



2023 Winter Storm After-Action Report



Administrative Statement

Handling Instructions

The 2023 Winter Storm After-Action Report (AAR) was authorized by the San Bernardino County Board of Supervisors and County Administrative Office. This report has been developed by Connect Consulting Services, an emergency management firm, and is the neutral, third party that evaluated the County's response to this Winter Storm. The information gathered in this AAR is intended for San Bernardino County leadership and emergency preparedness and response staff.

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Executive Summary

Incident Summary

On Wednesday, February 22, 2023, the National Weather Service (NWS) issued a rare warning for an incoming blizzard for the mountains of Los Angeles County. The next day, the NWS issued a first-ever blizzard warning for the San Bernardino Mountains, advising against travel. The alert for San Bernardino County, in effect from early morning February 24 through the afternoon of February 25, forecasted up to 5 feet of snow, as well as wind gusts up to 60 mph and extreme limited visibility, for areas above 5,000 feet in elevation.

Over a three-week period, from February 23, 2023, through March 15, 2023, the mountain areas of San Bernardino County experienced back-to-back winter storms, dropping approximately 11 feet of snow in some areas. The County’s mountain communities were hardest hit by winter storms, including the City of Big Bear Lake, Big Bear City, Crestline, Lake Arrowhead, Mount Baldy, Running Springs, and Wrightwood.

“We want the public to be aware this is not just a winter weather advisory, a winter storm warning. It’s a higher threat than that,” said Lisa Phillips, a meteorologist in the Los Angeles office.
“Rare blizzard warning issued for some Southern California Mountains,” The Sun, February 22, 2023

State of Emergency Declarations

February 27, 2023	San Bernardino declares a local state of emergency.
March 1, 2023	California Governor Newsom proclaims a state of emergency in 13 counties, including San Bernardino County.
March 10, 2023	U.S. President Biden declares an emergency in the State of California and orders federal assistance to 34 counties, including San Bernardino County.

Mountain communities faced closed roads, power outages, and lack of fuel. News reports and social media posts reported residents’ frustrations with what they perceived as a slow and disorganized government response and a lack of preparedness on both the public and private sides. The sheer extreme nature of the storm was something the area had not experienced since January of 1933, which brought approximately seven feet of snow to the San Bernardino Mountains, and many were taken off guard. Many homes were surrounded by record setting snow drifts, which covered structures, trapping some of the residents inside for days. Residents requiring rescue were transported off the mountain; there were approximately 269 documented rescues. Of 13 deaths recorded in San Bernardino County during the event, one death (due to a hit-and-run traffic collision) was linked to the extreme weather.



On February 27, 2023, the San Bernardino County Emergency Operations Center (EOC) was activated. The storm response was coordinated by the County EOC (managed by the County's Office of Emergency Services) and the response/tactical Incident Management Team (IMT), under the supervision of the Incident Commander (IC). County department representatives were located in both command structures, to support the overall response mission of preserving life and property for San Bernardino County residents and visitors. Additionally, County departments and their partners supported and executed evacuations, sheltering activities, establishing call centers, conducting welfare checks and other calls for service, power restoration, delivery of food and other essential resources, and providing access to the impacted communities.

The response and recovery effort engaged multiple agencies and departments, including the San Bernardino County Sheriff's Department, San Bernardino County Department of Public Works, San Bernardino County Fire Protection District, San Bernardino County Office of Emergency Services, San Bernardino County Board of Supervisors, San Bernardino County Land Use Services, San Bernardino County Department of Public Health, California Governor's Office of Emergency Services (Cal OES), California Department of Transportation (Caltrans), California Department of Forestry and Fire Protection (CalFire), Southern California Edison, SoCal Gas, and the American Red Cross.

The County EOC was deactivated on June 2, 2023, and the local state of emergency was lifted on June 27, 2023.

Report Development

In August 2023, San Bernardino County hired an independent contractor to develop the AAR for the winter storm response. From September to November 2023, the AAR planning team engaged County department staff and elected officials involved in the response in a comprehensive information-gathering process that included a data call, document analysis, survey deployment, and interviews to inform the report. During its engagement, the AAR planning team convened multiple times to strategize and provide updates on the report's development.

The team conducted 19 stakeholder interviews representing eight County departments and the Board of Supervisors. Using discretion and sensitivity throughout the process, the planning team acknowledged different perspectives among interview respondents, depending on their role and involvement in the response, resulting in a more targeted approach to accurately inform and prepare the AAR. The team also went to great lengths to critically analyze the diverse observations and their potential impacts on response and recovery functions.

Focus Area Findings

This report organizes all strengths, observations and areas of improvement and recommendations into specific themes (focus areas) identified as common areas for research and analysis for After-Action Reports. The focus areas include *Planning, Resources/Logistics,*



Incident/Organizational Management, Command / Decision Making, Partner Coordination, and Public Information and Communications. The output is a thorough review of the response and recovery effort, including strengths, potential best practices, areas for improvement, and challenges.

Strengths and Areas of Improvement by Focus Area

Focus Area	Strengths	Areas of Improvement
Planning	<ul style="list-style-type: none"> • Activation of existing emergency plans and Flood Area Safety Taskforce (FAST) • Previous damage assessment training 	<ul style="list-style-type: none"> • Gap in additional emergency planning • Lack in emergency training and exercises
Resources/Logistics	<ul style="list-style-type: none"> • Prepositioned response and shelter supplies • Repurpose of an existing surplus warehouse for donations • Ability to quickly identify existing contracts/vendors. • Partnerships between departments • Creation of the San Bernardino County Structural Damage Survey • Mobilization of Commodity Points of Distribution (CPOD) and Local Assistance Centers (LAC) 	<ul style="list-style-type: none"> • Limited county-owned winter weather equipment for significant snow removal to clear roads and to conduct damage assessments • The resource request process was confusing and/or lack of knowledge as to how to direct the process. • Lack of pre-storm donations and warehousing planning and warehousing staff
Incident/Organizational Management	<ul style="list-style-type: none"> • Creation of multidisciplinary teams to share assets • Dissemination of regular situational awareness products throughout the duration of the response. 	<ul style="list-style-type: none"> • Unclear organization and structure of the EOC • Lack of liaison officers for elected officials • Understaffed EOC • Lack of coordination between the EOC and the



Focus Area	Strengths	Areas of Improvement
		<ul style="list-style-type: none"> IMT, impacting information gathering
Command / Decision Making	<ul style="list-style-type: none"> Activation of Incident Management Team Pre-staged response and shelter resources in mountain communities Initiation of community call center/hotline, receiving over 7,000 calls in three weeks 	<ul style="list-style-type: none"> Delay in EOC activation Roles and responsibilities of the EOC and the IMT not defined Lack of a unified command (UC) structure Inconsistent coordination with external agencies
Partner Coordination	<ul style="list-style-type: none"> The County initiated a Volunteer Program to support the Winter Storm response Strong partnerships between the County and community-based organizations (CBO) Established cadre of volunteers for snow removal assistance 24/7 Storm Response Call Center and online system for donations/volunteer assistance 	<ul style="list-style-type: none"> Lack of formal Volunteer/Donations Management Plan as an annex to the Emergency Operations Plan. Mutual aid agreements existed but were not always known.
Public Information and Communications	<ul style="list-style-type: none"> Flexible team with varied skillset was able to adjust to communications needs Creation of Snow Information Page for centralized public information 	<ul style="list-style-type: none"> Not including the Communications Department in the response from the beginning A Joint Information Center (JIC) was never activated during the event



Focus Area	Strengths	Areas of Improvement
	<ul style="list-style-type: none"> Variety and volume of public information messages 	<ul style="list-style-type: none"> Challenges with Call Center for public inquiry Did not meet the needs of individuals with disabilities and access and functional needs (DAFN) Lack of a crisis communications plan Communication infrastructure limitations

Looking Ahead

San Bernardino County intends to leverage this document as a learning and improvement tool to enhance awareness of and aggregate the experience gained during the response and recovery to the 2023 Winter Storm. Lessons learned from this event will better prepare County agencies and their cooperative partners for future winter storm response and recovery efforts and other emergencies and disasters.



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Introduction

Purpose

The purpose of this After-Action Report (AAR) is to describe the events related to the 2023 San Bernardino County Winter Storm and to improve the County’s response to and recovery from future winter storms and other disasters. The findings within the document were identified through a thorough analysis of data collected predominately from personnel employed by county-level agencies and departments throughout San Bernardino County and are not prescriptive for any specific agency or department. The report will serve as an unbiased informational product to influence future disaster planning and preparedness initiatives across San Bernardino County.

The findings within the document were identified through a thorough analysis of data collected from August through October 2023. The AAR planning team worked to provide helpful details on processes and communication with discretion and sensitivity for the participants. The team also considered different perspectives among interview and survey subjects, depending on their involvement in the response. The team went to great lengths to critically analyze the diverse observations and their potential impacts. In the end, the views and statements expressed within this report were validated by multiple sources independent of one another.

Scope

This report focuses on the 2023 Winter Storm response and recovery activities that occurred within and between key County departments and external partners across San Bernardino County during the period of February 23, 2023, through April 2, 2023. These key dates mark the period just prior to the County’s emergency declaration through the closing of the last Local Assistance Center. The report will detail the County’s response functions during this time, evaluate interagency and interdepartmental collaboration, departmental processes, operational infrastructure, and provide key recommendations.

Participants

The following San Bernardino County departments participated in this process:

- San Bernardino County Board of Supervisors
- County Administrative Office
- Department of Public Works
- Land Use Services Department
- Office of Emergency Services
- Purchasing Department
- San Bernardino County Fire Protection District
- San Bernardino County Sheriff’s Department



Focus Areas

The following focus areas represent the categories of information that were targeted for collection and analysis to inform the AAR development process:

- Planning
- Resources/Logistics
- Incident/Organizational Management
- Command/Decision Making
- Partner Coordination
- Public Information and Communications

Report Organization

This report is designed to provide a concise summary of findings, observations, and recommendations regarding the San Bernardino County 2023 Winter Storm, with more detailed information to be found in Appendices A-F. The appendices include a recommendations table, a detailed key events timeline, a review of the data call and documents, a copy and summary of questions used in the interview, and a glossary and acronyms list to define and explain terminology used in the report.

The report includes a brief overview of the incident and describes the methodology employed to produce this report. It concludes with a summary of process improvements already implemented to engender more effective and efficient responses to future incidents.



Event Overview

Background

On Thursday, February 23, 2023, at 10:47 a.m., the National Weather Service (NWS) issued a blizzard warning for the San Bernardino County Mountains, including the communities of the City of Big Bear Lake, Big Bear City, Crestline, Lake Arrowhead, Mount Baldy, Running Springs, and Wrightwood, forecasting strong, sustained winds, with gusts to 45 mph, low visibility, and heavy snow with significant accumulation in a 48-hour period. This was a rare moment for the County as this storm marked its first blizzard warning in the history of its service.

Situation

The storm struck with full force early Saturday, February 25, leading to nearly seven feet of snow accumulation in the San Bernardino County Mountain range over the next several days. Subsequent winter storms added four more feet of snow over the next three weeks, bringing the total to approximately 11 feet.

On February 27, 2023, San Bernardino County declared a local state of emergency. The following day, the San Bernardino County Emergency Operations Center (EOC) was activated, along with the County's Incident Management Team (IMT) at the Aviation Building. Unified Command was also activated on February 28 at the Mountain Command Post located at County Fire Station 91.

On March 1, California Governor Gavin Newsom declared a state of emergency in 13 counties, including San Bernardino County, and on March 10, President Joe Biden declared an emergency in the State of California, providing federal assistance to 34 counties, including San Bernardino County.

From February 25 to March 2, heavy snowfall rendered all roads impassable, hindering snowplow operations. By March 12, all highways reopened to the public. Early in the response, limited resources created challenges in road clearing for the County and State. Communication was further hindered by unreliable cellphone service.

The impact extended beyond closed roads; power outages affected residents, and fuel shortages exacerbated the difficulties. Fuel supplies for snow removal equipment became limited and the media reported Caltrans ran out of fuel for their equipment. Broken natural gas lines led to some fires, with firefighters contending with snow-covered hydrants.

The extreme nature of the storm, not experienced since January 1933, caught many off-guard. Record setting snow drifts surrounded homes, trapping some people inside for days with depleting supplies.



Recovery efforts faced setbacks on March 27 and 28 when another 1 to 1.5 feet of snow fell on the mountains. Snowcats were used to rescue residents, transporting them to staging areas or Red Cross shelters. Approximately 269 rescues were documented.

Of the 13 recorded deaths in San Bernardino County during this time, only one (a hit-and-run traffic collision) was linked to the extreme weather. The County EOC was deactivated on June 2, 2023, and the local state of emergency was lifted on June 27, 2023.

The response and recovery involved multiple agencies and departments including, but not limited to, San Bernardino County Department of Public Works, the San Bernardino County Sheriff's Department, CalFire, San Bernardino County Fire Protection District, San Bernardino County Office of Emergency Services, Caltrans, Southern California Edison, SoCal Gas, CalOES (California Office of Emergency Services), and the American Red Cross.

Challenges

- Impassable highways and roads (Hwy 18, Hwy 38, Hwy 330, Hwy 173, Hwy 189)
- Snow removal equipment mobilization delays
- Downed powerlines and trees blocking roadways
- Residents trapped in homes in mountain area
- Residents unable to access homes in the mountain area from the valley

Methodology

The project team applied a data-driven, mixed methods approach to developing this report. Initial data collection centered on the County's focus areas: *Planning, Resources/Logistics, Incident/Organizational Management, Command / Decision Making, Partner Coordination, and Public Information and Communications*.

Within the scope provided, the project team utilized the following processes for information collection, analysis, and dissemination:

- Systematically collected, catalogued, analyzed, and reviewed relevant County documents
- Identified County stakeholders with key response and recovery functions during the winter storm event
- Conducted a stakeholder survey and 19 interviews with key departmental staff and elected officials



Data Collection

Data collection for this report was conducted in three phases: a data call and document review, a survey, and a series of individual interviews.

Data Call and Document Review

County staff provided relevant documents related to the development of this After-Action Report. The documents allowed the project team to develop a timeline of events and evaluate response and recovery tasks. During the subsequent analysis, documents were reviewed for information related to the County's response to and recovery from the winter storm.

Stakeholder Survey

The project team developed an online stakeholder survey to incorporate quantitative data points about the County's winter storm response and recovery efforts and capture first-hand experiences, drawing on anonymous information and perspectives. The 30-question survey was a combination of multiple choice, Lickert Scale, and open-ended questions designed to gather broad, foundational information regarding the winter storm event. During the survey period from September 12 through October 5, 2023, responses were collected from 13 individuals, representing six County agencies and departments. The full survey set, and summary response data are available in Appendix D – Survey Questions and Summary.

Stakeholder Interviews

The project team conducted interviews with County employees and elected officials, including San Bernardino County's Sheriff Office, the Fire Chief of the San Bernardino Fire Protection District, San Bernardino County Office of Emergency Services, Land Use Services Department, the Department of Public Works, Purchasing Department, County Administrative Office, and County Supervisors and departmental staff to provide a qualitative analysis of San Bernardino County's response and recovery efforts, as derived from first-hand accounts of the event. Within focus areas identified by the County, the project team developed the interview question set.

The specific group of stakeholders to participate in surveys and interviews were recommended by the consulting firm developing this report and contact information was provided by San Bernardino County. Interviews were facilitated by a lead facilitator and a notetaker. Before each interview, the project team conducted research to ascertain the interviewees' function(s) as related to the disaster response effort and chose interview questions based on this background information. During interviews, additional information was injected, where appropriate, to customize questions to allow for additional information to be gathered in key areas as identified.



From September 21 through November 1, 2023, the project team facilitated virtual interviews with 19 individuals representing nine County departments, agencies, and elected officials. Each 60-minute interview began with an introduction of the participant and included a snapshot of the project's purpose of the interview, including the event and the timeline covered (February 23 to April 2, 2023), with assurances that the information gathered would be analyzed, organized, and incorporated into the final report. The full interview questionnaire is available in Appendix E – Interview Questions and Summary.

Evaluation Approach

This expansive information collection effort provided County staff the opportunity to contribute feedback on the County's response to and recovery from the winter storm. The project team analyzed the data, performed a detailed document review, engaged with subject matter experts, and developed the Findings section of the AAR, generating a chronology of events, common trends in key operational areas, and recommendations for improvement.

Statement of Accuracy

The AAR process encourages and values varying perspectives and honest opinions. Viewpoints shared by interviewees are based on individual perspectives and individual experiences and are provided in the AAR without attribution. The views and statements within this report were validated by multiple sources independent from one another. Interviews represent stakeholders' recollections and analyses of incidents and actions, and varying viewpoints are expected and valued. Interviewees represented County departments or agencies through their participation but may not have incorporated every viewpoint or incident of the department or agency in their individual responses. Viewpoints shared by County representatives are based on individual perspectives and personal and lived experiences.

Findings

Focus Areas Overview

The report organizes all findings into specific topic areas generated from data collected in response to the winter storm through document analysis, surveys, and interviews. The findings are divided into focus areas and include *Planning, Resources/Logistics, Incident/Organizational Management, Command / Decision Making, Partner Coordination, and Public Information and Communications*, with each focus area being divided into observations and recommendations. The output is a thorough review of the response and recovery effort, including what was done well (strengths, best practices), what could be improved (areas of improvement), challenges, and overall lessons learned to help inform future development of preparedness, policy, and procedures for departments and agencies throughout the County.

Observations and Recommendations

PLANNING

The Planning focus area evaluates the existence, utilization, and effectiveness of emergency plans relevant to the Winter Storm and identifies County agency strengths and areas of improvement relative to their emergency planning capabilities.

Strengths

- The EOC activated several existing plans, including the Emergency Operations Plan (EOP), Local Assistance Centers (LAC) Plan, and Commodity Points of Distribution (CPOD) Plan.
- The Flood Area Safety Taskforce (FAST), an established multidisciplinary taskforce, was also activated and adapted to respond to the significant snow event.
- The Building and Safety inspectors are trained in the Taos Safety Assessment Program, which allows them to do rapid assessments in the hardest hit communities.

Areas of Improvement and Recommendations

Observation 1.1: Existing emergency plans were not fully utilized, understood, or shared.

Despite the existence of the County EOP and supporting documents, and several departmental emergency plans, interview and survey data highlighted that not all responders were aware of the existence of these plans or how to leverage them, including elected officials and County departmental staff.

Recommendations

- Familiarize all response staff and stakeholders with current emergency plans.
- Conduct regular training and exercises to validate the plans and include everyone who would have a role in responding to the specified scenario.
- OES should coordinate with new Board of Supervisors members after they take office, to familiarize them with emergency plans, help clarify what their role may be during an emergency, and to ensure they are included in County emergency trainings and exercises.

Observation 1.2: Several existing emergency plans are outdated, and other high priority plans and hazard specific annexes do not exist.

The current San Bernardino County EOP was last updated in 2019 and does not include winter weather as an identified natural hazard risk. The current County of San Bernardino Hazard Mitigation Plan (HMP), updated in 2022, categorizes a winter storm as a minimal risk to the County, thus the EOP does not contain an extreme winter weather annex. The Hazard Mitigation Plan does note that the County participates in an annual workshop regarding winter weather preparedness provided by the California Highway Patrol that brings together the County OES, San Bernardino County Special Districts key stakeholders, first responders, and weather experts to discuss the possible winter weather outlook and forecast.

Recommendations

- Review and update the County EOP annually at a minimum and/or following EOC activations; add a winter weather annex, and other supporting components as needed. Include community partners and stakeholders in an annual review process.
- Conduct a gap assessment of OES and all departments to identify what existing response plans need updating and what plans should be developed. All plans should be exercised and updated on an annual basis or following a response.
- Additional plans or EOP annexes the County could consider developing/updating include the following.
 - Continuity of Operations (COOP) Plan
 - Crisis Communications Plan
 - Disaster Recovery Plan/Annex
 - Volunteer/Donations Management Plan/Annex
 - Recovery Plan/Annex

Observation 1.3: EOC and IMT personnel were lacking comprehensive emergency training and exercise experience.

As outlined during interviews with several key stakeholders, some County staff with specific response and recovery functions had received training on the Incident Command System (ICS), the National Incident Management System (NIMS), and the California Standardized Emergency Management System (SEMS), yet many department staff members without day-to-day response and recovery functions had not, likely due to staff turnover, and ongoing impacts from the COVID-19 response. Some County Board of Supervisors staff did not receive emergency management training specific to elected officials. The lack of training and exercising resulted in duplication of efforts and confusion because individual and departmental roles and responsibilities were not clearly defined.

Recommendations

- Develop a County Integrated Preparedness Plan (IPP) to identify all-hazard preparedness priorities and a multi-year training and exercise schedule.
- Require and provide training for all personnel aligned with NIMS and SEMS guidance for their expected level of participation (staff, supervisory, or policy-level) at onboarding and at least biannually for their employment/appointment.
- Provide emergency management training for elected officials and their staff focused specifically on their unique roles and responsibilities during an emergency.
- Conduct annual EOC exercises to ensure familiarity with Incident Command System (ICS) structure and response plans. Training and exercises will help build preparedness for threats and hazards and identify resource requirements and capability gaps.

RESOURCES/LOGISTICS

The Resources/Logistics focus area describes the strengths and areas for improvement demonstrated in the delivery of essential commodities, equipment, and services in winter storm response efforts. This included sourcing supplies, vetting, and fulfilling resource requests, establishment and management of warehouses, resource distribution and replenishment, and associated resource and capability gaps.

Strengths

- Critical assets, including fire and sheriff departments assets and shelter supplies were pre-positioned due to the forecasted area of impact.
- The County repurposed an existing Purchasing surplus warehouse to manage the influx of donations for staging and distribution.

- Purchasing agents, embedded in each County department, could identify contracts and resource supplies and equipment as available.
- As not every department had the necessary snow vehicles (i.e., snow cats) and winter weather gear to reach some of the hardest hit areas, partnering with public safety departments allowed the Land Use Services Department staff to reach impacted areas to assess damaged structures and interface with residents about the status of their residences or businesses.
- Due to the limited access to the mountain areas, the County was able to supplement by creating the San Bernardino County Structural Damage Survey, an online survey for residents and businesses to report damages.
- CPOD and LAC services were quickly expanded to additional impacted areas, providing supplies (food, water, and fuel) and services (medical, shelter, information) to the impacted communities.

Areas of Improvement and Recommendations

Observation 2.1: The County lacked sufficient winter-weather equipment to adequately manage the amount of snow that accumulated from the back-to-back winter storms.

It was reported that once eight feet of snow had fallen, the existing Department of Public Works snowplows were rendered ineffective to handle that volume of snow. Additional equipment, such as front-end loaders, were brought in to assist with needed snow removal as opposed to the snow clearing during a typical winter storm. While effective, this slowed down the process of reopening roads. Other County vehicles were not outfitted with equipment, such as tire chains, and access to remote areas was only possible by a snowcat, a fully tracked vehicle designed specifically to move on snow. In addition, many field staff did not have the winter weather gear or appropriate Personal Protective Equipment (PPE), such as heavy boots and gloves, necessary for long duration exposure due to extreme winter weather.

Recommendations

- Conduct a comprehensive gap analysis of severe weather equipment and supplies across all County departments. Address gaps in equipment and supplies, and train staff appropriately.
- Provide go-kits for field staff who may not be able to access necessary equipment and supplies prior to deployment into the field.

Observation 2.2: Existing contracts and agreements did not provide the necessary equipment to handle the impact of the storm, due to the lack of appropriate equipment in the region and competing priorities of surrounding communities.

Given the extraordinary nature of the storm, with the volume of snow in such a brief period of time, the region's equipment contractors did not have adequate stock of necessary equipment available locally to handle the impacts of the storm, both within San Bernardino County as well as surrounding areas. For the limited available equipment, there was high demand, and equipment was quickly deployed to the early acting jurisdictions also facing storm impacts.

Recommendations

- Conduct an assessment of all existing emergency response contracts; establish contracts with additional vendors to provide redundancy for sourcing equipment.
- Consider mutual aid agreements (MAA) with local jurisdictions, surrounding counties, and private entities to have access to available resource caches.
- Work with Cal OES ahead of the winter storm season to inventory and pre-identify State assets and other available resources to supplement County inventory.

Observation 2.3: Coordination between frontline departments provided the needed access to remote areas of the county most impacted by the snow, as not all departments had the resources needed to conduct response activities such as damage assessments.

Due to the significant impact on the mountain communities, accessing the residents and properties to gather accurate situational awareness was challenging. Departments such as Land Use Services, which needed to access the area to conduct damage assessments, relied upon other public safety agencies (that had proper snow vehicles for the conditions) to provide them with transportation to the affected areas. Reliance on another department hampered the ability of the inspectors to be able to do their assessments as priorities shifted.

Recommendations

- Train and exercise multidisciplinary teams to work together during response events to meet overarching operational priorities.
- If feasible, procure additional equipment for appropriate County departments to utilize to access remote areas of the county during/after severe weather conditions.
- Consider pre-staging of food and supplies.
- Train staff to use snow-related equipment for rare events and ensure coordination across the county.

Observation 2.4: The existing system for requesting resources through the EOC was not well understood or coordinated, resulting in an ad hoc approach across multiple departments and individuals. This caused confusion and reported diversion of assets.

Having two command structures working concurrently (the EOC and the Incident Management Team) caused confusion for requesting and tracking resources once they arrived in the county. As an example, heavy equipment resources requested by one department were appropriated to another when it arrived within the county, without the knowledge of the originally requesting department.

Recommendations

- Establish, train, and exercise a comprehensive resource request process, to include procedures to request County, mutual aid, and State assets.
- Utilize a technology-based solution to provide real-time tracking and monitoring to avoid duplication of resource requests.
- Establish a resource unit when the EOC is activated, and ensure all resources are coordinated through that unit.

Observation 2.5: The County did not have an existing donations management plan / annex or a dedicated manager to oversee donations and coordinate warehouse logistics and staffing.

The ability to stage incoming donations in the existing surplus warehouse enabled the County to quickly activate the warehouse to store and distribute supplies for the community. It was noted, however, that due to a large influx of unsolicited donations and the lack of a formal donations management plan, decisions to identify and establish warehousing activities had to be made spontaneously during the event. In addition, while there were strong partnerships with faith-based, non-profit, and other organizations to provide resources to the communities in need, staff experienced in warehouse logistics was needed to streamline the process and establish a staffing plan to ensure consistent and comprehensive coverage throughout the duration of the response. While the EOC did not have such a position, the purchasing department did have such a role in their day-to-day operations. In the absence of a donations and volunteers management plan / annex, the Human Resources Department decided to extemporaneously develop a plan to manage donations, volunteers, and staffing, recruiting both internally and externally while the EOC, Fire Department, and Sheriff's Department also provided volunteer assistance and was able to mobilize volunteer efforts throughout is winter storm.



Recommendations

- Develop a Volunteer/Donations Management Annex as a functional annex to the EOP. Train and exercise the annex with appropriate County staff and external partners.
- Investigate the feasibility of a comprehensive warehousing operation, including storage, packaging, and staffing/management.
- Contracts with private warehouse facilities may be an option for just-in-time capabilities.

INCIDENT/ORGANIZATIONAL MANAGEMENT

The Incident/Organizational Management focus area outlines the strengths and areas of improvement for the overall structure of the response organization and management, including the coordination and staffing of both the EOC and the IMT.

Strengths

- There was good coordination amongst first responders and other staff in the field to create multidisciplinary teams to share assets as needed and coordinate transportation and render aid to impacted communities.
- The EOC produced regular situational awareness products, including Event Action Plans (EAP) and Situation Summaries, throughout the response.
- The EOC held daily morning briefing calls that included elected officials and all impacted agencies and departments (e.g., utilities, schools, county departments). Each key player gave an update including what was accomplished the night before and what the priorities were that morning. The information on these calls was distributed internally. These calls were often referred to when providing information to the public and when correcting misinformation.

Areas of Improvement and Recommendations

Observation 3.1: The organization and structure of the EOC was not familiar and clear to all involved in response activities.

There were mixed viewpoints about the effectiveness of ICS within the EOC. Some of those who were previously located in the EOC in past events felt it was an effective structure, but those who were newer to their role or the County, were unsure what their role was within the structure. This discrepancy was noted in the interviews and survey results.

Recommendations

- Continue the use of ICS to manage disaster response operations.
- Require and provide training for all personnel aligned with NIMS and SEMS guidance for their expected level of participation (staff, supervisory, or policy-level) at onboarding and at least biannually for their employment/appointment.
- Conduct annual EOC exercises to ensure familiarity with ICS structure, operational processes, and response plans with all appropriate departments and elected official staff.

Observation 3.2: The lack of liaison officers for key stakeholders led to ad hoc coordination between elected officials, external partners, and EOC staff.

Elected officials and external stakeholders who did not have a role within the EOC believed that they received inadequate situational awareness information and support to appropriately answer constituent questions or address their needs. Without a direct connection to the response structure, activities occurred ad hoc and resulted in gaps and/or redundancies. The identification and use of liaison officers would have enabled greater situational awareness and coordination between the EOC staff and external stakeholders.

Recommendations

- Ensure liaison officers are utilized for key stakeholders, including Board of Supervisors and other elected officials, from the beginning of the incident and that they are kept informed of all information and decisions in real time to ensure timely and accurate situational awareness.
- Integrate guidance provided by the Federal Emergency Management Agency's (FEMA) "Local and Elected Officials Guide: Role and Resources in Emergency Management" to document and clearly define roles in emergency response operations.
- Offer training such as G0402: National Incident Management System Overview for Senior Officials (Executives, Elected, & Appointed) for newly elected or appointed leaders on an as needed basis.
- Continue the use of the Incident Command System to manage disaster response operations.
- Require and provide training for all personnel aligned with NIMS and SEMS guidance for their expected level of participation (staff, supervisory, or policy-level) at onboarding and at least biannually for their employment/appointment.

- Conduct annual EOC exercises across County departments and agencies to ensure familiarity with ICS structure and response plans.

Observation 3.3: The EOC was understaffed for the scope and length of the incident.

It was noted that due to staff turnover, attrition, burnout from COVID-19, and a series of significant events, the OES was not at its full staffing level. Many staff worked extended hours during this event, but the length and magnitude of winter storm was unprecedented.

Recommendations

- Continue to onboard new OES staff.
- Investigate the ability of redeploying non-OES County staff to fill roles within the EOC.
- Provide training in alignment with NIMS and SEMS guidance for their expected level of participation (staff, supervisory, or policy-level).
- Establish procedures to routinely evaluate workload balance, including evaluation of the EOC structure against current operations.
- Develop and provide Just-In-Time (JIT) training during the response to close identified gaps.

Observation 3.4: There was minimal coordination between the EOC and the IMT, resulting in gaps in communication and duplication of efforts.

Once the decision was made to activate the IMT, with the Fire Chief as Incident Commander with the delegation of authority, it created confusion, particularly with departments and stakeholders that had representatives in both structures. Multiple interviewees noted a tension between the two structures.

Recommendations

- Identify criteria and document within the County EOP the decision triggers for the activation of the IMT.
- Clearly define and outline the lines of authority and roles and responsibilities when both the EOC and the IMT are activated.

Observation 3.5: Without a clear incident command structure, gathering and sharing ongoing accurate situational awareness information was challenging.

Despite many departmental and elected official staff members attending the daily briefing calls, a few interviewees noted that while they were aware of the EOC structure, they found it easier to receive information more quickly if they connected directly with department heads. As an example, not all departments were aware of the impacts to specific areas, including road closures, which hampered the purchasing staffs' abilities to target specific vendors to source available resources as some vendors were in the affected areas and/or travel restrictions impeded the ability to provide the resources.

Recommendations

- Establish a standing cadence for information dissemination across agencies and stakeholders.
- Ensure situation status updates are collected from all response agencies and stakeholders and disseminated following the pre-established cadence during the activation, through briefings and situation reports.
- Require and provide training for all personnel aligned with NIMS and SEMS guidance for their expected level of participation (staff, supervisory, or policy-level) at onboarding and at least biannually for their employment/appointment.
- Conduct annual EOC exercises to ensure familiarity with ICS structure and response plans.

COMMAND / DECISION MAKING

The Command / Decision Making focus area identifies strengths and areas for improvement relevant to the County's use of ICS, including its establishment, transition to the IMT structure, and demobilization.

Strengths

- The decision to activate an IMT aided in performing rescue and evacuation activities: Public safety agencies conducted successful evacuations for residents trapped in their homes who needed or wanted to be moved down the mountain.
- Prestaging response and shelter resources ensured services to the most heavily impacted areas despite travel restrictions and road closures.
- Repurposing the call center structure, established during the COVID-19 response, fielded over 7,000 calls over a three-week period.

Areas of Improvement and Recommendations

Observation 4.1: The delay in setting up a comprehensive, coordinated response structure caused significant impacts to coordination and resource allocation across County agencies and partner agencies.

The National Weather Service Office in San Diego issued the blizzard warning specific to the San Bernardino County mountains on February 23, 2023, and the EOC did not activate until February 27, 2023. This delay created confusion and impacted County agencies' ability to coordinate as response activities ramped up ahead of the event. By delaying the activation, it put the County in competition with other agencies for ordering state assets and requesting mutual aid of extremely limited resources.

Interviewees noted that due to the widespread impact of the storm to not only the County but surrounding areas, external resources from mutual aid or the State were on a "first come, first served" basis. Activating the EOC earlier and anticipating the resource needs would have allowed the County to request the needed assets earlier to allow for pre-staging of available resources.

Recommendations

- Review and update the County EOP to incorporate decisions to activate the EOC with specific triggers (notice vs. no-notice events). Develop activation triggers across all relevant County departments, elected officials, and external partners.
- Identify criteria and triggers for the activation of primary agencies to fill ICS positions and staff EOC.

Observation 4.2: The lines of authority and the roles and responsibilities of the EOC and the IMT were not clearly defined.

Traditionally, an EOC structure is the coordinating entity of a response, while an IMT is more "boots on the ground" or tactical in nature. A majority of interviewees expressed frustration and confusion over the lack of cohesive command structure during the response. Representatives from multiple agencies had staff in the EOC and the IMT, causing redundancies throughout the event, yet there was reportedly little to no coordination between the two command structures. This tension raised concerns from elected and appointed officials and resulted in confusion regarding resource requests/tracking and the overall public perception of the County's response.

Recommendations

- Identify criteria and document within the County EOP the decision triggers for the establishment of an IMT.

- Clearly define and outline the lines of authority and roles and responsibilities when both the EOC and an IMT are activated.

Observation 4.3: Lack of a unified command (UC) structure led to instances of competing priorities.

There were noted incidents where resources were requested by one department but were received and utilized by another. There were also examples where a department was redirected from their primary mission, such as Public Works to assist utility companies or Caltrans with snow removal, impacting the speed in which the county-maintained roads were cleared. This shift in priority, while necessary to provide essential services such as expediting power restoration, was not clearly communicated to the public, causing significant frustration over a perceived lack of attention to community needs.

Recommendations

- Consider the establishment of a unified command structure when multiple departments have primary responsibilities during a response, to ensure coordination.
- Overarching operational objectives should be established with all primary agencies and communicated through the response agencies and external stakeholders. When priorities need to shift, they should be documented and disseminated to ensure overall situational awareness.

Observation 4.4: Inconsistent coordination and communication with external agencies, including Caltrans, CHP, CalOES, and the National Guard, created confusion and frustration, leading to negative public perception and unfavorable social media reports. Some examples include expectations being raised by residents that the County was plowing roads during a specific time frame when they weren't. Incorrect information led to a decrease in public confidence.

While representatives from multiple agencies were located at the EOC and/or the IMT, there were still considerable communication gaps leading to the reopening of state roads before the County determined their readiness.

Recommendations

- Ensure situation status updates are collected from all response agencies and stakeholders and disseminated regularly during the activation through briefings and situation reports.



- Review and update the County EOP to incorporate EOC activation triggers. Socialize activation triggers across all relevant County departments, elected officials, and external partners.
- Identify criteria and triggers for the activation of primary agencies to fill ICS positions and staff EOC.

PARTNER COORDINATION

The Partner Coordination focus area describes the strengths and areas for improvement demonstrated in the relationships and coordination with community-based partners and partner jurisdictions in winter storm response efforts. This includes memoranda of understanding, volunteer and donations planning and management, vetting volunteers, and associated resource and capability gaps.

Strengths

- Strong established partnerships between the County and community-based organizations (CBOs), including the non-profit community based and faith-based organizations during the 2023 Winter Storm. Additionally, California Disaster Airlift Response Team (CalDART) brought food and supplies to the communities and Team Rubicon helped clear snow from properties. Assistance also came from Big Bear Mountain Resorts, local school districts, and faith-based organizations.
- The County operated a distribution center for donated goods and created food packs for families.
- The County established a cadre of volunteers, from both redeployed County employees and community volunteers, to create the Snow Post and Snow Buster Crew to distribute food items and provide snow removal assistance to the hardest hit communities. Almost 500 County employees were activated to support the County's response to the snowstorm.
- The County established a 24/7 Storm Response Call Center and an online system to accept donations and volunteer assistance.

Areas of Improvement and Recommendations

Observation 5.1: The County does not have an existing plan for volunteer/donations management.

Interviewees indicated there was no time to set up a donation system before donations started to come into the county. The public gave generously in food and water donations. The County did have a distribution center for donated goods and created food packs for families that would last three days. However, the distribution facilities were unable to store perishable food. The County early on established a system to solicit and vet volunteers to aid the community, but the lack of a comprehensive Donation Management Plan led several community groups to solve problems independently, causing challenges and ineffective coordination. The Board of Supervisors used personal connections to solicit donations; however, it was reported that their efforts were uncoordinated from a central position in the EOC. Financial donation management was delegated to a local non-profit provider, focused on response and recovery functions.

Recommendations

- Develop a volunteer and donations management position in the EOC to coordinate all requests and offers.
- Develop a Volunteer/Donations Management annex to the County EOP that addresses spontaneous and unaffiliated volunteers and donations, and train and exercise to it. A streamlined process with identified leads and staffing would support management of the function, allowing staff and first responders to fulfill their assigned duties.
- Engage community organizations during the development of a volunteer/donations management annex to the EOP.
- Invite community organizations and partners to participate in exercises for scenarios in which they will be called upon to assist the public with volunteer services and donations.
- Develop and maintain strong relationships with these organizations and volunteer response organizations such as Community Emergency Response Teams (CERT) and the Disaster Animal Response Team (DART) to be able to fully utilize these teams for response efforts.
- Continue seeking opportunities for public-private partnerships that support disaster response.
- Involve existing private partners in planning and other preparedness activities to help identify areas where opportunities for collaboration exist.
- Continue to define and develop policies, plans, and procedures for countywide response and recovery to streamline future processes for collaboration.

Observation 5.2: Mutual aid agreements existed but resources were not readily available and existing agreements were not always known amongst responders.



When utilized for staff, mutual aid with Cal OES and local municipalities worked well. When requesting specialized equipment, however, in an event of this magnitude, San Bernardino County was one of many areas in need of support.

Some state and federal assets that came to assist remained under the control of their own agency, which caused communication challenges.

Recommendations

- Develop and maintain Memoranda of Understanding (MOU) and Memoranda of Agreement (MOA). Continue to build and nurture established mutual aid relationships to be able to activate them with limited notice to increase resources during an event.
- Invite MOU partners to participate in exercises to align expectations and to ensure County personnel are aware of the resources available.

PUBLIC INFORMATION / COMMUNICATIONS

The Public Information / Communications focus area refers to the County's ability to deliver prompt, reliable, and actionable information to the whole community through use of clear, consistent, accessible, and culturally and linguistically appropriate methods to effectively relay incident-related information as well as the actions taken, and the assistance made available. This focus area also encompasses interoperability amongst response agencies and partners and any communications-centric resource and capability gaps.

Strengths

- Despite many challenges, the Public Information team was nimble and able to adjust to communications needs as the situation unfolded, leveraging the various skillsets of their team to produce a significant amount of public information content in the form of photos, graphics, and videos via social media, regular press conferences, and daily calls and newsletters.
- The creation of the Snow Information Page on the County's website provided a centralized location for information for residents and businesses.
- The Public Information team held press conferences, created, and distributed fliers, assisted CPODs (Community Points of Distribution) for food and other donations, released a daily newsletter, and created videos to demonstrate what the County was doing to clear roads.



Areas of Improvement and Recommendations

Observation 6.1: The Public Information team was not included in the response from the beginning but was brought in after public perception began to turn negative. This inhibited their ability to keep the public informed with accurate, consistent, and timely messaging.

The delayed activation of the Public Information team hurt their ability to respond immediately and effectively and had an adverse impact on public trust. Public Information Officers (PIO) began in “catch-up” mode and found themselves often in a reactive state. From the beginning of their activation, the team felt they were lacking access to the information they needed to effectively answer questions and communicate to the public the County’s response and the information the public needed for their own safety.

Recommendations

- Ensure the Public Information Officer position within the EOC structure is assigned as appropriate to the specific emergency and activated from the beginning of the incident.
- Keep the assigned PIO informed of all information and decisions such as the opening and closures of shelters or road closures, which would impact transportation for the public in real time to ensure timely and accurate public information.

Observation 6.2: A Joint Information Center (JIC) was never formally established, although a Joint Information System (JIS) was informally formed through daily communications calls and virtual meetings conducted with communications representatives from the various stakeholder agencies.

Recommendations

- Formally establish a JIC when the EOC is initially activated, to coordinate all public information, public outreach, and media relations functions.
- Include PIOs (Public Information Officers) from all agencies responding to the event.
- Ensure the EOC, IMT, and all departments are aware that a JIC is available as the public information and resource conduit.
- Establish relationships with local media and include media and other partners in County exercises and drills to establish relationships pre-disaster.
- Provide training for PIOs through Cal OES and FEMA’s online basic public information course and their on-campus Advanced Public Information Course.
- Conduct and/or participate in regular exercises activating and establishing a JIC.

Observation 6.3: The remote call center, led by Public Health and heavily utilized during this response, was not always effective in providing and gathering information from the public in real time, exacerbating the public's frustration with the County's response to the storm.

Modeled after the call center that was established during the COVID response, the call center was well publicized, and the public heavily utilized it, fielding 5,500 calls in the first week and 7,100 calls total. However, as a remote operation, it was not connected to the EOC, so call center agents did not have readily available information or answers for many of the caller's concerns/questions. Call center staff were not initially provided with specific training or information on topics such as the Snow Removal Program, and the information they were given to disseminate was often no longer accurate by the time callers received it. Call Center processes were improved during the response to correct this, and the call center activities improved. On March 1, the call center shifted from a regular 8am-5pm workday to a 24/7 operation. On March 5, the call center pivoted to resolve constituent calls within the call center instead of forwarding them. Subject matter experts assisted with developing scripts to provide critical information to callers in real time.

Recommendations

- Provide call center agents with training and job aids.
- Include call center structure and organization within the County EOP.
- Rapidly develop and provide call agents with a list of FAQs specific to the response, along with scripts that are regularly updated in real time as often as necessary.
- Establish a link with the JIC to provide the PIOs with trends in caller questions and attitudes and rely on the PIOs to provide answers to questions not included in the FAQs, including updates on road closures, shelter operations, and CPODs.

Observation 6.4: The Public Information team had challenges controlling storm-related messaging, setting realistic public expectations, and keeping the public informed with accurate, consistent, and timely messaging.

The lack of a crisis communications plan and the delayed activation of the Public Information team created an opportunity for misinformation and rumors. This led to the public perception that the County was not responding effectively to the emergency. One example of misinformation was media representation of the event as a mass casualty event, even though reports indicated that only one of 13 deaths reported during the storm was directly attributed to the storm. Public expectations became a challenge due to the inconsistent messaging. For example, the major media outlets reported that the National Guard was launching Blackhawk helicopters to assist with the relief effort. This plan had not been communicated to the County,

and the sight of National Guard Blackhawk helicopters flying over one of the communities shortly after the storm created a perception that help would be available sooner than was possible.

Recommendations

- Develop a Crisis Communications Plan or Annex to the County EOP. Train and conduct exercises with appropriate County staff and external partners.
- Establish a Joint Information System (JIS) as the conduit for exchanging, coordinating, and integrating public information activities.
- Appoint a social media manager/monitor for real-time awareness and coordination of messaging coming from outside sources.
- Maintain one consistent County website for the public to access during any emergency and ensure it is updated regularly for ongoing and current emergencies.
- Establish relationships with local media and include media and other partners in County exercises and drills to establish relationships pre-disaster.
- Ensure visibility of operational priorities to the public during an active event to set public expectations regarding ongoing and upcoming operations.

Observation 6.5: The Public Information / Communications team had challenges in disseminating information to meet the needs of individuals with Disabilities and Access and Functional Needs (DAFN) and limited English proficiency speakers.

The Public Information and Communications team relied on partners to push out public information to DAFN populations. Some information was released in both English and Spanish, but interviews did not indicate that any other languages were included.

Recommendations

- Craft clear messages in plain language that all can understand, including people with limited English proficiency and the DAFN population.
- Recognize the need and understand the process of integrating “Whole Community” partners, such as representatives from the DAFN community (Area Agency for Aging, Latin and Asian communities, deaf and hard of hearing, etc.) in planning for and response to various emergencies.

- Identify access and functional needs-related considerations before, during, and after disasters and integrate them into the County’s emergency management system and emergency plans, including the EOP and Crisis Communications Plan.

Observation 6.6: The County does not have a crisis communications plan or strategic communications program to assist with communications guidance during an emergency.

Recommendation

- Develop a comprehensive County Crisis Communications Plan that will guide how the County should communicate internally and externally to the public during emergencies. The plan should incorporate predetermined procedures to be followed, identify potential audiences, social media policies, and include pre-drafted templates for statements.

Observation 6.7: Communication infrastructure limitations created issues for both the public and responders.

Communication in mountain areas was a huge challenge for residents, drivers and road workers who could not communicate with supervisors during response operations. Limited cell phone reception made it difficult for community members, staff members, volunteers, or people stranded in their homes to request help. Building safety inspectors did not have access to long range radios, limiting their ability to communicate with one another.

Recommendations

- Build the County’s relationship with the local chapter of California Amateur Radio Emergency Service (ARES) and enhance the County’s ability to communicate during an emergency when cell phone reception and internet service is not reliable.
- Consider researching redundant communications methods as well as purchasing additional deployable satellite equipment to augment communications capabilities between responders during an emergency.

Observation 6.8: The winter storm caught many in the public unprepared to handle the volume and duration of the event.

Recommendations

- Ensure advanced timeliness of public messaging across multiple modes of communication, including the County website, emergency alert notification, and media briefings.
- Provide ongoing personal preparedness messaging and education campaign throughout the year to the year-round residents and short-term renters.

Conclusion

The project team has presented findings, observations, analysis, and recommendations about the County's response and recovery efforts related to the San Bernardino County 2023 Winter Storm, gained through a series of document review, survey, and interviews. The input provided by the participants in the AAR process helped to provide a comprehensive picture of strengths, best practices, and areas of improvement that can be used to build toward greater resiliency against future winter storms and other disasters.

San Bernardino County is an exceptionally large and diverse geographical area that is susceptible to various natural disasters. The response to the winter storm of 2023 revealed the need for additional multi-departmental emergency management training and exercises, preplanning, organizational structure improvement, partner coordination, and communication. San Bernardino County acknowledges these areas of improvement and has used this incident to implement process improvements.

For example:

- Post-incident, public information / communications team members have taken online training courses with Cal OES and FEMA to better prepare for future incidents.
- In mid-2023, the Sheriff's Department issued to all deputies' cell phones equipped with GPS tracking data software and training on how to use the software during a disaster response. A best practice is to utilize the GPS tracking software by all responding personnel at the onset of the disaster response.
- Public Works purchased \$1M worth of chains and have stored them in preparation for another event.
- The County has established additional on-call contractors for snow removal services.
- A state budget allocation was introduced from Assemblyman Lackey and Senator Ochoa Bogh to purchase specialized snow removal equipment for mountain communities.

San Bernardino County and their cooperating partners are to be commended for their level of effort and accomplishments during an unprecedented event. The commitment to this project demonstrates their desire to learn and grow from this experience so they can continue to fulfill their mission to "ensure the protection of life and property before, during, and after disasters."

Appendix A – Recommendations Table

#	Observation	Recommendations
1.1	Existing emergency plans were not fully utilized, understood, or shared.	Familiarize all response staff and stakeholders with current emergency plans.
		Conduct regular training and exercises to validate the plans, including everyone who would have a role in responding to the specified scenario.
		OES should coordinate with new Board of Supervisor members after their taking office, to familiarize them with emergency plans, help clarify what their role may be during an emergency, and to ensure they are included in County emergency trainings and exercises.
1.2	Several existing plans are outdated, and other high priority plans and hazard specific annexes do not exist.	Review and update the County EOP; add a winter weather annex and other supporting components as needed. Include community partners and stakeholders in the review process.
		Conduct a gap assessment of OES and all departments to identify what existing response plans need updating and what plans should be developed.
		<p>All plans should be exercised and updated on an annual basis or following a response.</p> <p>Additional plans or EOP annexes the County could consider developing/updating include the following.</p> <ul style="list-style-type: none"> • Continuity of Operations (COOP) Plan • Crisis Communications Plan • Disaster Recovery Plan/Annex • Volunteer/Donations Management Plan/Annex • Recovery Plan/Annex

1.3	EOC and IMT personnel were lacking comprehensive emergency training and exercise experience.	Develop a County Integrated Preparedness Plan (IPP) to identify all-hazard preparedness priorities and a multi-year training and exercise schedule.
		Require and provide training for all personnel in alignment with National Incident Management System (NIMS) and the State of California's Standardized Emergency Management System (SEMS) guidance for their expected level of participation (staff, supervisory, or policy-level) at onboarding and at least biannually for the duration of their employment/appointment.
		Provide emergency management training for elected officials and their staff focused specifically on their unique roles and responsibilities during an emergency.
		Conduct annual EOC exercises to ensure familiarity with ICS structure and response plans. Training and exercises will help build preparedness for threats and hazards and identify resource requirements and capability gaps.
2.1	The County lacked sufficient winter-weather equipment to adequately manage the amount of snow that accumulated from the back-to-back winter storms.	Conduct a comprehensive gap analysis of severe weather equipment and supplies across all County departments. Address gaps in equipment and supplies, and train staff appropriately.
		Provide go-kits for field staff who may not be able to access necessary equipment and supplies prior to deployment into the field.
2.2	Existing contracts and agreements did not provide the necessary equipment to handle the impact of the storm, due to the lack of appropriate equipment in the region and competing priorities of surrounding communities.	Conduct assessment of all existing emergency response contracts; establish contracts with additional vendors to provide redundancy for sourcing equipment.
		Consider mutual aid agreements (MAA) with local jurisdictions, surrounding counties, and private entities to have access to available resource caches.

		Work with Cal OES ahead of the winter storm season to inventory and pre-identify State assets and other available resources to supplement County inventory.
2.3	Coordination between frontline departments provided the needed access to remote areas of the county most impacted by the snow, as not all departments had the resources needed to conduct response activities such as damage assessments.	Train and exercise multidisciplinary teams to work together during response events to meet overarching operational priorities.
		If feasible, procure additional equipment able to access remote areas of the county for appropriate County departments to utilize during/after severe weather conditions.
		Train staff to use equipment and ensure coordination across the county.
2.4	The existing system for requesting resources through the EOC was not well understood or coordinated, resulting in an ad hoc approach across multiple departments and individuals. This caused confusion and reported diversion of assets.	Establish, train, and exercise a comprehensive resource request process, to include procedures to request County, mutual aid, and State assets.
		Utilize a technology-based solution to provide real-time tracking and monitoring to avoid duplication of resource requests.
		Establish a resource unit when the EOC is activated, and ensure all resources are coordinated through that unit.
2.5	The County did not have an existing donations management plan/annex or a dedicated manager to oversee donations and coordinate warehouse logistics and staffing.	Develop a Volunteer/Donations Management Annex as a functional annex to the EOP. Train and exercise the annex with appropriate County staff and external partners.
		Investigate the feasibility of a comprehensive warehousing operation, including storage, packaging, and staffing/management. Contracts with private warehouse facilities may be an option for just-in-time capabilities.

3.1	The organization and structure of the EOC was not familiar and clear to all involved in response activities.	Continue the use of ICS to manage disaster response operations.
		Require and provide training for all personnel aligned with NIMS and SEMS guidance for their expected level of participation (staff, supervisory, or policy-level) at onboarding and at least biannually for their employment/appointment.
		Conduct annual EOC exercises to ensure familiarity with ICS structure, operational processes, and response plans.
3.2	The lack of liaison officers for key stakeholders led to ad hoc coordination between elected officials, external partners, and EOC staff.	Ensure liaison officers are utilized for key stakeholders, including board of supervisors and other elected officials, from the beginning of the incident and that they are kept informed of all information and decisions in real time to ensure timely and accurate situational awareness.
		Integrate guidance provided by FEMA's "Local and Elected Officials Guide: Role and Resources in Emergency Management" to document and clearly define roles in emergency response operations.
		Offer training such as G0402: National Incident Management System Overview for Senior Officials (Executives, Elected, & Appointed) for newly elected or appointed leaders on an as needed basis.
		Continue the use of ICS to manage disaster response operations.
		Require and provide training for all personnel aligned with NIMS and SEMS guidance for their expected level of participation (staff, supervisory, or policy-level) at onboarding and at least biannually for their employment/appointment.
		Conduct annual EOC exercises to ensure familiarity with ICS structure and response plans.

3.3	The EOC was understaffed for the scope and length of the incident.	Continue to onboard new OES staff.
		Investigate the ability of redeploying non-OES county staff to fill roles within the EOC.
		Provide training in alignment with NIMS and SEMS guidance for their expected level of participation (staff, supervisory, or policy-level).
		Establish procedures to routinely evaluate workload balance, including evaluation of the EOC structure against current operations.
3.4	There was minimal coordination between the EOC and the IMT, resulting in gaps in communication and duplication of efforts.	Develop and provide Just-In-Time (JIT) training during the response to close identified gaps.
		Identify criteria and document within the County EOP the decision triggers for the activation of the IMT.
3.5	Without a clear incident command structure, gathering and sharing ongoing accurate situational awareness information was challenging.	Clearly define and outline the lines of authority and roles and responsibilities when both the EOC and the IMT are activated.
		Establish a standing cadence for information dissemination across agencies and stakeholders.
		Ensure situation status updates are collected from all response agencies and stakeholders and disseminated following the pre-established cadence during the activation, through briefings and situation reports.
		Require and provide training for all personnel aligned with NIMS and SEMS guidance for their expected level of participation (staff, supervisory, or policy-level) at onboarding and at least biannually for their employment/appointment.
4.1	The delay in setting up a comprehensive, coordinated response structure caused impacts to	Conduct annual EOC exercises to ensure familiarity with ICS structure and response plans.
		Review and update the County EOP to incorporate decisions to activate the EOC with specific triggers (notice vs. no-notice events).

	coordination and resource allocation across County agencies and partner agencies.	Develop activation triggers across all relevant County departments, elected officials, and external partners.
		Identify criteria and triggers for the activation of primary agencies to fill ICS positions and staff EOC.
4.2	The lines of authority and the roles and responsibilities of the EOC and the IMT were not clearly defined.	Identify criteria and document within the County EOP the decision triggers for the establishment of an IMT.
		Clearly define and outline the lines of authority and roles and responsibilities when both the EOC and an IMT are activated.
4.3	Lack of a Unified Command Structure (UC) led to instances of competing priorities.	Consider the establishment of a UC structure when multiple departments have primary responsibilities during a response, to ensure coordination.
		Overarching operational objectives should be established with all primary agencies and communicated through the response agencies and external stakeholders.
		When priorities need to shift, they should be documented and disseminated to ensure overall situational awareness.
4.4	Inconsistent coordination and communication with external agencies, including state transportation and private utilities, created confusion and frustration, leading to negative public perception and unfavorable social media reports.	Ensure situation status updates are collected from all response agencies and stakeholders and disseminated regularly during the activation through briefings and situational reports.
		Review and update the County EOP to incorporate EOC activation triggers. Develop and utilize activation triggers across all relevant County departments, elected officials, and external partners.
		Identify criteria and triggers for the activation of primary agencies to fill ICS positions and staff EOC.
5.1	The County does not have an existing plan for volunteer/donations management.	Develop a volunteer and donations management position in the EOC to coordinate all requests and offers.

		<p>Develop a Volunteer/Donations Management annex to the County EOP that addresses spontaneous and unaffiliated volunteers and donations and train and exercise to it. A streamlined process with identified leads and staffing would support management of the function, allowing staff and first responders to fulfill their assigned duties.</p>
		<p>Engage community organizations during the development of a volunteer/donations management annex to the EOP.</p>
		<p>Invite community organizations and partners to participate in exercises for scenarios in which they will be called upon to assist the public with volunteer services and donations.</p>
		<p>Develop and maintain strong relationships with these organizations and volunteer response organizations such as Community Emergency Response Teams (CERT) and the Disaster Animal Response Team (DART).</p>
		<p>Continue seeking opportunities for public-private partnerships that support disaster response.</p>
		<p>Involve existing private partners in planning and other preparedness activities to help identify areas where opportunities for collaboration exist.</p>
		<p>Continue to define and develop policies, plans, and procedures for countywide response and recovery to streamline future processes for collaboration.</p>
<p>5.2</p>	<p>Mutual aid agreements existed but resources were not readily available, and existing agreements were not always known amongst responders.</p>	<p>Develop and maintain Memoranda of Understanding (MOU) and Memoranda of Agreement (MOA). Be ready to activate them with limited notice to increase resources during an event.</p>
		<p>Invite MOU partners to participate in exercises to align expectations and to ensure County personnel are aware of the resources available.</p>
		<p>Continue to build and nurture established mutual aid relationships.</p>

6.1	<p>The Public Information team was not included in the response from the beginning but was brought in after public perception began to turn negative. This inhibited their ability to control the narrative and keep the public informed with accurate, consistent, and timely messaging.</p>	<p>Ensure the PIO position within the EOC structure is assigned as appropriate to the specific emergency and activated from the beginning of the incident.</p> <p>Keep the assigned PIO informed of all information and decisions in real time to ensure timely and accurate public information.</p>
6.2	<p>A Joint Information Center (JIC) was never formally established, although a Joint Information System (JIS) was informally formed through daily communications calls and virtual meetings conducted with communications representatives from the various stakeholder agencies.</p>	<p>Formally establish a JIC when the EOC is activated, to coordinate all public information, public outreach, and media relations functions. It can be at the EOC or nearby.</p> <p>Include PIOs from all agencies responding to the event.</p> <p>Ensure the EOC, IMT, and all departments are aware that a JIC is available as a resource and information conduit.</p> <p>Establish relationships with local media and include media and other partners in County exercises and drills to establish relationships pre-disaster.</p> <p>Provide training for PIOs through Cal OES and FEMA's online basic public information course and their on-campus Advanced Public Information Course.</p> <p>Conduct and/or participate in regular exercises activating and establishing a JIC.</p>
6.3	<p>The remote call center, led by Public Health and heavily utilized during this response, was not always effective in providing and gathering information from the public in real time, exacerbating the public's frustration with the County's response to the storm.</p>	<p>Provide call center agents with training and job aids.</p> <p>Include call center structure and organization within the County EOP.</p> <p>Rapidly develop a list of FAQs for agents specific to the response along with scripts that are regularly updated in real time as often as necessary.</p> <p>Establish a link with the JIC to provide the PIOs with trends in caller questions and attitudes and rely on the PIOs to provide answers to</p>

		questions not included in the FAQs, including updates on road closures, shelter operations, and CPODs.
6.4	The Public Information /Communications team had challenges controlling storm-related messaging, setting realistic public expectations, and keeping the public informed with accurate, consistent, and timely messaging.	Develop a Crisis Communications Plan or Annex to the San Bernardino Emergency Operations Plan.
		Train and conduct training with appropriate County staff and external partners.
		Establish a Joint Information System (JIS) as the conduit for exchanging, coordinating, and integrating public information activities.
		Appoint a social media manager/monitor for real-time awareness and coordination of messaging coming from outside sources.
		Create one consistent County website for the public to access during any emergency and ensure it is updated regularly for ongoing and current emergencies.
		Establish relationships with local media and include media and other partners in County exercises and drills to establish relationships pre-disaster.
6.5	The Public Information / Communications team had challenges in disseminating information to meet the needs of individuals with Disabilities and Access and Functional Needs (DAFN) and limited English proficiency speakers.	Ensure visibility of operational priorities to the public during an active event to set public expectations regarding ongoing and upcoming operations.
		Craft clear messages in plain language that all can understand, including people with limited English proficiency and the DAFN population.
		Recognize the need and understand the process of integrating “Whole Community” partners, such as representatives from the DAFN community (Area Agency for Aging, Latin and Asian communities, deaf and hard of hearing, etc.) in planning for and response to various emergencies.

		Identify access and functional needs-related considerations before, during, and after disasters and integrate them into the County's emergency management system and emergency plans, including the Emergency Operations Plan and Crisis Communications Plan.
6.6	The County does not have a crisis communications plan or strategic communications program to assist with communications guidance during an emergency.	<p>Develop a comprehensive County Crisis Communications Plan that will guide how the County should communicate internally and externally to the public during emergencies.</p> <p>The plan should incorporate predetermined procedures to be followed, identify potential audiences, social media policies, and include drafted templates in advance for statements.</p>
6.7	Communication infrastructure limitations created issues for both the public and responders.	<p>Build the County's relationship with the local chapter of California Amateur Radio Emergency Service (ARES) and enhance the County's ability to communicate during an emergency when cell phone reception and internet service is not reliable.</p> <p>Consider researching redundant communications methods as well as purchasing additional deployable satellite equipment to augment communications capabilities between responders during an emergency.</p>
6.8	The winter storm appeared to catch many in the public unprepared to handle the volume and duration of the event.	<p>Ensure advanced timeliness of public messaging across multiple modes of communication, including the County website, emergency alert notification, and media briefings.</p> <p>Provide ongoing personal preparedness messaging and education campaign throughout the year to the year-round residents and short-term renters.</p>

Appendix B – Detailed Key Events Timeline

Date	Event	Conditions/Response	Milestone(s)
2/23/23	10:47 a.m. Blizzard Warning in effect for San Bernardino County	<p><i>Conditions:</i></p> <ul style="list-style-type: none"> • Heavy snow, high winds, visibility less than .25 mile • Snow accumulations above 5,000 feet at 3-5'; between 4,000-5,000 feet at 1-3'; sustained winds of 25-35 mph w gusts of 50-60 mph <p><i>Response:</i></p> <p>San Bernardino County (SBC) Emergency Services monitoring at duty officer status</p>	No Milestones
2/24/23	<ul style="list-style-type: none"> • All area mountain highways closed (18, 38, 330, 173, 189) • Downed power lines and trees on Hwy 18 • County Fire unable to access areas east of Sky Park • NWS winter storm warning in effect February 24-26 	<p><i>Conditions:</i></p> <ul style="list-style-type: none"> • The heaviest snow will occur after midnight on Friday, February 24, through 10 am on Wednesday, March 1, with snow gradually tapering off Wednesday afternoon. • Snow levels are forecasted to be in the 4,000-4,500-foot range during the heaviest precipitation, falling to around 2,500 feet as precipitation tapers off Wednesday evening. This storm is projected to produce another round of major impacts to infrastructure. <p><i>Response:</i></p> <ul style="list-style-type: none"> • OES issues Flash Report #1. 	No Milestones

Date	Event	Conditions/Response	Milestone(s)
		<ul style="list-style-type: none"> SBC Emergency Services monitoring at <i>Duty Officer Status</i> 	
2/25/23	<ul style="list-style-type: none"> A concurrent water main pipeline break (Hesperia) and power outages to key pumping facilities split the County's efforts as they responded to this emergency and the winter storm. 	<p><i>Conditions:</i></p> <ul style="list-style-type: none"> Continued heavy snowfall and accumulation Limited visibility and gusting winds <p><i>Response:</i></p> <ul style="list-style-type: none"> Daily Flash Report #2-4 Boil Water Notice (CSA 70 J) San Bernardino County Operational Area (SBCOA) and EOC activated to level 3 (normal operations / steady state) in support of winter storm event All state highways leading to mountain communities are now closed due to snow accumulation California Highway Patrol (CHP), Caltrans, County Roads, and San Bernardino Sheriff's Dept coordinate escort of gas and grocery delivery trucks 	No Milestones
2/26/23	<ul style="list-style-type: none"> Boil water notice issued from Public Works Natural gas leaks across Lake Arrowhead and Crestline areas 	<p><i>No Conditions</i></p> <p><i>Response:</i></p> <ul style="list-style-type: none"> Daily Flash Report #5 from EOC: Boil Water Notice Bottled water is available for community impacted (County Service Area 70J). Water systems in Hesperia are being repaired. 	No Milestones

Date	Event	Conditions/Response	Milestone(s)
		<ul style="list-style-type: none"> Limited response from gas company to address gas leaks. 	
2/27/23	<ul style="list-style-type: none"> San Bernardino County declares local emergency All State routes to mountain communities closed County residents trapped in homes needing food and medications County residents stranded at base of the mountain due to highway closures 	<ul style="list-style-type: none"> Heavy snow, high winds, visibility less than .25 mile Snow accumulations above 5,000 feet are at 3-5'; between 4,000-5,000 feet at 1-3'; sustained winds of 25-35 mph with gusts of 50-60 mph <p><i>Response:</i></p> <ul style="list-style-type: none"> EOC Daily Flash Reports #6 & 7 OES activates EOC to Level 1 (full activation) Emergency Hotline number activated Shelter and resource center established (Redlands) County departments activate Department Operations Centers (DOC) to support response activities. 	No Milestones
2/28/23	Extreme Cold Winter Storm	<p><i>Conditions:</i></p> <ul style="list-style-type: none"> A major winter storm impacts the mountains through Wednesday afternoon. The heaviest snow is forecasted to occur after midnight through 10:00 a.m. Wednesday, March 1, with snow gradually tapering off Wednesday afternoon. Snow levels are forecasted to be in the 4,000-4,500 feet range during the heaviest precipitation, falling to around 2,500 feet as precipitation tapers off Wednesday evening. This storm is forecasted to produce another round of major impacts to infrastructure. 	No Milestones

Date	Event	Conditions/Response	Milestone(s)
		<ul style="list-style-type: none"> • Dry weather will prevail Thursday through the upcoming weekend with just a slight chance of light snow returning by Monday, March 6. <p><i>Response:</i></p> <ul style="list-style-type: none"> • Emergency Operations Center (EOC) is activated. • Incident Management Team (IMT) is activated – the Sheriff’s Department assumed the position of Incident Commander for County law enforcement. • Mountain Command Post is at Fire Station 91 in Lake Arrowhead; a unified command between the Fire Protection District (FPD) and the San Bernardino County Sheriff’s Department is activated, staffed by personnel from Twin Peaks Station and SBC FPD. • The San Bernardino Fire Chief assumes the position of Incident Commander for IMT. • Mountain Command Post (MCP) is activated. 	
3/1/23	<ul style="list-style-type: none"> • State of Emergency declared by CA governor • All State routes to mountain communities still closed • Boil water notice rescinded 	<p><i>No Conditions</i></p> <p><i>Response:</i></p> <ul style="list-style-type: none"> • Flash Reports #8 & 9 • Mobile Field Force (MFF) is activated and coordinates with IMT daily field operations and deployment plans. • Additional shelter is established in Lake Arrowhead. • BOS (Board of Supervisors) creates \$10M emergency fund to support road clearing. 	<i>No Milestones</i>

Date	Event	Conditions/Response	Milestone(s)
		<ul style="list-style-type: none"> • Caltrans suspends escorting residents on highways to/from mountain towns. • County Fire, Sheriff's Department, CHP, County Public Works, Caltrans, Southern Cal Edison, and Southern Cal Gas enter a unified command structure to better coordinate the emergency response. • Shelter opens in Lake Arrowhead (Rim of the World High School). 	
3/2/23	<ul style="list-style-type: none"> • State highways open to residents for several hours • Boil water notice rescinded 	<p><i>No Conditions</i></p> <p><i>Response:</i></p> <ul style="list-style-type: none"> • Flash Reports #10, 11, 12, 13 • An additional line is added at the EOC Call Center to handle calls related to damage assessments, building permits, or inspections. • Gas Emergency Hotline is established, along with SBC Storm Response Call Center Hotline, Emergency Donations, Storm Updates and Info Website, and Snow Removal Data. • Mountain Transit is running for Rim Community. • Caltrans is reopening some mountain roads for residents only. 	<ul style="list-style-type: none"> • Newly opened roads become congested, and stuck vehicles block roadways; SBSD (San Bernardino County Sheriff's Department) & SBC FPD work with state officials to close highways to general traffic • 12 rescues by Sheriff's Dept (residents needing relocation)
3/3/23	<ul style="list-style-type: none"> • <i>No Event</i> 	<p><i>Conditions:</i></p> <ul style="list-style-type: none"> • Another storm is possible toward the end of the week. <p><i>Response:</i></p> <ul style="list-style-type: none"> • Food distribution is operated by Crestline and Running Springs. 	<ul style="list-style-type: none"> • Call center received 2,051 calls to date • 309 miles and 59% of San Bernardino County maintained roadways now cleared (from Mt. Baldy and Wrightwood to

Date	Event	Conditions/Response	Milestone(s)
		<ul style="list-style-type: none"> The Fire Protection District created an online tool for reporting property damage. County Damage Assessment Unit is established. 	eastern edge of Big Bear Valley)
3/4/23	<ul style="list-style-type: none"> No Event 	<p>No Conditions</p> <p>Response:</p> <ul style="list-style-type: none"> IMT moves to larger location at Orange Show Fair Grounds. SBC Sheriff's Dept. activates Dept. Operations Center (DOC) SBC Storm Response Emergency Donations program is established. 	No Milestones
3/5/23	<ul style="list-style-type: none"> Wind Advisory in effect in the San Bernardino County Mountains until 8: 00 a.m. 	<p>Conditions:</p> <ul style="list-style-type: none"> Another storm is possible toward the end of the week. <p>Status remained: No additional activities reported.</p>	409 miles and 79% of SB County maintained roadways cleared; 100% in Wrightwood; 60% Crestline and Lake Arrowhead
3/6/23	No Event	<p>No Conditions</p> <p>Response:</p> <ul style="list-style-type: none"> Caltrans opens state highway 18, 330, 38, 189, 173, 2 and route 138 Up and down mountain travel is at the discretion of the Incident Management Team (IMT): collaborative of County Fire, County Sheriff, CHP, Caltrans 	85% of the County roads were deemed passable systemwide
3/7/23	No Event	No Conditions:	<ul style="list-style-type: none"> Hwy 18 between Lucerne Valley and Big Bear open

Date	Event	Conditions/Response	Milestone(s)
		<p><i>Response:</i></p> <ul style="list-style-type: none"> • Flash Report #15 • SB County 2023 Storm Response establishes program to assist with prescription medicine delivery for mountain communities and a hotline. • Burrtec Waste adds mountain drop-off sites for residents needing to dispose of household trash. • Mountain Transit is running Route 6 from Lake Arrowhead to San Bernadino. • Food is distributed at the following sites: Wrightwood, Charles Hoffman, Valley of Enchantment elementary schools and Crestline, Lake Arrowhead Libraries. • Crestline Food Donation Event is announced for the following day at Goodwin & Son’s Market. 	<ul style="list-style-type: none"> • Hwy 18 at dam remains closed • Hwy 18 Upper Waterman open to residents ONLY • Hwy 18 “Arctic Circle” remains closed • Hwy 330 at City Creek open to residents only • Hwy 38 open to residents only in both directions
3/8/23	Rain and flooding due to snow melt	<p><i>Conditions:</i></p> <ul style="list-style-type: none"> • Snow levels between 9,000 – 10,000 feet <p><i>Response:</i></p> <ul style="list-style-type: none"> • Flash Report #16, 17 • SB County Fire District offers sandbags • SB County snow removal reimbursement program is initiated (\$500). 	<ul style="list-style-type: none"> • County road clear efforts passed 85%-mark system wide • Mountain Transit resumes Route 5 from Big Bear and Running Springs • US Postal Service reopens Crestline, Skyforest, and Twin Peaks; Blue Jay, Lake Arrowhead, and Rimforest closed
3/9/23	Rain and flooding due to snow melt	<i>No Conditions</i>	<ul style="list-style-type: none"> • 488 road miles serviced • 28 road miles remaining

Date	Event	Conditions/Response	Milestone(s)
		<p><i>Response:</i></p> <ul style="list-style-type: none"> Flash Report #18 Temporary Trash Collection location is announced: Mary Putnam Henck Intermediate School 	
3/10/23	<ul style="list-style-type: none"> Flood watch and high wind warning issued for San Bernardino County Mountains Presidential major disaster declaration declared 	<p><i>No Conditions</i></p> <p><i>Response:</i> Flash Report #19</p>	Caltrans completes clearing of Keller Peak Road.
3/11/23	Flood watch and high wind warning issued for San Bernardino County Mountains	<p><i>Conditions:</i></p> <ul style="list-style-type: none"> Rain through Saturday morning, with total amounts 1-2," isolated higher amounts along the coastal mountain slopes Snow levels around 10,000 feet, causing precipitation to fall as rain in impacted communities Water could flow and pond over roadways Dry Saturday afternoon through Tuesday, with high potential of another rainstorm arriving <p><i>Response:</i> Demobilization plan begins.</p>	<i>No Milestones</i>
3/12/23	Flood watch and high wind warning issued for	<i>Conditions:</i>	All highways are open to the public except the Narrows and the

Date	Event	Conditions/Response	Milestone(s)
	San Bernardino County Mountains	<ul style="list-style-type: none"> • Rain through San Bernardino County with higher totals in coastal mountain slopes • Mountain community (Lake Arrowhead, Crestline, Running Springs, Wrightwood). High impact of rain totaling 1-2”, and winds gusting in the 40s mph. • The snow level will be at the highest elevation of 10,000 feet. • Dry weather expected Saturday afternoon through Tuesday <p><i>Status remained: No additional activities reported.</i></p>	Arctic Circle (due to rockslides and avalanche concerns).
3/13/23	NWS – Flood watch for the San Bernardino Mountains	<p><i>Conditions:</i></p> <ul style="list-style-type: none"> • Potential for heavy rain Tuesday night through Wednesday morning • Precipitation will end early Thursday, with a slight chance of precipitation on Friday and Saturday with snow levels at 5,500–6,500 feet. • Possible precipitation late next weekend <p><i>Response:</i></p> <ul style="list-style-type: none"> • Boil water notice for Forest Park MWC. • Burrtec trash service resumes. 	<i>No Milestones</i>
3/14/23	NWS Flash Flood watch 03/14/23-03/15/23	<p><i>No Conditions</i></p> <p><i>Response:</i></p> <ul style="list-style-type: none"> • San Bernardino County Land Use Services Department creates Storm Response Team to assist county residents in the repair and rebuilding of snow damaged structures. 	San Bernardino County BOS ratifies Snow Removal Reimbursement Program.

Date	Event	Conditions/Response	Milestone(s)
		<ul style="list-style-type: none"> Free Wi-Fi is provided at San Bernardino County Libraries. Boil water notice for Forest Home Christian Conference Center. 	
3/15/23	<ul style="list-style-type: none"> NWS Flash Flood watch 3/14/23-3/15/23 Boil water notice for Cedar Glen 	<p><i>Conditions:</i></p> <ul style="list-style-type: none"> Rain and snow showers expected Friday Mountain communities (Lake Arrowhead, Crestline, Running Springs, Wrightwood) Snow levels falling to 5,000 feet by the weekend <p><i>Response:</i></p> <ul style="list-style-type: none"> Public Works upgrades GIS map to include “Snow Road Widened Status” dashboard. San Bernardino County Fire Protection District enrolls residents in emergency notification program. 	<i>No Milestones</i>
3/16/23	<i>No Event</i>	<p><i>Conditions:</i></p> <ul style="list-style-type: none"> Snow levels could fall to 4,500 – 5,000 feet. <p><i>Status remained: No additional activities reported.</i></p>	<i>No Milestones</i>
3/17/23	<i>No Event</i>	<p><i>Conditions:</i></p> <ul style="list-style-type: none"> Snow levels could fall to 4,500-5,000 feet <p><i>Response:</i></p> <ul style="list-style-type: none"> Flash Report #24 Boil water notice rescinded for Forest Home Food Distribution Sites are identified: Wrightwood Community Center, Robert 	<i>No Milestones</i>

Date	Event	Conditions/Response	Milestone(s)
		<p>Hootman Senior and Community Center, Valley of Enchantment Elementary School, Lake Arrowhead Branch Library</p> <ul style="list-style-type: none"> • Transition planning from response to recovery • Shelters are demobilized (Redland EV HS, Rim of the World HS). • CPOD sites are demobilized. 	
3/18/23	<i>No Event</i>	<p><i>Conditions:</i></p> <ul style="list-style-type: none"> • Snow levels start around 5,000 ft on Tuesday morning, lowering to 4,000-4,500 feet by Tuesday night • Heavy precipitation expected Tuesday and ending Wednesday night • Snow of 5-10" at 4000-6000 feet and 15-30" at 6,000-8,000 feet <p><i>Response:</i> Sheriff's resources are demobilized.</p>	<i>No Milestones</i>
3/19/23	Storm system brings wind, rain, and snow Sunday-Thursday	<p><i>Conditions:</i></p> <ul style="list-style-type: none"> • Light precipitation on Sunday and continues into Monday • A strong storm moves on Tuesday into Wednesday • Mountain communities (Lake Arrowhead, Crestline, Running Springs, Wrightwood) snow of 5-10" at 4,000-6,000 feet and 15-30" at 6,000-8,000 feet <p><i>Status remained:</i> No additional activities reported.</p>	<i>No Milestones</i>

Date	Event	Conditions/Response	Milestone(s)
3/20/23	Atmospheric river brings wind, rain, and snow 3/20-3/22	<p><i>Conditions:</i></p> <ul style="list-style-type: none"> • Rainfall rates of 0.25 to 0.75 inches per hour for all areas heaviest Tuesday morning to midday. • Thunderstorms are possible with equal or heavier rainfall rates including Wednesday. • Moderate snow level at 6,000 feet lowering to 5,000 feet Tuesday night and then 4,000 feet for Wednesday, 1-2 feet at 5,500 to 6,500 feet and 2-4 feet above 6,500 feet several inches down to 4,000 to 4,500 feet <p><i>Response:</i></p> <ul style="list-style-type: none"> • Flash Report #25 <p>SB County Sheriff issues Evacuation Warning for Oak Glen, Forest Falls, Mountain Home Village, Angelus Oaks, and Northeast Yucaipa effective at 8:00 p.m.</p>	No Milestones
3/21/23	Atmospheric river brings wind, rain, and snow 3/20-22	<p><i>Conditions:</i></p> <ul style="list-style-type: none"> • A stronger storm moves through Tuesday into Wednesday • Snow levels start around 5,000 feet on Tuesday morning, lowering to 4,000-4,500 feet by Tuesday night • Heavy precipitation is expected Tuesday and ending by Wednesday night. • New snow of 6-12" at 4,000-6,000 feet and 16-36" at 6,000-8,000 feet <p><i>Response:</i></p>	No Milestones

Date	Event	Conditions/Response	Milestone(s)
		<ul style="list-style-type: none"> Flash Report #26 Evacuation Warning lifted at 2:00 p.m. 	
3/22/23	Atmospheric river brings wind, rain, and snow 3/20-22	<p><i>No Conditions</i></p> <p><i>Response:</i></p> <ul style="list-style-type: none"> Flash Report #28 American Red Cross Shelter is demobilized at 7:00 p.m. (Redlands East Valley High School) 	<i>No Milestones</i>
3/23/23	<i>No Event</i>	<p><i>No Conditions</i></p> <p><i>Response:</i></p> <ul style="list-style-type: none"> Flash Report #29 Boil water notice is rescinded for Cedar Glen. 	<i>No Milestones</i>
3/24/23	<i>No Event</i>	<p><i>No Conditions</i></p> <p><i>Response:</i></p> <ul style="list-style-type: none"> Flash Report #30 Food distribution remains in operation until 03/31 or until supplies last 	<i>No Milestones</i>
3/28/23	<i>No Event</i>	<p><i>No Conditions</i></p> <p><i>Status remained: No additional activities reported.</i></p>	<ul style="list-style-type: none"> SBC BOS approves continuance of local emergency. SBC BOS approves County's Mountain Small Business Grants Snow Response Program.
3/29/23	<i>No Event</i>	<p><i>No Conditions</i></p> <p><i>Status remained: No additional activities reported.</i></p>	<ul style="list-style-type: none"> San Bernardino County Snow Removal Program serves 2,000 residents.



Date	Event	Conditions/Response	Milestone(s)
4/11/23	<i>No Event</i>	<i>No Conditions</i> <i>Status remained: No additional activities reported.</i>	<ul style="list-style-type: none"> • SBC BOS approves continuance of local emergency. • SBC BOS ratifies \$750k increase to County's Snow Removal Reimbursement Program.
6/13/23	<i>No Event</i>	<i>No Conditions</i> <i>Status remained: No additional activities reported.</i>	<ul style="list-style-type: none"> • SBC BOS approves continuance of local emergency • SBC BOS ratifies an increase of \$150k to County's Snow Removal Reimbursement Program.
6/27/23	<i>No Event</i>	<i>No Conditions</i> <i>Status remained: No additional activities reported.</i>	<ul style="list-style-type: none"> • SBC BOS terminates local emergency.

Appendix C – Data Call and Document Review

Document Name	Date Released	Document Origin and Document Detail
SBC Emergency Operation Plan (EOP)	1/1/2019	Emergency Operations Plan
Flash Report #1	2/24/2023	OES Daily Report
Flash Report #2	2/25/2023	OES Daily Report
Flash Report #3	2/25/2023	OES Daily Report
Flash Report #4	2/25/2023	OES Daily Report
Flash Report #5	2/26/2023	OES Daily Report
County Declares Emergency in Wake of Massive Snowstorms	2/27/2023	BOS Press Release
Flash Report #6	2/27/2023	OES Daily Report
Flash Report #7	2/27/2023	OES Daily Report
Storm Response Newsletter	2/28/2023	County crews continue coordinated response to snowstorms
Situation Summary #1	2/28/2023	Situation Summary Report (SSR)
EOC Event Action Plan #1	2/28/2023	Emergency Action Plan (EAP)
EOC Event Action Plan #1	2/28/2023	EAP
Storm Response Newsletter	3/1/2023	County leads efforts to provide storm information and secure resources
Flash Report #8	3/1/2023	OES Daily Report
Flash Report #9	3/1/2023	OES Daily Report
Flash Report #10	3/1/2023	OES Daily Report
CA State of Emergency Declaration	3/1/2023	Executive Order
Flash Report #11	3/2/2023	OES Daily Report
Flash Report #13	3/2/2023	OES Daily Report

Document Name	Date Released	Document Origin and Document Detail
EOC Event Action Plan #2	3/2/2023	EAP
Storm Response Newsletter	3/3/2023	County leadership updates the public on the snowstorm recovery efforts
Flash Report #12	3/3/2023	OES Daily Report
Situation Summary #2	3/3/2023	SSR
Storm Response Newsletter	3/4/2023	County launches donation program for storm victims
EOC Event Action Plan #3	3/4/2023	EAP
County roads approach 80% clearance	3/5/2023	County Press Release
EOC Event Action Plan #3	3/5/2023	EAP
EOC Event Action Plan #3	3/5/2023	EAP
CPOD Plan Charles Hoffman Elementary	3/6/2023	
Storm Response Newsletter	3/6/2023	Major progress achieved in efforts to reopen roads
EOC Event Action Plan #4	3/6/2023	EAP
Situation Summary #3	3/6/2023	SSR
Storm Response Newsletter	3/7/2023	Snow removed from more than 90% of county roads
Flash Report #14	3/7/2023	OES Daily Report
Flash Report #15	3/7/2023	OES Daily Report
EOC Event Action Plan #5	3/7/2023	EAP
Situation Summary #4	3/7/2023	SSR
County Employee Volunteers Needed	3/8/2023	Interoffice Memo
Storm Response Newsletter	3/8/2023	Rain is on the way- Be prepared
Flash Report #16	3/8/2023	OES Daily Report

Document Name	Date Released	Document Origin and Document Detail
Flash Report #17	3/8/2023	OES Daily Report
EOC Event Action Plan #6	3/8/2023	EAP
Situation Summary #5	3/8/2023	SSR
Situation Summary #6	3/8/2023	SSR
Storm Response Newsletter	3/9/2023	The county is preparing for rain. You should, too
Flash Report #18	3/9/2023	OES Daily Report
EOC Event Action Plan #7	3/9/2023	EAP
EOC Event Action Plan #8	3/9/2023	EAP
Situation Summary #7	3/9/2023	SSR
Flash Report #19	3/10/2023	OES Daily Report
Flash Report #20	3/10/2023	OES Daily Report
EOC Event Action Plan #9	3/10/2023	EAP
EOC Event Action Plan #10	3/11/2023	EAP
Situation Summary #8	3/11/2023	SSR
EOC Event Action Plan #11	3/12/2023	EAP
Flash Report #21	3/13/2023	OES Daily Report
EOC Event Action Plan #12	3/13/2023	EAP
Situation Summary #9	3/13/2023	SSR
Storm Response Newsletter	3/14/2023	Board of supervisors directs relief for owners of blizzard-damaged property
Flash Report #22	3/14/2023	OES Daily Report
EOC Event Action Plan #13	3/14/2023	EAP
Situation Summary #10	3/14/2023	SSR
Storm Response Newsletter	3/15/2023	County prepares for the storms ahead



Document Name	Date Released	Document Origin and Document Detail
Flash Report #23	3/15/2023	OES Daily Report
EOC Event Action Plan #14	3/15/2023	EAP
Storm Response Newsletter	3/16/2023	Break in the rain offers time to prepare
EOC Event Action Plan #15	3/16/2023	EAP
Flash Report #24	3/17/2023	OES Daily Report
EOC Event Action Plan #16	3/17/2023	EAP
Situation Summary #11	3/17/2023	SSR
Storm Response Newsletter	3/18/2023	County Prepares for Coming Storm
EOC Event Action Plan #17	3/18/2023	EAP
EOC Event Action Plan #18	3/19/2023	EAP
Flash Report #25	3/20/2023	OES Daily Report
EOC Event Action Plan #19	3/20/2023	EAP
Situation Summary #12	3/20/2023	SSR
Storm Response Newsletter	3/20/2023	County poised for storm response
Flash Report #26	3/21/2023	OES Daily Report
Flash Report #27	3/21/2023	OES Daily Report
Flash Report #28	3/22/2023	OES Daily Report
Storm Response Newsletter	3/22/2023	County's coordinated storm response tackles snow all night
Flash Report #29	3/23/2023	OES Daily Report
Storm Response Newsletter	3/23/2023	County crews make quick progress clearing public roads
Flash Report #30	3/24/2023	OES Daily Report
Storm Response Newsletter	3/24/2023	County crews service all public roads ahead of schedule



Document Name	Date Released	Document Origin and Document Detail
Storm Response Newsletter	3/25/2023	Mountain residents served at new County assistance centers
Storm Response Newsletter	3/26/2023	County assistance centers welcome and serve hundreds of mountain residents
Storm Response Newsletter	3/27/2023	County LAC's serve thousands of mountain residents over the weekend
Storm Response Newsletter	3/28/2023	Supervisors create mountain business grant program
Storm Response Newsletter	3/29/2023	Snow removal payback program serves 2,000.
Flash Report #31	3/29/2023	OES Daily Report
SBC New Now March Edition	3/30/2023	County Email Update
Storm Response Newsletter	3/30/2023	County leads FEMA, other agencies on tour in effort to secure aid
Storm Response Newsletter	3/31/2023	County shows federal and state agencies extent of mountain damage
Storm Response Newsletter	4/02/2023	County assistance center in Wrightwood connects hundreds with services
Storm Response Newsletter	4/7/2023	Mountains Small Business Grant Programs
Flash Report #32	6/9/2023	OES Daily Report
2023 Mountain Storm Response Summary and After-Action Review	2023	San Bernardino County Sheriff's Department
Snow Blizzard Management Plan	2023	San Bernardino County Public Works

Appendix D – Survey Questions and Summary

Nearly all stakeholders completed surveys (13 out of 14) demonstrating strong participation among respondents. This survey was designed to gather broad, foundational information regarding the winter storm event and is a combination of multiple choice, Likert Scale, and open-ended questions. Identified internal stakeholders including key departmental department heads and frontline team leads, were asked to complete a 30-question survey via Survey Monkey. Survey questions were designed to elicit information around coordination and communication, activation and utilization of emergency plans, and open-ended responses about challenges and successes of the County response to this event.

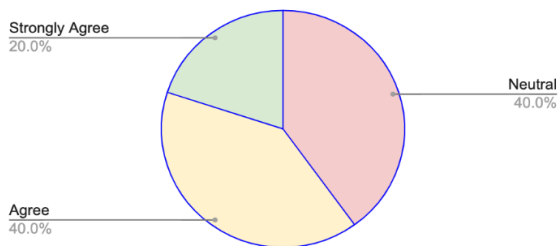
The survey was designed to inform the interviews. Some of the survey answers may conflict with answers given during the interviews. All identified stakeholders except elected officials (Board of Supervisors and the Sheriff) were asked to complete the survey.

Q1. What is your name and full name, title, and position?

Q2. What role(s) did you fulfill during the February 2023 Snowstorm response?

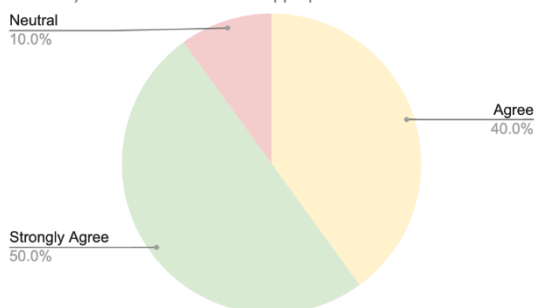
Q3. The County’s organizational structure areas of authority, and my area of responsibility were clearly communicated and understood during this incident.

The County’s organizational structure, areas of authority, and my areas of responsibilities were clearly communicated and understood...



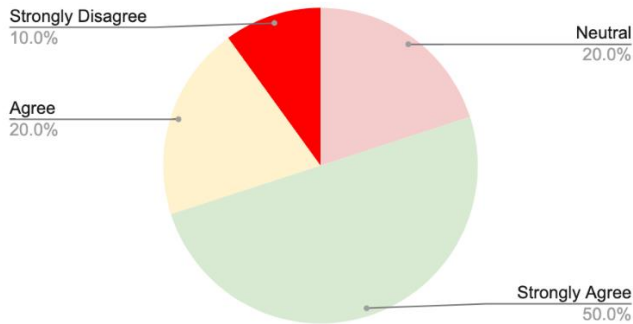
Q4. The responsibilities my department and I (by statute, plan, or directive) were tasked with were appropriate.

The responsibilities my department and I (by statute, plan, or directive) were tasked with were appropriate.



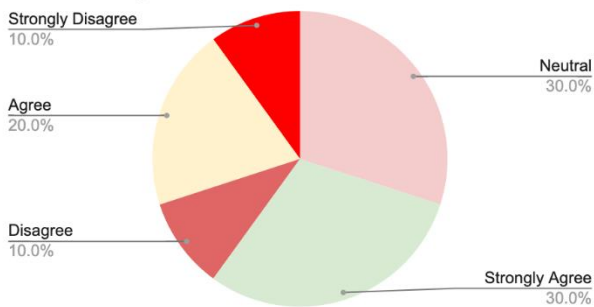
Q5. I had the authority I felt was needed to carry out assigned responsibilities.

I had the authority I felt was needed to carry out assigned responsibilities.



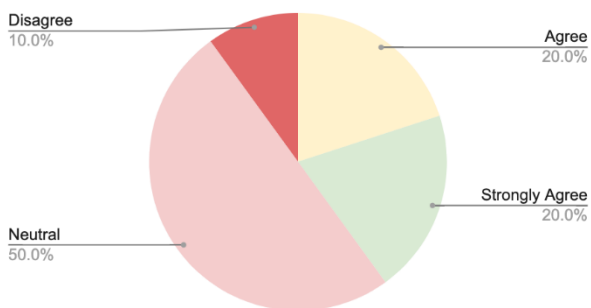
Q6. I had the information (amount and type) I needed to support effective decision-making.

I had the information (amount and type) I needed to support effective decision-making.



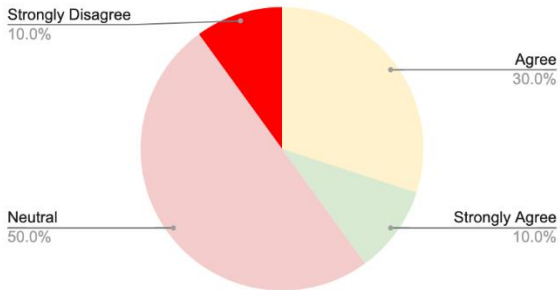
Q7. Necessary emergency supplies, equipment and/or MOUs/contracts were available to acquire emergency services or supplies if needed.

Necessary emergency supplies, equipment and/or MOUs/contracts were available to acquire emergency services or supplies, if needed.



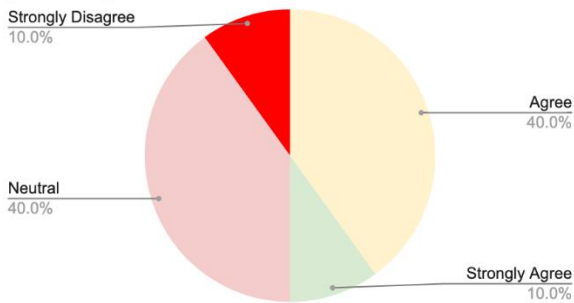
Q8. I am familiar with the County’s Emergency Operations Plan and associated plans.

I am familiar with the County’s Emergency Operations Plan, and associated plans.



Q9. I utilized the County’s Emergency Operations Plan and associated plans, during this incident.

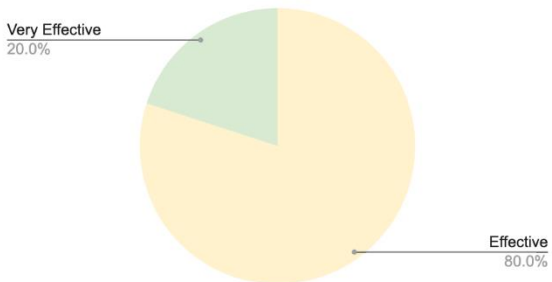
I utilized the County’s Emergency Operations Plan, and associated plans, during this incident.



Q10. Effectiveness of Communication Across Stakeholders

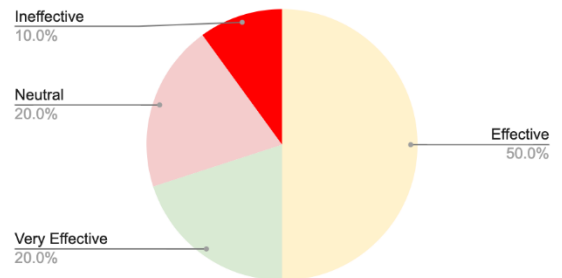
Effective Communication with County Departments

San Bernardino County’s effectiveness coordinating with County Departments during the snowstorm



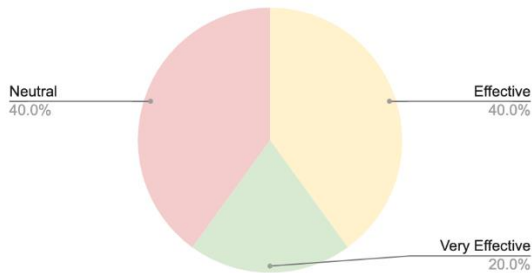
Effective Communication with County Cities & Towns

San Bernardino County’s effectiveness coordinating with county cities & towns during the snowstorm



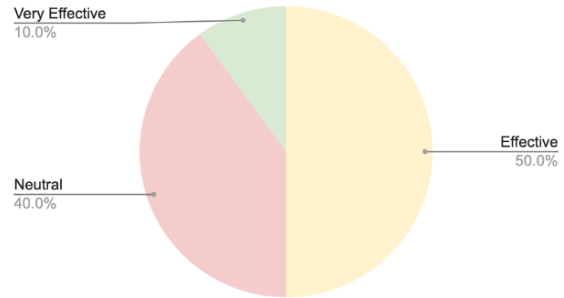
Effective Communication with State Agencies

San Bernardino County's effectiveness coordinating with State Agencies during the snowstorm



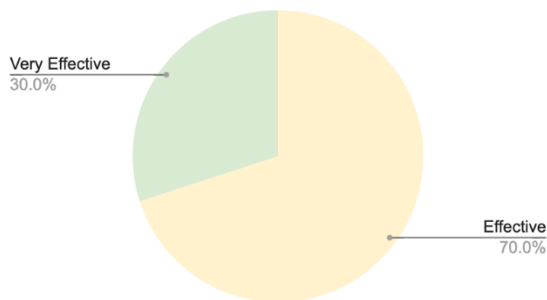
Effectiveness of San Bernardino Co Press Releases

Effectiveness of SBC Press releases



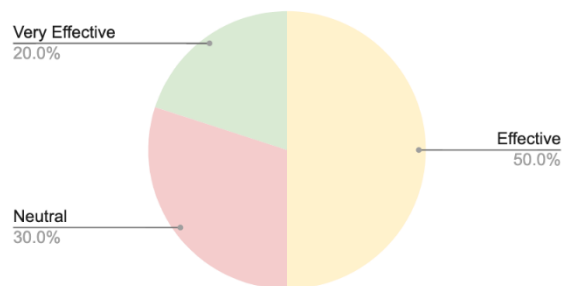
Effectiveness of San Bernardino Co Press Conferences

Effectiveness of SBC Press conferences



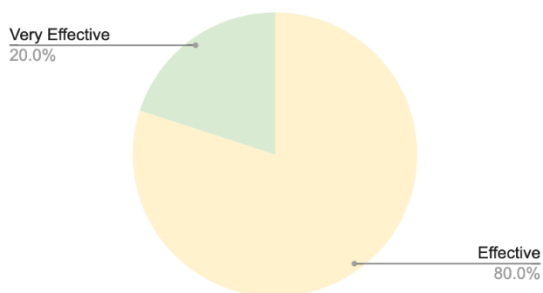
Effectiveness of San Bernardino Co. Social Media

Effectiveness of SBC Social media



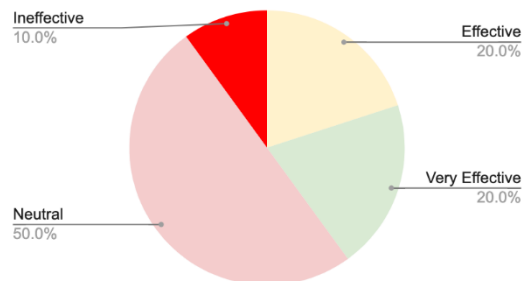
Effectiveness of SBC News & Media Interviews

Effectiveness of SBC news media interviews



Effectiveness of SBC Emergency Alerts

Effectiveness of SBC Emergency Alerts





Appendix E – Interview Questions and Summary

Nineteen stakeholders participated in interviews, including members of the San Bernardino County Board of Supervisors and representatives from Public Works, County Fire Department, Sheriff's Office, Communications, Purchasing, County CEO, and Building Inspectors. Each individual was asked questions related to their specific role in the emergency as well as general questions related to the County's emergency response.

The County Administrative Office has contracted with Connect Consulting to prepare a comprehensive After-Action Report (AAR) and of the County's response to the 2023 winter storm emergency during the period of February 23, 2023 (First Flash Report) to April 2, 2023 (Last Local Assistance Center Closed). These key dates cover the timespan when the County was heavily involved with both response and recovery of this exceptional winter storm event. As you played a role and have critical knowledge of the County's winter storm response, Connect Consulting is asking you to participate in a 60-minute interview to gather critical information to be included in the report.

Any information gathered through this interview process will be aggregated and organized by focus areas before being incorporated into the final AAR. Focus areas include Planning, Resources/Logistics, Incident/Organizational Management, Command/Decision Making, Partner Coordination and Public Information and Communications. We appreciate your participation in this interview process.

General Introduction Questions

At a high level, please describe your role during the winter storm response, including your primary functions.

Did your role and responsibilities differ from other responses? If so, how?

Did your role have any involvement in the initial and ongoing Emergency Operations Center (EOC) activation for the winter storm response (notifications, ICS structure, staffing, etc.)?

1. Planning

Please describe your department's emergency plans before the winter storm (including Emergency Operations Plan, Continuity of Government/Continuity of Operations Plans, Severe Weather Annex, etc.).

Please describe any training and exercise conducted on those plans prior to the 2023 Winter Storm.



2. Resource/Logistics

Did your organization pre-stage any resources for the winter storm response? If so, please describe that process.

Can you describe the key resource and/or logistical challenges your team encountered during the San Bernardino County winter storm response, and how did you address them?

How did your logistics team adapt to changing conditions and demands throughout the emergency response, and what strategies or technologies were particularly helpful in making real-time adjustments to your logistical operations?

Were there sufficient agreements in place with private individuals and businesses to supplement the County's equipment needs?

Were those agreements successfully activated during the winter storm response? What factors are taken into consideration for determining whether the County should purchase needed equipment versus entering an agreement with private individuals and businesses?

3. Incident/Organizational Management

Similarly, did your role have any involvement in the Incident Command System (ICS) structure in San Bernardino County's response?

Do you believe the Incident Command Structure was effective in coordinating across command (County government) and general staff (divisions/branches) roles?

How could coordinating across command be improved?

4. Command/Decision Making

What were some of the major decision points that you were involved with that occurred during this event response, specifically during this period?

How was decision-making coordinated with County executive leadership and other County departments?

Are there internal and external partners who should have been included and who were not included?

What worked well (and did not work well) in this process?



5. Partner Coordination

Can you provide examples of successful partner coordination and collaboration during the winter storm response?

What factors contributed to these successful partnerships?

Were there any instances of resource sharing or mutual aid agreements with neighboring jurisdictions or organizations?

Please describe these instances of resource sharing and their impact on the emergency response effort.

How did you address any coordination challenges or conflicts that arose during the response to the winter storm? What strategies or mechanisms were used to resolve these issues and maintain a cohesive response?

6. Public Information and Communication

How would you assess the effectiveness of communication channels and protocols used during the winter storm response?

Were there any notable successes or challenges in maintaining communication across agencies and other County departments?

In what ways did your organization utilize technology and tools (e.g., radio systems, social media, emergency alert systems) to reach both internal and external stakeholders during the winter storm event?

Were there any innovative effective methods used to receive information from partners and workers out in the field?

Were there any instances where communication breakdowns or delays occurred, and how were these issues addressed?

What strategies or recommendations do you have for improving communication resilience in future emergency responses?

Could you share some examples of successful interagency collaboration and communication strategies employed during the winter storm response and some examples of challenges?



Closing Interview Questions

As you reflect on your experience during the winter storm response, do any of the following stand out to you including:

- Strengths in San Bernardino's response
- Areas for improvement in San Bernardino's response
- Best practices that San Bernardino adopted during the response that should be captured into policies and plans for future disaster responses

Are there any additional items you would like to share before we conclude today's interview?

Appendix F - Glossary and Acronyms

Glossary

After-Action Report (AAR). A report covering response actions, application of the Incident Command System, modifications to plans and procedures, training needs, and recovery activities.

Call Center. During an emergency, a call center or “hotline” receives and coordinates inbound calls and messages from the public regarding the status of the emergency and the jurisdiction’s response to it. This would include information on evacuations, shelters, food and clothing distribution, volunteer opportunities, road accessibility, and other disaster-related issues. Call Centers typically receive their information from an established Joint Information Center.

Continuity of Operations (COOP). Continuity of Operations is a United States federal government initiative, required by U.S. Presidential Policy Directive 40 to ensure that agencies can continue the performance of essential functions under a broad range of circumstances.

Commodity Points of Distribution (CPOD). Points of Distribution (POD) are designated sites where essential commodities, such as food, water, and medical supplies, are distributed to the public during emergencies or disasters. These locations serve as centralized points for efficiently providing critical resources to affected communities, ensuring a systematic and organized approach to disaster response and recovery efforts.

Coordination. The process of systematically analyzing a situation, developing relevant information, and informing the appropriate command authority of viable alternatives for the selection of the most effective combination of available resources to meet specific objectives. The coordination process does not involve dispatch actions. However, personnel responsible for coordination may perform command or dispatch functions within the limits established by specific agency delegations, procedures, legal authority, etc.

Crisis Communications Plan. A crisis communications plan is a guide to informing stakeholders of the County’s plan and response public information strategy during an emergency. It helps to foster a culture of transparency on the part of the County and a sense of community partnership.

Disaster. A situation that creates an actual or imminent serious threat to the health and safety of persons or a situation that has resulted or is likely to result in catastrophic loss to property or the environment and for which traditional sources of relief and assistance within the affected area are unable to repair or prevent the injury or loss. A disaster usually exhausts local resources and requires outside help.

Disabilities and Access and Functional Needs (DAFN). Persons who may have additional needs before, during, and after an incident in functional areas, including maintaining independence, communication, transportation, supervision, and medical care. Individuals in



need of additional response assistance may include those who have disabilities, live in institutionalized settings, are seniors, are children, are from diverse cultures, have limited English proficiency or are non-English speaking, or are transportation disadvantaged.

Emergency. An unforeseen combination of circumstances that calls for immediate action to prevent a disaster from developing or occurring. An emergency can usually be handled with the resources of the local unit of government.

Emergency Operations Center (EOC). A central command and control facility responsible for carrying out the principles of emergency preparedness and emergency management or disaster management functions at a strategic level during an emergency and ensuring the continuity of operations of a company, political subdivision, or other organization.

Emergency Operations Plan (EOP). The EOP provides the structure and processes the organization utilizes to respond to and initially recover from an incident.

Emergency Public Information. Information disseminated to the public by official sources during an emergency, using broadcast and print media. This includes: 1) instructions on survival and health preservation actions to take (what to do, what not to do, evacuation procedures, etc.), 2) status information on the disaster situation (number of deaths, injuries, property damage, etc.), and 3) other useful information (state/federal assistance available).

Federal Disaster Assistance. Provides in-kind and monetary assistance to disaster victims, state, or local government by federal agencies under the provision of the Federal Disaster Relief Act and other statutory authorities of federal agencies.

Flood Area Safety Taskforce (FAST). The FAST monitors developing storm conditions and prepares for and responds to flood-related conditions in the County. The task force is comprised of officials from various departments and cities as well as state and federal emergency agencies.

Function. In the Incident Command System (ICS), function refers to the five major activities: Command, Operations, Planning and Intelligence, Logistics, and Finance/Administration. At the EOC, the term "Management" is used in place of "Command." The term "function" is also used when describing the activity involved.

Incident. An occurrence or event, either human-caused or by natural phenomena, which requires action by emergency response personnel to prevent or minimize loss of life or damage to property and/or natural resources.

Incident Commander (IC). The person responsible for all field aspects of an emergency response; including quickly developing incident objectives, managing all incident operations, applying resources, and responsible for all persons involved. The IC sets priorities and defines the organization of the incident response teams and the overall incident action plan.



Incident Command System (ICS). ICS is structured to facilitate activities in five major functional areas: command, operations, planning, logistics, and finance/administration. In some circumstances, intelligence and investigations may be added as a sixth functional area.

Incident Management Team (IMT). The IMT is comprised of the following: Incident Manager/Commander, Operations Section Chief, Planning Section Chief, Logistics Section Chief, Finance/Admin. Section Chief, and applicable Command Staff of Safety, Liaison and Public Information Officer. Additional units may be activated to serve on the IMT as needed.

Jurisdiction. Jurisdictions are usually incorporated locations, recognized by the U.S. Census Bureau and include cities, towns, townships, boroughs, villages, counties, and parishes.

Joint Information Center (JIC). The JIC is a central location that facilitates operation of the Joint Information System. It is the central point of contact for all news media. Public Information Officers from all participating agencies should collocate at the JIC.

Joint Information System (JIS). A system that integrates incident information and public affairs into a cohesive organization designed to provide consistent, coordinated, timely information during crisis or incident operations.

Local Assistance Center (LAC). Local assistance centers are activated following disasters to support survivors and businesses suffering disaster-related losses or damages. Each center is locally operated with support from state agencies, federal partners, and non-profit agencies.

Local Government. Public entities are responsible for the security and welfare of a designated area as established by law. A county, municipality, city, town, township, local public authority, school district, special district, intrastate district, council of governments, regional or interstate government entity, agency or instrumentality of a local government, or a tribe or authorized tribal authority.

Memorandum of Agreement (MOA). An MOA is a document written between parties to cooperatively work together on an agreed upon project or meet an agreed upon objective.

Memorandum of Understanding (MOU). The memorandum of understanding is an agreement used by federal, tribal, state, and local agencies to assist and define the relationship between and among agencies during disaster response and recovery efforts.

Mutual Aid Agreement. Mutual aid agreements establish the legal basis for two or more entities to share resources. Mutual aid agreements may authorize mutual aid between two or more neighboring communities, among all jurisdictions within a state, between states, between federal agencies, and/or internationally.

National Incident Management System (NIMS). NIMS is a comprehensive, national incident management approach applicable at all jurisdictional levels and across functional disciplines. NIMS enables us to work together to prevent, protect against, respond to, recover from, and mitigate the effects of incidents, regardless of cause, size, location, or complexity, to reduce the loss of life and property and harm to the environment. NRF (National Response



Framework) IMS works with the NRF (National Response Framework) – NIMS provides the template for incident management, while the NRF provides the structure and mechanisms for national-level policy for incident management. Response Framework) – NIMS provides the template for incident management, while the NRF provides the structure and mechanisms for national-level policy for incident management.

Nonprofit Organization. A tax-exempt organization that serves the public interest. In general, the purpose of this type of organization must be charitable, educational, scientific, religious, or literary. It does not declare a profit and utilizes all revenue available after normal operating expenses in service to the public interest. A nonprofit organization is a 501(c)(3) or a 501(c)(4) designation.

Preparedness. Actions taken to plan, organize, equip, train, and exercise to build and sustain the capabilities necessary to prevent, protect against, mitigate the effect of, respond to, and recover from threats and hazards.

Public Information Officer (PIO). A member of the ICS Command Staff responsible for interfacing with the public and media and/or with other agencies with incident-related information needs. This is a role distinct from the County PIO position within the Communications Department.

Recovery. The capabilities necessary to assist communities affected by an incident to recover effectively.

Resource. Personnel, equipment, teams, supplies, and facilities available for assignment to incident operations and for which status is maintained. Resources are described by kind and type and may be used in operational support or supervisory capacities at an incident or an EOC.

Response. The capabilities necessary to save lives, protect property and the environment, and meet basic human needs after an incident has occurred.

Subject Matter Expert (SME). A SME provides the knowledge and expertise in a specific subject, business area, or technical area for a project/program.

Standardized Emergency Management System (SEMS). SEMS is the cornerstone of California's emergency response system and the fundamental structure for the response phase of emergency management. The system unifies all elements of California's emergency management community into a single integrated system and standardizes key elements.

Unified Command (UC). An ICS application is used when more than one agency has incident jurisdiction or when incidents cross political jurisdictions.

Voluntary Organizations Active in Disasters (VOAD): VOAD is one or a coalition of (usually nonprofit) second responder organizations in the U.S. These groups voluntarily help survivors after a disaster. VOAD members cannot activate, direct, or supervise one another without a special agreement (such as a Memorandum of Understanding [MOU]).





Acronyms

- AAR:** After-action report
- Cal OES:** California Governor's Office of Emergency Services
- Caltrans:** California Department of Transportation
- CBO:** Community-based organization
- CERT:** Community Emergency Response Team
- CHP:** California Highway Patrol
- COOP:** Continuity of Operations
- CPOD:** Commodity Points of Distribution
- DAFN:** (people with) Disabilities and Access and Functional Needs
- DART:** Disaster Animal Response Team
- EAP:** Emergency Action Plan
- EOC:** Emergency Operations Center
- EOP:** Emergency Operations Plan
- FAST:** Flood Area Safety Task Force
- FEMA:** Federal Emergency Management Agency
- IC:** Incident Commander
- ICS:** Incident Command System
- IMT:** Incident Management Team
- JIC:** Joint Information Center
- JIS:** Joint Information System
- JIT:** Just-in-Time
- LAC:** Local Assistance Center
- MAA:** Mutual Aid Agreement
- MFF:** Mobile Field Force
- MOA:** Memorandum of Agreement
- MOU:** Memorandum of Understanding



NIMS: National Incident Management System

NWS: National Weather Service

PIO: Public Information Officer

PPE: Personal Protective Equipment

SBC: San Bernardino County

SBCOA: San Bernardino County Operational Area

SEMS: Standardized Emergency Management System

SSR: Situation Summary Report

UC: Unified Command

VOAD: Volunteer Organizations Active in Disasters