure to plan, manage, disseminate, and receive information on a real time basis was lacking.

- The information shared between departments and divisions was limited, sometimes inaccurate, and not always timely.
- Staff frequently received updates from customers rather than internally.
- The structure to plan, manage, disseminate, and receive information on a real time basis was lacking.

➢ Theme: Leadership

The people in leadership roles are clearly communicating guidance, direction, and ethical management over the resources, services and people for whom they are responsible.

Strengths

- Middle management did a great job coordinating outage efforts within their divisions and making sure their teams had the necessary resources.
- Teamwork was displayed among managers and supervisors.
- Leaders were knowledgeable about the work that was performed in their area.
- Leadership responded quickly to changing needs by providing additional personnel, locations, and resources.

Weaknesses

- Emergency response pre-planning did not support a multi-service event.
- Communication from the Executive Management Team to their respective work groups was perceived as lacking.
- The community perception was that the General Manager was not visible nor available enough to the community during the event.
- Both community and staff perception was that there was bias on how restoration was prioritized by leadership.
- Leadership's ability to plan, manage, disseminate, and receive information on a real time basis appeared insufficient.

➢ Theme: Capabilities & Resource Availability and Visibility

SUB is able to visualize and have a full understanding and visibility of current and up-coming resource and capability status, to include, but not limited to:

- Personnel skills and abilities, safety, wellness, and availability
- Resources such as equipment readiness, fuel, supplies, repair inventory, technology, etc.
- Community resources and availability (inter-agency support)
- Mutual Aid resources and availability, as well as the resources they bring with them

Strengths

- Electric Service Center (ESC) staff was innovative and on top of managing resources and supplies to restore electric service
- Meals provided to staff and mutual aid personnel improved crew availability, response time, and efficiency.
- Leadership worked to cross-utilize personnel to support restoration efforts, such as Water Service Center (WSC) supporting ESC efforts, Resource Management supporting Customer Service, and Meter Reading supporting ESC.
- "All hands on deck!" – Every person that supported restoration efforts made themselves available, with a positive attitude, to help wherever needed, showing the character of the employees.
- Pre-established interagency relationships enabled quicker responses.

Weaknesses

- There was a lack of SUB-wide visibility of resource status.
- There was no automated outage management system.
- Capabilities and resources available throughout SUB were not fully known and utilized.
- Lack of back-up generation capability and redundant assets hindered essential functions.
- There was insufficient number of staff to effectively manage an event of this size (Examples: understaffed warehouse, ESC and WSC CSRs, marketing team, Incident Command staff).

➢ Theme: Training & Knowledge

Each person involved had the appropriate knowledge and skills to perform the role and/or responsibilities assigned to them effectively and efficiently.

Strengths

- Staff are skilled and know how to do their jobs well and are able to assist others when SUB scaled up due to the event.
- ESC provides yearly Emergency Response review and training.
- Customer Service does outage database training twice a year.
- SUB employees are eager and committed to learning anything they need to know to support restoration efforts.
- Field crews were quick to respond to the event due to being skilled and knowledgeable.

Weaknesses

- There is a lack of general understanding of SUB electric, water, and telecommunication systems to effectively provide public information

- Incident Command Structure training had not been kept current.
- Leadership failed to recognize some employee skillsets and how to best utilize them across divisions.
- There was insufficient training on the outage database system.
- The Public Information Officer needed more training and knowledge.

➢ Theme: Technology

Technological support, to include machinery, equipment, software, and communications, available was sufficient in helping our leaders and teams do their job in a timely and efficient manner.

Strengths

- Radios and cell phones worked
- A public facing website outage map created on the fly.
- Community notifications utilized the website, Facebook, radio, and news stations.

Weaknesses

- There was no automated outage management system.
- SUB's antiquated technology used during the event was not comparable to standard practices and technologies used by neighboring utilities of a similar size.
- Geographic Information System (GIS) was an overlooked asset.
- There was a lack of a resource and capability management system.

➢ Theme: Agency Relationships

This refers to the relationship between SUB and outside agencies, to include but not limited to, Team Springfield, mutual aid partners, media, etc.

Strengths

- Mutual aid support teams were readily supplied.
- SUB's designated liaison consistently participated in the City of Springfield and Lane County Emergency Operations Center's Cooperator's calls.
- Willamalane Park and Recreation District provided resource and facilities support.
- Inter-agency support between local utility companies helped cover gaps that each had.
- Local communications companies were utilized as resources.

Weaknesses

- Lack of community response with some community partners.
- Inter-agency coordinated efforts were perceived as minimal.

Appendix A: Figures

Feedback by Core Service Area

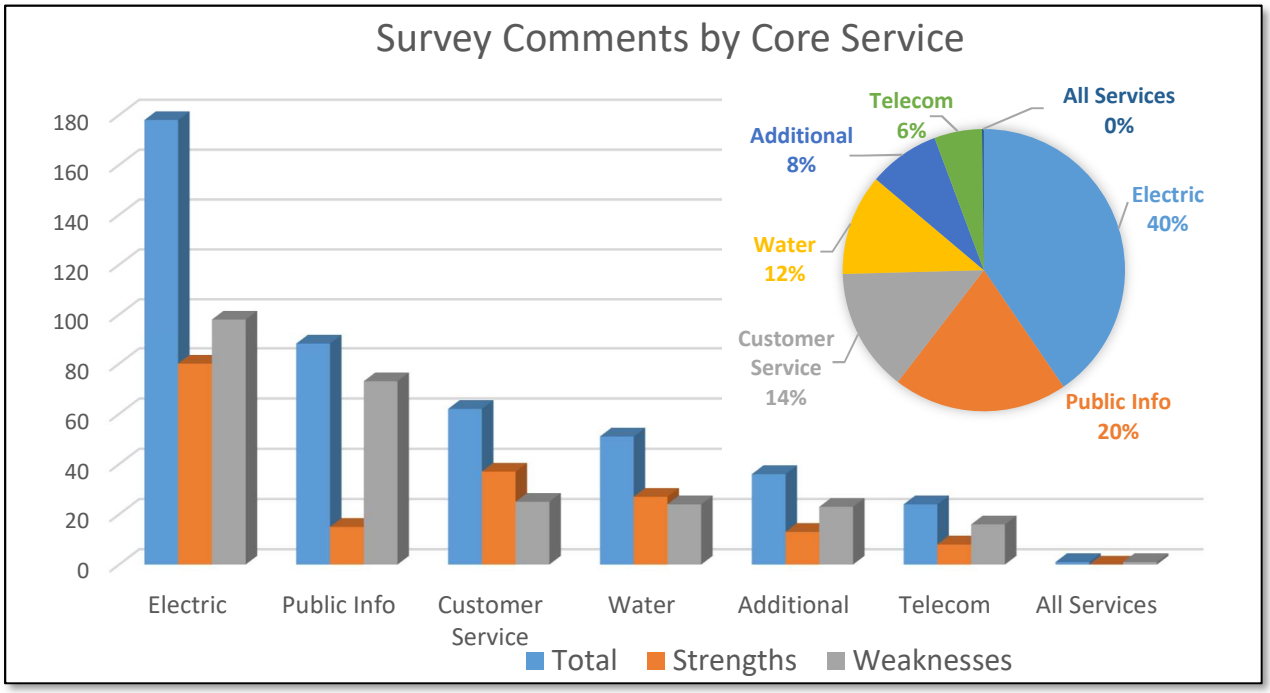


Figure 1. SUB January 2024 Ice Storm Feedback by Core Service Area

Feedback by Functional Area

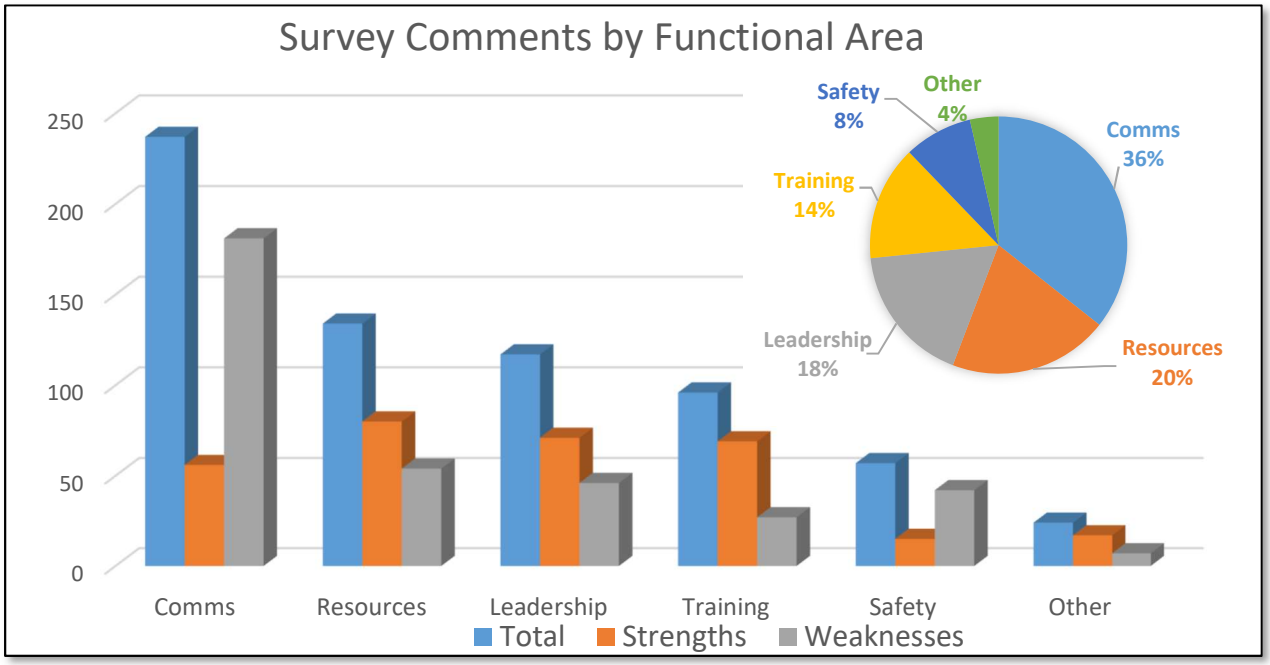


Figure 2. SUB January 2024 Ice Storm Feedback by Functional Area

Strengths and Weaknesses by Functional Area

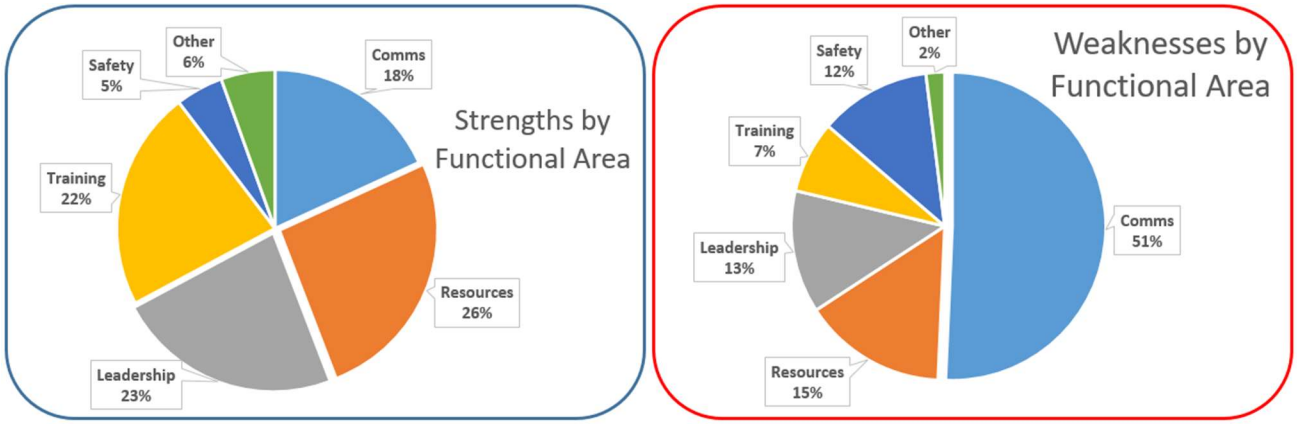


Figure 3. SUB Strengths and Weaknesses by Functional Area

Feedback by Common Theme

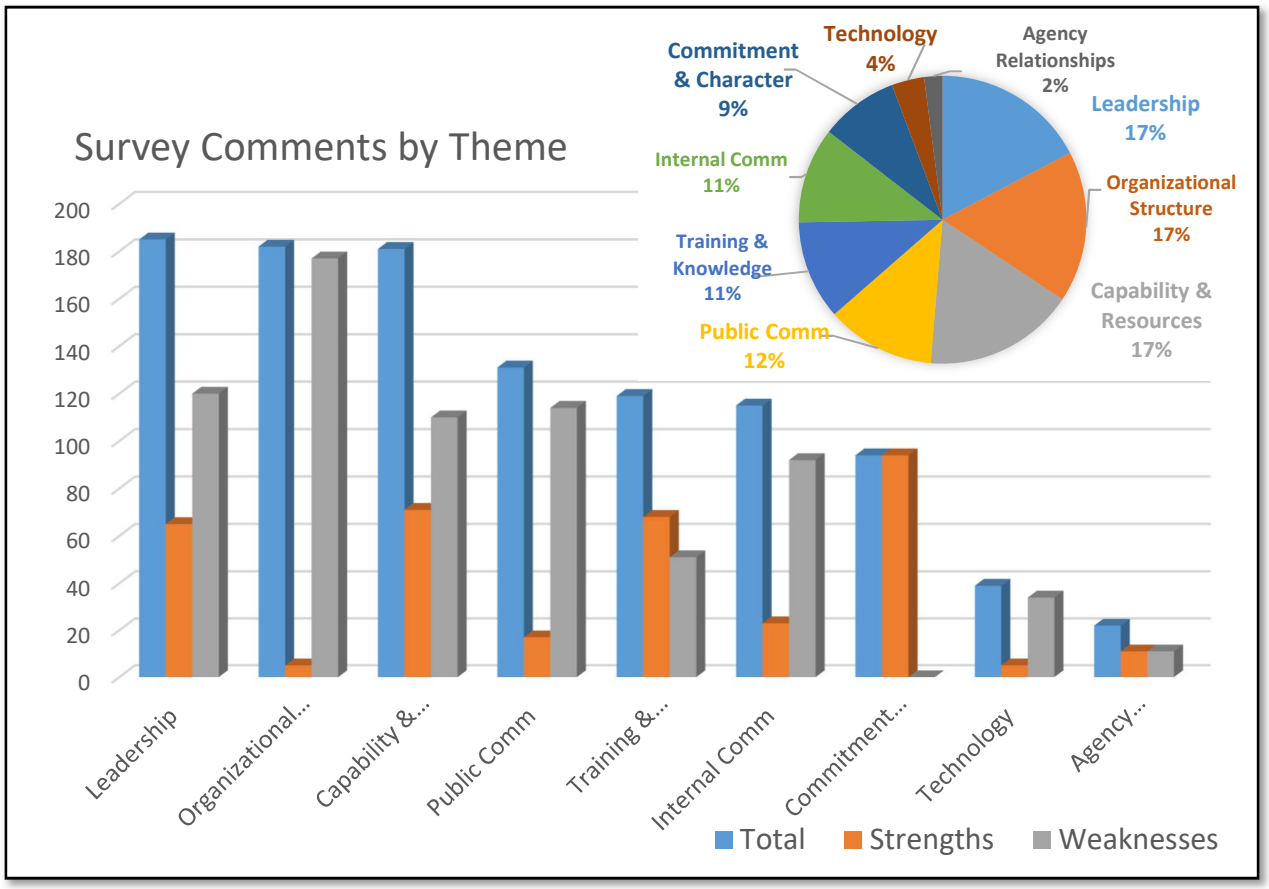


Figure 4. SUB January 2024 Ice Storm Feedback Common Theme

Strengths and Weaknesses by Theme

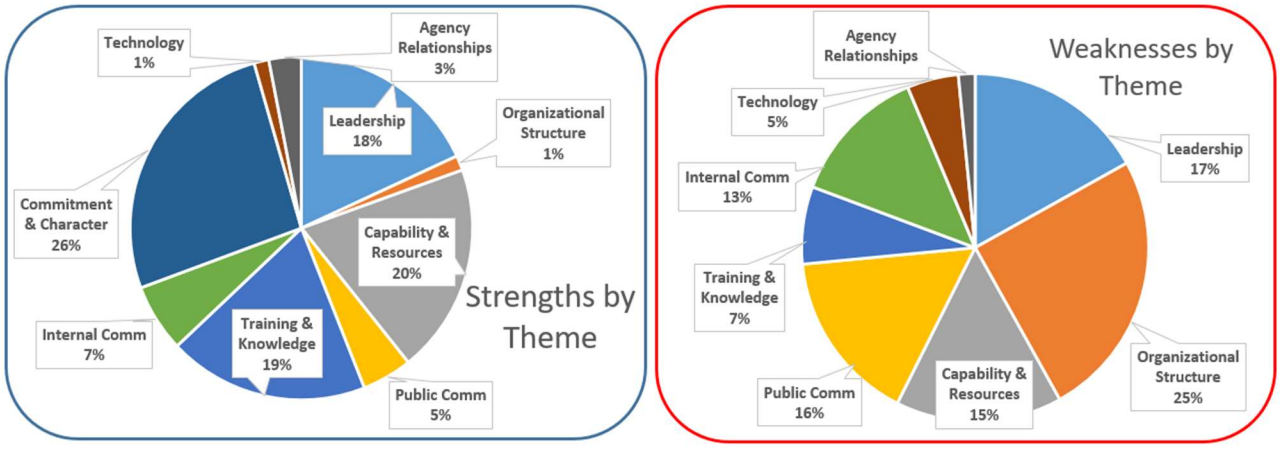


Figure 5. SUB Strengths and Weaknesses by Theme

Planned Post-Incident Process



Figure 6. SUB Post 2024 January Ice Storm Process

DRAFT Appendix B: SUB Staff Solutions

- Example: Notify staff of communications to the public first.
- Example: Provide Radio training for operations staff.
- Example: Improve Electric Service Center triage process.

DRAFT Appendix C: Improvement Plan

- SUB has a push to text system in place that will send out a message to customers. This is an additional communication tool. It will not reach residents with land lines, those that do not have devices that receive text, or situations (like what occurred) where regional communications are limited or down. We will reach out to the City, Willamalane, the School District, and Lane County to request they send out the SUB text.
- SUB will stand up a temporary on line web page where customers can self-report their outage if they would prefer to enter their outage information in that format
- SUB has limited ability to activate external non-utility restoration resources. The City/County have activation authority. In an event that could have a humanitarian impact, we will send out a request to consider activation of the National Guard, Red Cross, Community Emergency Response Teams, and other resources to have boots on the ground. If customers call, customer service will have the ability to relay that we have made the request for outside assistance but we have limited authority to activate. The ice storm event impacted property, transportation, power, water, communications, and fuel supplies (among other impacts).
- Information will be stood up on the website stating that SUB has declared an emergency and implemented the above steps.
- Water Trailers: SUB will be moving forward with developing specifications for a water trailer from the water utility budget.
- SUB has been pushing hard to restock materials. We are either restocked with supplies or have certain supplies on order.
- Bridge Funding: SUB is working with Catholic Community Services to have CCS do intake for SUB electric customers receive bridge funding (funds to help them pay bills when they are dealing with financial stress from the ice storm). It will be focused on vulnerable households. More details will follow once we reach agreement.
- Backup Generation: Unless SUB gets clarity in the near term that the external grant process will move forward in a timely manner, SUB will seek to decouple the backup generation at the Willamette Wellfield from the grant (possibly making the entire grant moot) and move forward without grant funding to install backup generation at the Willamette Wellfield.



SPS Ice Storm Response – January 2024

December 3, 2024

Health and Safety



Care and Connection





Community Recovery

Community Partnerships and Communication







Lessons Learned