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.

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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

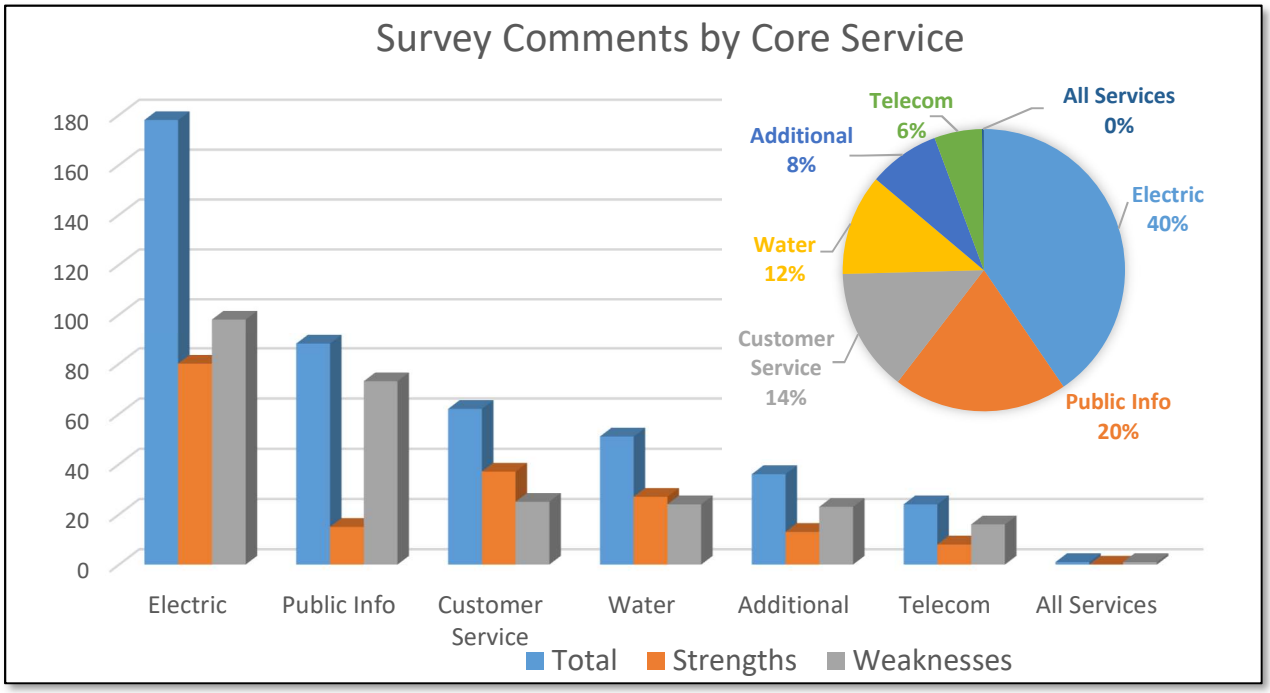


Figure 1. SUB January 2024 Ice Storm Feedback by Core Service Area

Feedback by Functional Area

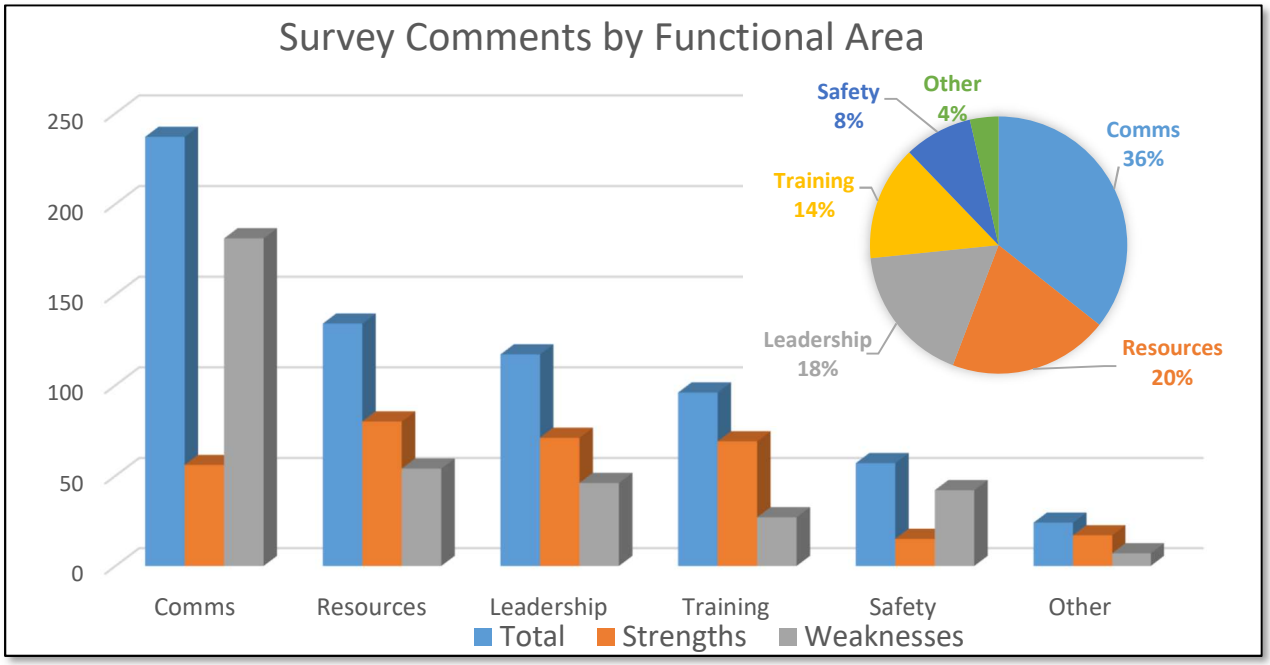


Figure 2. SUB January 2024 Ice Storm Feedback by Functional Area

Strengths and Weaknesses by Functional Area

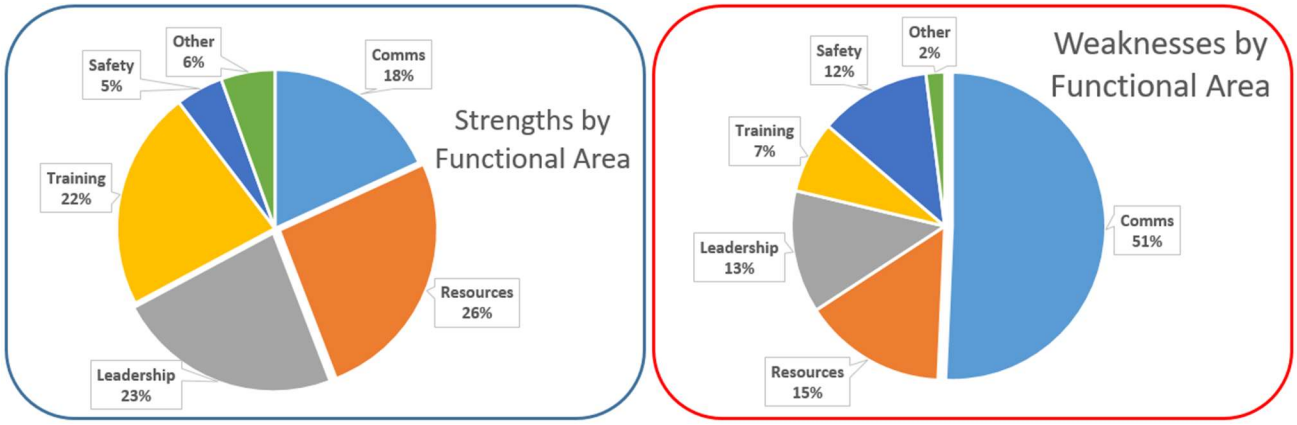


Figure 3. SUB Strengths and Weaknesses by Functional Area

Feedback by Common Theme

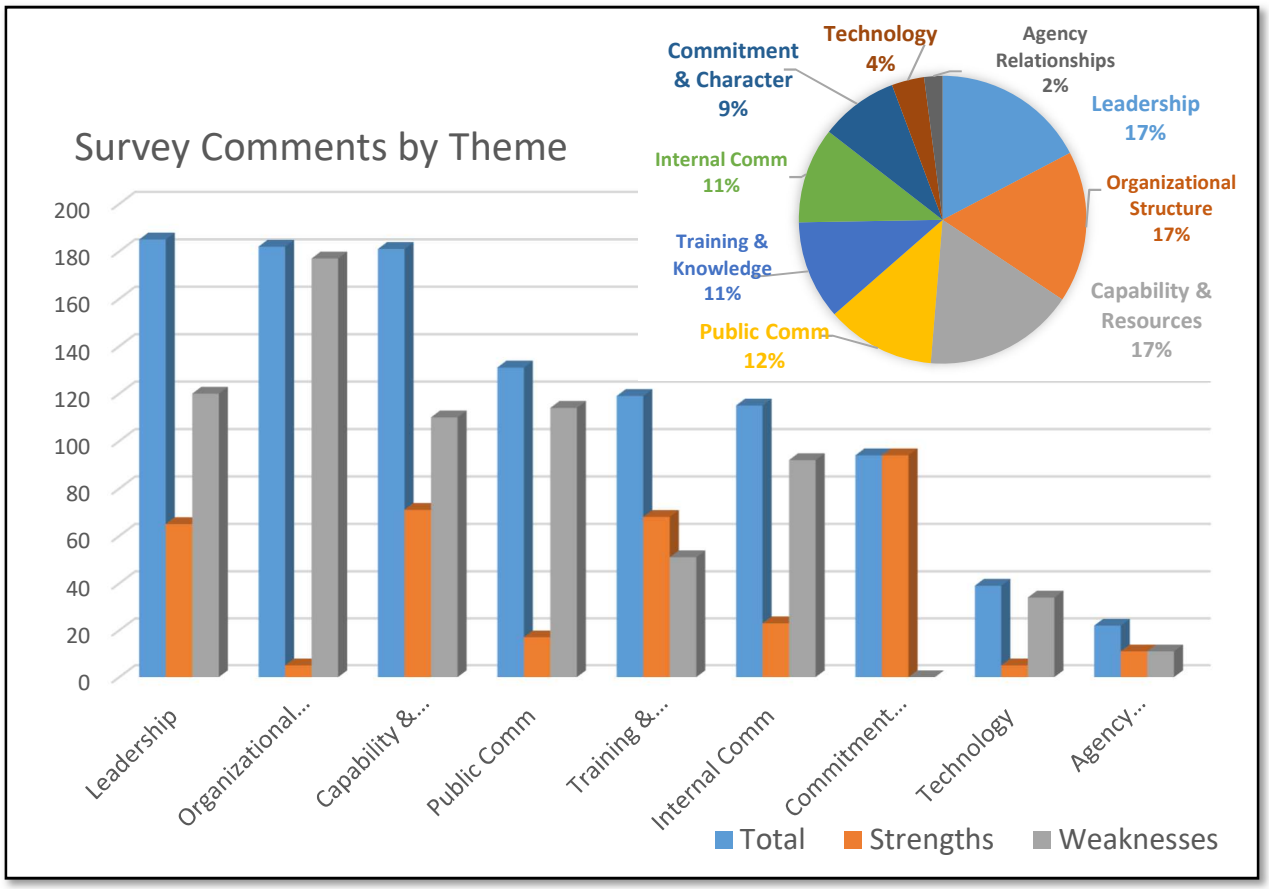


Figure 4. SUB January 2024 Ice Storm Feedback Common Theme

Strengths and Weaknesses by Theme

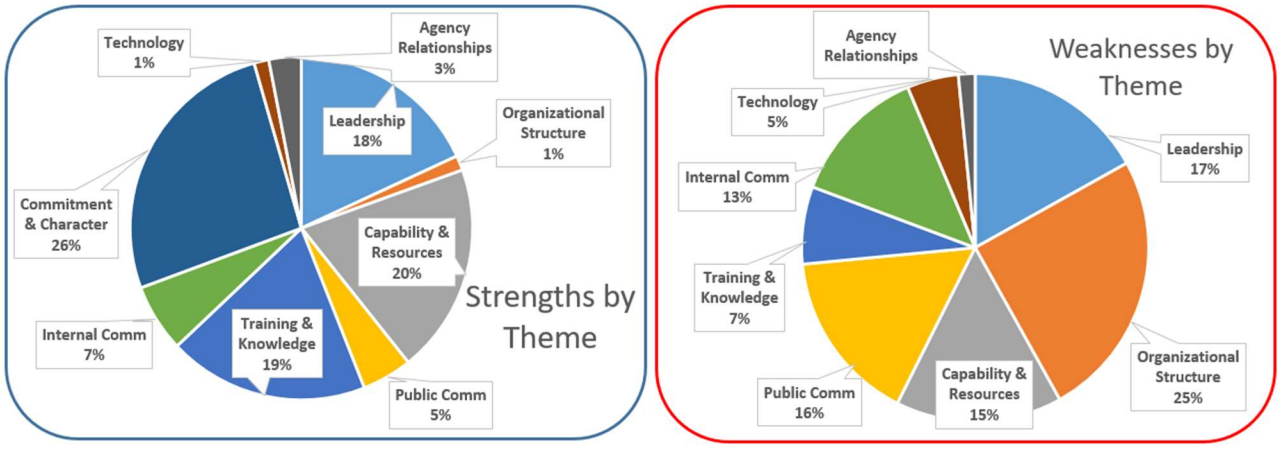


Figure 5. SUB Strengths and Weaknesses by Theme

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.