



A Tradition of Stewardship
A Commitment to Service

2020 GLASS FIRE AFTER ACTION REPORT



Thanks

The LNU Lightning Fire was not declared 100% contained when the Glass Fire began on September 27, in the midst of the COVID-19 pandemic. The response 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 Glass 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

The authors of this After Action Report (AAR) would also like to thank those who helped develop this document. A list of AAR contributors can be found in ‘Appendix A’ of this document. These individuals participated in Hot Washes, 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 Napa 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



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Executive Summary

The 2020 California wildfire season was characterized by a record-setting year of wildfires that burned across the state of California. In the early morning hours of Sunday September 27, 2020, the Glass Fire ignited northwest of Deer Park in Napa County. Fueled by strong Diablo winds and an ongoing heatwave, the fire expanded rapidly and triggered large-scale evacuations immediately. The fire coincided with a Red Flag Warning and an anticipated Public Safety Power Shutoff that had been scheduled to begin later that day. When the Glass Fire began, the LNU Lightning Fire, which ultimately burned 1/3 of the County's land mass, was still not declared 100% contained.

With little time between the LNU Lightning Complex Fire response and the Glass Fire's explosive start, and still in the midst of COVID-19 pandemic response, government and community partners reactivated to address this growing threat in a resolute and actionable manner.

While the Glass Fire presented many unique challenges to emergency responders and EOC personnel, it also offers opportunities to highlight improvements that were made since the 2017 fires and since the LNU Lightning Complex Fire that shortly preceded it.

This AAR highlight specific themes generated from data collected on the response and recovery to the Glass Fire. Each theme includes strengths and areas for improvement identified by Napa County stakeholders and partners. 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 Glass 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.



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.
- The County utilized additional mutual aid to support EOC, LAC, and public works activities, which provided welcome relief to staff who faced back-to-back activations and increased demand for services.
- Communications around evacuation improved during the Glass Fire, with the pilot use of Zonehaven, a private software, to enhance operational coordination as well as the timeliness and accuracy of evacuation maps.
- The Public Information Team, community partners, and local officials made extensive efforts to provide information to the public through a variety of media, as the threat of COVID-19 limited the opportunity for in-person engagement.
- The teams supporting shelter operations were able to effectively pivot from the LNU Lightning Complex Fire response to the Glass Fire response and accommodate increased demand for non-congregate shelter. As demand surged, the team activated congregate sheltering options and transferred those individuals and households to non-congregate options expediently as they became available.
- The County of Napa ensured all first responders, staff, and evacuees had access to personal protective equipment (PPE) and implemented public health measures that resulted in no known spread of COVID-19 linked to County shelter, evacuation, or EOC activities.

Significant Areas For Improvement

- The County struggled to maintain a deep enough bench of Emergency Operations Center (EOC) response personnel to cover multiple simultaneous activations. The staffing roster remained largely the same between the two fire activations, which might have resulted in additional fatigue for staff activated to support back-to-back efforts. A renewed focus on training, disaster service worker engagement, and policies that institutionalize necessary staffing rotations would help deepen the County's bench.
- The County has invested in acquiring Alert and Warning tools, but would benefit from a deeper investment in staffing (including time to train, test, prepare, and engage stakeholders) to develop a more refined Alert and Warning strategy and successfully utilize these complex tools during emergencies.
- Evacuations in more densely populated areas and growing public awareness that non-congregate shelter options were available resulted in higher demand for shelter and increasingly complex logistical arrangements among shelter partners.
- Recovery always takes longer than the public and government officials anticipate. The differences between recovery timelines for the two different events proved frustrating for fire survivors.



Introduction

This AAR provides a thorough analysis of the Napa County response to the Glass Fire that took place from September 27, 2020, to October 20, 2020. While recovery efforts continue to this day, 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 during and shortly after the fire took place. 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.

While the Glass Fire presented unique challenges to emergency responders and government officials, it also presented opportunities to highlight a number of improvements that have been made since the Napa Complex Fires of 2017. Notably, the agencies responding to the Glass Fire were already engaged in addressing the challenges and demands placed on them because of the recent LNU Lightning Complex Fire, and the ongoing COVID-19 pandemic response. The pandemic created significant impacts on the community and on government's ability to carry out emergency response functions.

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 Glass 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 September 27, 2020, when the EOC was fully activated through October 19, 2020, when all evacuation orders were lifted and residents were allowed to return to their homes. The final section touches on short-term recovery activities. 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. Glass 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, preparedness documentation

Survey

An online survey was developed and distributed to collect individual responder 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.

Facilitated Group Discussion – Hot Wash

A facilitated group discussion called a Hot Wash was designed and conducted to engage County stakeholders 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 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 root cause of 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 Glass Fire, providing context to the unprecedented challenges the Napa County faced in responding to multiple, concurrent large-scale incidents, as well as the complicating factors that ensued which at times muddled the response. The core content of the report is included in the Analysis of Key Findings section. This section organizes key findings into major 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. Only six weeks prior to the Glass fire, a large complex of fires known as the Sonoma–Lake–Napa Unit (LNU) Lightning Complex Fire, began to burn what would become a total of 363,220 acres, destroying over 1400 structures, and causing six civilian deaths, three of which were in Napa County.² The LNU Lightning Complex Fire spanned five counties and became the fourth largest wildfire in California history, following the SCU Lightning Complex, which was also in the Bay Area.³ The LNU Lightning Complex Fire was close to being fully contained when the Glass Fire began.⁴

The Glass fire started the morning of September 27, 2020, around 4:00 AM in the community of Deer Park⁵. Fueled by high winds, that evening the fire picked up dangerous speed, exploding in growth and forming two new fires. By 8:00 AM, those two off-shoots, the Shady Fire and the Boysen Fire had merged with the Glass Fire, forming a complex that collectively burned 11,000 acres with 0% containment. City and County officials raced to order evacuations as the fire rapidly spread, threatening residential neighborhoods, businesses, forestland, and agriculture.

California Department of Forestry and Fire Protection (CAL FIRE) estimated that 8,500 structures were threatened.⁶ Initial evacuation orders and road closures were issued for Deer Park and then Angwin, as the fire spread. The County opened Crosswalk Church to receive evacuees and match them to non-congregate sheltering options by 7:42 am on Sunday morning, just under four hours after the fire reportedly ignited.

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

² SF Chronicle: <https://www.sfchronicle.com/projects/california-fire-map/2020-lnu-lightning-complex>

³ Insurance Information Institute: <https://www.iii.org/fact-statistic/facts-statistics-wildfires>

⁴ ABC7 News: <https://abc7news.com/new-fires-in-ca-west-coast-napa-how-did-the-glass-fire-start/6623887/#:~:text=The%20Glass%20Fire%20initially%20sparked,%2C%20wineries%2C%20restaurants%20and%20landmarks>

⁵ ABC7 News: <https://abc7news.com/glass-fire-napa-update-news-calistoga-wildfire/6622911/>

⁶ ABC7 News: <https://abc7news.com/glass-fire-napa-update-news-calistoga-wildfire/7194134/>



By September 28, very poor air quality and orange skies were reported all over the Bay Area, with Sonoma County and San Francisco facing the “unhealthy range”.⁷ By 3:15 PM over 53,000 Napa and Sonoma County residents had been evacuated.⁸ The City of Calistoga, in coordination with County of Napa issued a mandatory evacuation order for the entire City of Calistoga. The evacuation was announced with a shared message through City and County Nixle accounts and resulted in a sharp and sudden uptick of traffic to the County’s evacuation center at Crosswalk Church.

That evening, Governor Newsom issued an emergency proclamation for the counties of Napa and Sonoma. By 9:00 AM the next morning the fire had grown to 42,560 acres, with a loss of 80 homes and structures at several wineries and restaurants. The fire continued to blaze with 0% containment, threatening over 10,000 structures in its path. Some school districts cancelled online school for Tuesday and Wednesday.⁹

On September 30, containment was reported at 2% with over 48,000 acres burned. Fire officials released a Red Flag Warning confirming that they expected strong winds and CAL FIRE crews reported that they were encountering challenges in establishing control lines due to the challenging terrain.¹⁰

By October 11, CAL FIRE announced 90% containment of the Glass Fire and by October 19 lifted all evacuation orders. The next morning CAL FIRE announced that the Glass Fire was 100% contained, after 24 grueling days of immeasurable exertion from firefighters, first responders, and volunteers.

Timeline

The incident timeline provides the key reference points of the Glass 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.

⁷ *Ibid.*

⁸ *Ibid.*

⁹ *Ibid.*

¹⁰ *Ibid.*

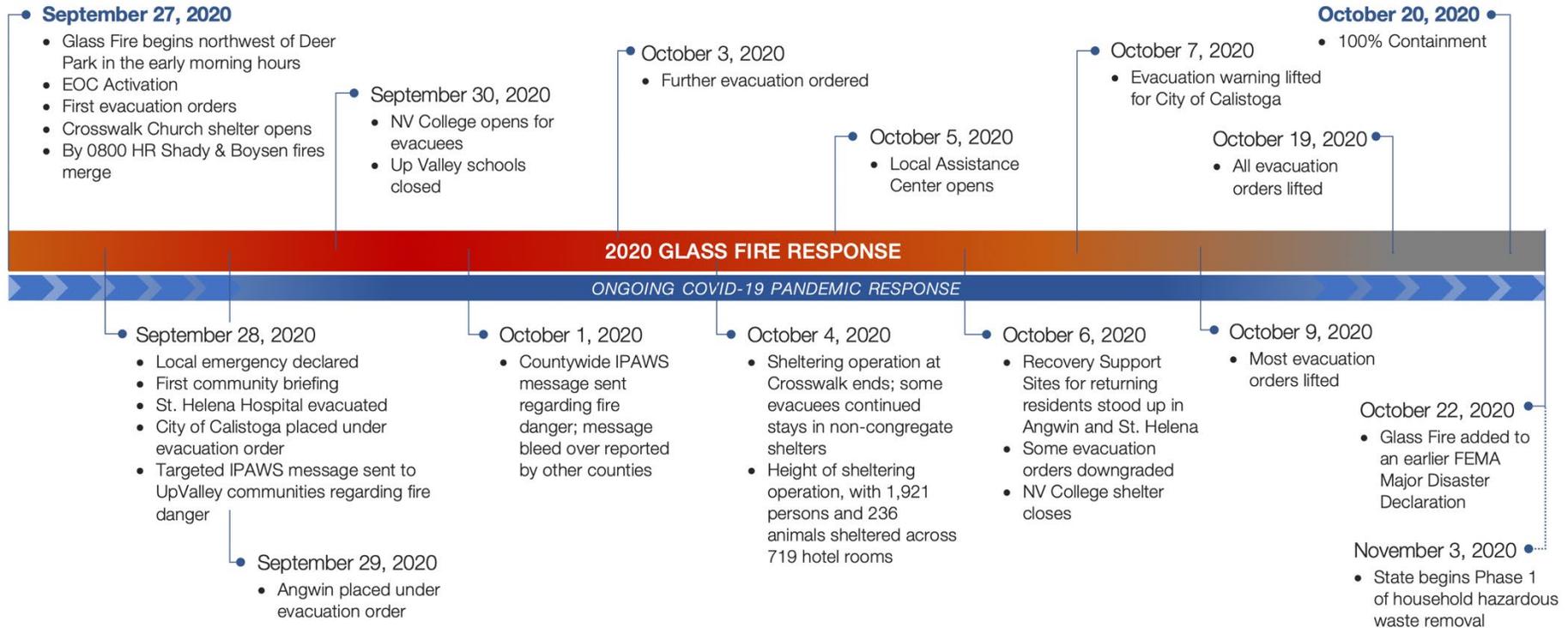
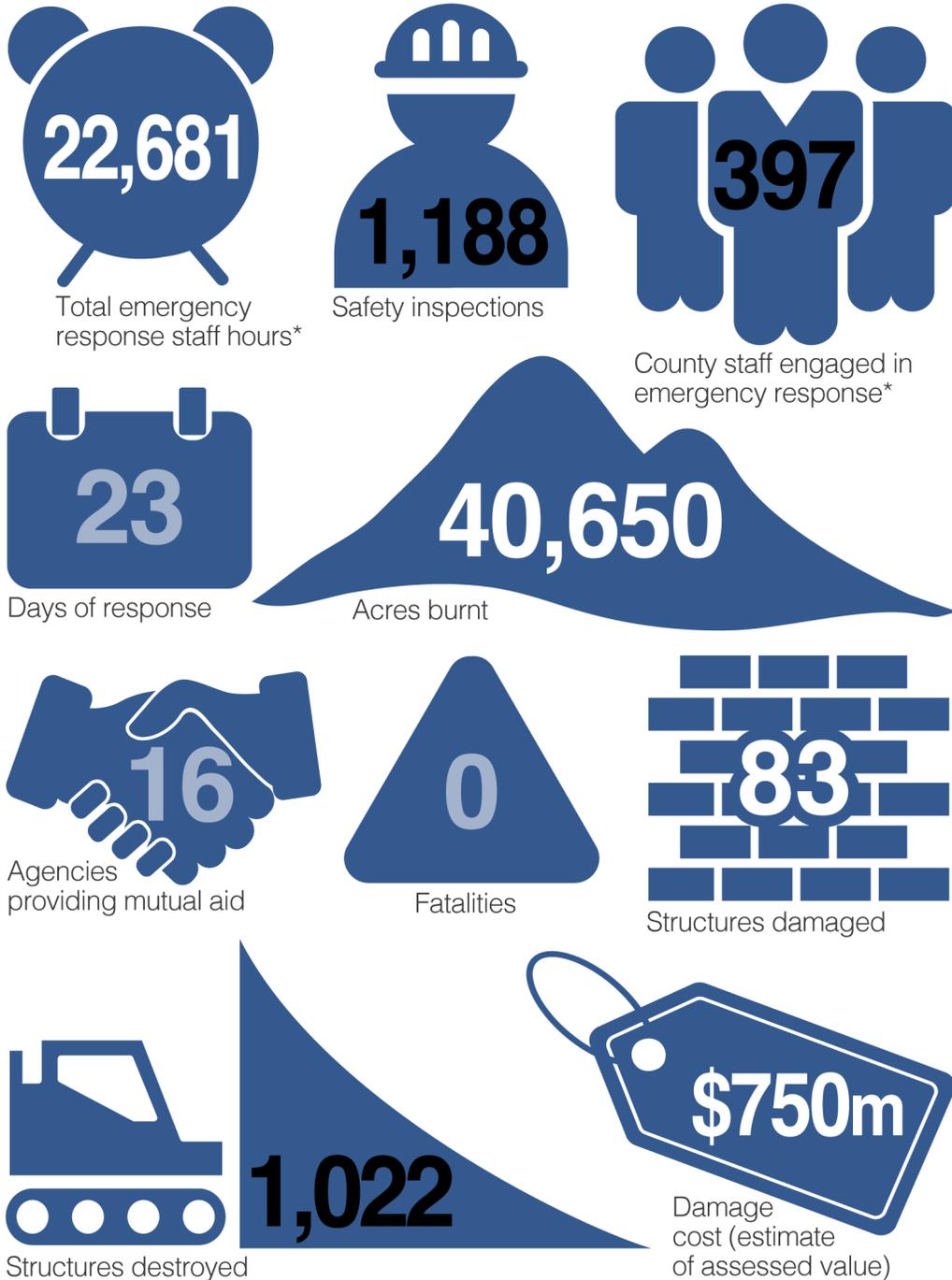


Figure 2. Incident Timeline of the 2020 Glass Fire response.



Impact to the County Infographic



* Does not include County Fire / CAL FIRE hours.

Figure 3. Napa County’s 2020 response statistics for Glass Fire.



Analysis of 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, Alert & Warning; Shelter Operations; Resource Management; Staff Health and Wellness; Regional, State and Federal Coordination, COVID-19 Impacts on Response and Recovery Operations; and Transition to Recovery. Each of those sections identifies strengths and areas for improvement resulting from the data collection process. Recommendations for improvement are included at the conclusion of each section.

1. EOC Activation and Operations

Overview

The LNU Lightning Complex Fire After Action Report provides some background on the pre-season fire preparations and plans the County’s Office of Emergency Services had made prior to the peak of the 2020 fire season. While the LNU Lightning Complex Fire began with limited evacuation activity, it was immediately clear when the Glass Fire ignited at approximately 3:50am on Sunday, September 27 amidst high winds that it would have a significant impact on densely populated areas of the County and require a full EOC activation. As such, the EOC Director began the call down process to activate the EOC in the early morning hours.

During the LNU Lightning Complex Fire, EOC leadership had utilized an “incident within an incident” concept to organize fire response within the existing EOC framework to manage the ongoing COVID-19 pandemic. This model aligned with federal planning concepts¹¹ and resulted in a combined response structure with shared briefings, Incident Action Plans, and staff for both incidents. During the LNU Lightning Fire, it became clear that the demands of fire response outweighed the potential efficiencies gained by this “incident within an incident” framework. As such, the EOC treated the Glass Fire as an entirely separate incident from the COVID-19 response and gave the Glass Fire its own defined stand-alone structure.

“The momentum gained and rhythm established during the LNU Lightning Complex Fire allowed for more streamlined EOC operations during the Glass Fire. EOC staff were able to anticipate needs before they arose.” – Hot Wash participant

¹¹ [COVID-19 Pandemic Operational Guidance for 2020 Hurricane Season \(fema.gov\)](https://www.fema.gov/operations-guidance-for-2020-hurricane-season)

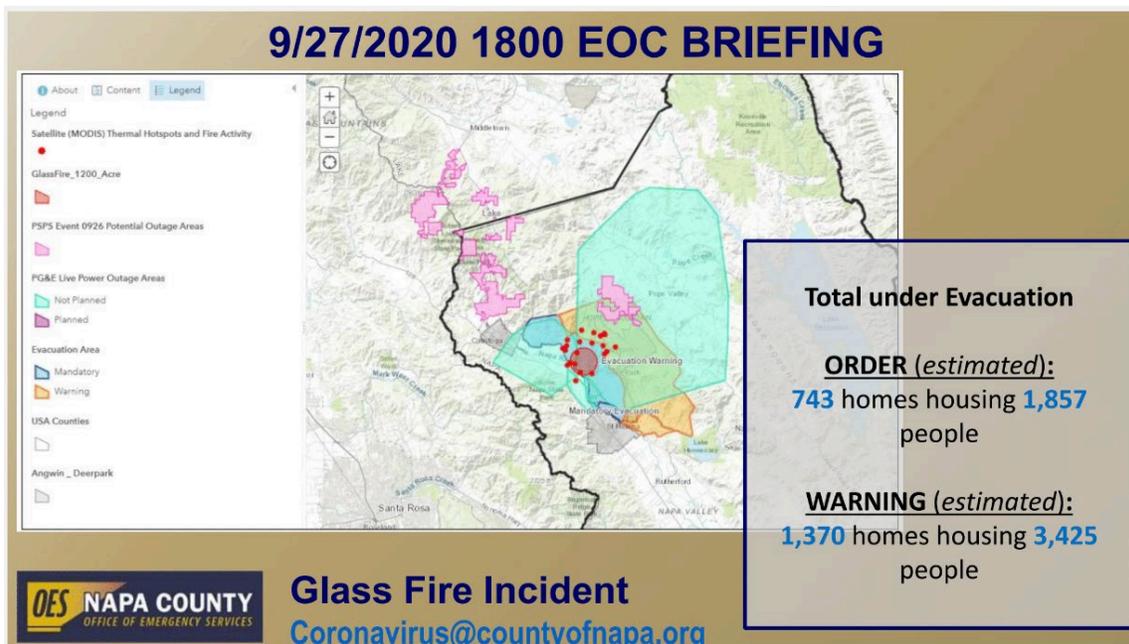


Figure 4. EOC Briefing overview on September 27, 2020. (Source: Napa County.)

As delineated in the County’s EOP and California’s Standardized Emergency Management System (SEMS), Napa County functions as the Operational Area and serves as the central point for information dissemination and resource requests by cities, towns, and special districts within the County.¹² During the Glass Fire response, the County successfully fulfilled the OA role and, despite difficulties associated with managing two large-scale responses, followed the guiding principles outlined in SEMS, the National Incident Management System (NIMS), and the Incident Command System (ICS). 68% 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 Glass Fire response and recovery effort.

Napa County and EOC leadership prioritize the health and safety of staff during emergencies. The succession of events on top of an ongoing pandemic, resulted in expected burnout among the small but dedicated team that supports the County’s emergency response. In the survey, several respondents commented on the increased feelings of stress and fatigue personnel experienced during the Glass Fire. Some staff reported being evacuated themselves, dealing with friends or family members who were impacted, or experiencing disaster-related disruptions that made it impossible to work from home. Some AAR respondents noted that the poor air quality that resulted from the fires impacted their mental health and morale, on top of long shifts and demanding workloads. Despite the struggle to pause and prioritize personal wellness during multiple and sometimes concurrent, activations, County personnel staff seem to recognize the critical importance of this work and the unprecedented nature of the situation.

When asked through this AAR survey if psychological and emotional support programs and resources were readily made available to response and recovery staff, 37% of survey respondents agreed or strongly agreed, 46% neither agreed nor disagreed, and 17% disagreed or strongly disagreed. This

¹² Napa County. *Emergency Operations Plan*, pg. 47.



means that, compared to results from the LNU Lightning Complex Fire, roughly 6% less staff agreed or strongly agreed, 3% more neither agree nor disagree, and 3% more disagreed or strongly disagreed.

It should be noted that, many of the core Strengths, Areas for Improvement, and Recommendations from the LNU Lightning Complex Fire AAR remain true of the Glass Fire EOC Activation and Operations. Unless particularly unique or strongly supported by the Glass Fire response, those core findings are not repeated in this report for brevity.

Strengths

Strength 1: The call down process used to activate the EOC resulted in a fully staffed EOC.

While many other counties struggle to bring in staff to support the EOC, Napa County's EOC had all core staffing positions filled within hours of the fire's pre-dawn start. It was expressed during small group interviews and the hot wash that Napa County benefits from a highly dedicated core team of EOC staff who maintain a readiness stance during periods of critical fire conditions.

Strength 2: The stand-alone planning framework for the Glass Fire response resulted in more clarity and focus

During the LNU Lightning Complex Fire, EOC leadership messaged that the LNU Lightning Complex Fire response effort was a branch under the existing EOC activated for COVID-19. There was initial uncertainty about the eventual scope and impact of the LNU Lightning Fire, which made the "incident within an incident" planning framework appropriate to the moment. Staff reported that the Glass Fire activation, wherein staff was called in and activated specifically for Glass Fire response, provided more clarity about roles and focus for work assignments. Briefings were also more succinct and chains of command more clear with a dedicated Glass Fire response organization.

Strength 3: EOC operations were strengthened by years of experience staff had working together, as well as lessons learned and processes developed during the LNU Lightning Complex Fire.

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 and strong relationships that have been forged over the years among staff who have responded to multiple disasters together.¹³ The LNU Lightning Complex also offered immediate lessons learned and reference points that improved response efforts.

Strength 4: The use of mutual aid provided welcome relief and fulfilled surge staffing needs:

Due to the significant impacts of the Glass Fire, the County utilized mutual aid more heavily in a number of response areas to great success. The County utilized the Emergency Management Mutual Aid (EMMA) network to bring in a GIS specialist from southern California, utilized Medical Health Operational Area Coordinator (MHOAC) mutual aid to provide behavioral health support at the Local

¹³ Hot Wash



Assistance Center, as well as extensive use of Public Works mutual aid from surrounding jurisdictions to support the overwhelming amount of initial road clearance and tree debris removal generated by the Glass Fire.

Strength 5: Despite many being impacted by the disaster themselves, County staff demonstrated an unrelenting commitment to the response mission.

The combination of the LNU Lightning Complex Fire and the Glass Fire directly affected a number of Napa County employees and EOC staff. Some county personnel were evacuated from their homes or supporting friends and family, who had been directly impacted. Despite the personal toll the back-to-back fires had on many, staff displayed remarkable dedication and commitment to serving the public. Many interviewed for this AAR reported putting their personal fatigue and exhaustion aside to work exceptionally long hours on increasingly complex incidents.

INCIDENT FACTS		
Incident Start Date: September 27, 2020		Incident Start Time: 3:50 AM
Incident Type: Wildfire		Cause: Under Investigation
Incident Location: 200 Block North Fork Crystal Springs Road		
CAL FIRE Unit: Sonoma-Lake-Napa		
Unified Command Agencies: CAL FIRE, Sonoma County Sheriff's Office, Napa County Sheriff's Office, Santa Rosa Fire Department and Santa Rosa Police Department.		
Size: 51,266 acres	Containment: 2%	Expected Full Containment: To be determined
First Responder Fatalities: 0		First Responder Injuries: 0
Total Structures Threatened: 26,290		
Sonoma County Single Family Residences Destroyed: 36		Napa County Single Family Residences Destroyed: 107
Sonoma County Single Family Residences Damaged: 31		Napa County Single Family Residences Damaged: 15
Sonoma County Multi-Unit Residences Destroyed: 0		Napa County Multi-Unit Residences Damaged: 0
Sonoma County Commercial Destroyed: 1		Napa County Commercial Destroyed: 5
Sonoma County Commercial Structures Damaged: 4		Napa County Commercial Structures Damaged: 4
Sonoma County Mixed-Residential/Comm. Destroyed: 1		Napa County Mixed-Residential/Comm. Destroyed: 0
Sonoma County Outbuildings Destroyed: 27		Napa County Outbuildings Destroyed: 0
Sonoma County Other Minor Structures Destroyed: 27		Napa County Other Minor Structures Damaged: 71
Sonoma County Other Minor Structures Damaged: 10		Napa County Other Minor Structures Damaged: 9
CURRENT SITUATION		
Situation Summary:	The Glass Fire in Sonoma and Napa Counties continued to burn actively throughout the day. Crews are working on structure defense while building and reinforcing containment lines. Extremely dry fuels combined with warmer and drier weather has allowed short range spotting. Hot and dry weather is anticipated over the next several days.	
Evacuations:	Napa County Evacuation Information https://local.nixle.com/napa-county-oes/	

Figure 5. Incident Update sheet from September 30, 2020. (Source: Napa County.)



Areas for Improvement

Area for Improvement 1: A focus on team-building, training, and enhanced planning tools will help integrate new staff into the EOC environment

While the County's EOC has thrived and succeeded because of strong core working relationships, staff turnover and retirements trigger a need to focus on increased team-building among newer staff as well as the development of just-in-time training and protocol documents to institutionalize processes.

Area for Improvement 2: Staffing roster was largely identical for back-to-back incidents

Although the EOC benefited from the team cohesion and very recent experience of staff activated for the LNU Lightning Complex Fire, the fatigue and exhaustion was acutely felt by personnel who staffed both efforts. There may be opportunity to strategically rotate staff or develop a shadowing process to train additional employees on future activations. The County's call down process to staff EOC activations is based on a "first to respond" approach (i.e. the first to answer the initial call down inherits the position for the duration of the incident unless they make arrangements to rotate the position with other staff). This can create challenges and burnout that EOC leadership should be attentive to, as staff may be hesitant to walk away from roles that are best rotated or shared by multiple people.

Area for Improvement 3: Current staffing levels are unsustainable for long-term activations and require bench of available resources to be deepened.

County personnel were extraordinarily dedicated but those staff activated for a succession of events, some concurrent, experienced expected burnout. Some staff reported that they believed there is an inequitable burden placed on those who are activated to support emergency response, even though they often report the work to be personally and professionally rewarding. Some indicated that tasks and roles should be more equally spread out amongst employees.

Area for Improvement 4: Mutual aid resources were well-received and well-integrated, but took some time to arrive.

In future large-scale disasters, EOC leadership would benefit from a more pro-active call down of mutual aid resources. Staff reported during small group sessions that in future activations, they would call on mutual aid earlier and more often to support understaffed areas. While it can take time for mutual aid resources to integrate into the EOC, these exchanges provide critical relief to the receiving jurisdiction and valuable experience to the providing jurisdiction. Napa County staff who have fulfilled previous mutual aid requests in other jurisdictions reported that the experience often provides insight into best practice from other EOCs.



Recommendations

Recommendations from the LNU Lightning Complex Fire AAR regarding EOC activation are applicable to this report on the Glass Fire as well but are not repeated here.

Recommendation 1.1: Take action to renew focus on team-building, training, and enhanced planning tools to help integrate new staff into the EOC environment.

Recommendation 1.2: Identify opportunities to establish pre-event MOUs around critical response areas where additional surge support may be needed (such as public works). Pre-event MOUs can expedite the exchange of mutual aid during an incident and lessen workload during recovery when post-MOUs are otherwise established to claim reimbursement of mutual aid costs.

Recommendation 1.3: Designate an EMMA coordinator to identify areas where surge support may be needed and call in mutual aid early. Establish a plan to engage EMMA resources that defines the process and establishes clear responsibilities and resources for the logistical support needed to call in and integrate EMMA resources.

Recommendation 1.4: Identify opportunities to rotate or shadow staff to prevent burnout during back-to-back incidents. All positions should have a primary and a well-trained and available alternate. EOC leadership should also look at opportunities to cross-train staff on different roles and responsibilities.

Recommendation 1.5: Provide policy guidance to departments for determining and reporting employee status (safety, disaster impacts to home or work location, availability to support response or continuity of operations, etc...), as part of a continuity of operations planning process. These policies should follow an evaluation of DSW engagement across County departments.

Recommendation 1.6: To expand the EOC's bench depth and ensure employees understand their responsibilities in disasters, OES should work with Human Resources and Training & Development to evaluate existing training for disaster service workers (DSWs), including the training new employees take at hire, as well as refresher curriculum that would be required for existing employees periodically.

Recommendation 1.7: During EOC activations, utilize simple strategies to boost morale and energize team members. For example, some EOCs benefit from visits from emotional support animals or regular snack breaks. In addition to hard work and dedication, positivity-focused best practices should continue to be a hallmark of the EOC's culture (such as recognizing team members, highlighting positive milestones, sharing inspiring thoughts or light humor, emphasizing the big picture, etc...)

Recommendation 1.8: While County staff can access Employee Assistance Program resources by seeking them out from Human Resources, it may be helpful to staff a stress manager or Human Resources Liaison in the EOC to promote stress management practices, advocate for staff rotations, evaluate overutilization, and monitor for burnout.



2. Evacuation and Repopulation

Overview

During the Glass Fire, more than 18,000 residents were under evacuation order at the height of the County’s response. While the Glass Fire burned a smaller geographic area than the LNU Lightning Fire, it threatened an area of the County that was more densely populated and triggered broader evacuations. Field-based law enforcement personnel utilized hi-lo sirens and in-person notifications to inform residents of evacuations in their areas. The EOC issued Nixle messages as evacuations were ordered by the Incident Command Post (ICP). During the Glass Fire, the County utilized the Wireless Emergency Alert system for the first time during an emergency, which is discussed in the Public Information, Alert, and Notification section of this report.

During the Glass Fire, the ICP utilized a pilot program through Zonehaven, an evacuation mapping software, to enhance the provision of relevant and timely mapping products for operational use and public information. The utilization of Zonehaven, as well as enhanced coordination following the LNU Lightning Fire, resulted in an evolved use of mapping products to support emergency public information through the EOC and operational decision making at the ICP.

Just seven weeks after the patient evacuation for the LNU Lightning Complex Fire, St. Helena Hospital evacuated all patients again as the Glass Fire threatened facilities and damaged infrastructure. The hospital was forced to conduct a full closure, which was supported by the EOC’s Medical Health branch.

The County faced unique challenges during repopulation but leveraged previously established processes to coordinate a safe and orderly repopulation of the impacted areas as the ICP authorized.

A graphic announcement for a virtual community meeting. The top section is dark grey with white text: "VIRTUAL COMMUNITY MEETING", "Glass Fire Recovery", and "Returning Home After the Fire: What to Expect". The middle section is light blue with a clipboard icon on the left and a first aid kit icon on the right. It contains the date and time: "Monday, October 12 4:00 - 5:00 PM" and a note "*Spanish at 5pm*". Below this are registration links: "Register via Zoom: bit.ly/3nzOU4Q (link is case sensitive)" and "Join via Facebook: Facebook.com/NapaCounty". The bottom section is white with a grey border, containing a paragraph of text about safety hazards and emotional strain after a fire. At the very bottom is a dark grey footer with the Napa County logo, the text "Stay tuned for more upcoming fire recovery community meetings to be announced soon!", and "MORE INFORMATION: 707-253-6170 | Jesus.Tijero@CountyofNapa.org".

Figure 6. Virtual Community Meeting announcement for repopulation information.
(Source: Napa County, Facebook.)



Strengths

Strength 1: Enhanced understanding of command structures resulted in improved communication and coordination with other response agencies during the Glass Fire.

During the Hot Wash, personnel involved in evacuations stated that experiences during the LNU Lightning Complex Fire resulted in more clarity about communications pathways and chains of command between field personnel, involved response agencies, ICP, and EOC during the Glass Fire.¹⁴ Immediate lessons learned and recent memory from the previous fire resulted in an enhanced shared understanding of evacuation roles and responsibilities.

Strength 2: Zonehaven, which was utilized by the ICP, as a pilot enhanced mapping of evacuated areas for the public and for operational coordination

During the CZU Lightning Complex Fire in August, several South Bay counties including Santa Cruz, Santa Clara, and San Mateo counties used a map-based evacuation software called Zonehaven to establish “evacuation zones” that allowed residents to visualize where they were on a map, with evacuation status, from warning to order, shown by the coloring of their zone. News about this software spread by word of mouth, and it was utilized by the CALFIRE IMT during the Glass Fire. Zonehaven staff supported the rapid mapping of impacted areas and supported implementation with staff at the ICP and EOC. These enhanced mapping products resulted in more timely, effective communication to residents, and improved decision-making operationally. Zonehaven was utilized as a pilot during the Glass Fire to great success, and the County has moved forward with developing a contract with the company to establish pre-determined evacuation zones and support evacuation mapping during future incidents. The software helps address many of the challenges around evacuation planning by establishing a common understanding of geographic boundaries, developing zones that the public can become familiar with and that reflect unique geographical considerations about the area, and expediting the decision-making process for the ICP about how to bound evacuations when fire threatens a given area. The software also allows response personnel to pre-plan information about where road closures will be located and how they need to be staffed. The public-facing product gives residents additional clarity before and during disasters about how evacuations are conducted and what their evacuation status might be.

Strength 3: The evacuation and closure of St. Helena Hospital was successfully coordinated thanks to close partnerships among medical health agencies

During the Glass Fire, the Napa County Medical Health Branch in coordination with St. Helena Hospital, American Medical Response (the County’s EMS provider), REACH Air Medical Services, and the All Access Transfer Center (AATC) carried out a full evacuation and closure of St. Helena Hospital.

The County’s EMS Administrator and Medical and Health Operational Area Coordinator (MHOAC) as Medical Health Branch Director worked with neighboring MHOACs and the Regional Disaster Medical

¹⁴ Hot Wash



Health Specialist (RDMHS), AATC, and area healthcare facilities to safely transfer patients and communicate with hospital staff. The patient movement process required significant support from ground transport and helicopter. A number of healthcare facilities were hesitant to receive patient transfers during the COVID-19 pandemic, which added further complexity to the patient transfer process. The AATC, a transfer center that helps facilitate requests for patient transfer and transportation, was an invaluable resource to support this complex coordination.

For the safety of the building and the crews working to protect it, power needed to be turned off during the Glass Fire. Sensitive equipment — MRI machines, CT scanners, the nurse call system — needed to be shut down, along with the hospital’s HVAC system, pharmacy refrigeration, water systems, and IT servers. Reopening a hospital after a full closure can only happen after a series of lengthy and thorough inspections of equipment and facilities, so full closure is often a last resort when a healthcare facility faces a critical safety threat.

The fire burned extensively around St. Helena Hospital, damaging hospital infrastructure (including five miles of PVC pipe that fed the hospital its water supply) and generating debris around the property and adjoining slopes. SHH was reopened about two months after the closure, on December 8. The safe and efficient evacuation, closure, and ultimate reopening of St. Helena Hospital, while difficult, was a huge point of pride for those involved.

Strength 4: The County provided transportation resources and other support to AFN populations, who needed further assistance during and following the Glass Fire.

The County provided extensive support to its residents during the evacuation effort, including NVTA buses. During the evacuation itself, the County took special care to provide support to older adults, those with transportation challenges, and individuals who required additional assistance to ensure that all residents were able to evacuate safely.¹⁵

¹⁵ *Small Group Interview*



Figure 7. Evacuation guidance released by Napa County for those who tested positive for COVID-19.

Strength 5: The agricultural pass program was more quickly implemented and fine-tuned during the Glass Fire to make the process more efficient.

The Agricultural Commissioner’s Office gained additional efficiencies to quickly implement the Agricultural Pass Program (or Agricultural Verification Card Program) during the Glass Fire. Staff from the Agricultural Commissioner’s Office recognized the opportunity for process improvement during the Glass Fire, adding additional fields to the ArcGIS - Esri 123 Survey used to collect information to verify legitimate agricultural needs.



Areas for Improvement

Area for Improvement 1: Clear and timely communication from one central source to inform repopulation.

There is always pressure and urgency to authorize repopulation after the immediate danger of a fire has passed. While the ICP establishes a repopulation planning team to initiate these discussions right away, there may be opportunity for EOC PIO to anticipate and position repopulation information earlier and more strategically.

Recommendations

Recommendation 2.1: The Napa County EOC was fortunate to have the All Access Transfer Center available through Adventist Health. This system proved to be a valuable asset to the operational integrity of the evacuation. The County should consider building out this capability for future events to provide support in identifying destinations and tracking patients for repatriation purposes.

Recommendation 2.2: Napa County's response benefited enormously from the pilot use of Zonehaven. As the County moves forward to utilize and implement Zonehaven, County should embark on a robust public engagement strategy to ensure residents understand this new approach, as well as support close coordination between Fire, Law Enforcement, and OES as to how the software will be implemented and integrated into existing evacuation and EOC operations.

Recommendation 2.3: In addition to the recommendations regarding the pass program listed in the LNU Lightning Complex Fire AAR, the County could make more information about the Agricultural Pass Program available to enhance understanding of the requirements and intentions of the program. Additional vetting questions could be integrated into the application process to help triage and route applicants accordingly.

Recommendation 2.4: There is opportunity to establish a “repopulation toolkit” to develop templates for public-facing information regarding repopulation ahead of time, to ensure evacuees receive clear, consistent public safety messaging (including from Environmental Health, Fire, and Public Health) as well as resource referrals to mental and behavioral health, as appropriate.



3. Public Information, Alert & Warning

Overview

Just on the heels of the LNU Lightning Complex Fire, the Glass Fire began, and the Public Information Team again faced the challenging task of coordinating and disseminating critical information to the public while operating amidst the constraints of the COVID-19 pandemic.

The PIO team was able to leverage and template communications tools developed during the LNU Lightning Fire to expedite the provision of public information during the Glass Fire. However the Glass Fire, generated unique challenges, particularly around Alert and Warning. Of note, during the Glass Fire the County sent Wireless Emergency Alert (WEA) messages for the first time during an emergency. The second of these two messages was sent countywide and message bleedover was widely reported across the region.

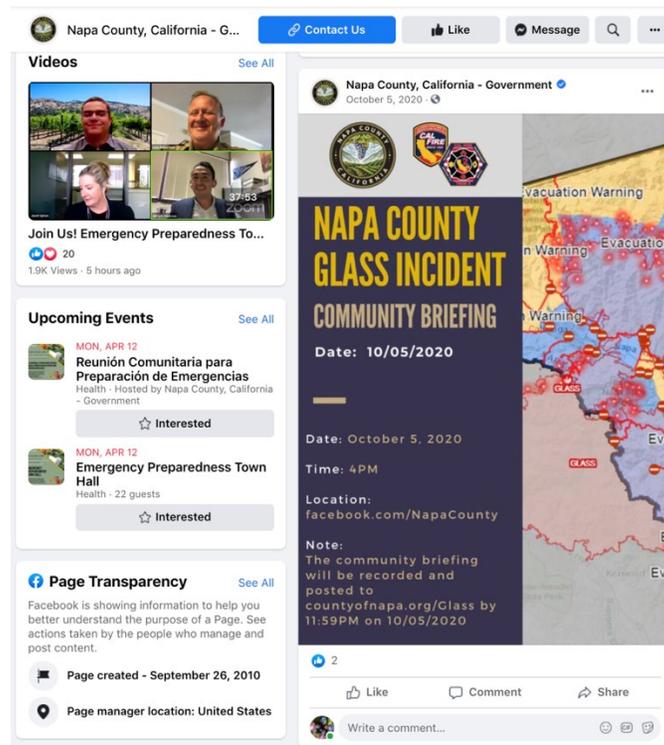


Figure 8. Community Briefing announcement on social media.
(Source: Napa County, Facebook.)



It was frequently expressed in the survey and in interviews that the PIO Team “had it down”, and although they had limited staffing and very little time to recuperate after the LNU Lightning Complex Fire, they were able to instantly pull together to perform an impressive range of activities. During the Glass Fire, they again utilized strategies to maximize the dissemination of accessible information, like having bilingual call center staff who could refer callers to resources in both English and Spanish.

The Tools and Resources section on the County’s emergency response webpage contained a suite of useful information including Wildfire Live Cameras from ALERTWildfire, a road closures map, a wind interactive map, Napa County air quality information, power outage tools, and more.

Strengths, Areas for Improvement, and Recommendations from the LNU Lightning Complex Fire AAR on Public Information and Alert and Warning also largely apply to Glass Fire response as well, and are not repeated here.

Strengths

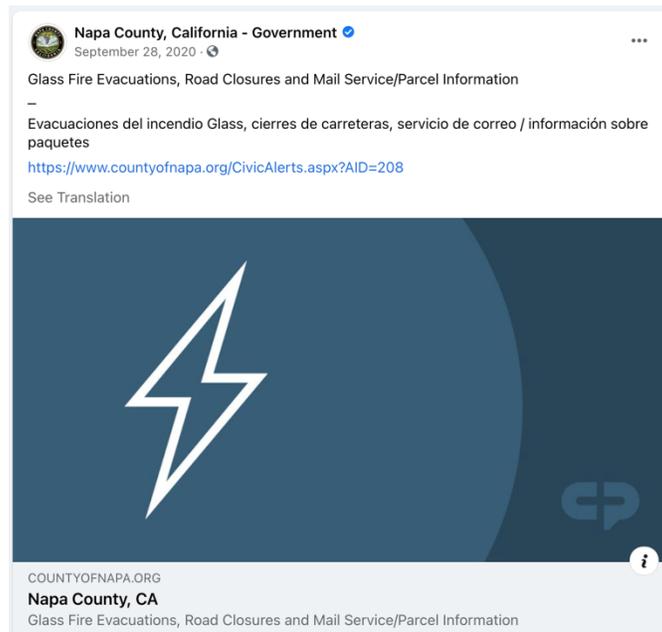


Figure 9. Facebook post with information for evacuation and road closures in English and Spanish languages. (Source: Napa County, Facebook.)

Strength 1: Collaboration and information sharing among CAL FIRE, COAD, and other partners.

Sharing information frequently across partners helped to align messaging to the public and provide a consistent voice. Napa has a well-developed and highly effective platform for this type of coordination through the Joint Information Center (JIC).



Strength 2: County call center provided an important platform for the public to request and provide information.

The call center had been stood up to support COVID-19 response and was an invaluable resource for answering the public’s questions during the Glass Fire. PIO team utilized county employees serving as Disaster Service Workers to staff the call center. The call center staff worked tirelessly to update callers on the latest information regarding fire movement, 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 them 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. In some cases the sharing of information from callers helped the County identify and respond to rumors. The call center volume was as follows, between the start of the fire on September 27 to October 19, when evacuation orders were lifted:

Date	Call Volume
9/27/2020	30
9/28/2020	118
9/29/2020	62
9/30/2020	65
10/1/2020	426
10/2/2020	76
10/3/2020	54
10/4/2020	35
10/5/2020	131
10/6/2020	90
10/7/2020	76
10/8/2020	58
10/9/2020	72
10/10/2020	42
10/11/2020	26
10/12/2020	94
10/13/2020	85
10/14/2020	72
10/15/2020	54
10/16/2020	61
10/17/2020	29
10/18/2020	17
10/19/2020	99



Strength 3: Communications tools were templated from the LNU Lightning Fire, which expedited workflow.

The PIO team was able to effectively leverage press releases, social media posts, Alert and Warning message templates created during the LNU Lightning Fire to expedite messaging during the Glass Fire and provide consistent information between fires. Material already developed during LNU Lightning Fire served as templates that expedited communications and provided consistent messaging to the public.

Strength 4: The EOC sent its first successful live WEA message to Upvalley communities

On the evening of September 28, as the Glass Fire quickly tripled in size and resulted in expanded evacuation orders, Napa County EOC sent the County’s first Wireless Emergency Alert (WEA) message during an emergency. The message was geographically targeted to cell phones within range of cell towers near Angwin, Calistoga, Deer Park, Rutherford, St. Helena, and Yountville. The text of that message read:

“Extreme Fire Danger and Severe Winds. Stay Alert and adhere to all evacuations orders.”

According to notification summary data from IPAWS, this message was received by over 57,396 devices. Napa County became approved by the federal government as an IPAWS originator in 2018 after the 2017 fires and had conducted a number of monthly internal tests and at least two live community tests prior to the 2020 fires.

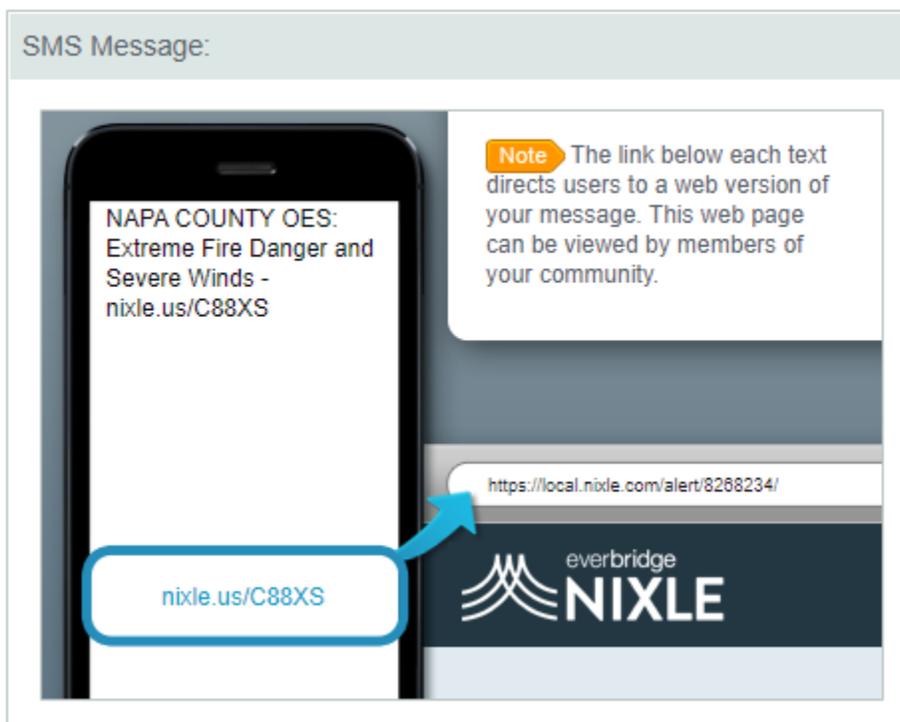


Figure 10. Screenshot of the Nixle confirmation page from the County’s first live IPAWS during an emergency.



Strength 5: The County’s emergency response website highlighted many resources the public and media sought

Through the EOC PIO function, the County made many ongoing updates to its website and the Ready Napa County website to highlight frequently asked questions, Alert and Warning messages, press releases, and resources that were useful to the public. The web team quickly consolidated and incorporated this information into webpages that were constantly updated and fine-tuned throughout the incident.

Strength 6: PIO team responded to a huge volume of media inquiries, positioning Napa’s response as a focal point in broader stories about the 2020 wildfire season

The EOC PIO coordinated responses to hundreds of media inquiries through the duration of the incident. In addition to general press releases, the EOC PIO provided detailed responses to media inquiries and was commended for her timeliness and responsiveness.



Figure 11. News headlines showing fire burning through forestry on September 28, 2020. (Source: Fox2 News.)



Areas for Improvement

Area for Improvement 1: A Wireless Emergency Alert (WEA) message was disseminated widely across the region, causing alarm and confusion.

Napa County utilized the Integrated Public Alert and Warning System for the first time on September 28 to send a Wireless Emergency Alert (WEA) message to cellphones within range of cell towers in a geographically targeted area Upvalley. Unlike Nixle, cellphone users do not opt in to receive these alerts, which makes them especially useful for areas that receive a high volume of visitor traffic. Two days later, as the National Weather Service issued a new Red Flag Warning to warn of high winds that would result in critical fire weather, EOC leadership utilized IPAWS to send a countywide WEA message to warn the public and visitors of these critical conditions. The message was sent on October 1 at 11:14 am and read:

“Extreme Fire Danger. Stay Alert and leave area if you feel unsafe,”

While the earlier WEA message was developed and disseminated through Nixle using targeted geographic areas, this WEA message was sent through the Nixle platform as a “Countywide” message, without geographic fencing. The resulting message was unintentionally received by cellphone owners in Marin, Solano, Sonoma and possibly other counties, due to the imprecise nature of how the IPAWS platform interacts with cell towers. The message did not carry any verbiage or framing that identified it with Napa County, which caused confusion in other counties that did not face this fire danger. Solano County, Marin County, the City of Napa, and other agencies followed Napa County’s WEA message with public alerts to let their residents know that the Napa County WEA was not intended to alarm them.

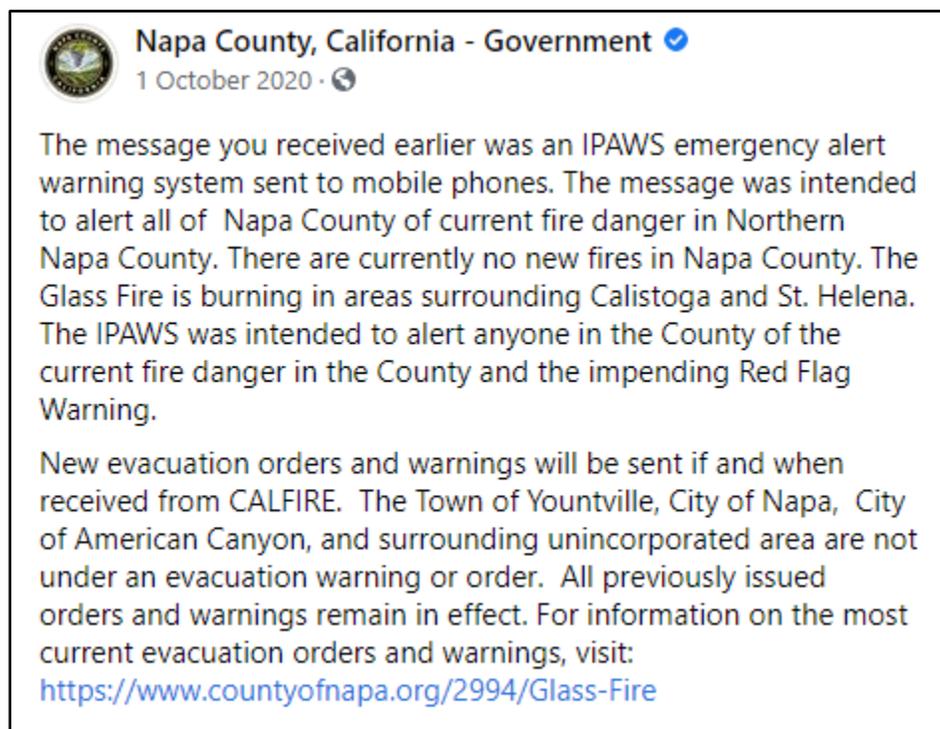


Figure 12. EOC issued a clarifying Nixle message shortly after the WEA message was sent.



After the IPAWS message was sent, traffic to the County call center spiked, as the public sought clarification about the message and the potential threat in their area. The call center received a record 426 calls that day and was ill-prepared to address this influx of calls.

After the 2017 fires, the County committed to getting certified to utilize the Integrated Public Alert and Warning System (IPAWS). While the County regularly ran internal tests of the Wireless Emergency Alert (WEA) platform, took required FEMA trainings for IPAWS originators, and communicated with their software vendor Nixle, Alert and Warning programs have become increasingly complex and require advanced technical expertise to implement effectively. A technological tool like IPAWS is only as strong as the workflow and capacity to implement it. Alert and Warning programs require specialized understanding of and coordination with infrastructure owners (telecommunications companies), software vendors (like Nixle), state and federal authorities, and communities themselves who may offer insights on coverage, uptake, and messaging strategies. The County has invested in acquiring Alert and Warning tools, but would benefit from a deeper investment in staffing (including time to train, test, prepare, and engage stakeholders) to successfully utilize these complex tools during emergencies.

Area for Improvement 2: Call Center staff should receive more training and support to address crisis calls

It was expressed that public information training received prior to the LNU Lightning Complex Fire and Glass Fire did not adequately prepare Call Center staff to support individuals in crisis or those with unique needs. Call center staff would benefit from additional training, referral protocols, and debriefing. A mental health professional should also be available as a referral for callers and support to staff.

Call center staff worked 12 hour shifts and, on some occasions, personally experienced wildfire threats and cell tower outages.

Area for Improvement 3: The Public Information Team remained understaffed for the duration of the emergency.

Although the PIO team benefitted from the unique skills, experience, and dedication of core staff, the small team struggled to coordinate so many different activities. Both 2020 wildfires identified a number of areas in the public information function that should be considered for future investment and reorganization. Lessons learned should be used to continue to refine the PIO team's organization chart, roles and responsibilities, and procedures.

Area for Improvement 4: PIO Team faced unrealistic expectations for frequent and immediate public information releases

One ongoing challenge noted in both fire responses, was the confusion, primarily among the public, on the roles and responsibilities of the County versus CAL FIRE. There were several requests for live fire maps, and high-tech tools, which the small Public Information Team just did not have the bandwidth, authority, or resources to develop.

The PIO team experienced significant pressure to respond to frequent requests to push out public information. However, CAL FIRE IMT is the official source of information about fire behavior, acreage burned, structures threatened or lost. and the IMT puts out official public information at 12 hour intervals by design. Additional sources of information are considered unofficial or anecdotal, and it is



important for public agencies to align behind official sources. There is an understanding that the public may be interested in receiving information more frequently, and may consult unofficial sources that provide unconfirmed and sometimes misleading or incorrect information. Despite this pressure from the public, it is important for the County, EOC, and elected officials to speak with one voice and avoid pushing redundant or conflicting information through multiple sources.

Recommendations

Recommendations from the LNU Lightning Complex Fire AAR regarding Public Information and Alert & Warning, are applicable to this report on the Glass Fire as well but are not repeated here.

Recommendation 3.1: Develop a formal plan for call center activation and training. Reduce call center shifts from 12 hours to 8 hours and create a plan to utilize staff who can only work limited hours. Formalize a bench or cadre of call center staff who are trained and prepared to support this function during emergencies.

Recommendation 3.2: Evaluate options for expanding focus and resource investment in Alert and Warning. These complex Alert and Warning tools require specialized expertise, nuanced strategy development, and continuous training and testing, to utilize effectively during emergencies. There is also a significant need to enhance the public's understanding of Alert and Warning through public education and targeted preparedness campaigns.

Recommendation 3.3: Develop clearly defined protocols and trigger points for the activation of given Alert and Warning tools. Pre-defined messaging templates would steer emergency communication towards established best practices.

Recommendation 3.4: Continue to improve communication with neighboring counties during emergencies through Cal OES Coastal Region. Some Bay Area counties are also forming a regional Joint Information System for cross-county sharing during emergencies.

Recommendation 3.5: Determine mechanisms in which the call center can better accommodate a sudden large influx of calls (e.g., protocols that provide advance notice to staff, pre-scripted messages that provide clarification on incident information and address misinformation, mechanisms to surge staffing). Some California counties utilize services like 211 to surge call center support and regionalize resource referrals during emergencies.

Recommendation 3.6: Additional staffing in the PIO section could support increased coordination with media. Many media inquiries are for general information that is already established through existing press releases (acres burned, structures destroyed etc...). Additional staffing to provide responses to generic or routine inquiries would free up the lead PIO's availability to develop more involved or pro-active communications strategies during emergencies



4. Shelter Operations

Overview

During the Glass Fire, both Crosswalk and Napa Valley College served as evacuation centers, where evacuees could receive food, information, services, and register for non-congregate sheltering resources and meal delivery. Between the LNU Lightning Complex Fire and the Glass Fire, the Care and Shelter Branch provided shelter services to close to 2,500 individuals—over 1,900 for the Glass Fire alone. The Glass Fire resulted in a far greater number of residents evacuated and seeking shelter. The Care and Shelter branch’s support of the LNU Lightning Fire’s sheltering effort concluded just four days before the Glass Fire began, giving the team little time off between events.

Ultimately, Napa County Care and Shelter Branch and its partners executed a smooth transition, re-activated quickly, and greatly expanded operations to accommodate this increased demand. The Glass Fire shelter response ran from September 27, 2020 to November 9, 2020, and resulted in the sheltering of 1,921 individuals across 719 hotel rooms, in addition to congregate sheltering when need briefly outpaced the availability of non-congregate sheltering options. 238 pets were also sheltered in hotel rooms, an additional 168 pets by Napa County Animal Shelter, and 110 large animals or livestock by NCART through this effort.

Shelter workers were diligent about promoting the health and safety of evacuees and taking precautionary measures to prevent COVID-19 infections during the sheltering effort. Public health measures, such as required masks, social distancing, temperature checked, and regular sanitizing were utilized.

Strengths

Strength 1: The teams supporting shelter operations were able to pivot seamlessly from the LNU Lightning Complex Fire response to the Glass Fire response, incorporate process improvements into their workflow, and address the needs of those who were displaced.

The evacuation center at Crosswalk Church and non-congregate sheltering was stood up with remarkable efficiency the first day of the Glass Fire. The Care and Shelter branch leveraged the relationships utilized during the LNU Lightning Complex Fire to reactivate resources to implement an expanded sheltering effort. Intake staff utilized scripts and well-organized registration binders. Internal communication and staggered shift schedules worked well.

Strength 2: The County identified and implemented a system for safely evacuating and sheltering residents who had tested positive for COVID-19 or were experiencing symptoms of COVID-19.

Because the Glass Fire resulted in a larger number of households evacuated and increased demand for sheltering services amidst the pandemic, there was an increased need to identify and safely accommodate evacuees who had tested positive for COVID-19 or were experiencing symptoms. The Care and Shelter branch worked with Napa County Public Health, as well as the Isolation and Quarantine branch of the COVID-19 EOC to safely identify and refer those evacuees to alternate



accommodations for isolation and quarantine. The County established referral hotlines (including for after-hours calls) and built information about those resources into its Glass Fire incident webpage and Nixle messages. . The massive sheltering and evacuation effort did not result in any known COVID-19 transmission.

Strength 3: Community and volunteer partners contributed enormously to the shelter operation and demonstrated a collaborative and well-coordinated approach.

Napa County benefits tremendously from the collaboration and close coordination with community-based organizations. The County has a strong and effective Community Organizations Active in Disasters (COAD), which coordinates community-based organizations during all phases of emergency management. Both COAD and Center for Volunteer & Nonprofit Leadership (CVNL), the county’s contracted provider for spontaneous volunteer management and donations management, work through the Incident Command System to provide support to the EOC during emergencies. The pro-active inclusion of these two groups in the EOC structure results in a unified relationship between government agencies and community-based organizations, particularly around the mass care and shelter effort. Many other communities struggle to achieve this level of coordination during disasters. During an incident, managing donations and spontaneous volunteers can be a challenge but the County’s EOC and Care & Shelter branch were not significantly burdened by these common struggles during the Glass Fire.

Strength 4: Animals were successfully evacuated or sheltered-in-place through a well-coordinated, multi-agency effort.

The safe and successful evacuation of household pets, large animals, and livestock was highlighted in the LNU Lightning Fire After Action Report, but bears mentioning again as a strength of the Glass Fire response. Napa County benefits enormously from agencies like NCART and CERT, which are able to provide critical services to evacuees that supplement and enhance the County’s overall response.





Through CERT and the Agricultural Commissioner’s Office, during the Glass Fire response, a GIS mapping system was established to identify locations of sheltered in place animals, track volunteers, and coordinate services for those animals and livestock. The system was overlaid with live fire maps and evacuation maps for the Glass Fire which helped determine the priority and assess the risk in the areas, in coordination with law enforcement.

During the Glass Fire Napa County Animal Shelter sheltered 168 pets and NCART provided shelter to 110 large animals and livestock. Additionally, evacuees accommodated approximately 238 pets in non-congregate shelters at the height of the sheltering operation.

Strength 5: The County deployed known and trusted community providers to support mental health needs at the evacuation centers

During the Glass Fire, Napa County Mental Health requested additional support from known community providers, including Aldea and Mentis. Their staff were trained in disaster response and coordinated through Napa Valley COAD. Working together with community providers helped to alleviate staffing shortages, provide supplemental services, and meet the needs of evacuees displaced by the fires.

Strength 6: Care and Shelter branch staggered shifts and formalized the process of training a shadow or back-up

Staff involved in the sheltering effort praised the staggered shift system, wherein staff overlapped shifts to support smooth transitions. Staff said the sheltering operation was well-organized and that workloads were manageable and well-defined. Additionally the team established a process for training back-ups. This helped the team stay on top of phone calls and tasks that lingered between shifts.

Areas for Improvement

Area for Improvement 1: As evacuees’ needs shifted, it became very challenging to track shelter resources needed, assigned, and actually utilized.

The increased demand for sheltering resources complicated the accounting and logistics of the sheltering operation. During the Glass Fire, there were a number of cancellations and no-shows to hotels, and some movement between hotels provided by the County and hotels coordinated by the American Red Cross/California Department of Social Services. Staff also struggled to accommodate larger parties that unexpectedly arrived to check in to rooms, after smaller rooms had been requested earlier. On some occasions, evacuees vacated rooms without informing staff or checking out of rooms with hotel management. Noticing these instances, staff undertook tremendous effort to maintain frequent communication with evacuees, to identify when their plans and needs changed.

Area for Improvement 2: Many evacuees came to the evacuation center and approached shelter staff with questions that would have been more easily addressed offsite, online, or in an FAQ document.

Due to COVID-19, fire information briefings were largely conducted virtually over Facebook Live. Outside of EOC briefings, shelter staff were not briefed or trained to provide this information to evacuees; still there was an expectation and pressure to provide disaster updates in person. Evacuees also had many logistical questions that could have been easily addressed in a written document, with a referral to the call center, or on the County’s webpage. While questions are certainly understandable, it



was difficult for shelter staff to manage registration, intake, and shelter services while attempting to field many questions.

Area for Improvement 3: At a couple of points, evacuees waited in long lines to access shelter services, which resulted in some tension at the evacuation centers.

When there is an unexpected increase in evacuation activity, it takes time for the EOC to accommodate this increased activity at shelters and evacuation centers. Mass evacuations on September 28, including a significant evacuation order for the City of Calistoga, resulted in an unanticipated surge of residents arriving at Crosswalk Church to seek sheltering services. That day, the number of persons receiving shelter from the County increased from 518 to 906. The next day, the number of persons receiving shelter increased to 1,607. Some noted that long outdoor lines at Crosswalk Church were a source of frustration for evacuees. Though it fundamentally takes time for an operation to adapt to unanticipated increase in demand for services, there may be some strategies to help alleviate some of the tension that comes with long lines and large crowds.

Area for Improvement 4: Evacuation site staff or official affiliated volunteers were difficult to identify.

Stakeholders noted that volunteers did not wear identifying clothing or name tags to formally affiliate them with the sheltering effort and set them apart from evacuees. This resulted in a rumor that evacuees were helping organize, clean, distribute donations, and provide other services. In reality, these individuals were volunteers that were not wearing identifiable gear that could set them apart from evacuees. While staff wore County badges, it would be helpful to provide more visible clothing to easily identify them as shelter staff and volunteers as recognized shelter volunteers.

Area for Improvement 5: Evacuees and staff were frustrated by the number of forms that needed to be filled out to access different services.

American Red Cross, which helped coordinate and fund some hotel stays at the County and State's request, utilized a different shelter registration form than the County. Staff utilized tracking forms for shelter day use that differed from hotel registration forms. Self-Sufficiency Division staff are in talks with ARC to combine intake forms during future emergencies. Community-based organizations also utilize a variety of forms to triage and register evacuees for disaster services and assistance. There may be further opportunity to streamline these forms by combining or digitizing them.

Recommendations

Some recommendations from the LNU Lightning Complex Fire AAR regarding Shelter operations are applicable to this report on the Glass Fire as well but are not repeated here.

Recommendation 4.1: Work closely with PIO team to develop templates and update a frequently asked questions document for fire evacuees that can be distributed at evacuation centers and posted on the incident webpage, as needed. These FAQs should outline the process for shelter intake and care resources, and could also be used to address early questions about repopulation.

Recommendation 4.2: Assign evacuation site staff and volunteers a vest, shirt, or name tag to clearly identify their role.



Recommendation 4.3: Evaluate options for limiting amount of time evacuees wait in line to access services, such as a ticketing system, shaded or air-conditioned waiting area, or phone callback system.

Recommendation 4.4: Work with shelter partners and community-based organizations to streamline forms used for shelter services and other forms of immediate disaster assistance.

Recommendation 4.5: Continue to brainstorm and define roles for volunteers to support care and shelter staff when needed. Develop pre-disaster position checklists for potential volunteer roles to easily transition volunteers on and off.



5. Transition to Recovery

Overview

Recovery activities proceeded at the onset of the Glass Fire, alongside LNU Lightning Fire recovery, and these activities will continue for many years. This AAR touches on short-term recovery activities, including proclamations, Local Assistance Center, internal coordination, and communication to the public.

As discussed in the AAR report for the LNU Lightning Complex Fire, a local emergency proclamation is an important 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. On September 27, the day the fire began, the County Executive Officer acting as the Director of Emergency Services issued a Proclamation of Local Emergency, and the County's Public Health Officer followed the next day with a proclamation of a local health emergency. On September 28, Governor Gavin Newsom issued a proclamation of a State of Emergency.

While FEMA immediately approved funding under the Fire Management Assistance Grant, other federal declarations were delayed. The state's request for a Major Disaster Declaration was initially denied by FEMA and then successfully appealed. Napa County was added to an earlier disaster declaration (DR-4569) on October 22. A Presidential Major Disaster Declaration facilitates the provision of support including crisis counseling, housing and unemployment assistance and legal services available to disaster survivors in impacted counties. A declaration for Public Assistance also provides federal assistance to help local governments and other public agencies fund emergency response, recovery (including debris removal), and protective measures. The delay from the federal government in approving this assistance resulted in confusion and frustration for households impacted by the Glass Fire, who did not immediately have the same set of recovery resources available to them as those impacted by the LNU Lightning Fire. The Recovery Operations Center (ROC) PIO team worked to accurately message these complex differences to the public.

The County's Glass Fire recovery efforts were organized through the ROC that was already established for the LNU Lightning Complex Fire. The strengths, areas for improvement, and recommendations identified in the LNU Lightning Complex Fire AAR apply to Glass Fire's recovery as well. The section below identifies several considerations unique to Glass Fire's early and transitional recovery activities.

Strengths

Strength 1: Community meetings and public information tools recognized the parallel but distinct recovery trajectories.

As recovery activities proceeded along different timelines due to the chronology of the events, as well as the delayed state and federal assistance, the County established distinct recovery contact lists and communications tools. The two fires impacted distinct areas of the county and resulted in their own unique recovery challenges. As such, the County established a separate Nixle group for those impacted by the Glass Fire to receive recovery communications and held parallel community meetings that spoke to the unique needs and timelines of each group, as appropriate. As recovery activities picked up,



timelines for debris removal and disaster assistance more closely aligned, but these early nuances were important to recognize.

Strength 2: The Recovery Operations Center provided a helpful framework for organizing complex activities across two events and a smooth transition point for deactivating the EOC

Recovery leads across seven functional areas had been meeting through the ROC for about a month when the Glass Fire began. ROC Plans Chief and ROC manager moved quickly to modify the briefing structure and Recovery Action Plan to manage two concurrent recoveries. An evolving series of charts and planning documents described the parallel tracks for recovery between the two fires and outlined the status of different recovery projects. With so many simultaneous activities happening across differing timelines, the ROC was a useful forum to exchange information, coordinate activities, and request needed resources. The ROC structure, which utilizes ICS, is an effective means to transition activities out of the EOC as emergency response concludes.

Strength 3: The Local Assistance Center was stood up quickly and re-located to St. Helena following repopulation

After a brief break between fires, the Local Assistance Center reopened in South Napa on October 5 to provide a one-stop-shop location for information on local, state and federal disaster assistance resources for affected homeowners and businesses. Napa County called in mutual aid to provide additional staffing to support seven-day-a-week operation. On October 17, the LAC moved to St. Helena to be more accessible to those affected by the Glass Fire. Resources and equipment were relocated smoothly. Over 700 individuals visited the LAC stood up to support the Glass Fire between October 5 and November 20, when it closed. Virtual appointments and a virtual LAC website remained available for those who could not visit in person.

Strength 4: Roads utilized mutual aid to support road clearance and hazard tree work

The Glass Fire produced large volumes of vegetative and structural debris, which impacted County roads. Roads crews soon realized the volume of debris and hazard tree trimming required by the Glass Fire would exceed available resources, and they required mutual aid from neighboring counties and municipalities within Napa. Those crews performed the initial road clearance work that ensured first responders and returning residents were able to safely access those areas.

Areas for Improvement

Area for Improvement 1: Identifying and collating impacted property owners' contact information was a challenge.

The County made extensive efforts to identify contact information for impacted property owners and renters, in order to provide ongoing communication about debris removal deadlines and disaster resources. Several County departments engaged in parallel but duplicative and ultimately incomplete efforts. Establishing these contact lists was a challenge for both fires, but particularly for the group impacted by the Glass Fire. Outreach to residents happened during election season, which might have resulted in increased hesitation from the public to answer calls from unknown numbers.



Area for Improvement 2: There is not a defined process for deactivating the Local Assistance Center

The Local Assistance Center remained open to serve residents for approximately six weeks, and visitor traffic dropped dramatically in the remaining weeks. While the LAC is a critical and highly valued recovery resource for the impacted population, the effort requires extensive staffing and some reported fatigue and frustration. The LAC remained open longer than usual, due to the delay from FEMA in approving a disaster declaration and making disaster assistance available to Glass Fire-impacted households. The LAC remained open specifically to support FEMA registrations once that resource became available.

Area for Improvement 3: Registration for FEMA disaster assistance was very low

There are many complex reasons why registration for FEMA disaster assistance was low among those affected by the Glass Fire, and registration, as well as approval rates, continue to drop during successive events across the country. The difficulties associated with these federal programs are well-documented in recent news stories and the Glass Fire raised unique challenges, with COVID-19 and confusion around the delayed declaration. While the County promoted registration for disaster assistance through several channels, there may be opportunity to request additional locations for FEMA to stage Mobile Intake Registration Centers to boost registration in future disasters.

Recommendations

Recommendations from the LNU Lightning Complex Fire AAR regarding the transition to recovery are applicable to this report on the Glass Fire as well but are not repeated here.

Recommendation 5.1: Develop an operational protocol that defines Local Assistance Center customer tracking and information sharing protocols, as well as deactivation triggers. Convene a workgroup to evaluate customer data and identify opportunities to expand outreach to target populations.

Recommendation 5.2: Coordinate development of pre-disaster recovery assistance materials with Cal OES and FEMA to anticipate scenarios in which delayed declarations result in confusion for the public.



County's Response Statistics Infographic

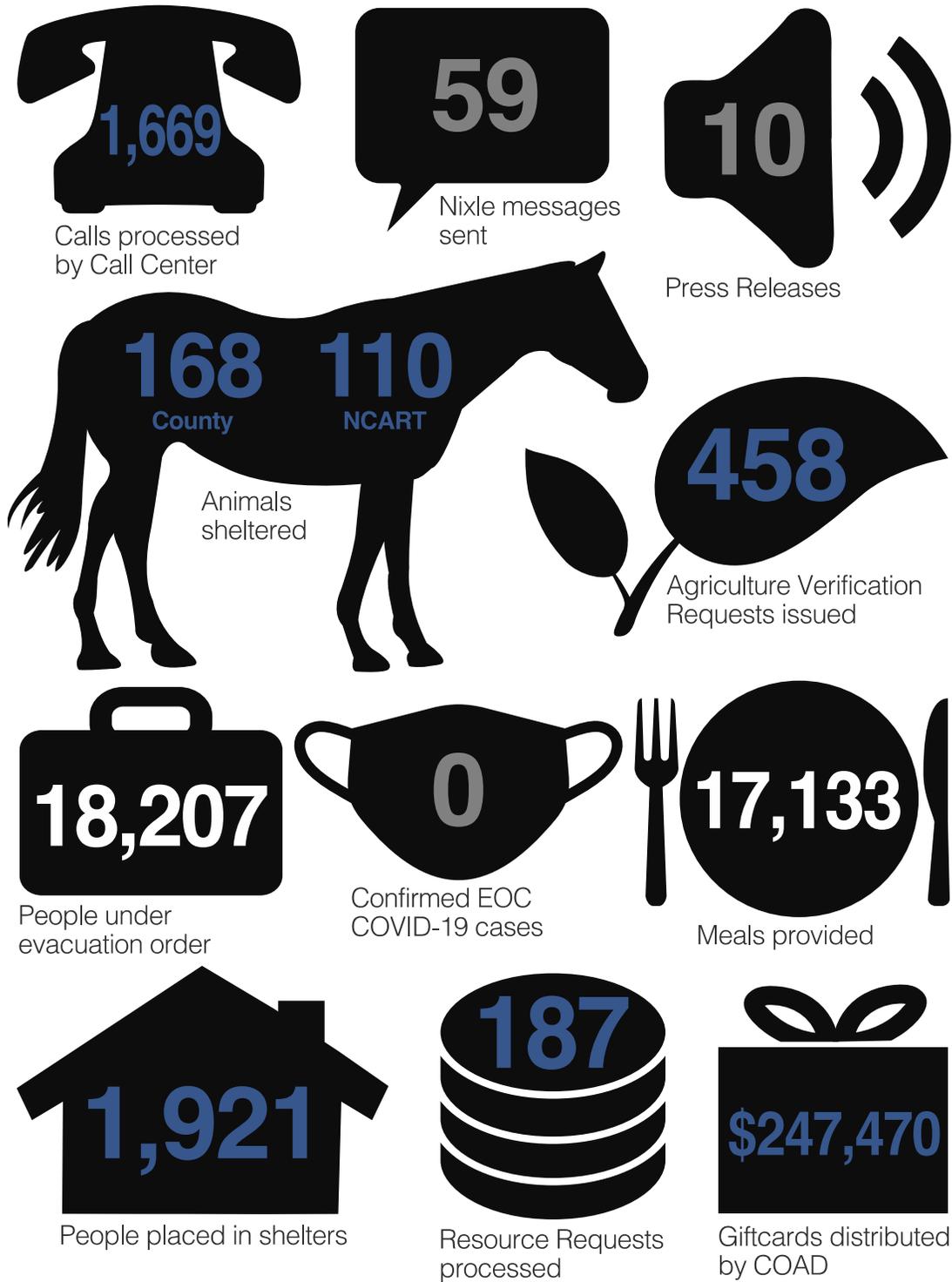


Figure 14. Infographic of the County's Glass Fire response efforts.



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
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Appendix C. Glossary of Acronyms

Acronym	Definition
AAR	After Action Report
AATC	All Access Transfer Center
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
CERT	Community Emergency Response Team
COAD	Community Organizations Active in Disaster
COVID-19	Coronavirus Disease 2019
CVNL	Center for Volunteers and Nonprofit Leadership Napa
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
FEMA	Federal Emergency Management Agency
GIS	Geographic Information System
HIPPA	Health Insurance Portability and Accountability Act
IAP	Incident Action Plan
ICP	Incident Command Post
ICS	Incident Command System
IPAWS	Integrated Public Alert and Warning System
LAC	Local Assistance Center
LEP	Limited English Proficiency
LNU	Sonoma-Lake-Napa Unit
NCART	Napa Community Animal Response Team
NIMS	National Incident Management System
NWS	National Weather Service
OA	Operational Area



Acronym	Definition
OES	Office of Emergency Services
PIO	Public Information Officer
PPE	Personal Protective Equipment
PSPS	Public Safety Power Shutoff
ROC	Recovery Operations Center
SEMS	Standardized Emergency Management System
SitStat	Situation Status
SOP	Standard Operating Procedure
TEP	Temporary Evacuation Point
WEA	Wireless Emergency Alert

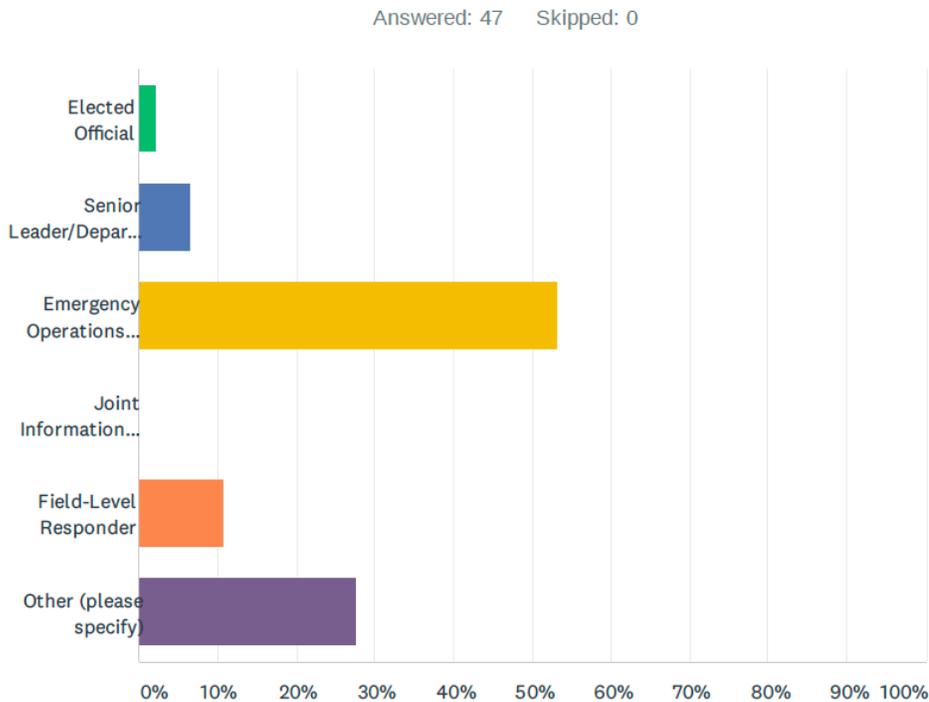


Appendix D. Survey Data Summary

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 Glass Fire. The survey received responses from a total of 47 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.

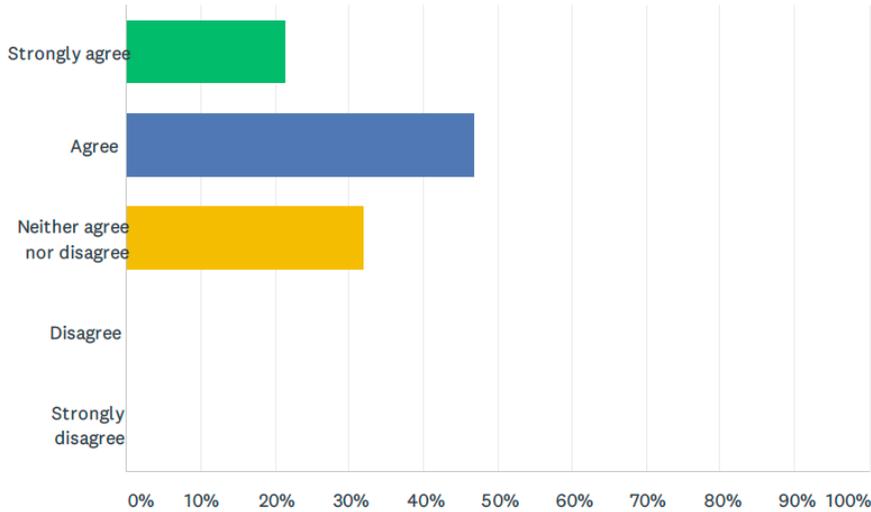
Q1 Which of the following best describes your primary role during the Glass Fire response and recovery effort?





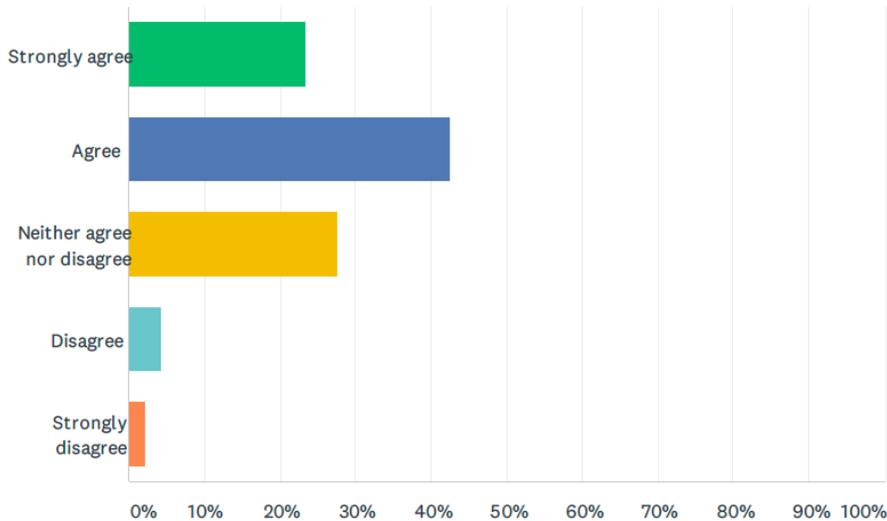
Q2 The County effectively utilized its written plans/procedures to guide the overall Glass Fire response/recovery effort.

Answered: 47 Skipped: 0



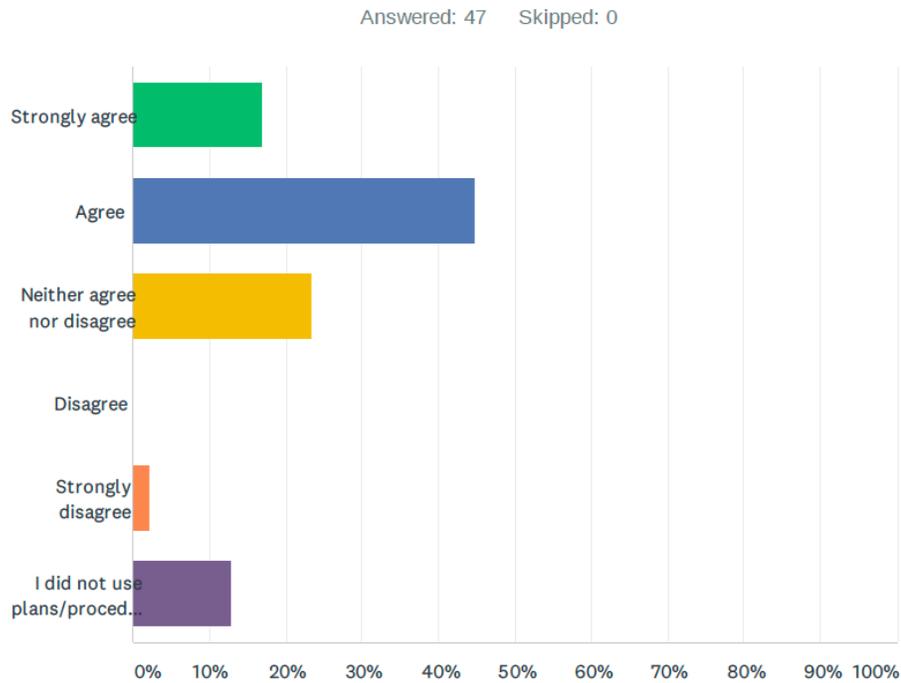
Q3 The County appropriately integrated previously established pandemic plans and procedures to defend against COVID-19 while responding to/recovering from the Glass Fire.

Answered: 47 Skipped: 0

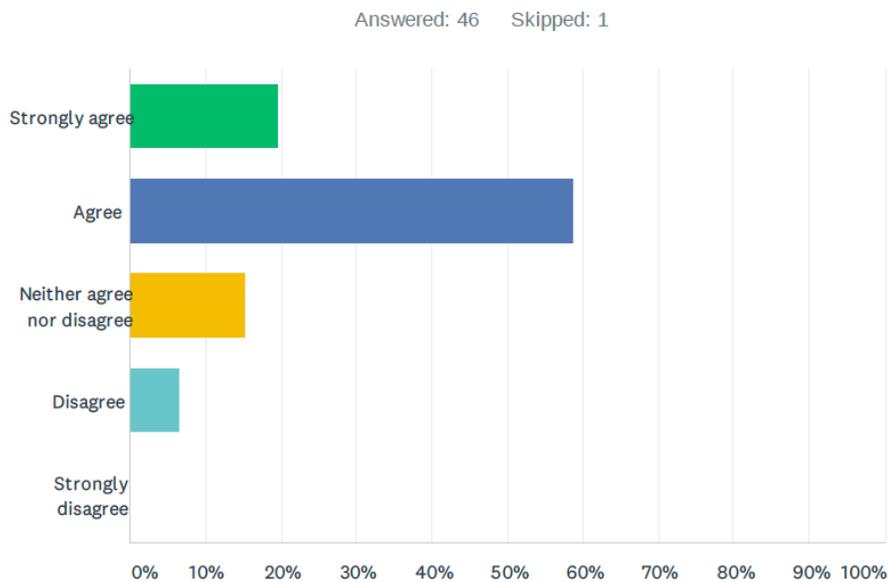




Q4 The written plans/procedures I used during the Glass Fire adequately supported my role throughout the response/recovery effort.



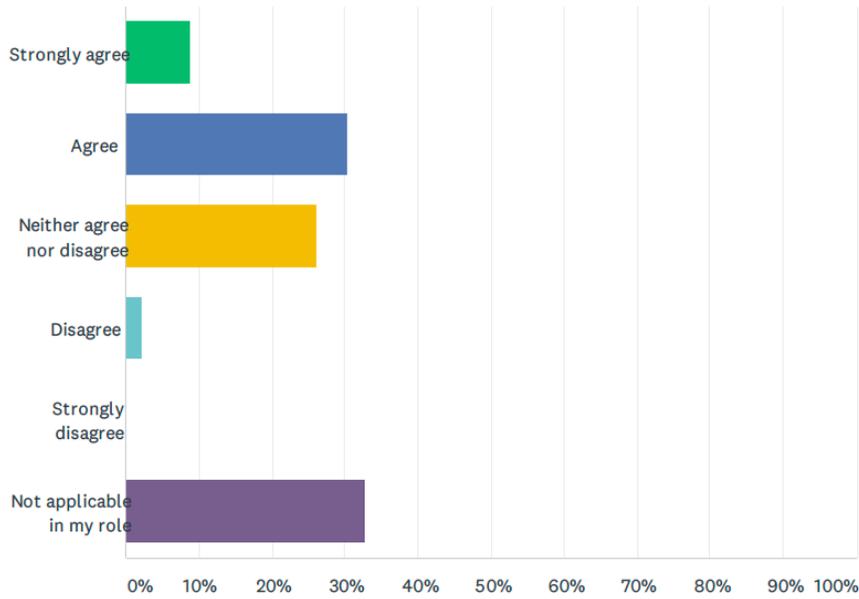
Q5 The training I received prior to the Glass Fire adequately prepared me for the role to which I was assigned.





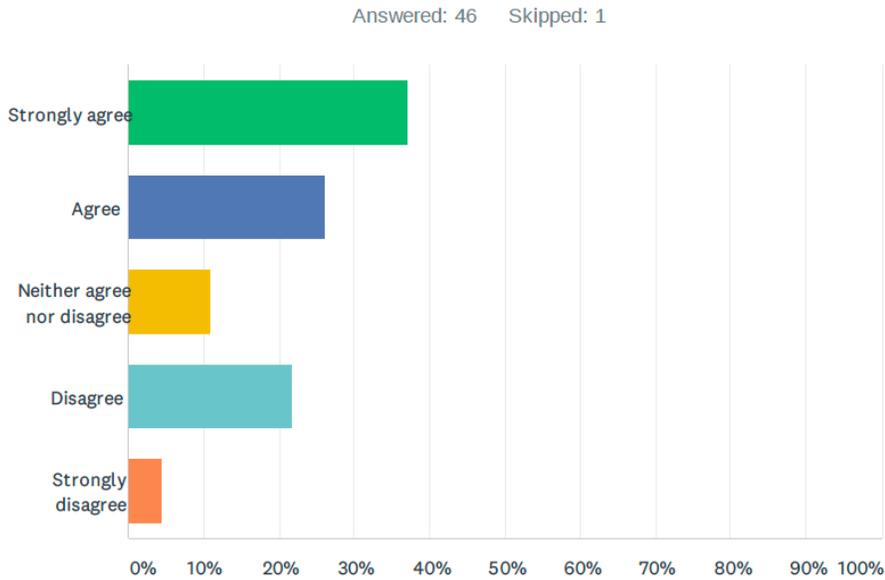
Q6 The training I received prior to the Glass Fire adequately prepared me to support individuals with disabilities and others with access and functional needs (DAFN).

Answered: 46 Skipped: 1

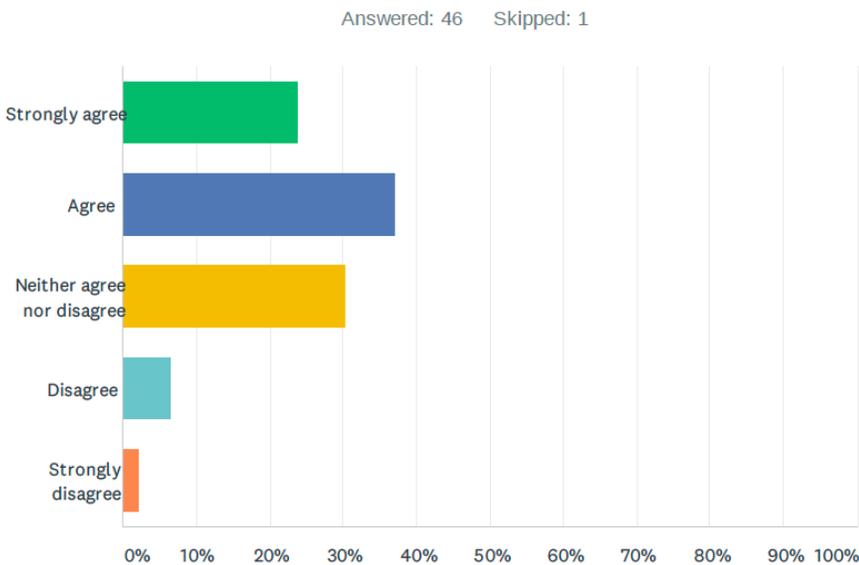




Q7 No more than 12 months prior to the Glass Fire, I participated in a tabletop, functional, or full-scale exercise and/or I participated in real-world response that helped prepare me for the role to which I was assigned during the Glass Fire.



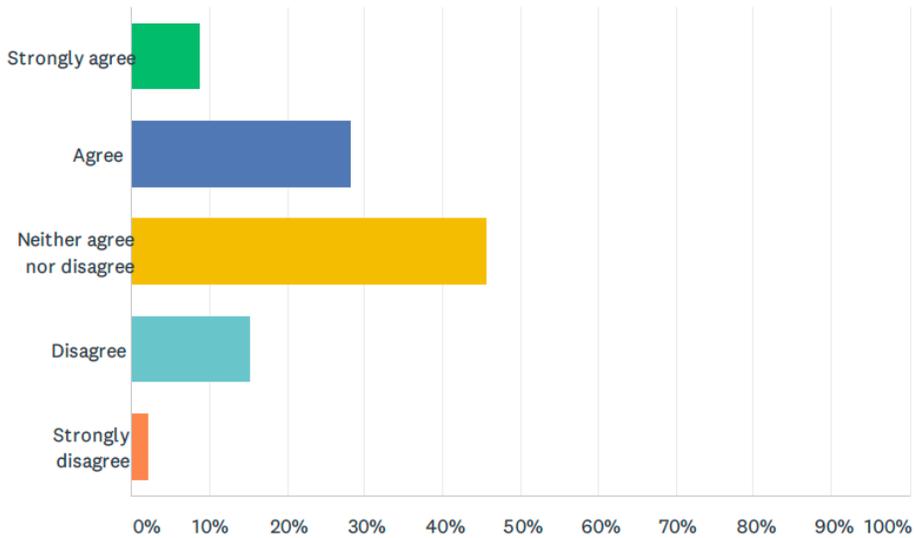
Q8 Adequate provisions, such as food and basic hygiene, were provided at my work location.





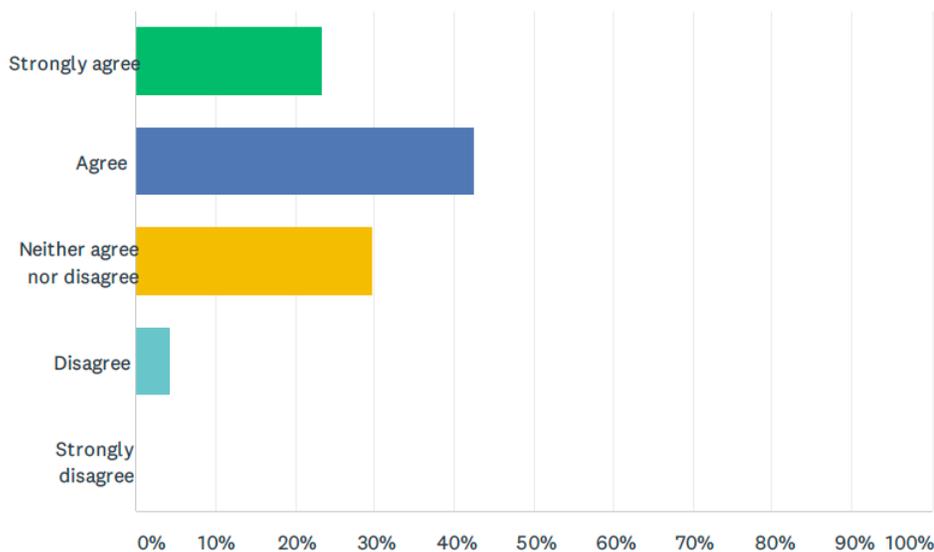
Q9 Psychological and emotional support programs and resources were readily made available to response and recovery staff at my level.

Answered: 46 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: 47 Skipped: 0



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



Many respondents noted that there were several challenges of managing the Glass fire in such short succession after the LNU Lightning Complex Fire. Some issues derived from depleted supplies, less mutual aid available, and staff fatigue. Respondents noted, however, that the LNU Lightning and Glass fires were spaced apart enough for the County to learn from the first fire and inform response for the second. Several respondents expressed complexities of staff needing to respond to fires that they are personally experiencing because they live in the affected communities. Similar to the LNU Lightning Complex Fire, many respondents said that the staff pulled together and continued to respond as necessary, despite the consistent burnout. Sites that had been previously stood up for COVID-19 and LNU Lightning Complex Fire response were repurposed to serve Glass Fire evacuees. 39% of respondents, 13 of 33, specifically addressed staff burnout and/or alarmingly high workload as being a major issue in this response.

The Glass Fire disrupted operations for many staff, and spread very quickly, making it challenging to update information. Similar to the LNU Lightning Complex Fire, gift cards were distributed to those who were eligible and in need by COAD agencies, however, it was more difficult during the Glass Fire because there were a large number of people requesting them. This resulted in the team setting up a second phone line and creating an appointment system to alleviate crowding and lack of social distancing. There were also concerns about having adequate financial documentation of each fire when resources overlapped.

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

Similar to the LNU Lightning Complex Fire, the Glass Fire responders faced challenges in a virtual environment because full services could not be administered, and coordination was sometimes limited. For staff responding, securing PPE was a considerable focus. Additionally, evacuees needed to be able to distance, so once again, hotels became the main source of evacuation shelters. There were also less volunteers available to assist. Another noted challenge was the difficulty of evacuating hospitals and moving patients when many receiving hospitals were already maxed out on resources to support COVID-19 positive patients.

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

Several areas for improvement were noted by respondents including requests for earlier mutual aid assistance, standing contracts for more personnel resources, and overall data organization, such as more regular and frequent quality control of data on debris removal and parcel status. Approximately 20% of respondents, 6 of 30, mentioned issues involving communication, coordination, and/or organizational issues. More organization and planning were needed for call centers, as well as increased communication between State and County, and between GIS and Incident Command. Coordination from the County could have also been improved with community based organizations and COAD. It was mentioned that Recovery Operations Center could have benefitted from ICS training.

Shelter staff in particular, faced several challenges in responding to the Glass Fire. They could've benefited from more personnel, including bilingual and trauma-informed staff, and contingency planning. Additionally, registration of evacuees, distribution of meals, and coordination with bus drivers were all mentioned as areas that could have been improved. Evacuation information and coordination between the County and CAL FIRE could have been enhanced. The Crosswalk shelter seemed to face several organizational issues, including lacking mental health services and confusion around new shelter



protocols when simultaneously implementing COVID-19 sheltering guidelines. For example, there seemed to be a lack of synchronization on social distancing, meal delivery, pet, and donation protocols.

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

Similar to the LNU Lightning Complex Fire, 50% of respondents, 14 of 28, reported that staff did an incredible job meeting the needs of the community, even though it often meant running on empty. Overall, it was noted that staff did a fantastic job housing everyone in need and helping more vulnerable evacuees, like those with mobility issues or limited English proficiency. They were praised for going “above and beyond” and having a strong sense of collaboration, dedication, and empathy.

Overlapping with the strengths in the LNU Lightning Complex Fire, communications, particularly the creative use of Facebook Live and other social media platforms, were praised. Coordination with partners such as local hotels, CERT, COAD partners, California Highway Patrol, and community providers such as Aldea and Mentis to obtain valuable resources and staff were crucial strengths recognized by respondents.

Question 15: Many successful Glass 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?

60% of total survey respondents, 26 of 47, either skipped this question (26) or marked N/A, none, or did not answer (5). Some creative solutions and innovative processes that came about during the Glass Fire were highlighted and are listed below:

- Essential agricultural grower verification system
- Tags on mailboxes for first responders
- Mutual assistance from other counties, such as behavioral health staff from Kern and Solano County
- Mobilizing staff from various departments to fill in as needed
- Registration and tracking of evacuees in hotels
- Animal tracking system and shelter in place map for care of animals left behind
- COAD participation in EOC
- Federal Regional Center collaboration for safe gift card distribution
- Call center spread sheets for tracking information
- Online tools like Zoom, GIS tools, Facebook Live, and applications such as Damage Assessment



Appendix E. Incident Map

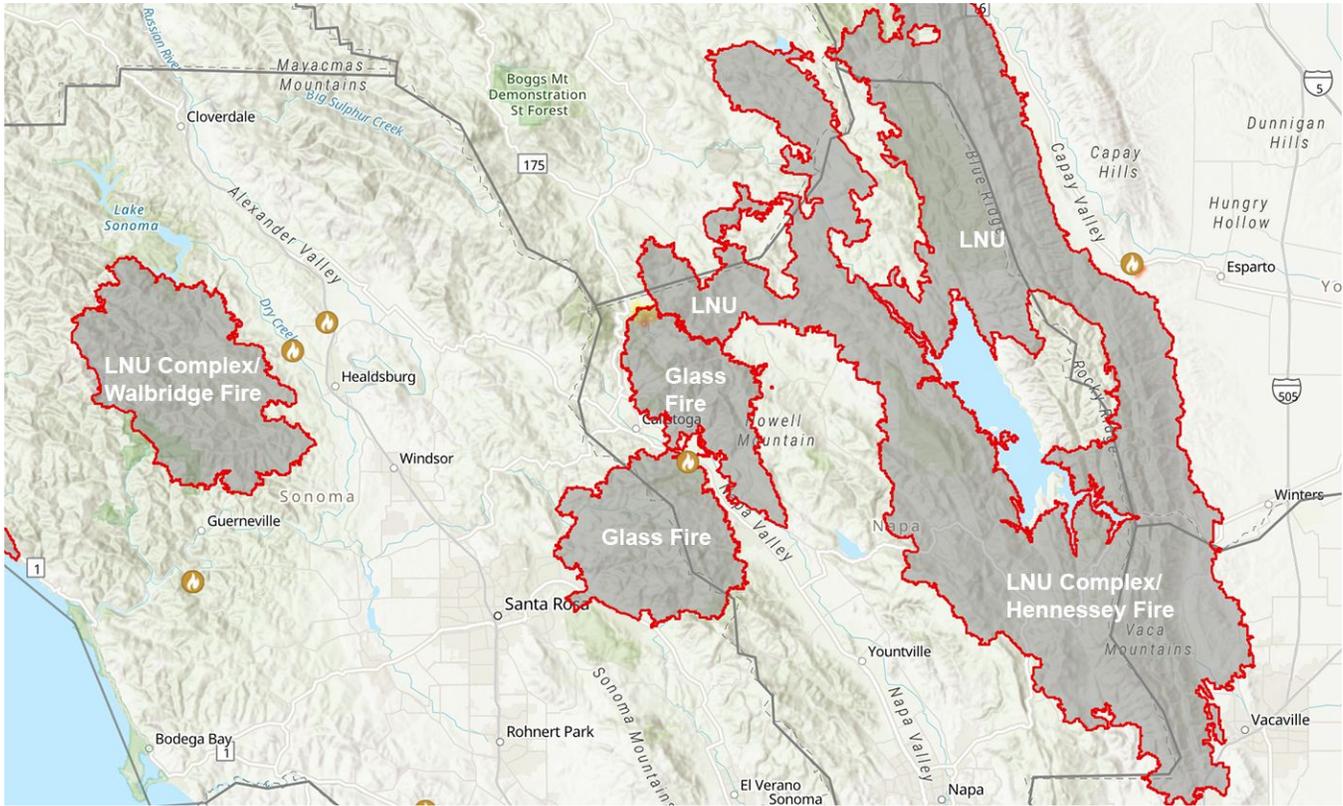


Figure 16. Map of the areas impacted by the 2020 Glass Fire as well as the preceding LNU Lightning Complex Fire.



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