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2020 LNU LIGHTNING
COMPLEX FIRE
**AFTER ACTION
REPORT**



Acknowledgements and Thanks

Thanks

The 2020 LNU Lightning Complex Fire was the largest wildfire in Napa County's (County) history. The response mission occurred amid the COVID-19 response and required a significant amount of collaboration and selfless service from Napa County staff joined by response partners from jurisdictions and organizations within the Napa County Operational Area (OA) as well as neighboring cities, counties, states, and Federal agencies. Napa County would like to offer a special thanks to the countless residents who embodied the "neighbors helping neighbors" ethos of Napa Valley during this monumental incident. Our deepest gratitude also goes to the hundreds of volunteers for the invaluable contributions they made and capacity they added to our response. Napa County would also like to take this opportunity to sincerely thank each and every person who donated material and financial resources to aid our communities, families, and individuals hardest hit by the LNU Lightning Complex Fire. To every agency, organization, and jurisdiction that reached out and, without hesitation, offered staff, resources, and wisdom, you have our sincerest gratitude. We hope that the lessons we have learned and captured in this report will provide actionable tools for bolstering our collective ability to prepare for, protect against, respond to, and recover from disasters.

Contributors

A list of this After Action Report (AAR) contributors can be found in 'Appendix A' of this document. These individuals participated in the Hot Wash, shared perspective through small group interviews, provided data, and reviewed iterative drafts of the document. In addition, countless individuals provided their thoughtful feedback through a general survey distributed to County employees and partner agencies.

This document was written by Constant Associates, Inc. (CONSTANT), a third-party, private sector emergency management and public health preparedness consulting firm contracted by Napa County to lead this multi-pronged AAR development process.

Cover Photo: Noah Berger



Table of Contents

ACKNOWLEDGEMENTS AND THANKS.....	1
Thanks.....	1
Contributors	1
TABLE OF CONTENTS.....	2
EXECUTIVE SUMMARY	4
The After Action Process.....	4
Significant Strengths.....	4
Significant Areas for Improvement	5
INTRODUCTION.....	6
Purpose and Scope of the Report.....	6
Data Gathering Process.....	6
Organization of Report	8
INCIDENT OVERVIEW	9
Description.....	9
Timeline	11
Impact to the County Infographic.....	13
ANALYSIS OF KEY FINDINGS	14
1. EOC Activation and Operations	14
2. Evacuation and Repopulation	21
3. Public Information and Alert & Warning.....	30
4. Shelter Operations.....	41
5. COVID-19 Impacts.....	48
6. Transition to Recovery.....	51
County’s Response Statistics Infographic	56



APPENDICES.....57

Appendix A. List of AAR Contributors.....58

Appendix B. Stakeholder Interviews and Hot Wash Participants Lists59

Appendix C. Glossary of Acronyms62

Appendix D. Survey Data Summary64

Appendix E. Incident Map.....72

Appendix F. References.....73



Executive Summary

Napa County has experienced significant wildfires in recent years and has placed heavy emphasis on preparing and responding to these emergencies. During the 2020 California wildfire season, in the midst of a heat wave, pandemic, and grid emergency, a series of lightning-sparked fires spread across much of the wine country area of Northern California. The Hennessey Fire began near Hennessey Ridge Road on Aug. 17 and joined with other lightning-sparked fires to form a complex that became known as the LNU Lightning Complex Fire.

When the fire began, Napa County was one of the first communities to experience a fast-moving and highly destructive natural disaster within the ongoing COVID-19 pandemic. With public health measures in place, the County moved quickly and innovatively to adjust response operations within public health guidance and reduced capacity. In doing so, the County relied heavily on the resilience of staff, community partners, and volunteers to contribute to the response.

This AAR highlights specific themes generated from data collected on the response and recovery to the LNU Lightning Complex Fire. Each theme includes strengths and areas for improvement identified by stakeholders and partners involved in the response. Recommendations for improvement are listed for each theme in the Analysis of Findings section and are summarized in a separate document, the Improvement Plan (IP).

The After Action Process

The data collection and report generation process were undertaken by CONSTANT. A team of experts collected data through a multi-pronged process which included documentation reviews, stakeholder workshops, surveys, and facilitated group discussions. After a thorough analysis of the data collected, findings and recommendations for improvement were outlined. Best practices are provided throughout the document as to share procedures, tactics, and solutions utilized during and following the LNU Lightning Complex Fire so that Napa County Office of Emergency Services (OES), and potentially other jurisdictions, can enhance their preparedness and response capability. Recommendations have been developed to support the ongoing recovery efforts from Napa County as well as to build upon emergency response and recovery processes that the County may use in future events. The most notable significant strengths and areas for improvement are highlighted below.

Significant Strengths

- Napa County has a dedicated, cohesive, and, highly-motivated team to support EOC operations. Staff have years of experience working together in response to previous incidents, and mentor new staff to deepen the bench. Disaster response has broad support across County departments and other local partners.



- Despite it being the first time that the County implemented large scale non-congregate care, communication and coordination went smoothly. No COVID-19 cases were linked to evacuation or sheltering efforts.
- Public information was communicated across a variety of media, with focus on improving Spanish-language access to information. County has robust Nixle-subscriber base and used this tool extensively to communicate evacuation information.
- Hi-lo sirens and evacuation tags facilitated successful in-person evacuation efforts.
- Partners like CERT, NCART, community-based organizations communicated with the EOC to coordinate activities and provide critical services that supplemented the County's response efforts.

Significant Areas for Improvement

- The County struggled to maintain a deep enough bench of EOC response personnel to cover simultaneous activations. A renewed focus on training and disaster service worker (DSW) engagement would help deepen the County's bench.
- While peer-to-peer mentoring helped staff who were new to EOC positions onboard quickly, a focus on more operational planning documents, checklists, and formalized processes would provide staff with additional guidance and onboarding support.
- Communication during emergencies is always a challenge. There is opportunity for Napa County to bolster its Alert and Warning program and reach a greater share of the population. Recommendations include transcreating and disseminating messages in collaboration with community partners, expanding staffing of the program to include the technical expertise needed to utilize additional communications modalities, and develop enhanced capacity for two-way situation analysis.
- Coordination and planning around donations management could be improved. This area involves partnerships between County EOC, shelter staff, and community-based organizations.
- A defined policy for staff rotations and position coverage might have helped establish a more sustainable staffing pattern, given employees a stronger basis to request support when needed, and prevented burn out.
- Seasoned staff credited recent activations, trainings, and exercises for their comfort and confidence working in the EOC environment. Training opportunities and a countywide full scale exercise were put on hold in 2020 and the first half of 2021 given the unprecedented challenges of COVID-19. The County should resume its focus on training and exercise throughout the operational area, and utilize regional opportunities when available. Staff are interested in training opportunities but may need encouragement from managers and department heads to make the time to participate.



Introduction

This AAR provides a thorough analysis of the County's response to the LNU Lightning Complex Fire that took place from August 18, 2020 to September 2, 2020. While recovery efforts continue to this date of publishing, this report synthesizes and presents a timeline of events and overarching summary of the immediate impacts of the event and actions taken by Napa County and partner organizations shortly after the fire commenced and throughout the incident period. Information presented in this report was derived from a detailed document review (including response documentation as well as plans and procedures), an online survey, virtual stakeholder interviews, and a facilitated working-group session.

The information collected was analyzed by a team of experts to provide key findings – both strengths and areas for improvement. These findings are presented in the Analysis of Key Findings section of this report. These findings are organized by the critical functions of the response for ease of understanding and to provide context on the incident. Recommendations for improvement are included at the conclusion of each subsection.

Purpose and Scope of the Report

This AAR focuses on actions carried out by the Napa County EOC in response to the 2020 LNU Lightning Complex Fire. The scope of this AAR is centered on the EOC organization. As such, this report does not provide an analysis on the field-level response actions, tactical decisions made by first responders, or specific department procedures. The report examines the County EOC's actions from August 17, 2020, when the EOC was fully activated through September 2, 2020, when all evacuation orders were lifted and residents were allowed to return to their homes.

The development of this AAR was sanctioned by the Napa County Board of Supervisors with the intent to comprehensively collect best practices and lessons learned in an effort to enhance the County's response capabilities going forward.

Data Gathering Process

Summary

This AAR has been compiled using a four-step data gathering process, as outlined in 'Figure 1' below. This process included a comprehensive review of pre-existing plans and incident documentation, a survey of responders and stakeholders, group interviews according to response roles, and facilitated discussions with County and partner response officials. All data was reviewed and analyzed by a team of emergency management professionals to provide a fair and honest analysis of the response and the development of realistic and actionable improvement recommendations.



Figure 1. LNU Lightning Complex Fire AAR Data Gathering Process

Document Review

Experts from CONSTANT collected and reviewed response documents along with established policies and procedures to compile the notes for this Report. A sampling of those documents includes:

- Napa County Emergency Operations Plan (EOP)
- Napa County EOC Incident Action Plans (IAPs)
- Napa County EOC Situation Status (SitStat) Reports
- Napa County presentations, briefings, press releases, and preparedness documentation

Survey

An online survey was developed and distributed to collect individual respondent feedback. This data was analyzed to determine if any of the issues that were identified required further inquiry. Survey participants were asked to share what they observed as strengths as well as any issues that impeded response efforts. Survey participants were also asked to share any specific recommendations for improvement. This data provided a detailed view of the response and was used to identify data gaps which were filled through the Hot Wash, small group stakeholder interviews, open-source research, and incident documentation review.

Hot Wash

A facilitated group discussion was designed and conducted to engage County stakeholders. This discussion was named the Hot Wash meeting and assisted in refining the overall incident timeline of key events, working across departments to determine root causes of issues during the response, and collectively working towards identifying any improvements.



Interviews

One-on-one and small group interviews were conducted to determine critical issues and strengths related to the EOC's response efforts. Interviews also provided an opportunity to discuss the issues identified through the survey and Hot Wash. Approximately nine interviews and one presentation to the Board of Supervisors were conducted to include areas such as public information, alert and notification, language access and engagement, local assistance center (LAC), construction and engineering, and others.

Organization of Report

This AAR was organized in the following manner in order to give readers an overview of the LNU Lightning Complex Fire, providing context to the unprecedented and relentless conditions disaster service workers experienced, as well as the complicating factors that ensued which at times complicated the response. The core content of the report is included in the Analysis of Key Findings section. This section organizes the major findings into separate themes. Those themes share strengths and areas for improvement resultant from the data collection process. Recommendations for improvement are included at the conclusion of each theme.



Incident Overview

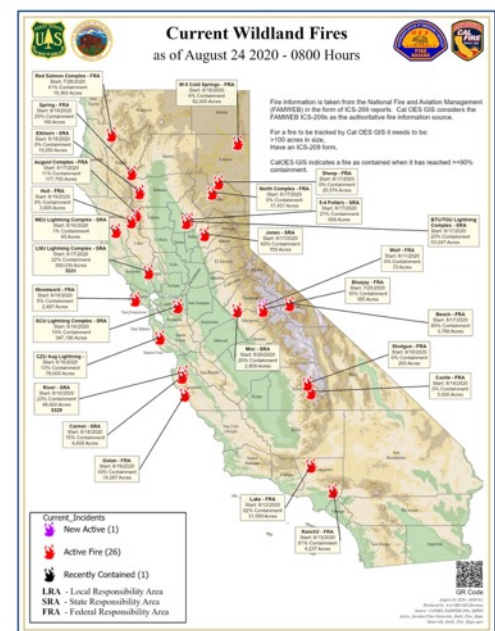
Description

Northern California has historically been prone to high temperatures, dryness, and strong winds, elevating the region's risk for significant wildfires. The frequency, and sometimes the intensity of these wildfires has increased in recent years, due to a combination of drought conditions, dry winds, and rising temperatures.¹ 2020 proved to be an exceptionally challenging year for Napa County officials and residents, who experienced simultaneous emergencies including several region-wide wildfires, the COVID-19 pandemic, and frequent public safety power shutoffs. Napa County and its neighbors have faced some of the state's most devastating wildfires in recent years. In 2017, wildfires erupted throughout the North Bay. The four 2017 fires that erupted in Napa County – the Tubbs, Atlas, Partrick and Nuns fires — destroyed 600 homes and killed seven people. In July 2018, the Steele Fire burned across 135 acres and destroyed eight homes near in the Berryessa Highlands area at the south end of Lake Berryessa.

The LNU Lightning Complex fires were a series of lightning-sparked fires during the 2020 California wildfire season across much of the wine country area of Northern California. This area included Lake, Napa, Sonoma, Solano, and Yolo Counties and lasted from August 17, 2020, to October 02, 2020. A series of rare thunderstorms rolled through much of Northern California from the early morning of August 16, 2020, to August 17, 2020, because of a weakened Tropical Storm Fausto.² Within 72 hours, 10,849 lightning strikes consequently started 376 fires across the state.³

While most of these fires were small and separate, the Hennessey Fire (initially called the 14-3 Fire) was the largest and grew to merge with the Gamble, Green, Markley, Spanish, and Morgan Fires, burning over 192,000 acres by itself before joining. The Hennessey Fire began as a fast-moving vegetation fire near Hennessey Ridge Road east of Napa's Lake Hennessey, at dawn on August 17, 2020.

Dry conditions (due to a long dry summer) combined with strong winds caused the fire to move at a rapid pace from



¹ Los Angeles Times: <https://www.latimes.com/california/story/2020-09-29/how-wine-country-became-the-epicenter-for-fires-in-california>

² Barmann, Jay (17 August 2020). *"Lightning Strikes Spark Multiple Fires in Napa, Knock Out Power In Healdsburg"*. SFist. Retrieved 02 February 2021.

³ Sandler, Adam (19 August 2020). *"California Sees 10,849 Lightning Strikes In 72 Hours As Wildfires Rage"*. Forbes. Retrieved 02 February 2021.



750 acres the morning of August 17, 2020, to over 2,400 acres by 5:00 PM that same day.⁴ This resulted in evacuations for Chiles Valley and areas in and around Lake Hennessey.⁵ Additional fires had started the evening of August 17, 2020, as well; these included the Gamble, Markley, Spanish, and 15-10 fires.⁶

Emergency Services staff coordinated the provision of Alert and Warning and initial sheltering activities from the County administration building on August 17, before convening a full in-person EOC activation the next day as the fire complex grew and additional evacuations were ordered.

By the evening of August 18, 2020, California Department of Forestry and Fire Protection (CAL FIRE) had announced additional evacuations for Butts Canyon Road, Wragg Canyon Road, and Snell Valley Road as the fire had burned over 10,000 acres by that night. The following day, August 19, 2020, as the fire grew, CAL FIRE ordered additional evacuations for Deer Park, Angwin, and St. Helena Hospital as well as additional evacuations in Solano County, after the fire jumped I-80. The Hennessey Fire had merged with the Gamble, Green, Markley, Spanish, and Morgan Fires resulting in over 105,000 acres being burned and destroying 105 structures and damaging 70 structures.⁷ On August 19, the County Executive Officer proclaimed the existence of a local emergency due to the fires burning across the County and the County Health Officer followed with a local health emergency proclamation the same day due to the hazardous waste and materials created by the fires.

Four civilians were found dead by the evening of August 20, 2020, three in Napa County and one in Solano County. Additionally, the Hennessey Fire merged with the Round Fire in Lake County, further expanding the fire to 192,000 acres. By August 21, 2020, the Hennessey Fire was at 15% containment.⁸ As the weather improved over subsequent days, fire containment steadily increased as progress was made on the fire's eastern and southern sides.⁹ On August 24, 2020, residents in Atlas Peak and many other unincorporated areas of Napa County were given approval to return to their homes, as evacuation orders were lifted.¹⁰ By August 26, 2020, the northern part of the fire had spread further into Lake County and Yolo County, crossing Highway 16, resulting in more evacuations there. The California National Guard was deployed to serve as hand crews with firefighters, and by August 28, 2020, over 4,000 residents could return Angwin. Additionally, St. Helena Hospital reopened, and all evacuation orders were lifted in Deer Park by August 27, 2020.¹¹

By itself, the Hennessey Fire is the largest ever in Napa County, resulting in a total of 305,651 acres scorched.¹² The total scorched area from the entire LNU Lightning Complex Fire was 363,220 acres

⁴ Carter, Lori A. (17 August 2020). ["Evacuation orders issued for residents near Hennessey fire in Napa County".](#) *Press Democrat*. Retrieved 02 February 2021.

⁵ ["CAL FIRE LNU Lightning Complex Fire Tweets".](#) Twitter. CAL FIRE. Retrieved 02 February 2021.

⁶ *Ibid.*

⁷ *Ibid.*

⁸ Graff, Amy; Ting, Eric (21 August 2020). ["LNU Complex grows to 302,388 acres, 15% contained".](#) *SFGate*. Retrieved 02 February 2021.

⁹ Larson, Elizabeth (23 August 2020). ["Smoke challenges firefighters on LNU Lightning Complex".](#) *Lake County News*. Retrieved 02 February 2021.

¹⁰ Courtney, Kevin. ["Update: Cal Fire begins lifting some evacuation orders in Napa County".](#) *Napa Valley Register* (24 August 2020). Retrieved 02 February 2021.

¹¹ *Ibid.*

¹² Eberling, Barry (23 September 2020). ["Severe weather helped make Napa's Hennessey Fire one for the record books".](#) *Napa Valley Register*. Retrieved 02 February 2021.



(with which a total of 165,643 acres were within Napa County alone). A total of 1,491 structures were destroyed, and 232 structures were damaged. Six civilians were killed (three identified within Napa County), and five civilians suffered non-fatal injuries.¹³

Timeline

The incident timeline provides the key reference points of the LNU Lightning Complex Fire response period and serves as an overview of the incident to provide context for this AAR. The data points are information gathered from IAPs, other documentations (such as resource request forms), Hot Wash meeting, and stakeholder interviews. This timeline was reviewed and revised by the Project Oversight Team members.

¹³ ["LNU Lightning Complex: Cal Fire confirms 5th death"](#). Sacramento, California: [KCRA-TV](#). Retrieved 02 February 2021.

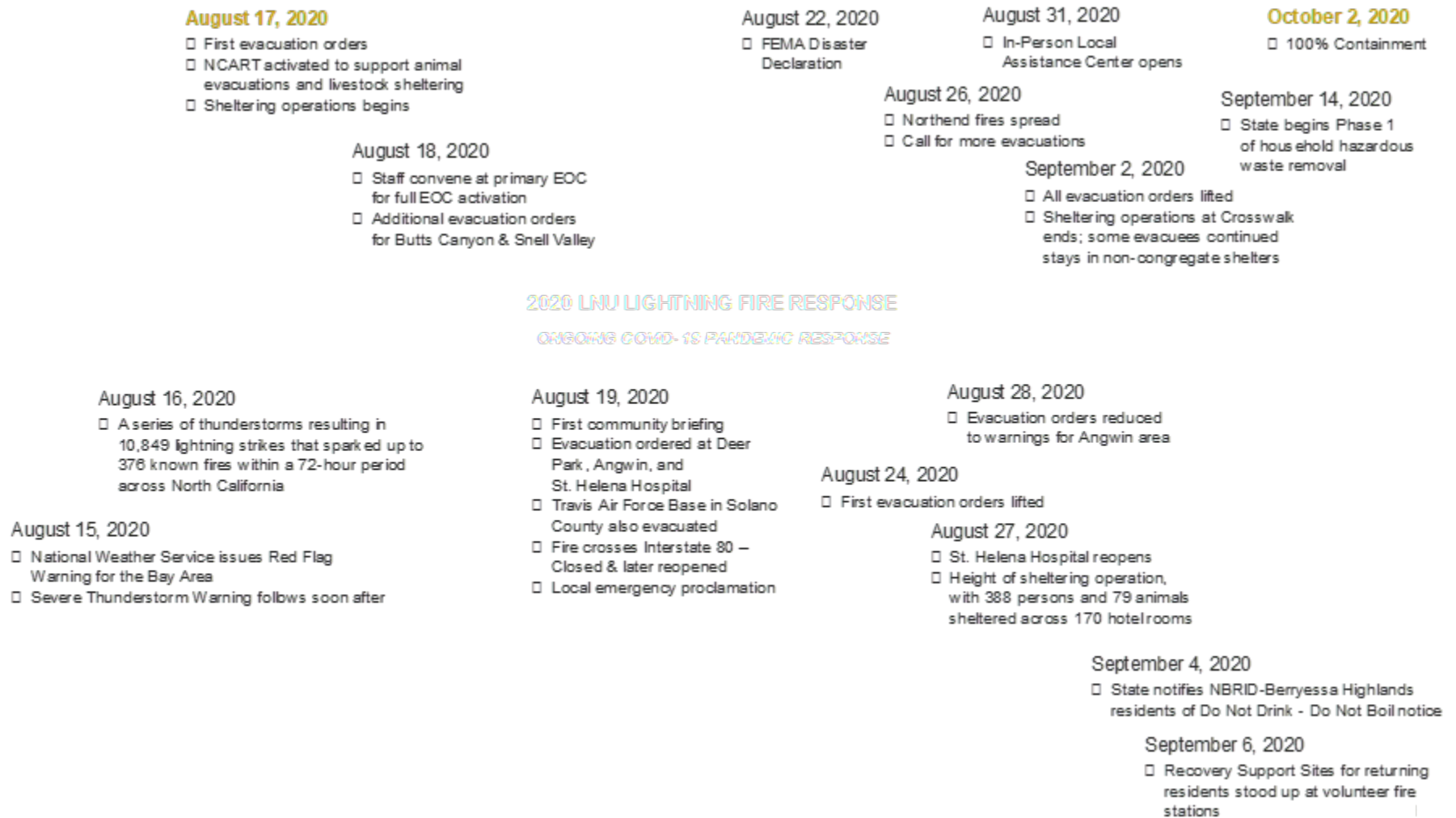
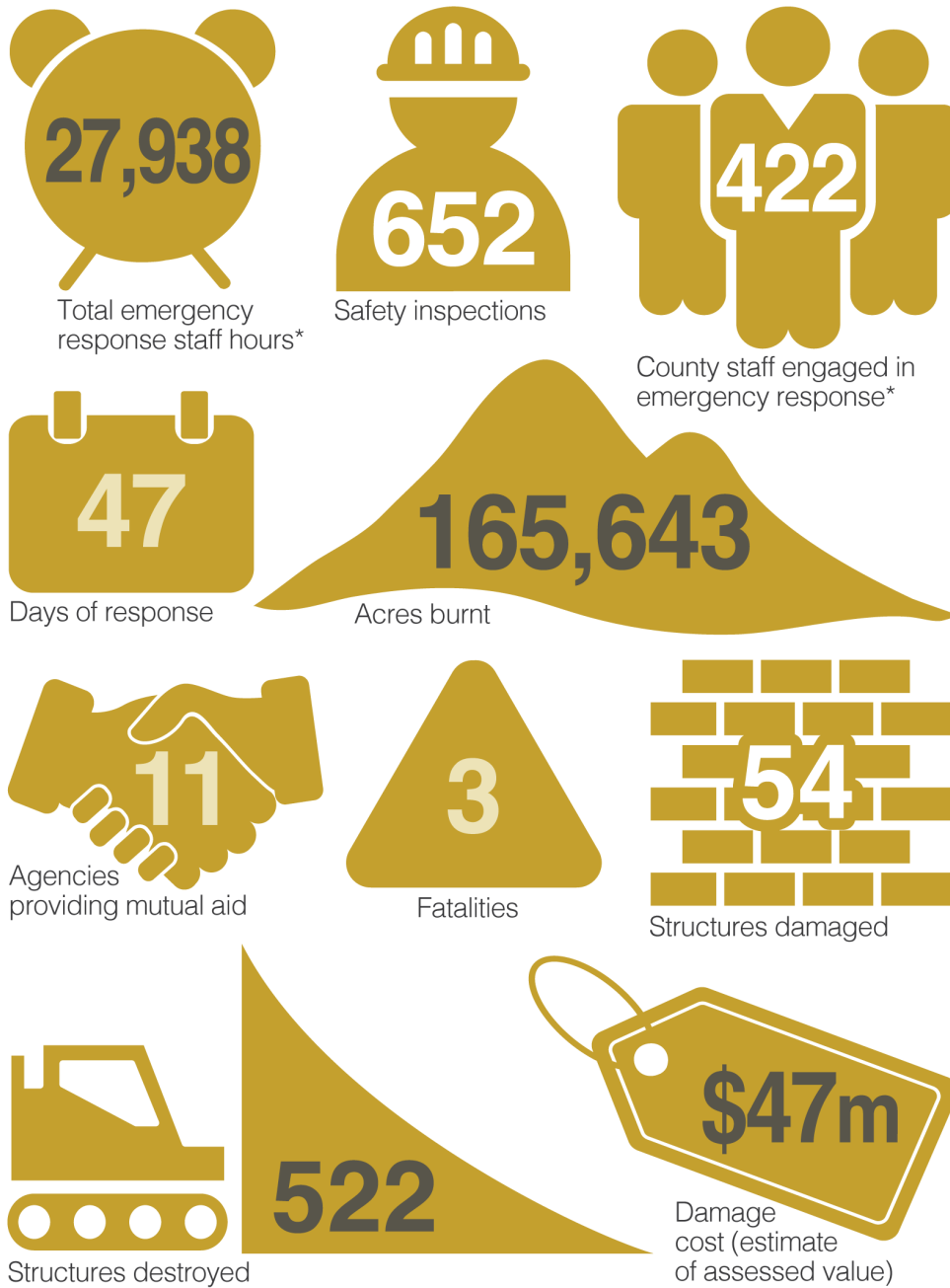


Figure 3. Incident Timeline of the 2020 LNU Lightning Complex Fire response.



Impact to the County Infographic



* Does not include County Fire / CAL FIRE hours.

Figure 4. Infographic of the some of the statistics of the impacts to Napa County's 2020 LNU Lightning Complex Fire response.



Analysis of Key Findings

This section of the report includes the core content related to the Analysis of Key Findings. This section organizes the major findings into separate themes. In order, those themes are: EOC Activation and Operations, Evacuation and Repopulation, Public Information and Alert & Warning, Shelter Operations, COVID-19 Impacts on Response and Recovery Operations, and Transition to Recovery. In each of those themes, they share strengths and areas for improvement resulting from the data collection process. Recommendations for improvement are included at the conclusion of each theme.

1. EOC Activation and Operations

Overview

Before the 2020 fire season began, a cross-functional team of County leaders engaged in dialogue about how the EOC could effectively manage a significant fire that could occur during the COVID-19 pandemic. These discussions led to the development of a response concept for managing “an incident within an incident,” which mirrored federal planning concepts around disaster response and recovery in a pandemic environment¹⁴. The incident within an incident concept was briefed as part of a staff report on 2020 Fire Season Emergency Preparedness to the Board of Supervisors on August 11. The presentation also served as a refresher to key leaders as it included a high-level review of EOC activation and deactivation authorities and procedures as well as key considerations for determining incident scope and appropriate EOC activation levels based upon incident dynamics.¹⁵ Lastly, the presentation highlighted significant strides the County had taken to bolster its preparedness including the onboarding of new Emergency Services Officers as well as the investment in critical resources such as new generators and trailers to support Public Safety Power Shutoff (PSPS) events and shelter operations.

Napa County’s emergency management organization was actively engaged with response activity the week before the LNU Lightning Complex Fire began. The entire state of California experienced a record-breaking heat wave that had impacts throughout Napa County. On Friday, August 14, 2020, for the first time in 19 years, the sweltering heat triggered a Stage 3 Emergency declared by the California Independent System Operator (CAISO) that resulted in rolling blackouts throughout the

¹⁴ [COVID-19 Pandemic Operational Guidance for 2020 Hurricane Season \(fema.gov\)](https://www.fema.gov)

¹⁵ Napa County. Emergency Preparedness, 2020 Fire Season Update Presentation. August 11, 2020



state, affecting up to 2 million people.¹⁶ ¹⁷ Approximately 15,000 electricity customers in the City of American Canyon in southern Napa County were directly affected by the blackouts.¹⁸

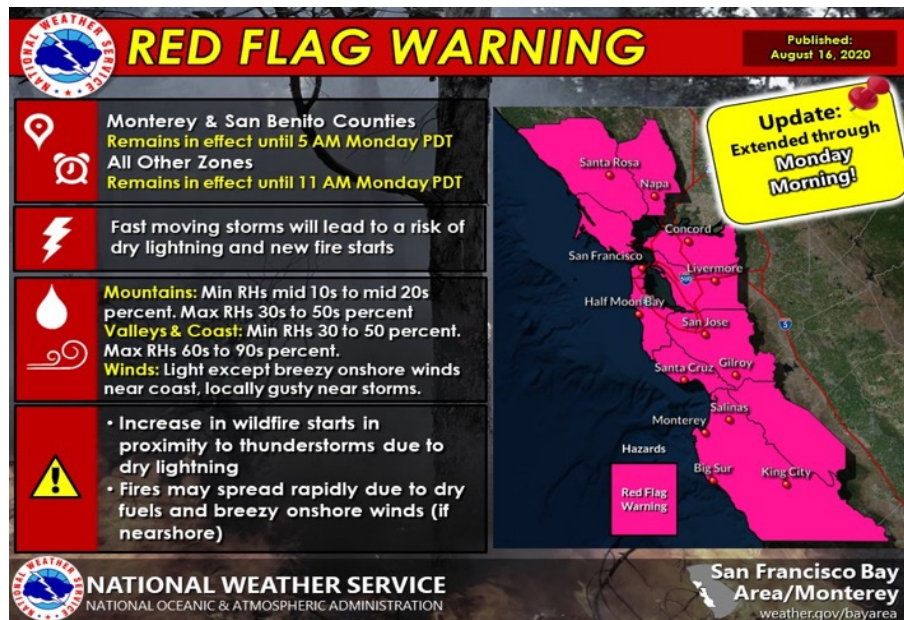


Figure 5. NWS Red Flag Warning on August 16, 2020. (Source: <https://twitter.com/NWSBayArea>)

As part of the response, Napa County disseminated guidance to its residents encouraging them to conserve power to help mitigate the risk of additional power outages. The National Weather Service (NWS) issued a Red Flag Warning anticipating that a combination of low relative humidity, strong winds, and high temperatures would create critical fire weather conditions for the San Francisco Bay and Monterey areas. NWS followed up with a Severe Thunderstorm Warning.

At the time the LNU Lightning Fire began on August 17, the Napa County EOC was already activated in response to the ongoing COVID-19 pandemic. Emergency Services staff coordinated the provision of Alert and Warning and initial sheltering activities from the County administration building on August 17, before convening a full in-person EOC activation the next day as the fire complex grew and additional evacuations were ordered. Notifications to key personnel (Command and General Staff) began on August 17 via call tree, initiated by the EOC Director.

All major EOC command and general staff positions were filled and the team began to coordinate information and resources in support of the evolving wildfire response operation. The EOC team developed situation status presentations which were utilized to facilitate daily EOC briefings as well

¹⁶ Washington Post. "Record-crushing heat, fire tornadoes and freak thunderstorms: The weather is wild in the West." Aug 17, 2020. <https://www.washingtonpost.com/weather/2020/08/17/record-crushing-heat-fire-tornadoes-freak-thunderstorms-weather-is-wild-west/>

¹⁷ California ISO Press Release. Aug 15, 2020
<http://www.caiso.com/Documents/ISORequestedPowerOutagesFollowingStage3EmergencyDeclarationSystemNowBeingRestored.pdf>

¹⁸ Stakeholder Interview

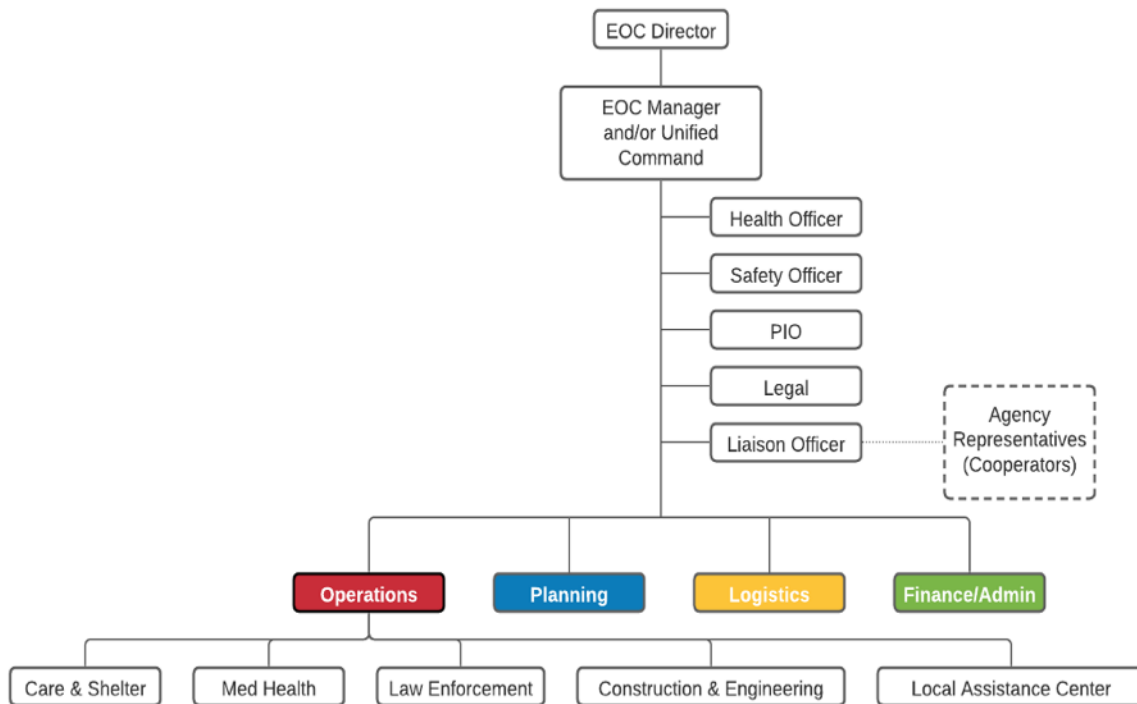


Figure 6. LNU Lightning Complex Fire EOC organizational Structure.
(Source: Napa County Office of Emergency Services.)

as IAPs which outlined incident objectives, response priorities, and resources for the upcoming operational period.

Under California State Emergency Management System (SEMS), the County serves as an operational area (OA). An OA is an organizational level that refers to the intermediate level of the state's emergency management organization which encompasses the county and all political subdivisions located within the county including special districts. The operational area manages and/or coordinates information, resources, and priorities among local governments within the operational area, and serves as the coordination and communication link between the local government level and regional level.¹⁹ During the LNU Lightning Complex Fire response, the County successfully fulfilled its OA role and, despite the challenges of a rapidly-evolving fire incident coupled with the ongoing threat of the COVID-19 pandemic, utilized the guiding principles outlined in SEMS, the National Incident Management System (NIMS), and the Incident Command System (ICS) to manage both incidents simultaneously. 71% of the Napa County staff who participated in an online survey agreed that the County effectively utilized its written response plans and procedures to guide the LNU Lightning Complex Fire response and recovery effort.

¹⁹ Napa County Emergency Operations Plan pg. 47



The County's EOP further articulates that the County emergency organization will operate in a Unified Command Structure in the event of a major disaster. Appropriately, the County named the incident "2019-nCoV-Napa Lightning Complex 2020" to denote a combined pandemic and wildfire response and honored an interdisciplinary approach in establishing an incident organizational structure that was best suited for sustained response activity.

Strengths

Strength 1: The call down process used to activate the EOC for the LNU Lightning Complex Fire resulted in a fully staffed EOC and staffing rotation, as needed.

It was underscored during small group interviews and the Hot Wash that the call down process for activating the EOC in response to the LNU Lightning Complex Fire resulted in full staffing.²⁰ It was further expressed that the process works well because County EOC leaders and staff have established strong working relationships through prior training and real-world response experiences.²¹



Figure 7. Vests on chairs for staff positions at the EOC.

(Source: https://napavalleyregister.com/news/local/napa-countys-new-emergency-center-sits-ready-for-disasters/article_be5f2da8-cc34-5625-9aaf-e72203f4953e.html)

²⁰ Hot Wash

²¹ Stakeholder Interview



Strength 2: Personnel filling EOC Command and General Staff roles were familiar with their roles and responsibilities, and had received core ICS training

The County requires all staff complete ICS 100 and ICS 700 upon hire, and requires staff who would be assigned a role within the EOC during disasters to complete ICS 200. When the LNU Lightning Complex Fire began, there was a sufficient roster of trained personnel to draw from when filling all Command and General Staff positions within the EOC. It was expressed during stakeholder interviews and through the online survey that new and seasoned EOC staff worked collaboratively to ensure an effective and sustainable operation throughout the response.

Strength 3: EOC operations were strengthened by staffs' years of experience working together in response to previous incidents as well as lessons learned from recent EOC activations.

While Napa County has well-developed emergency plans and training programs in place, the success of its response organization is, in part, fueled by the camaraderie that has been forged among staff from having responded to multiple disaster over the years as County employees.²²

Increased disaster activity in Napa County in recent years has resulted in a strong and cohesive core team. It is important to maintain this sense of unity and team cohesion, even as staffing transitions and retirements occur.

**NAPA COUNTY
 EMERGENCY/DISASTER TIMELINE
 2014-PRESENT**



²² Hot Wash



Strength 4: Despite many being impacted by the disaster themselves, County staff demonstrated an unrelenting commitment to the response mission on behalf of the community.

As the largest and most devastating wildfire in Napa County history to date, the LNU Lightning Complex Fire directly affected many Napa County employees. A number of staff members were directly impacted by the fires personally or were supporting friends or family who were. Several continued to support the County's response, despite the personal impact of the fires on their own lives and homes, displaying a remarkable measure of dedication to the mission and commitment to help protect the safety of the greater community.

Strength 5: County staff who were not fully trained in ICS or EOC operations were rotated into EOC positions by necessity and they performed very well.

Interviewees remarked about how Napa County's more seasoned EOC staff provided Branch/Section-specific just-in-time training to newer staff as they got acclimated to the details of their respective EOC roles and responsibilities. It was further noted that these just-in-time trainings, while effective, were informal in nature and were delivered on an ad hoc basis.²³

Strength 6: The County's recent planning efforts helped guide the overall response and recovery framework utilized in the LNU Lightning Complex Fire.

Prior to the LNU Lightning Complex Fire, the County had taken deliberate strides to build upon and implement lessons learned from the 2014 earthquake, the 2017 fires, and the multiple PSPS events that occurred. The County hosted several EOC trainings and exercises with municipalities in 2019 and 2020, and was in the midst of finalizing a 2020 EOP update.

Areas for Improvement

Area for Improvement 1: The County struggled to maintain a deep enough bench of EOC response personnel to cover simultaneous activations.

Concurrently managing response operations for two major incidents, both having multiple operational periods and extensive staffing requirements would be a major challenge for any organization. While the County is well suited for staffing its EOC organization for a sustained response to one major incident, the 2019-nCoV-Napa Lightning Complex 2020 placed a significant strain on the County's staffing capacity. The County worked diligently to ensure that all normal business functions were maintained while rotating staff to fill resource gaps as they arose. Volunteers, community response partners, mutual aid resources from other agencies proved invaluable. County staff who participated in the online survey, Hot Wash, and stakeholder interviews all expressed that, over time, the demands of the activations and limited staffing capacity was felt.

²³ Stakeholder Interview



Area for Improvement 2: While the EOC call down process resulted in a fully staffed EOC roster, there were not protocols or policies in place to formalize staffing rotations or create redundancy, which would have resulted in a more sustainable operation for deployed staff.

Some staff were not aware of or did not utilize resources to provide back-up coverage for their roles. In addition to the core A-shift staffing roster, Section Chiefs should communicate with identified B- and C-shift staff to design sustainable staffing rotations during an incident.

Area for Improvement 3: The Branch/Section-specific trainings that were offered to new EOC staff were not available as formalized training.

It was discussed during the Hot Wash that there was a lack of consistency in the Branch/Section-specific just-in-time trainings that more experienced EOC staff provided to new EOC staff. It was further expressed that new staff might have received different information based upon who was providing their training and what the pressing issues of the day were. The potential benefits of these training were not maximized due to a lack of codified tools and standardized processes for facilitating them.

Recommendations

Recommendation 1.1: Improve County call down process and implementation. While the manual call down process was effective, facilitative technology tools are available to support and expedite employee call downs during emergencies.

Recommendation 1.2: A renewed focus on training and disaster service worker engagement would help deepen the County's bench. EOC leadership could work with County leadership to evaluate additional response capabilities within departments that historically have not been heavily utilized in disaster response.

Recommendation 1.3: Formalize the EOC Branch/Section-specific just-in-time trainings by developing training modules that can be delivered virtually or in-person as well as a framework for onboarding supporting instructors who are certified to deliver the trainings.

Recommendation 1.4: Integrate the tracking of ICS trainings with the County's existing learning management system (LMS) and ensure that the trainings are available to all staff. Consider utilizing a responder's task book, or emergency resource training guide used to prepare individuals for activation. During non-emergency time establish a process for training new staff remotely.

Recommendation 1.5: Create a Continuity of Operations Plan which includes a roster of core team member roles to support the County's continuity of operations, as well as those available to support the EOC with emergency response roles that fall outside their usual duties.



2. Evacuation and Repopulation

Overview

The rapid and continued spread of the fire resulted in massive evacuations over several days with evacuation orders being continually expanded and modified. The California Department of Forestry and Fire Protection (CAL FIRE) maintains primary responsibility for firefighting operations in the area in which the LNU Lightning Complex Fire ignited and throughout much of Napa County. Based on situational information, and in coordination with the Napa County Sheriff, CAL FIRE issued evacuation orders beginning on August 17 through August 26.

The overlapping responsibilities of CAL FIRE and the County during evacuations demonstrate the importance of shared decision-making and situation understanding. CAL FIRE holds the most accurate and current information regarding fire conditions and expected behavior. During extreme fire behavior events, time is of the essence requiring rapid evacuation and public warning. Napa County Sheriff's Office has local knowledge of the geography and has established relationships with local jurisdictions. The County EOC also maintains the most accurate and comprehensive mapping data and has the capability and responsibility to provide public alerts, warning residents of impending evacuations and expected actions. The County utilized a number of tools and strategies to support evacuation efforts. In 2019, the Napa County Sheriff's Office undertook a pilot program to use European-style "high-lo" sirens in emergency vehicles to announce evacuations. The hi-lo sirens rock back and forth between two fixed pitches, one high and one low. Several other counties have followed suit and implemented their own hi-lo siren programs. The hi-lo sirens were used to support evacuations during the LNU Lightning Complex and the unique sound allowed deputies to alert entire neighborhoods that a mandatory evacuation order was in effect and there was imminent danger.

Law enforcement also reported successful outcomes with the evacuation tag program, a new tool to help quickly ensure that neighborhoods are evacuated during disasters. Residents are instructed to tie tags stating "Evacuated" in a location that is highly visible along their properties when they evacuate which allows first responders to remain situationally aware of evacuation status of households.

In addition, the immense effort to safely evacuate and care for animals during the LNU Lightning Complex Fire was a major success thanks to the support of numerous agencies who contributed staff and resources.

The Agricultural Pass Program (or Agricultural Verification Card Program), while largely celebrated by those in the agricultural industry, raised concerns from first responders, which if addressed could result in a more coordinated program. The program makes permits available to workers involved in critical infrastructure and agricultural operations to give them access to areas under mandatory evacuation orders.

Repopulation efforts were prioritized quickly during the LNU Lightning Complex Fire as Napa County recognized the importance of granting people access to their homes and property. After the immediate life safety threat has passed, residents are often very eager to return to properties that might have been damaged or destroyed or lack critical utilities, which can pose safety concerns. The



County convened an interagency planning team, including utilities providers, which worked collaboratively to repopulate evacuated zones in a safe and timely manner.

Strengths

Strength 1: The practice of utilizing high-lo sirens and evacuation tags worked well during the LNU Lightning Complex Fire.

Napa County Sheriff's Office utilized high-lo sirens and evacuation tags, both of which worked effectively during the LNU Lightning Complex Fire.²⁴ As wildfires grow in severity and frequency, Napa County recognized the need to quickly alert its population of an imminent threat in a "low-tech" manner that captures attention and results in the public taking protective action. During the LNU Lightning Complex Fire, Napa, Sonoma, and Solano County deputies utilized the high-lo sirens to provide warning to the public of an evacuation order in the area.²⁵

In addition to high-lo sirens, Napa County utilized evacuation tags during the LNU Lightning Complex Fire, which also proved to be a success. During the fires in 2017, first responders spent days evacuating Napa County neighborhoods. As a result, to aid in first responder situational awareness, Napa County implemented evacuation tags. These tags can be placed on mailboxes, fences, gates, doors, etc. and are provided free of cost to Napa County residents. Evacuation tags let first responders know if households have been evacuated and allow neighborhoods to be cleared more quickly, freeing up the time of first responders when timely evacuation saves lives.²⁶

²⁴ Small Group Interview

²⁵ Napa Valley Register. "Dodd's High-Low Siren Bill Goes to Governor for Signature." August 2020. https://napavalleyregister.com/news/local/dodds-high-low-siren-bill-goes-to-governor-for-signature/article_0994fba4-e82b-5c35-9bfd-7f969b212418.html

²⁶ County of Napa. "Evacuation Tags". <https://readynapacounty.org/211/Evacuation>



Figure 8. Evacuation tags provided by Napa County Sheriff's Office at 19 separate locations throughout the County.)

Strength 2: Animals were successfully evacuated or sheltered-in-place through a coordinated, multi-agency effort.

Numerous agencies contributed to the safe and successful evacuation of household pets, large animals, and livestock. Notably, NCART led animal evacuations and brought in numerous other partners to support that response. Community Emergency Response Team (CERT) helped support communications between participating agencies, including Napa County Sheriff's Office, (who helped coordinate access to animals that were being sheltered in place and provided information regarding road closures and transportation infrastructure damage), NCART, first responders, and Napa County Animal Services. CERT established a command center and supported planning and logistics to enable safe evacuations and welfare checks of animals that needed to be sheltered in place.

NCART coordinated additional support through their partners, including Napa Valley Horseman's Association, Valley Brook Equestrian Center, Paul Tarap and Ag 4 Youth, Jameson Humane, Sunrise Horse Rescue, We Care Animal Rescue, Napa Humane, Wine Country Animal Lovers, and countless other volunteers.²⁷ NCART also worked through the EOC to request and provide resources such as portable kennels, crates, pet food, etc. Information sharing between the Agricultural Commissioner's Office and NCART resulted in additional detail about the whereabouts, quantities, and types of animals who may need care and feeding, veterinary care, or other support throughout the response. This coordination and data-sharing might have been enhanced if the Agricultural Commissioner's Office or NCART were represented in the EOC. Overall, the animal evacuation and operations conducted during the LNU Lightning Complex Fire were a success due to the dedication and hard work of numerous agencies who worked together under one shared mission. Agencies like

²⁷ Napa CART. "LNU Lightning Complex 2020: Summary." <https://napacart.org/lnu-lightning-complex-2020/>



NCART and CERT provide critical services that supplement and enhance the County's overall response.



Figure 9. Napa Community Animal Response Team. (Source: <https://www.facebook.com/napacart/photos/a.2086391884949121/2731240347130935/?type=3&theater>)

Strength 3: The Agricultural Commissioner's Office pivoted successfully to implement a COVID-safe Agricultural Verification Card Program and permit eligible workers and property owners access to lawfully closed areas to carry out critical agriculture and infrastructure operations.

The Agricultural Commissioner's Office adapted to the challenges of COVID-19 pandemic to successfully implement the Agricultural Verification Card Program amidst operational challenges. First, the office was able to complete some work remotely which was largely thanks to the implementation of the ArcGIS Esri Survey 123 that was used to electronically collect the data needed to verify agricultural activity for the issuance of a pass. Previously, information was collected on paper and in-person. While the office did use previous data collected to supplement the survey and support the verification process, the primary process for data collecting consisted of the ArcGIS Esri Survey 123. Further, the office moved operations out of their physical office space and into the parking lot to accommodate physical distancing and other public health measures to prevent the spread of COVID-19.

With these changes came other difficulties, such as some growers not having access to the internet or having limited English proficiency. However, the Agricultural Commissioner's Office ensured support was provided to all individuals by allowing persons to complete the survey on an iPad in the parking lot of the building and by allowing individuals to call-in to the office and submitting their data to the survey on their behalf. Spanish-speaking employees were also available to assist those with limited English proficiency. The transition to a virtual data collection system had further benefits than preventing the gathering of individuals during a pandemic. Because of the virtual data, the Agricultural Commissioner's



Office could more easily share, visualize, and analyze data, as the office was able to easily prepare data dashboards.

Strength 4: Medical Health Branch coordinated a smooth and orderly evacuation of all patients at the St. Helena Hospital.

On August 19, CALFIRE ordered the evacuation of the St. Helena Hospital. The Medical Health branch of the EOC coordinated with the hospital to arrange for the transfer of over 50 patients. The evacuation was described as calm and orderly, with many noting that the County and the hospital were both prepared for this level of patient movement and evacuation. Some hospital staff remained behind on site to continue to operate essential infrastructure at the hospital—EOC staff continued to brief hospital staff about fire behavior and safety, as the hospital considered a full evacuation and closure.



Figure 10. Napa County EMS. (Source: Napa County.)

Strength 5: Pro-active communication between partners helped to coordinate and streamline repopulation decisions.

Constant communication and early planning between Law Enforcement, Fire, utilities providers, and other partners supported thorough analyses and decision making around repopulation. During the 2020 fire season, the EOC structure formalized the involvement of County personnel (i.e. debris removal, damage assessment) to support decision-making around repopulation efforts alongside the IMT. This structure allowed for more direct and informed planning and communication to the public.



Areas for Improvement

Area for Improvement 1: Coordination across response partners before and during the evacuation effort could have been improved

With such a large event, many response and governmental agencies were involved in the evacuation effort. The evacuations were carried out successfully, some agencies and municipalities relayed that they were confused about their roles in the effort. It was noted that greater coordination between the county EOC, city EOCs, and the field responders might have improved public understanding of the evacuation effort.²⁸

It was noted by one interview in a small group interview that residents in St. Helena were concerned about the lack of evacuation orders in their jurisdiction. While St. Helena officials emphasized the importance of aligning with the Incident Management Team (IMT) and strove to provide information to the public about why evacuation decisions are made (e.g., fire behavior, evacuation routes, mapping), this public confusion underscored an opportunity for closer pre-disaster coordination between agencies involved in evacuation, as well as provision of robust education to the public about evacuation planning before and during incidents.

While the EOC's Geographic Information System (GIS) team did a fantastic job interpreting and synthesizing information to get out to the public, some noted that it took several days for evacuation maps to be published online and through social media due to a hesitancy about where particular boundaries should be drawn, per the ICP.

Some noted that it appeared that on several occasions, command at the EOC learned of evacuation and repopulation information as it was published in press releases by the ICP rather than through a direct communication line with the command at the ICP. This resulted in delays in gathering situational awareness at the EOC-level throughout the rapidly evolving start of the incident, causing confusion about which areas were under evacuation orders on several occasions at different points.²⁹ The EOC issued clarifying Nixle messages on a couple of occasions. While evacuation is addressed in an annex to the Napa County EOP, more robust pre-disaster evacuation planning outlining organizational structures, criteria and definitions, and EOC processes that define communication with the ICP could bolster coordination across response partners in the future.

Area for Improvement 2: There was public confusion surrounding evacuation terminology, reasoning, and locations.

During extreme fire behavior events, time is of the essence requiring rapid evacuation and public warning; communication is always a challenge in this landscape of urgency. Several interviewees noted that the public struggled to understand where evacuations had been issued and what the differences were between warnings and orders. The ICP provided evacuation orders and warnings by street names.

²⁸ Hot Wash

²⁹ Online Survey



Some residents commented on the Nixle platform that it would be helpful to disseminate a map along with evacuation orders so residents can better understand the location of the evacuation and the vicinity of that evacuation warning/order in reference to one's residence. Due to a lack of pre-designated evacuation zones, quickly disseminating public-facing evacuation maps posed challenges as the workflow surrounding evacuation mapping was nuanced and complex.

It was also noted that there is a need for public education surrounding evacuation terminology. In May 2020, the state released a memo that standardized evacuation terminology (e.g., established definitions for evacuation warnings and orders). Some individuals expressed confusion surrounding the difference between an evacuation and order and warning and some of the older terminology, such as "evacuation advisory" or "evacuation alert". Without understanding the meaning behind these terms, it is difficult for individuals to be empowered to make critical emergency decisions for themselves and their families.

Area for Improvement 3: The Agricultural Verification Card Program developed to regulate access to evacuated areas for workers engaged in critical agricultural operations raises concerns for first responders and would benefit from enhanced coordination through the EOC

Agricultural production in Napa County tops \$1 billion, and harvest of grapevines occurs each year from August through October, peak fire season. Extended evacuations and area closures can have a significant impact. Napa County developed an agriculture pass program in 2014 to allow agricultural workers to access into evacuated areas to support critical operations. While this program addresses challenges associated with lengthy area closures in largely agricultural regions that can heavily impact local economies, first responders staffing checkpoints indicated in interviews that enforcement and verification is a significant challenge. .

Some agricultural operations may request upwards of 150 passes to support agricultural operations during peak harvest times and it is challenging for first responders to maintain access control when such a high volume of access passes become available. Further, the definition of a legitimate agricultural need has not yet been clearly defined, making the process for verification of agricultural activity sometimes nuanced and difficult to determine. For instance, individuals providing generators, portable bathrooms, and other supporting services also requested passes, but this does not necessarily fall within the scope of the Agricultural commissioner's Office. In addition, the Agricultural Commissioner's Office does not have authority over wineries, as this falls under the purview of Planning, Building, and Environmental Services (PBES). Further scope challenges were experienced during the implementation of the pass program due to the EOC call center directing individuals to call the Agricultural Commissioner's Office to obtain a pass for reasons not aligned with the purpose of the program overall (e.g., to obtain prescription medications from their households or to care for companion animals).

Staff from the Agricultural Commissioner's Office shared that a more proactive approach to data collection to verify critical agricultural operations before an incident occurs would expedite the permitting process and provide more robust verification critical needs in future events.

Overall, while the pass program was largely a success in that it allowed individuals with agricultural operations to safely access their properties and carry out their essential functions, some elements of



the program can be further fine-tuned to support the integrity and ease of implementation of the program.

Area for Improvement 4: The County experienced challenges with consistently issuing clear and timely messages regarding repopulation which caused confusion.

The effort to repopulate Napa County residents during the LNU Lightning Complex Fire required much coordination and timely communication from a central source. Some communities received the go ahead to repopulate before it was confirmed that all roads were safe and areas secure for repopulation. Mixed messaging caused confusion and there was an observed need to improve efficiency within the EOC to include more streamlined public messaging regarding repopulation disseminated through the PIO.

Recommendations

Recommendation 2.1: Develop a comprehensive Evacuation Plan, or update the Evacuation Annex, in coordination with response partners. The Evacuation Plan should include the following elements:

- Processes for utilizing evacuation tags and sirens
- Explanation of the terminology utilized
- Coordination mechanisms between response agencies and for evacuation alert and warning
- Zonehaven workflow
- A repopulation process that formalizes the public notification process established during the LNU Lightning Complex Fire
- Training, exercise, and plan review and update standards

Recommendation 2.2: Develop an Agriculture Annex to the EOP that includes but is not limited to:

- The establishment of an Agriculture Branch within the Operations Section of the EOC to provide additional support and coordination around the Agricultural Verification Card Program
- Multi-agency involvement (e.g., Napa County Sheriff's Office, Planning, Building & Environmental Services, etc.)
- Clear definitions of what is considered legitimate agricultural activity and determinations of what other industries (e.g., wineries) or supporting services (e.g., generators, utilities portable restrooms, etc.) should be granted access and the process for doing so
- Explore options for implementing electronic passes and for verifying legitimacy of passes (e.g., personalized QR code)

Recommendation 2.3: Formalize a process for communicating with agricultural industry partners and law enforcement personnel to collect the data necessary to verify pass needs and build understanding between the county and agricultural partners regarding the intent of the program and safety protocols needed to protect workers.



Recommendation 2.4: Document and formalize the process established for repopulation to ensure continued coordination in repopulation events. Continue to coordinate with the ICP's interagency repopulation planning team, to support provision of public information and communication around evacuation and repopulation.



3. Public Information and Alert & Warning

Overview

Napa County's Public Information (PIO) Team in the EOC worked across many functions and communications tools to provide clear, consistent, and timely information to the public, amidst an acute demand for information from the public and senior officials during this rapidly changing and dynamic incident. The PIO team was responsible for the following functions during the LNU Lightning Complex Fire:

- Media management (including coordination and dissemination of information and media responses)
- Call Center management
- Joint Information Center management
- Website content development
- Social media
- Alert & Warning (communication of evacuation warnings and orders to the public)
- Translation
- Coordination of press conferences and briefings
- Development of executive talking points
- Analysis and dissemination of information from the ICP
- Rumor control



Figure 11. News coverage of the LNU Lightning Complex Fire featuring Napa County's Public Information Team. (Source: Fox2 News.)



Before the LNU Lightning Complex Fire activation began, several processes had already been stood up to support the County's COVID-19 response. The County was already staffing a public information hotline or call center, which provided support to the public from bilingual County employees (activated as disaster service workers). The County had already established a Joint Information Center, where public information officers from municipalities and other agencies in the operational area exchanged public information and collaborated on messaging.

Disasters often offer lessons learned in Alert and Warning, as emergency conditions result in unanticipated impacts to communications networks, the technology to deliver emergency communications rapidly evolves, and public expectations shift. Napa County uses Nixle as its primary mass notification tool and centerpiece of its Alert and Warning program. Nixle has a very robust subscriber base.

The PIO Team used a number of platforms to communicate the latest information to the public in both English and Spanish. The team utilizes Facebook, Twitter, NextDoor, the County website, and ReadyNapaCounty.org (its preparedness platform) to post incident updates from the ICP, evacuation notices, shelter information, and safety advisories. The PIO team strove to ensure updates remained consistent and timely across various platforms, though inconsistencies and updating delays were inevitable given the small number of staff supporting the PIO team and the various platforms utilized.

Alert and Warning definitions

A **public alert** is a communication intended to attract public attention to an unusual situation or circumstance connected with someone or something. The measure of an effective alert is the extent to which the intended audience becomes attentive and searches for additional information.

A **public warning** is a communication intended to persuade members of the public to take one or more recommended protective actions in order to reduce losses or prevent harm. The measure of an effective public warning message is the extent to which the intended audience takes the protective action and/or heeds the guidance.



Figure 12. Social Media post showing public information in English and Spanish languages.
(Source: Napa County, Twitter.)

Although there were many successes to the communications efforts during the LNU Lightning Complex Fire, staff noted that the demand and expectations for public information and the volume of media inquiries outpaced the capacity of available staff. The core team members continued to put in maximum hours and avoided taking bathroom breaks. This did not result in a sustainable staffing pattern and the PIO team experienced a high level of burnout. As one respondent noted, “Three people did the job of eight people.”

One additional challenge noted, was the confusion, primarily among the public, on the roles and responsibilities of the County versus CALFIRE. The County relies on CALFIRE and the Incident Management Team to provide updates on official data and fire activity. There were many requests for live fire maps and high-tech situational awareness tools, which the small PIO Team did not have the bandwidth, resources, or authority to produce.

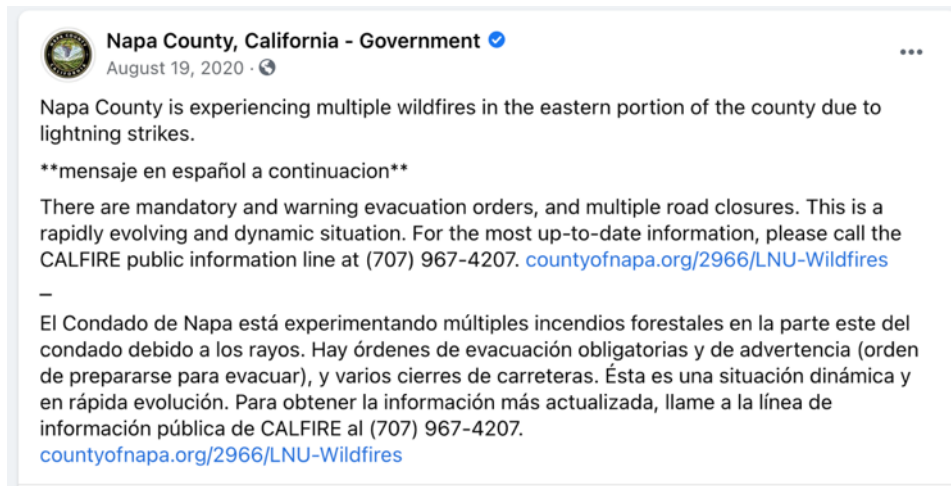


Figure 13. Public Information push in English and Spanish with evacuation orders.
(Source: Napa County, Facebook.)

Strengths

Strength 1: The PIO team did a commendable job of meeting the diverse needs of the community by providing critical information to the public through an array of different channels.

The use of social media, especially Facebook Live, was noted as a consistent success as the County's PIO team adjusted to a largely digital approach, made necessary by the COVID-19 pandemic. Both English and Spanish speakers answered calls from the public through the call center, and press conferences, Alert and Warning messages, and social media content was consistently translated. The team worked with local press to reach rural communities and address rumor control.

The County also relied on its partnership with COAD for their outreach as trusted messengers to maximize engagement with hard-to-reach populations. COAD supplemented the County's efforts and was significant in the information-sharing and dissemination during the incident.

Strength 2: The public recognized Nixle, Napa County's mass notification system, as an official and primary source of information throughout the LNU Lightning Complex Fire response and recovery.

Napa County utilized its mass notification system, Nixle, to issue evacuation orders and warnings and other updates throughout the duration of the incident. Through these notifications, Napa County was able to reach residents through multiple communications modalities, such as text, email, and Everbridge app alerts to inform them of evacuation orders and warnings, shelter options, road closures, and COVID-19 public health measures. Required public health measures at the evacuation center, including masking and social distancing, were communicated through Nixle as well. Napa



County also utilized Nixle to disseminate repopulation notifications, as evacuations were lifted.³⁰ The County followed its Alert and Warning guidelines to send messages pertaining to evacuation orders, repopulation, and road closures as “alert” message type in Nixle, which reach all subscribers. The public appears to be accustomed to utilizing Nixle notifications as an official source of emergency information from the County.

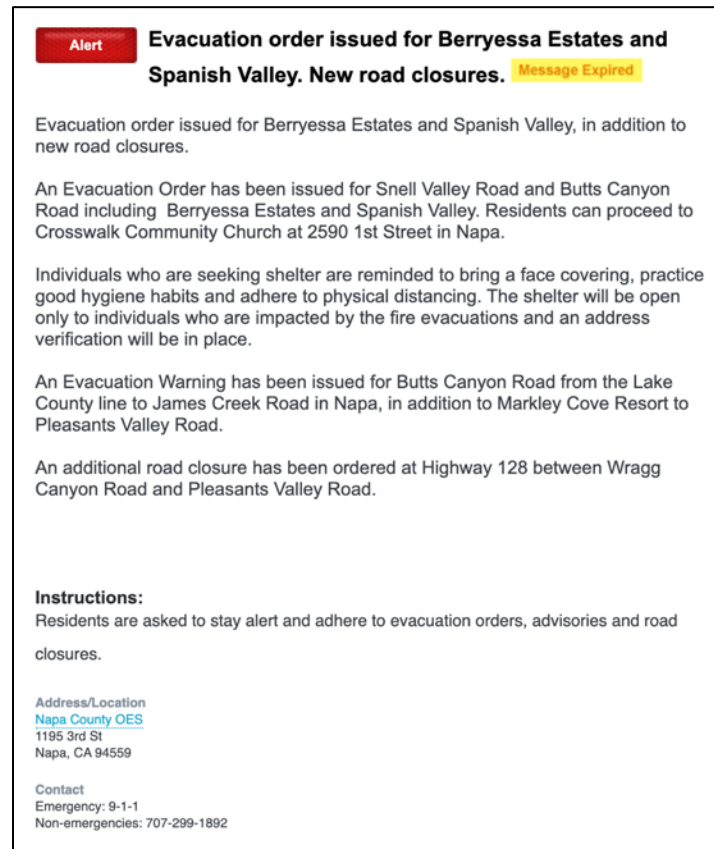


Figure 14. Napa County Nixle Evacuation Alert.
(Source: <https://www.local.nixle.com/alert8188552/?l=en>)

Strength 3: Collaboration and information sharing among CAL FIRE, COAD, and other partners resulted in messaging alignment

Sharing information frequently across partners helped to provide a consistent voice and official source of information for the public. County PIO Team focused on amplifying official updates from the CAL FIRE IMT, rather than re-creating or developing County-specific communication tools.

³⁰ Small Group Interview



Strength 4: Bilingual county-led call center was stood up quickly to answer a variety of questions from the public

The county call center staff worked tirelessly to answer questions from the public regarding fire behavior, evacuation centers, road closures, and more. Some callers would reach the call center in hopes of locating a loved one in the area, like an elderly parent or someone with limited phone and internet access. Call center staff would collect those names and pass it to Health and Human Services Agency / Napa County Sheriff's Office to conduct wellness checks. Unlike other communications platforms, the call center provided two-way communication, which allowed concerned individuals to ask specific questions. The County's call center supplemented CAL FIRE's 24/7 call center which was staffed out of a building at CAL FIRE Sonoma-Lake-Napa Unit Headquarters.

Call volume from the County's call center from the date the fire began to the date evacuation orders were lifted and sheltering ended was as follows:

8/17/2020	121
8/18/2020	87
8/19/2020	101
8/20/2020	100
8/21/2020	130
8/22/2020	82
8/23/2020	49
8/24/2020	157
8/25/2020	86
8/26/2020	94
8/27/2020	83
8/28/2020	97
8/29/2020	38
8/30/2020	43
8/31/2020	93
9/1/2020	67
9/2/2020	54
9/3/2020	56

Strength 5: Incorporating language translators into the EOC expedited the translation of Alert and Warning messages.

During the LNU Lightning Complex Fire, the translations team was incorporated into the EOC structure. While this occurred in the 2019 response to the PSPSs, this was the first time this occurred for a real-world wildfire response. During prior incidents, such as the 2014 earthquakes and 2017 fires, there was concern that the translation process delayed the timely issuance of alerts and warnings. As a result, the process for requesting translations improved over time and resulted in the integration of the translations team into the EOC. Translators are now formally on the EOC roster



and a staffing process has been established to better meet translation needs in future incident responses. This process includes scheduled translator shifts and a translator roster to ensure staffing coverage of critical translator positions throughout EOC activations. Overall, the practice of integrating the translations team into the EOC structure proved successful during the LNU Lightning Complex Fire response, so much so that it has now become standard practice for Napa County.³¹



Figure 15. Translated LNU Lightning Complex Fire Community Briefing Session information.
(Source: <https://www.facebook.com/NapaCounty/photos/a.117865601605578/3307849552607151/?type=3&theater>)

³¹ Small Group Interview



Areas for Improvement

Area for Improvement 1: The Public Information Team remained understaffed for the duration of the emergency.

It was repeatedly noted that this group was stretched thin to the point that individuals were responsible for work that was 5 times their normal workload. Staff reported that they did not have a clear mechanism for activating or requesting new staff to provide relief or additional support. The lack of established backup support and dependence on particular individuals in key positions, created continuity issues when those individuals were not immediately available.

Area for Improvement 2: A lack of established processes and planning tools added additional challenges to the Alert and Warning process and confusion for the public.

While the County had engaged in planning efforts around its Alert and Warning program previously, Nixle messages were initially developed and sent on an ad hoc basis based on the urgency of the moment. Continuity across messages was a challenge as Alert and Warning originators rotated on and off duty and previously templated language was lost.

In 2019, the County's PIO team had previously created a portfolio of message templates that had been reviewed and approved by the Joint Information Center and COAD. While some components of the messaging templates were utilized during the LNU Lightning Complex Fire (SMS fields), the templates lacked IPAWS specifications, message bodies, and other components that could have proved useful. Eventually, the PIO team developed and began using more extensive templated language to standardize and expedite messaging.³²

Area for Improvement 3: The Alert and Warning program was understaffed, given the complexity and importance of this activity.

During the LNU Lightning Complex Fire, four County staff members in the EOC were trained and available to craft, disseminate, and manage Nixle messages (with two staff serving as experienced subject matter experts in the Nixle platform, and two serving strictly as back-up support). The County did not have any bilingual staff trained to disseminate Nixle messages. The number of staff currently trained to disseminate Nixle messaging is not adequate for a response to an incident of the same scale and severity of that of the LNU Lightning Complex Fire, particularly when coupled with a global pandemic.³³

Additionally as the technology and telecommunication infrastructure that supports Alert and Warning grows in complexity and the disaster impacts that technology in unanticipated ways, Napa County would benefit from greater technical expertise to support its program. As the fires and power outages impacted cell coverage and wi-fi, some residents reported that they had lost the ability to receive Nixle messages or open attachments on a browser that were sent via SMS. While these unforeseen impacts are unavoidable, there are opportunities to expand Napa County's Alert and

³² Small Group Interview

³³ Small Group Interview



Warning program to include other redundant forms of communicating with residents (i.e. utilization of reverse-911 or Nixle Dial, EAS, NOAA Weather Radios).

The County has an agreement with an AM radio station, but it was noted that this resource is underutilized and needs to be further branded and marketed by the County to improve engagement with the public.³⁴ While it has been noted that inroads are being made towards further utilizing the radio contract and that now, over 200,000 people are signed up for Nixle alerts, Napa County should continue to evaluate redundant communications strategies to ensure the widest reach for emergency notifications and information.

Additional expertise and analysis is needed to identify those opportunities and cultivate the capacity to implement those additional strategies.

Area for Improvement 4: The County experienced software challenges with its mass notification software vendor, Nixle.

Napa County Office of Emergency Services began contracting with Nixle in early 2014 to replace an older system that primarily provided Reverse-911 capabilities. Subscribership grew tremendously after the 2014 earthquake and 2017 fires. The County had over 200,000 subscribers registered for the opt-in system at the time of the LNU Lightning Fire.

Nixle was acquired by another Alert and Warning software provider called Everbridge in 2016, but the Nixle system remains more basic than its parent platform. Other neighboring Bay Area counties utilize more robust platforms with additional features, like Everbridge or CodeRed, as their primary mass notification tool and some maintain Nixle as a back-up platform.

During the late evening hours of August 18, EOC leadership wanted to utilize the IPAWS platform to send a Wireless Emergency Alert (WEA) alert to all cell phones in a particular area, urging vigilance overnight as fire activity remained dynamic. As staff worked to send the message through the Nixle software platform, they continued to receive an unknown terminal error message from Nixle. Staff worked with Nixle, Everbridge, Cal OES Warning Center, and FEMA's IPAWS lab to troubleshoot the issue, which was ultimately due to a software update failure on the Nixle platform.

The vendor routinely makes updates to its software and terms of service that are complex for staff to troubleshoot, integrate into the program, and socialize with the public. For instance, Nixle made a companywide change in June 2020, wherein the company would only send text messages to registered subscribers for the Alert-only category or for subscribers who do not provide email addresses. The policy change resulted in confusion for Alert and Warning disseminators and for the public, who suddenly did not receive messages in the format they were accustomed to. Throughout 2020, Napa County OES received complaints from the public that Nixle messages were not delivered through a consistent mode (text, email, or app alert).

As the market for Alert and Warning software continues to evolve, Napa County should continue to evaluate whether Nixle provides the features and services it needs to support an effective and reliable Alert and Warning program.

³⁴ Hot Wash



Area for Improvement 5: No formal, comprehensive plan exists to guide Alert and Warning and other communications efforts during an emergency response.

While the Napa County EOP briefly mentions Alert and Warning, it was noted during the data collection process that there is not a recognized formal plan that establishes policy and guides communications efforts during emergencies. While the Office of Emergency Services has engaged in several past planning efforts to establish Nixle guidelines and messaging templates, the County may benefit from a more robust, comprehensive document that details procedures for utilizing multiple communications tools, establishes trigger points, standardizes definitions, delineates processes for translation, and includes pre-translated template Alert and Warning messages, press releases, and social media posts.³⁵

Area for Improvement 6: County employees staffing the Call Center received little training and employee assistance resources to support their work.

It was expressed that the communications training and available resources (scripts) did not adequately prepare Call Center staff to support individuals in crisis or with particular specialized needs. Staff often received calls from the public regarding evacuation decision-making or emergency response decisions, calls the staff did not feel adequately prepared or trained to take.

Area for Improvement 7: County Call Center may duplicate additional resources which are available to provide resource referrals and emergency information to the public.

While staff and the public reported positive experiences regarding the County's Call Center, which is stood up to answer questions from the public during emergencies, other resources exist to support this function during an emergency, including CALFIRE's call center and 211, which is operated by the Bay Area United Way to provide one-stop-shop resource referrals to the public. Staffing a dedicated Call Center provides an invaluable service to residents in need of information, but due to the heavy resource investment, the potential confusion of multiple sources of information, and the potential for duplicated services, the County should further evaluate the unique services and value add offered by a County-managed Call Center during emergencies. There may be opportunities to direct the public to other, more streamlined resources.

Recommendations

Recommendation 3.1: A just-in-time protocol document or folder of Alert and Warning messaging templates would have standardized the Nixle workflow, as PIOs rotated on and off duty. Napa County could have benefited from leveraging the previously approved templates to create more comprehensive and consistent Alert and Warning messages for the public. A folder of messaging templates could be updated regularly by OES and the PIO team to capture emerging considerations (such as anticipated COVID-19 safety protocols or changes to evacuation terminology).

³⁵ Small Group Interview



Recommendation 3.2: Train additional staff, including bilingual staff, to support the drafting, dissemination, and management of its Alert and Warning tools. Napa County should have additional subject matter experts with specialized understanding of the technical aspects of Alert and Warning platforms, as well as additional message originators.

Recommendation 3.3: The EOC's PIO team could benefit from additional staffing to maintain communication with local press. Some communities rely on hyperlocal sources of news (bloggers, Facebook groups) and the EOC's PIO team benefits from establishing communication with these trusted community messengers and news sources.

Recommendation 3.4: The EOC's PIO team could benefit from additional staffing to support executive communication with elected officials, who communicate directly and frequently with constituents.

Recommendation 3.5: Collaborate with CAL FIRE on information sharing protocols, roles and responsibilities, and public messaging tools. There was some expressed confusion regarding what information the County could share, and what belonged to CAL FIRE. Strategize how best to equip the public for accessing these valuable resources during disaster. The desire for live fire maps and other high-tech products was expressed by several stakeholders interviewed in this AAR. Explore options for addressing these requests, such as developing them in-house, collaborating with a partner, or, if available, documenting a process for directing the public to an established, workable fire map in collaboration with CAL FIRE.

Recommendation 3.6: Provide additional training to County call takers. When possible, physically locate call takers together in a shared space, and ensure reporting line to PIO is clear.

Recommendation 3.7: Consider utilizing a language access approach focused on "transcreation" of content, over and above "translation" of content. Transcreation is the process of adapting content from one language to another while maintaining the existing tone, intent and style. While translation focuses on replacing the words in one language with corresponding words in a new language, transcreation is focused on conveying the same message and concept in a new language.

Recommendation 3.8: Develop a robust Crisis Communications Plan which defines the processes Napa County should utilize to communicate in the case of an emergency. The plan should include but should not be limited to the following:

- Nixle standard operating procedures, pre-vetted maps to disseminate in Nixle evacuation alerts to add further clarity, and an Alert and Warning quality assurance process
- Processes for utilizing all available communications systems (e.g., social media, AM radio, traditional media, message boards, door-to-door communications, etc.)
- All hazards alert and message templates to expedite message dissemination
- Formalization of the process of including translators in the EOC structure and a standard process for translations/transcreations
- Training, exercise, and plan review and update standards



4. Shelter Operations

Overview

Napa County recognizes the need to provide mass care and shelter to residents during disasters and has made great strides in recent years to expand this capability. The EOC's Care and Shelter branch demonstrated tremendous resolve with the rapid provision of shelter resources to accommodate evacuees in the aftermath of the LNU Lightning Complex Fire. Before the full EOC activation, OES had coordinated with the Care and Shelter team under the Self-Sufficiency Division (SSD) to set up and initiate shelter and mass care operations. SSD is the lead coordinating agency for the EOC's Care and Shelter branch during emergencies.

Prior to the 2020 fire season, OES, SSD, and Public Health Emergency Preparedness staff conducted a series of shelter planning meetings to plan for shelter operations during a pandemic. That shelter workgroup identified capacity at existing shelter locations and discussed public health measures that would need to be implemented to safely provide congregate shelter and mass care during a major incident. The workgroup discussed the potential to conduct non-congregate sheltering, but it was not initially considered a plausible option, given the high volume of tourists in Napa County in the summer and fall months and the anticipated utilization of hotels by other evacuees.

The Care and Shelter Branch maintains strong partnerships with several community-based organizations and government agencies; those partnerships were critical to their success setting up non-congregate sheltering for the first time and providing resources to evacuees during a very complex response.

Within hours of the first evacuation order on August 17, Care and Shelter branch had opened up Crosswalk Church as an evacuation center for early evacuees to access food, information, services, and shelter. As evacuations grew in the days that followed, more households sought shelter options from the County. A limited number of evacuees preferred to stay in RVs at Crosswalk Church, but the vast majority of the County's sheltering operation involved the provision of non-congregate shelter and related services across multiple hotel sites. At the height of the sheltering operation on August 27, the County provided non-congregate sheltering to 388 individuals across 170 hotel rooms.



Figure 16. Socially distanced beds set up in anticipation of potential non-congregate sheltering at Crosswalk Church. (Source: Napa County.)

Strengths

Strength 1: With support from American Red Cross and State of California, the County was able to provide non-congregate shelter resources at hotels for interested evacuees.

As part of their operations to provide non-congregate sheltering options, Napa County was able to work with partners from the American Red Cross (ARC) to secure blocks of rooms at hotels, which helped provide a solid foundation for non-congregate shelter resources as evacuees began to request shelter accommodations. As need for non-congregate shelter resources grew with increased evacuations in fires across the state, the California Department of General Services, California Governor's Office of Emergency Services, and California Department of Social Services worked together to make hotel room blocks available to impacted counties to use as non-congregate sheltering options. The County continued to identify hotel rooms and staff available to support registration and intake, but the state's support provided critical logistical support and financial assistance. This support proved invaluable and resulted in a robust but very safe non-congregate sheltering operation that limited the transmission of COVID-19.

Strength 2: Strong working relationships and clear chains of command with community partners served the County well

A key strength of the County's care and shelter response stemmed from well-coordinated partnerships with community-based organizations. A number of community partners worked with



Napa County during the 2015 sheltering effort in Calistoga following the Valley Fire, and there is a recognized need to coordinate and provide services in a unified manner.

The week the LNU Lightning Fire began, the EOC's Care and Shelter branch has been planning to conduct a tabletop exercise in partnership with community-based organizations. The County's EOC had been working closely together for several months on missions requests related to the COVID-19 pandemic. Community partners noted that they were already in constant communication with each other regarding the COVID-19 pandemic so it felt natural to transition into a wildfire response that necessitated increased coordination.

Napa County benefits from a strong working relationship with Napa Valley Community Organizations Active in Disasters (COAD), which coordinates community-based organizations in all phases of emergencies. During the LNU Lightning Fire, COAD provided over 300 "kid kits" and distributed approximately \$58,000 in donated gift cards to evacuees. COAD also supported the response by lining up agency representatives from United Policyholders, Bay Area Legal Aid, and Fair Housing Napa Valley to staff the Local Assistance Center. The Office of Emergency Services contracts with the Center for Volunteer & Nonprofit Leadership (CVNL) to support donations and volunteer management. During the fire, CVNL collected gift card donations and coordinated spontaneous volunteers. Both COAD and CVNL utilize the incident command system to fulfill mission requests from the EOC.

The County also utilized an agreement with the Salvation Army to coordinate meals for evacuees, which resulted in 6,942 meals prepared and delivered.



Figure 17. Salvation Army coordinated the preparation of thousands of meals to feed evacuated residents. (Source: Napa County.)



Strength 3: Internal communication and communication among partners remained strong during this complex operation.

The implementation of non-congregate sheltering across multiple sites required more coordination and communication than a typical congregate sheltering operation. In a non-pandemic year, staff are able to coordinate logistics and resolve issues in person. COVID-19 resulted in more remote coordination between partners. In spite of those challenges, those interviewed for this AAR reported strong ground-level communication between partners. Placing a care and shelter liaison at each hotel helped streamline shelter registration issues as they arose.

Strength 4: Use of hotel rooms eased the pressure off of the Napa County Animal Shelter, as many evacuees were able to accommodate pets in their rooms.

During the LNU Lightning Complex Fire, hotels utilized as non-congregate sheltering largely permitted evacuees to keep pets with them in their rooms. This helped reduce the anticipated volume of pets the Animal Shelter might have ordinarily had to care for during a comparable emergency with congregate sheltering. As a result, the Animal Shelter was able to provide additional support to the livestock and large animal sheltering effort coordinated by NCART.



Figure 18. A dog supported during sheltering efforts. (Source: Napa County Animal Shelter.)

Strength 5: Evacuees had overwhelmingly positive feedback about sheltering and care staff's service.

Overall, the sheltering and care staff and partners demonstrated incredible resolve and commitment to providing the best service to evacuees during the response. This was clear from the start with shelter intake registration. County partners had set up several tents and mobilized volunteers to



provide a streamlined process for evacuees. With evacuees battling the summer heat as well as strict COVID-19 guidelines, staff and volunteers had continuously displayed compassion and diligence in facilitating a comfortable process for evacuees to meet their immediate needs. Staff and volunteers took time to walk through evacuees' concerns and provide compassionate customer service; bilingual staff and volunteers were always available on site to ensure services were accessible to evacuees.



Figure 19. Sheltering and Care staff at the Evacuation Center with snacks and water.
(Source: Napa County.)

Areas for Improvement

Area for Improvement 1: There were logistical challenges that resulted in delayed meal delivery to non-congregate care sites

While setting up non-congregate sheltering and assigning evacuees to rooms across multiple sites was ultimately very efficiently stood up and successful, there were challenges associated with the provision of meals during the LNU Lightning Complex Fire response. The County partnered with the Salvation Army to provide meals to evacuees. However, logistical challenges resulted in delays transporting meals to hotel sites in a timely manner. With a dispersed set of non-congregate care sites, transportation of meals was not efficiently mapped or routed. These issues stemmed from a lack of staff available for transportation and a lack of planning to identify most logical routes for meal delivery.

Area for Improvement 2: There was a lack of planning for and communication to the public around donations management and several challenges around the collection and distribution of donations



During the response, the County messaged to the public that gift card donations were welcome, but not goods or items, due to the threat of COVID-19 and well-documented logistical challenges of donations management during disasters. Nevertheless, community-based organizations and members of the public provided donations to evacuated households and presented donated resources at Crosswalk Church. County staff acknowledged that not all items could be utilized or maximized to help those who needed it. Eventually, this would result in a surplus of donations that was cumbersome for the staff and volunteers to manage. Specifically, the animal shelter had issues with receiving donations and resources that did not match their needs or quality standards.



Figure 20. A welcome sign outside the Evacuation Center. (Source: Napa County.)

Donations collection and distribution raised some challenges. Both functions were essentially coordinated by two different teams with different schedules at Crosswalk Church, in view of evacuees. Staffing to support the collection and distribution of donations was limited. This proved frustrating for some evacuees and there were several instances when evacuees witnessed volunteers collect donations when the team that distributed donations was not available to distribute donations at that time. Due to donations management protocol between CVNL and COAD, staff were not able to immediately distribute donated gift cards, which resulted in several charged conversations between staff and evacuees who requested access to donated resources.

County staff and community partners stated that the donations management plan should designate distinct points of collection and dissemination for donations.



Recommendations

Recommendation 4.1: Continue to engage with transportation partners like Napa Valley Transportation Authority to coordinate efficient delivery of meals to care sites. Coordinate with community partners to arrange more drivers to ensure the transportation fleet can sufficiently deliver meals in a timely and consistent manner. Coordinate with GIS resources through the EOC to support enhanced mapping of transportation routes, when needed.

Recommendation 4.2: Create guidelines and public information material for community members to understand which donations are acceptable and preferred and how they will be distributed.

Recommendation 4.3: Plan for distinct sites for donations collection and distribution and ensure that these sites are not co-located at the main evacuation center.

Recommendation 4.4: As public health threats linger, continue to conduct sheltering exercises involving hotel management, community partners, and agencies involved in care and shelter to continue to streamline and troubleshoot the processes around non-congregate and congregate sheltering. Regular pre-season shelter exercises can help anticipate new and emerging challenges.



5. COVID-19 Impacts

Overview

Napa County faced unprecedented challenges developing first-of-its-kind response protocols to a dynamic and rapidly-evolving fire incident in the midst of a global pandemic. Mitigating the threat of COVID-19 in the County's field response operations and at County facilities (EOC, evacuation centers etc) was a prominent activity during this activation. The County's EOC made bold and difficult choices and their commitment to the safety and wellbeing of the community resulted in a largely successful response, with no COVID-19 cases linked to the EOC activation or the County's sheltering or evacuation efforts. Public health measures, as implemented, were effective in mitigating the threat of COVID-19 during this natural disaster that forced thousands from their homes.



Figure 21. County staff members wearing face masks during response work.
(Source: Napa County.)



Strengths

Strength 1: EOC staff were able to follow COVID-19 guidelines as demonstrated by the number of staff assigned, the PPE and supplies provided, and the physical distancing measures taken.

Overall, the County EOC was able to implement and follow public health guidelines to prevent the spread of COVID-19. This included new configurations to accommodate physical distancing within the EOC space. Additionally, EOC leadership had carefully considered staffing arrangements to ensure that rooms and facilities were not over the recommended capacity. Within the EOC, stakeholders noted that staff were consistently provided PPE, including masks, hand sanitizer, and other supplies that would help reduce the risk of COVID-19. It was further noted that all of this planning was taken into consideration well in advance. Stakeholders noted that leaders were aware that there was a high possibility of overlapping incidents, which led them to plan for COVID considerations in an EOC environment prior the actual incident.

Strength 2: Despite the demands of COVID-19 which limited the availability of staff, the County developed pre-planned and ad hoc strategies to generate the staffing it needed to support a massive response to the LNU Lightning Complex Fire.

The potential shortage of staffing was a major challenge, as many staff had been assigned to support the COVID 19 EOC activation, which included operational activities such as contact tracing, testing, and isolation and quarantine. This is partially why OES initially planned to manage potential fire response as an “incident within an incident” and organized “fire response” as an operational branch within the already activated EOC for COVID-19, in order to maximize reduced staffing and resource capacity. Unified Command continually evaluated operational objectives to shape an EOC structure that reflected the necessary priorities of the operational period.

Strength 3: To protect lives from the fire, the County EOC personnel and first responders accepted the risk of COVID-19 and continued to promote the safety and health of the community under the less than favorable circumstances and benefitted from referrals regarding exposed individuals.

One ongoing challenge of wildfire response during the COVID-19 pandemic was that residents who had confirmed cases of COVID-19 and were quarantined at home were highly likely to expose first responders and others to COVID-19 during the evacuation process. EOC’s Operations Section worked collaboratively among branches to establish a referral process as well as safety protocols for COVID positive residents who were in home-based isolation or quarantine and needed to be evacuated. Public Health and the Care and Shelter Branch at the EOC would provide referrals regarding individuals who were under isolation and quarantine at home and who had a potential need to be evacuated. A hotline was established for these referrals that was accessible to the public at all hours. All COVID-19 related referrals and individuals were referred to a designated isolation and quarantine site for evacuated residents.



Strength 4: To honor COVID-19 guidelines, the County leveraged technology to support ongoing communication and coordination with cooperating agencies and transfer certain functions to virtual operations.

In order to further limit the spread of COVID-19, the County transferred what functions they could to virtual operations. Recovery Operations Center (ROC) efforts were managed entirely via Zoom to support effective coordination. LNU Lightning Complex Fire EOC briefings were conducted in person and were made available to remote staff and cooperators via Zoom. In some cases, this also gave staff members additional flexibility as they were able to work remotely and flex when needed to support their families while working at capacity.

Areas for Improvement

Area for Improvement 1: The complexity of the LNU Lightning Complex Fire soon surpassed the “incident within an incident” framework that was initially used to plan for response efforts in the midst of COVID-19.

During the summer of 2020, OES and other EOC partners developed several planning approaches for addressing disasters that could occur concurrently within the COVID-19 pandemic. Understanding that available staff were stretched thin by the COVID response, OES initially planned for an "incident within an incident" response to a fire event, wherein the County's fire response would be addressed as an operational branch in the existing COVID-19 EOC structure and efforts would be made to minimize impacts to staff supporting the COVID-19 response and maintain a largely virtual activation. The magnitude and complexity of the LNU Lightning Complex Fire soon surpassed the potential efficiencies of the "incident within an incident" framework.

Area for Improvement 2: A number of COVID-19 safety protocols were developed on an ad hoc basis.

It is impossible to fully anticipate the unforeseen issues that may emerge in the midst of an unprecedented global pandemic. The County did an admirable job rising to each challenge and developing protocols as issues emerged. While OES and Public Health had several discussions in anticipation of the 2020 fire season before the LNU Lightning Complex Fire began, an earlier and more robust planning effort might have anticipated more of these unforeseen challenges and allowed the EOC opportunities to develop stronger planning approaches.

Recommendations

Recommendation 5.1: Consider codifying the lessons learned from “incident within an incident” framework related to COVID-19 response in a separate AAR process to capture how to improve or expand this framework during overlapping complex incidents.

Recommendation 5.2: Engage in pre-season tabletop exercises and formal planning discussions to anticipate emerging issues as risks of seasonal threats escalate. Pre-season planning efforts help all partners touch base, understand new guidance or resources, and stay ahead of likely challenges.



6. Transition to Recovery

Overview

Recovery activities proceeded at the onset of the LNU Lightning Fire and are likely to continue for many years. On August 19, the County Executive Officer proclaimed the existence of a local emergency and the County Health Officer followed with a local health emergency proclamation the same day regarding the dangerous debris created by the fires. A local emergency proclamation, issued in accordance with the Emergency Services Act, is a critical step in the disaster recovery process. Local emergency proclamations are required to authorize the issuance of orders and regulations, activate pre-established emergency provisions, and request state or federal assistance.

Governor Gavin Newsom proclaimed a State of Emergency on August 18 for fires burning across the state, and President Donald Trump issued a Major Disaster Declaration, that included approval for both FEMA Individual Assistance and Public Assistance on August 22, pursuant to the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act).

A number of recovery activities were organized through the County's Recovery Operations Center (ROC), a working group that utilized an ICS structure. The ROC held its first kick off meeting on September 3 and met regularly through January. Several county departments were engaged through that effort:

- Napa County's Department of Public Works-Roads Division served as the lead agency responsible for road clearance, debris removal from public roads and facilities, and repair/recovery of disaster-related damage to public infrastructure.
- Napa County's Planning, Building, and Environmental Services (PBES) Department is the lead agency for a number of other recovery activities, including safety inspections and building tagging, debris removal from private property, and watershed recovery.
- Napa County's Department of Housing and Homeless Programs continued to provide interim housing to disaster survivors who lost their homes and had no other immediate resources for housing.
- Napa County's Health and Human Services Agency served as the lead coordinator of the County's Local Assistance Center.
- Community Organizations Active in Disaster (COAD) staffed a branch of the ROC that provided updates and coordination around the recovery activities of community-based organizations.

On September 27, the Glass Fire began and County staff began reorganizing recovery from the LNU Lightning Complex Fire to accommodate simultaneous response and recovery from the Glass Fire. This section identifies strengths, areas for improvement, and recommendations regarding the transition to recovery and some initial recovery activities that occurred alongside response efforts.



Strengths

Strength 1: Emergency proclamations were made quickly and without hindrance.

It was discussed during the Hot Wash that the process for developing and processing emergency proclamations proceeded smoothly. Issuing local proclamations is an important first step in the recovery process.

Strength 2: Recovery teams made use of new technology to provide enhanced coordination and mapping of recovery activities.

The County's Safety Inspection team, organized by the Building Division, utilized an ArcGIS Survey 123 digital form to collect safety inspection data on the status of damaged buildings. GIS analyst developed a digital version of a standardized damage assessment form to expedite the collection of this field data. The County's damage assessment data was made available to the public in an intuitive and timely map.

Strength 3: The County moved quickly to identify strategies for maintaining contact with households impacted by the LNU Lightning Complex Fire.

After disasters, local governments have an ongoing need to communicate with impacted property owners and renters after the emergency response period has ended. It is difficult to collect this contact information, as impacted households disperse. The County implemented a number of strategies to identify contact information for those impacted by the LNU Lightning Complex Fire to provide those residents with information about resources, recovery deadlines, and safety information. The County created an opt-in communications form to encourage residents to opt in to identify themselves as impacted households and receive disaster updates and recovery information. County Library staff did pro-active outreach based on public records. The PIO team created a private Nixle group for LNU Lightning Fire-impacted households to receive targeted updates from the County. Staff at the Local Assistance Center surveyed LAC visitors about their needs, impacts, and contact information. These efforts made it easier for the County to sustain communication with this targeted group of affected residents after the emergency period ended.

Strength 4: The County addressed road clearance and debris removal from public infrastructure expeditiously.

The LNU Lightning Complex Fire produced large volumes of vegetative and structural debris, which impacted County roads. Roads crews moved quickly to ensure first responders and returning residents had access to the impacted areas. Roads crews are familiar with the FEMA Public Assistance process and build that awareness into their emergency response activities and documentation of their work.

Strength 5: The County developed a unified County web presence to support recovery efforts.

The County's Recovery PIO team had many discussions early on with stakeholders about the complex recovery process that lies ahead for disaster survivors. The team was about establishing easy-to-follow, one-stop-shop webpages for disaster survivors, including the "Rebuilding After the



Fire” landing page³⁶, Ready Napa County’s Wildfire Recovery page³⁷, and the Virtual Local Assistance Center. These webpages were interlinked depending on ownership of the content between departments, and emphasized visually appealing graphics, concise content, frequently asked questions, and intuitive site navigation.



Figure 22: Graphic from Napa County’s recovery webpage that utilizes a simple, linear logic to rebuilding and recovery for wildfire survivors.

The County’s social media channels and website still provide regular updates on recovery efforts and resources for those affected by the LNU Lightning Complex Fire. Residents can also opt in to receive text notifications on recovery news and attend Wildfire Recovery Community Meetings.

³⁶ <https://www.countyofnapa.org/2225/Rebuilding-After-the-Fire>

³⁷ <https://readynapacounty.org/432/Wildfire-Recovery>



Strength 6: The County established a Local Assistance Center (LAC) and two Recovery Support Sites (RSS) in compliance with public health measures to provide accessible services to the impacted communities

In addition to establishing a LAC in South Napa that made local, state, and federal resources available to disaster survivors, the County also established two recovery support sites to support residents who had returned home to the impacted areas. In the initial weeks after the fires, the state issued a “Do Not Drink-Do Not Boil” order for two water systems in the area due to post-wildfire concerns about benzene contamination. At the RSS sites, the County with help from CERT, distributed water and other recovery resources. The LAC benefited from additional local resources, coordinated in partnership with COAD.

Strength 7: The County moved quickly to transition to sustained recovery operations

The County activated a Recovery Operations Center (ROC) before the EOC for the LNU Lightning Fire had de-activated. The ROC convened different recovery functional areas for regular meetings and coordination for over six months. Planning for recovery during response is a best practice in emergency management and allowed for a smooth transition of EOC objectives, as the response efforts tapered off. While many departments own recovery activities in the long-term, many activities such as private property debris removal, watershed recovery, and interim housing required extensive interdepartmental coordination and communication, which the ROC structure supported and sustained.

Areas for Improvement

Areas for Improvement 1: Disaster survivors and county officials were frustrated by delays in the recovery process and desired more proactive communication.

As the threat of the fires passed, many residents and local officials expressed anxiety regarding the clean-up efforts for private properties. County Environmental Health issued clear advisories regarding the threat of hazardous waste, which is often present in wildfire ash and debris, and those advisories were supported by the Health Officer’s proclamation of a public health emergency, forbidding the removal of debris without proper assessment. Napa County submitted a request to the California Governor’s Office of Emergency Services to provide support for household hazardous waste and debris removal from private property. As wildfires continued across the state for weeks, the state did not provide an official response to the County’s request. The state began Phase I: Household Hazardous Waste assessment and removal on September 14, which helped address concerns about the threat the debris posed to life safety and environment. Nevertheless, residents and County officials were anxious to initiate debris removal efforts sooner and desired earlier direction about next steps in the recovery and rebuilding process.



Areas for Improvement 2: While the County ultimately developed several approaches to communicate with impacted households, an effort to coordinate contact lists at the onset might have lessened the work associated with this effort.

The County developed an ArcGIS tool to centralize contact information across departments that was underutilized. County staff relied on labor-intensive means of collecting contact information from impacted households and contact lists could not be centralized to provide a more comprehensive master communication list due to divergent approaches to tracking contact information.

Areas for Improvement 3: The Local Assistance Center was located far from the impacted community

Napa County's Local Assistance Center (LAC), which provided a "one-stop-shop" for local, state, and federal disaster recovery resources for individuals, families, and businesses impacted by the fire was located in South Napa, while the affected residents lived in remote areas of the county up to an hour away. While attendance at the LAC was strong, the location may have presented an inconvenience or transportation barrier to impacted residents. County staff stated that identifying potential facilities in more remote areas of Napa County is a challenge.

Recommendations

Recommendation 6.1: Develop a Disaster Debris Management Plan that codifies the County's policies and approaches for addressing disaster-generated debris on public and private property. Include messaging templates and sample request letters.

Recommendation 6.2: Develop a pre-disaster list of potential LAC sites across the County. Explore the possibility to co-locate a LAC in an adjoining county, when crossing county lines is more convenient for impacted residents.

Recommendation 6.3: Continue to maintain the Napa County Recovery template websites for easy activation after disasters. There is also opportunity to define distinct web presences (including maps and data) for previous disasters, which helps document the history of the event and makes information available to the public on an ongoing basis. The recovery process would benefit from a larger focus on streamlining processes and communication across disasters.

Recommendation 6.4: Centralize and coordinate efforts to collect contact information to reduce duplication of effort among county departments and improve communication with impacted households. Contact information could be linked to existing mapping efforts.



County's Response Statistics Infographic

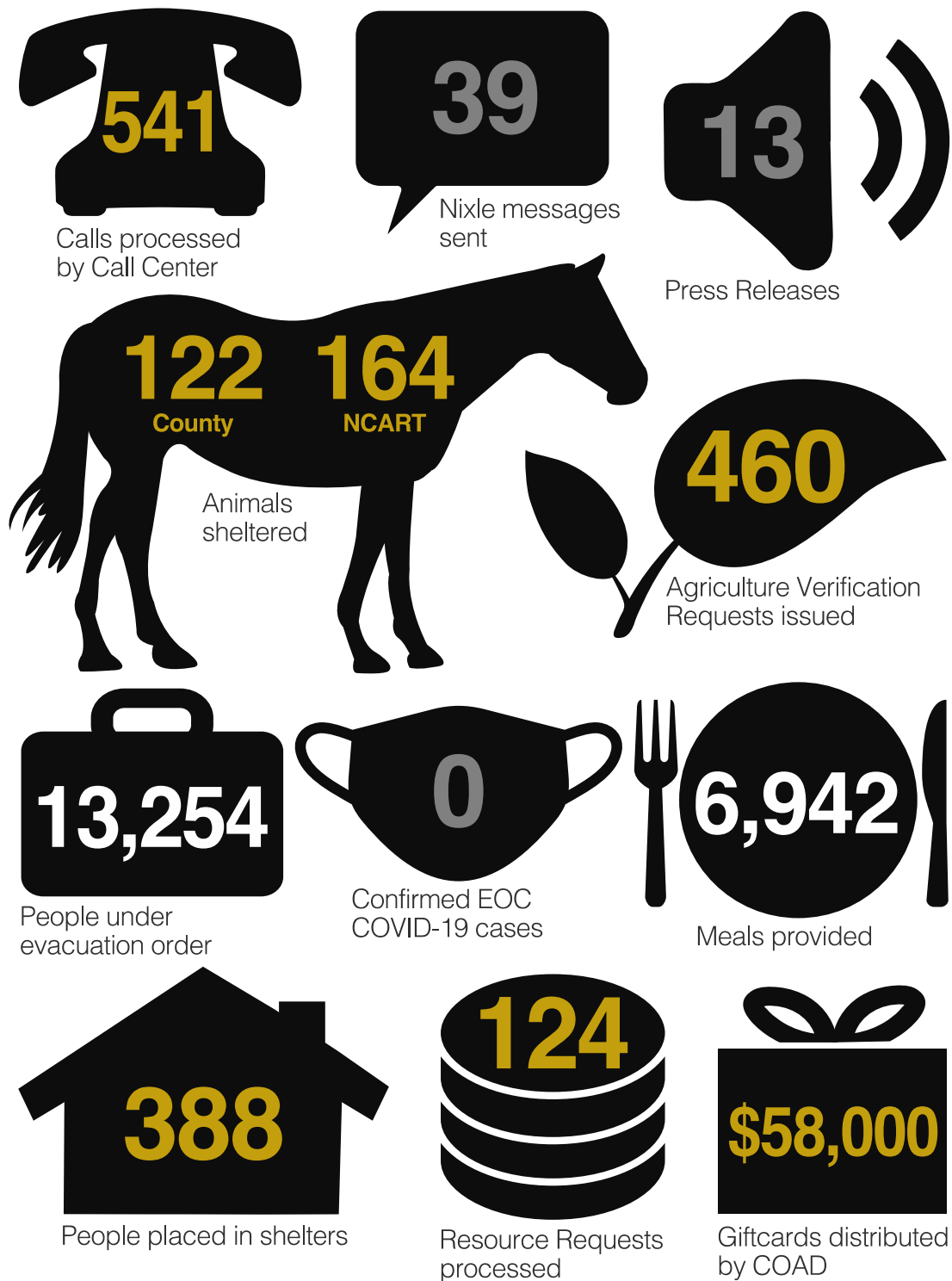


Figure 23. Infographic of the County's LNU Lightning Complex Fire response efforts.



Appendices

This section provides additional resources including but not limited to:

- Appendix A – List of AAR Contributors
- Appendix B – Stakeholder Interviews and Hot Wash Participants Lists
- Appendix C – Glossary of Acronyms
- Appendix D – Survey Data Summary
- Appendix E – Incident Map
- Appendix F – References



Appendix A. List of AAR Contributors

Acknowledgements

The following list represents all the individuals who contributed to the production of this AAR. A special thank you to each of these individuals for their time, effort, and attention throughout the process and completion of the AAR.

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Appendix B. Stakeholder Interviews and Hot Wash Participants Lists

Stakeholder Interview Participants

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Richard Goldfarb	ARC
Steve Campbell	City of Calistoga
Teresa Brown	Napa County



Appendix C. Glossary of Acronyms

Acronym	Definition
AAR	After Action Report
ARC	American Red Cross
ASL	American Sign Language
CAL FIRE	California Department of Forestry and Fire Protection
Cal OES	California Governor's Office of Emergency Services
Cal/OSHA	California Division of Occupational Safety and Health
CART	Community Animal Response Team
CERT	Community Emergency Response Team
COAD	Community Organizations Active in Disaster
COVID-19	Coronavirus Disease 2019
CVNL	Center for Volunteers and Nonprofit Leadership Napa
DAFN	People with Disabilities and Individuals with Access and/or Access and Functional Needs
DGS	California Department of General Services
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
FEMA	Federal Emergency Management Agency
FMAG	Fire Management Assistance Grant
GIS	Geographic Information System
IAP	Incident Action Plan
ICP	Incident Command Post
ICS	Incident Command System
IPP	Integrated Preparedness Plan
ISO	Independent System Operator
LAC	Local Assistance Center
LEP	Limited English Proficiency
LNU	Sonoma-Lake-Napa Unit



Acronym	Definition
NCART	Napa Community Animal Response Team
NIMS	National Incident Management System
NWS	National Weather Service
OA	Operational Area
OES	Office of Emergency Services
PBES	Planning, Building, and Environmental Services
PIO	Public Information Officer
PPE	personal protective equipment
PSPS	Public Safety Power Shutoff
ROC	Recovery Operations Center
ROE	Right of Entry
SEMS	State Emergency Management System
SitStat	Situation Status
SOP	Standard Operating Procedure

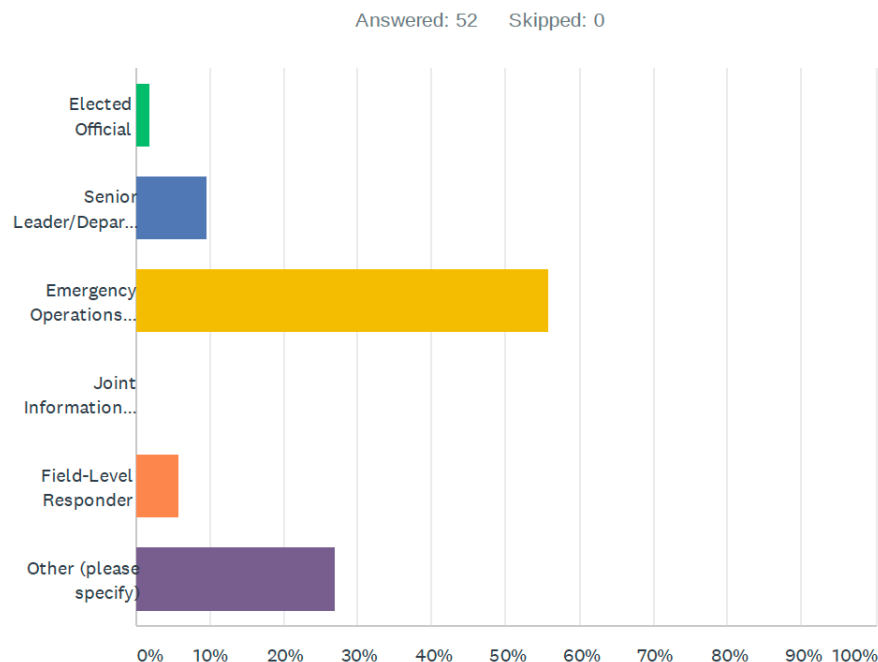


Appendix D. Survey Data Summary

An electronic survey was conducted amongst Napa County officials in order to collect feedback from individuals involved in the response and recovery efforts of the LNU Lightning Complex Fire. The survey received responses from a total of 52 individuals. This survey was designed to get a sense of the response and recovery efforts from a holistic perspective, as well as procure information on specific operational facets of the incident. The survey responses were collected from February 2-19, 2021.

The survey was confidential, and both multiple choice and open-ended questions were asked, providing a means for both quantitative and qualitative data analysis. The results of the survey are delineated below. Quantitative data is graphically depicted and is supported by qualitative information received through open-ended responses.

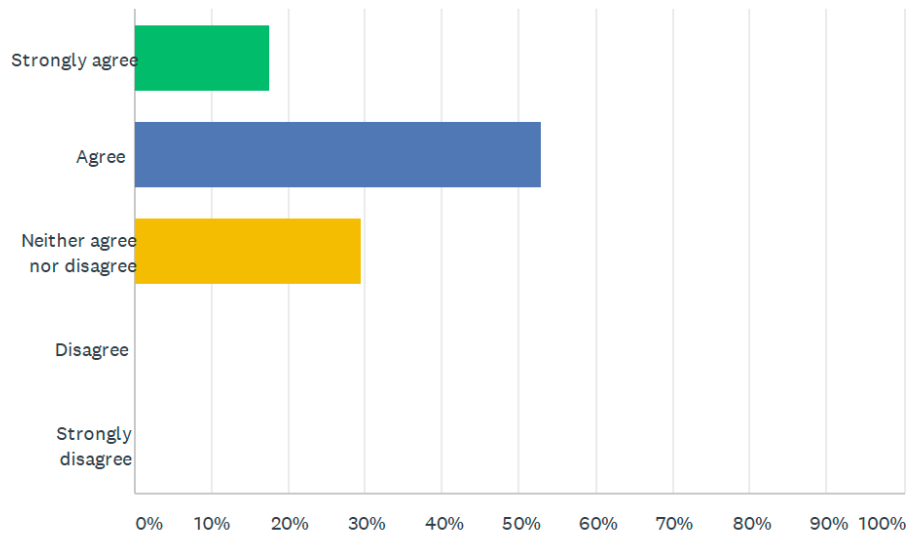
Q1 Which of the following best describes your primary role during the LNU Lightning Fire response and recovery effort?





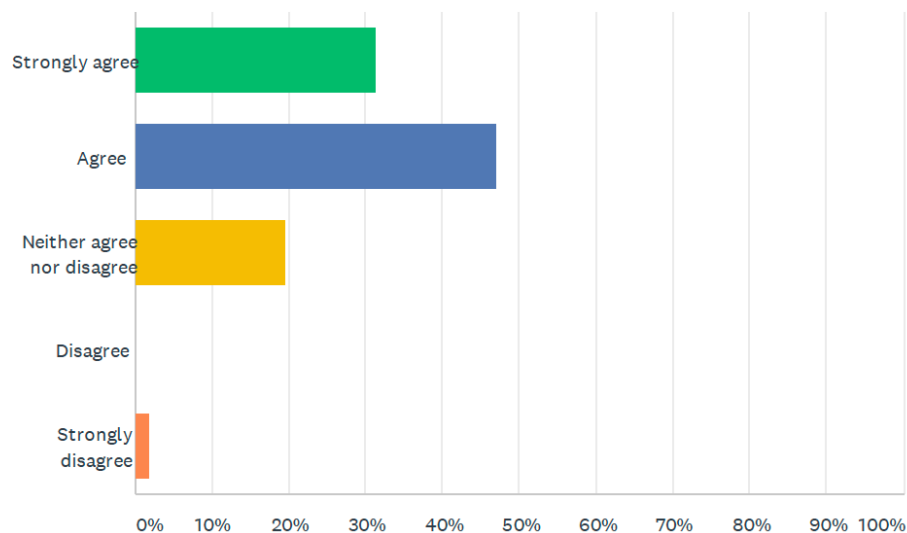
Q2 The County effectively utilized its written plans/procedures to guide the overall LNU Lightning Fire response/recovery effort.

Answered: 51 Skipped: 1



Q3 The County appropriately integrated previously established pandemic plans and procedures to defend against COVID-19 while responding to/recovering from the LNU Lightning Fire.

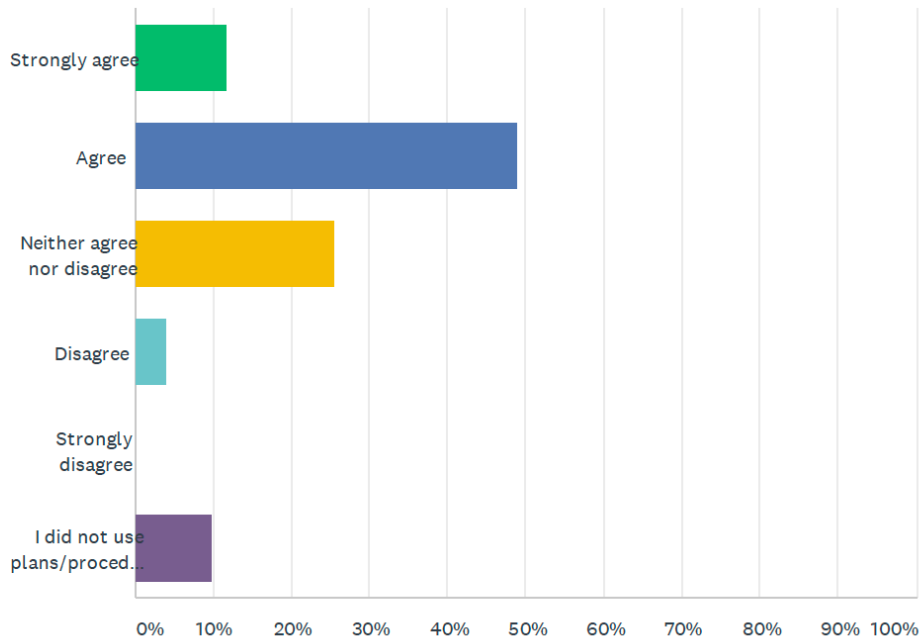
Answered: 51 Skipped: 1





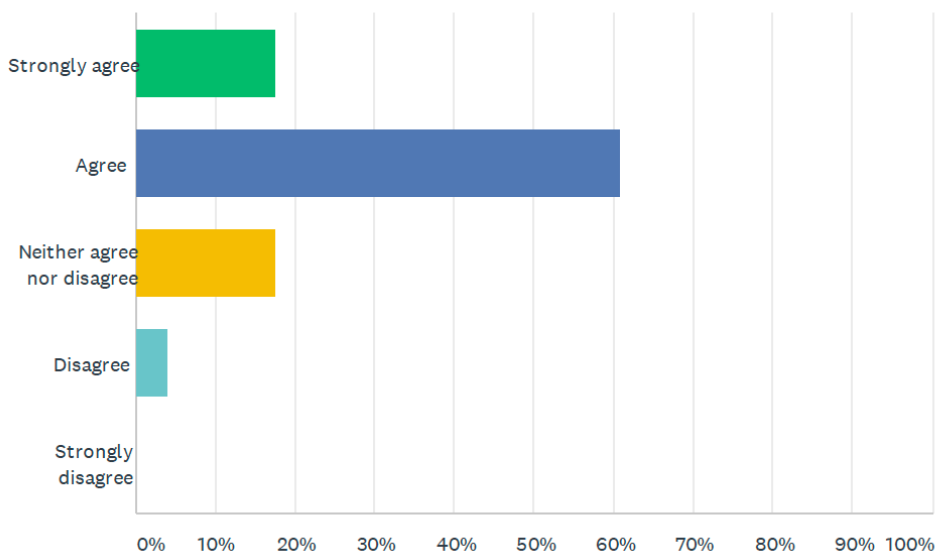
Q4 The written plans/procedures I used during the LNU Lightning Fire adequately supported my role throughout the response/recovery effort.

Answered: 51 Skipped: 1



Q5 The training I received prior to the LNU Lightning Fire adequately prepared me for the role to which I was assigned.

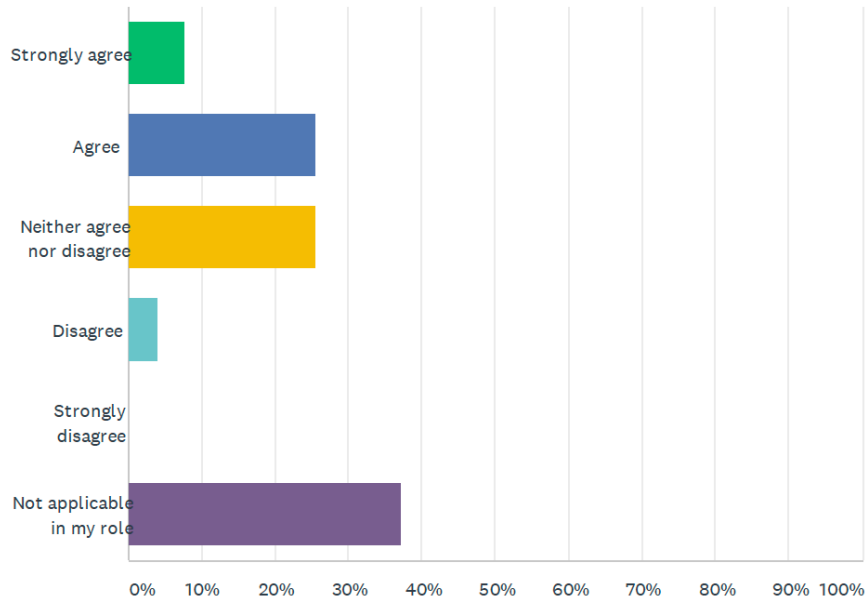
Answered: 51 Skipped: 1





Q6 The training I received prior to the LNU Lightning Fire adequately prepared me to support individuals with disabilities and others with access and functional needs (DAFN).

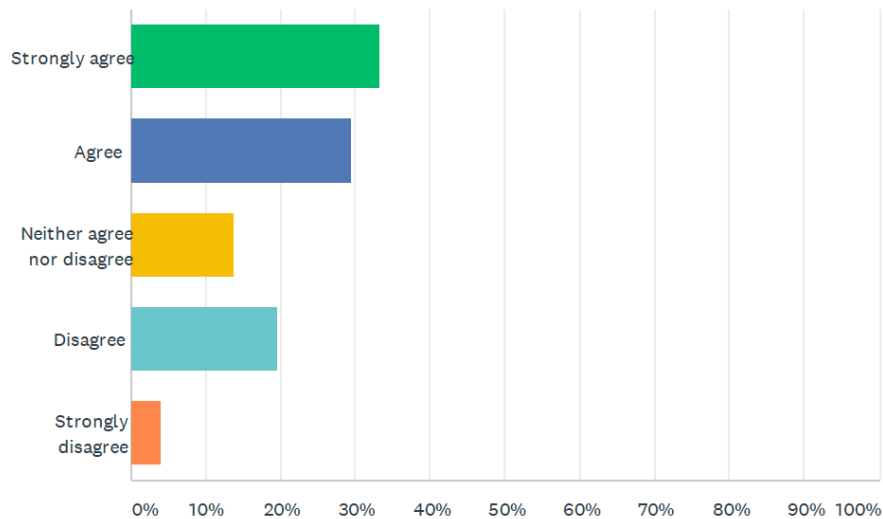
Answered: 51 Skipped: 1





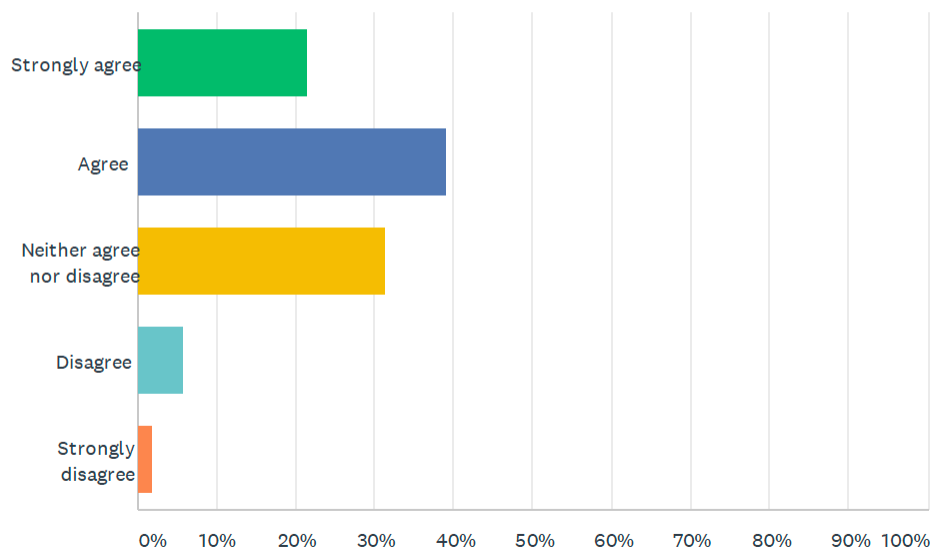
Q7 No more than 12 months prior to the LNU Lightning Fire, I participated in a tabletop, functional, or full-scale exercise and/or I participated in real-world response that helped prepare me for the role to which I was assigned during the Lightning Fire.

Answered: 51 Skipped: 1



Q8 Adequate provisions, such as food and basic hygiene, were provided at my work location.

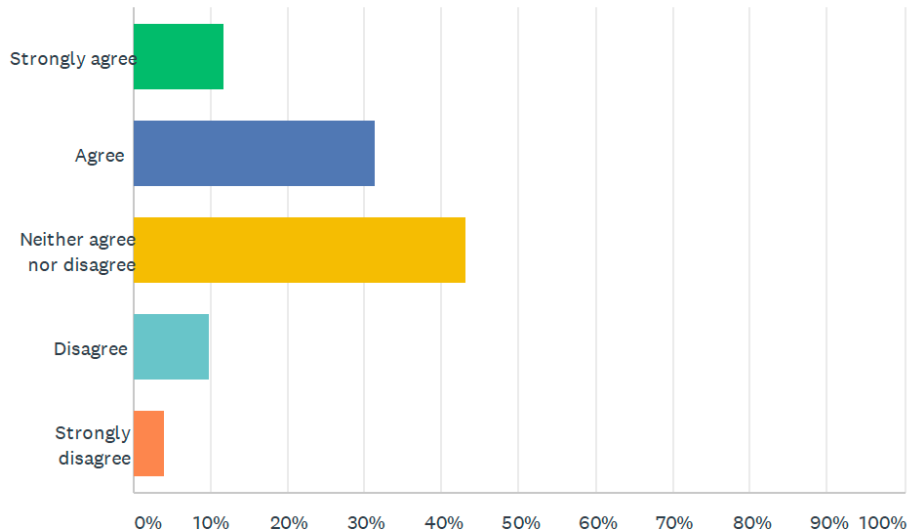
Answered: 51 Skipped: 1





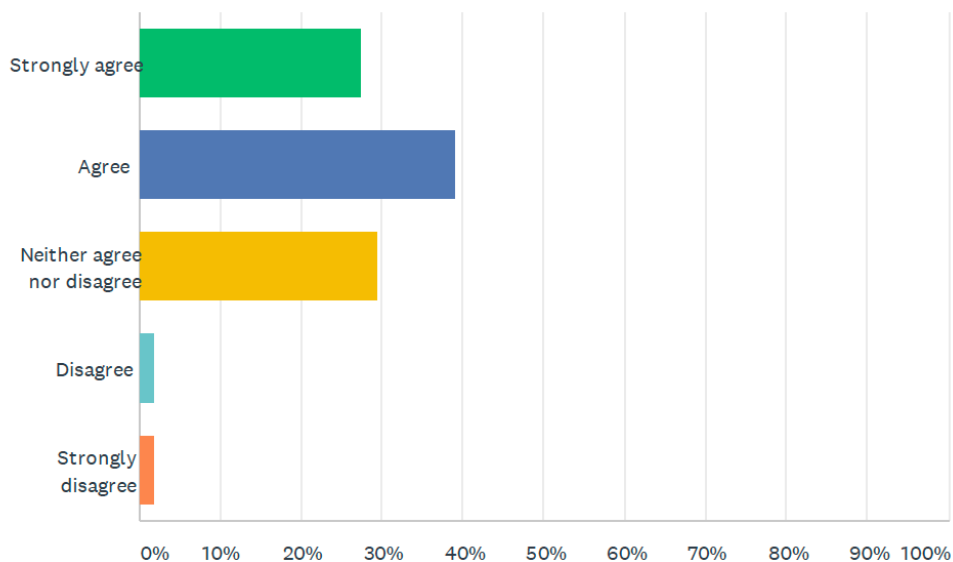
Q9 Psychological and emotional support programs and resources were readily made available to response and recovery staff at my level.

Answered: 51 Skipped: 1



Q10 Personal protective equipment (PPE) and other safety supplies relative to COVID-19 were readily made available to response and recovery staff at my level.

Answered: 51 Skipped: 1





The following information was procured through open-ended survey questions asked to all survey respondents.

Question 11: How has the Lightning Fire affected your department/organization as a whole?

Many respondents reported facing significant strain due to limited staffing. This was largely due to many staff already being allocated to COVID-19 response efforts. Staff were spread very thin and faced business continuity issues, which contributed to high levels burn out and low morale. Other resources had also been diverted, and revenue was reduced, causing regular programs to fall behind. 10 out of the 40 respondents noted that simultaneous COVID-19 pandemic activation caused staff and resources to be stretched very thin, and other respondents alluded to the overwhelming workload caused by multiple disasters. Half of respondents (21 out of 40) reported heavier workload and/or being understaffed.

Some respondents reported higher comradery and synergy within their department. It was noted multiple times within survey responses that staff rose to the challenge in order to meet the needs of the community. Some respondents reported new improvements to processes, protocols, and volunteer training as a result of lessons learned, and others noted the need for these improvements in their respective departments.

Question 12: How did COVID-19 impact the Lightning Fire response/recovery efforts?

Respondents noted experiencing challenges as a result of activating a virtual EOC and managing two simultaneous disasters. Employees were unable to provide full services to those in crisis. COVID-19 prompted the need for sheltering evacuees in a safe and socially distanced way, and in non-congregate shelters, like hotels. This became particularly challenging for evacuees who were COVID-19 positive. Another challenge was securing adequate PPE for staff responding to the wildfire and ensuring that safe practices were abided by. Some respondents noted that there was less overall funding for this response effort due to reduced budgets from COVID-19, as well as an increased number of staff out sick because of COVID-19. Despite these additional setbacks, protocols were implemented effectively, and evacuees were sheltered using hotel rooms and schools.

Question 13: Did you observe or experience any areas for improvement that should be addressed through a corrective action plan? If so, please describe.

In addition to challenges associated with being short-staffed, respondents also mentioned the need for having a clear understanding of roles and responsibilities within the response. 11 of 37 respondents mentioned a need for better communication between departments and the EOC, from the County to the public, and/or between the County and the State. Some respondents noted the need for more resources, like live fire maps to be shared with the public, and improved resources to households with low English proficiency. Challenges arose over the apparent lack of resources available for the wildfire response and some respondents suggested establishing a process or system of communicating what resources will be deployed, and when and where they will be deployed. It was also noted that other processes could be better streamlined and standardized, for example, evacuee intake forms, EOC duties, and the process for requesting mutual aid from other agencies.

Coordination could have been improved between the County and both the Red Cross and COAD. Several respondents indicated the necessity for training in order to be prepared for the next



activation. This is particularly desired for EOC leaders and dedicated staff members who can be cross-trained in different job functions, thus bolstering continuity planning abilities. Respondents also indicated the desire for more team building opportunities.

Question 14: Did you observe or experience any notable strengths that should be documented and built upon? If so, please describe.

Overall, staff were prepared, adaptable, creative, and committed to the response. Many respondents noted that EOC operations seemed smooth and organized. Approximately 64% of respondents, 22 of 34, listed strengths related to the dedication of the staff, such as great leadership, hardworking and creative team members, and an organization-wide can-do attitude. Several respondents noted staff's ability to be empathetic to the public, especially in regard to public messaging. Specific County teams were praised for their expertise, proactiveness, and competence in their respective duties, including, but not limited to, the GIS team, the Communications (PIO) Branch, the Shelter Staff, Crosswalk Staff and Volunteers, Public Health, Logistics, and EOC members. Others perceived strong coordination and collaboration across all teams as being a major strength of Napa County's response. Partnerships with other local government agencies and COAD were also listed as strengths.

Question 15: Many successful Lightning Fire response/recovery outcomes are attributed to the innovative strategies and tactics employed by responders. What innovative strategies and tactics did you observe or help implement?

50% of total survey respondents, 26 of 52, either skipped this question (23) or marked N/A (3). Of the 26 responses, 6 noted the creative solutions implemented in order to get safe shelter for evacuees in hotels, schools, or elsewhere. Many other creative solutions and innovative processes were highlighted and are listed below:

- Electronic submittal and processing
- Water distribution at the Highlands and other neighborhoods
- Communication using Facebook live and social media outlets
- Essential agricultural grower verification system
- A network of fire cameras
- Radio network allowing real time weather and fire updates
- Pop up command centers that can connect to nearby towers for communication dissemination
- Call center spread sheets for tracking information
- Improved workflow between GIS and IC
- Online tools like Zoom, GIS tools, and applications such as Damage Assessment

Additionally, having established relationships with local partners proved to be extremely helpful in creating innovative strategies, and the tactics used by first responders who were faced with limited resources was referred to as "heroic".



Appendix E. Incident Map

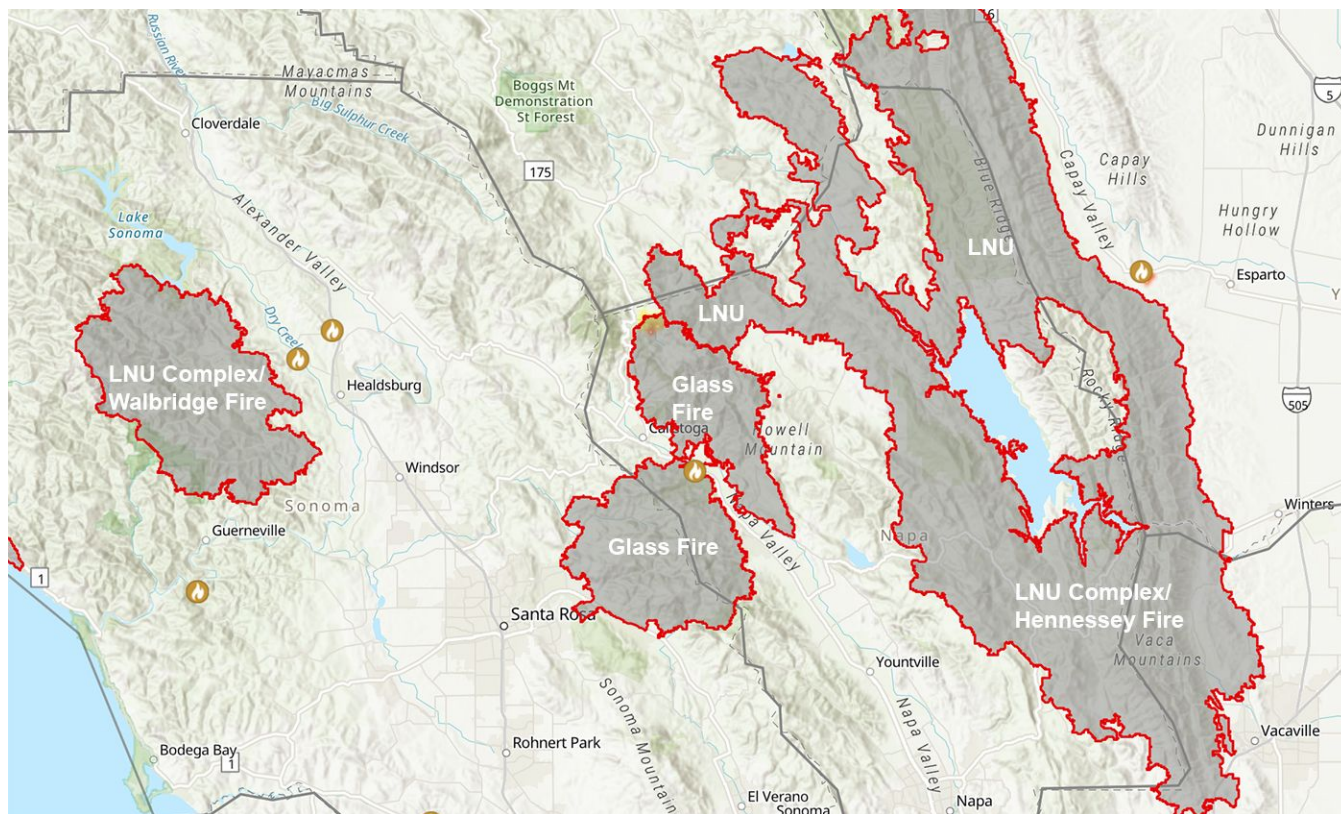


Figure 27. Map of the areas impacted by the 2020 LNU Lightning Complex Fire and the Glass Fire.



Appendix F. References

- Aerial map indicating the areas impacted by the 2020 LNU Lightning Complex Fire.
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