

Coming Together in Crisis



The Santa Rosa Story



An After Action Report of the
City of Santa Rosa's Response to the
2017 Sonoma County Fires

Provided April 2019



This page is intentionally blank.



Dedication

This report is dedicated to the memory of the Santa Rosa residents who lost their lives in the fires. It is also dedicated to the people of Santa Rosa—residents, businesses, and public servants—whose heroic efforts to help each other during the fires saved countless lives and whose continued dedication to the community is aiding the recovery efforts.

In memory of:

Karen Sue Aycock

Valerie Lynn Evans

Tak-Fu Hung

Carmen Colleen McReynolds

Marilyn Carol Ress

Marjorie Lenore Schwartz

Carol Collins-Swasey

Tamara Latrice Thomas

Linda May Tunis



Coming Together in Crisis – The Santa Rosa Story

This page is intentionally blank.

Disclaimer and Disclosure

This report, prepared by Witt O'Brien's, was developed under contract with the City of Santa Rosa. The opinions, findings, conclusions, and recommendations are provided solely for the use and benefit of the requesting party. Any warranties (expressed and/or implied) are specifically waived. Any statements, allegations, and recommendations in this report should not be construed as a governing policy or decision, unless so designated by other documentation. This report is based on the most accurate and current data available to Witt O'Brien's at the time of publication and is therefore subject to change without notice. Provided to the City of Santa Rosa April 2019.

About Witt O'Brien's

Witt O'Brien's is a global leader in emergency preparedness, crisis management, and disaster response and recovery, with the depth of experience and capability to provide services across the crisis and disaster life cycle. Witt O'Brien's has worked with public and private sector organizations throughout the United States to enhance, improve, and implement their emergency planning, training, and exercise programs, as well as assist and assess prevention, protection, mitigation, preparedness, response, and recovery operations. For the past 15 years, Witt O'Brien's has been supporting communities and others in the development of independent after action reports aimed to identify critical challenges, highlight capabilities that require enhancement, and develop a roadmap for future success of disaster recovery and prevention.



1201 15th Street NW, Suite 600
Washington, DC 20005
Phone: 202-585-0780
wittobriens.com

818 Town & Country Blvd, Suite 200
Houston, TX 77024
Phone: 281-320-9796

Acknowledgement of Kelle Kroll Group Contributions

The City of Santa Rosa asked us to incorporate the work, including timeline, findings and recommendations, of the Kelle Kroll Group which had been originally engaged to conduct an after-action report of the fire incident from the perspective of the City's emergency operations center. We have worked to do so here to the degree such are consistent with our findings and recommendations.



Acknowledgements

Witt O'Brien's acknowledges and appreciates the cooperation of City of Santa Rosa elected officials and employees, volunteers, residents, and others for their input and ideas in the development of this report. A list of those interviewed is provided in the appendix.



Coming Together in Crisis – The Santa Rosa Story

This page is intentionally blank.



TABLE OF CONTENTS

- Executive Summary.....1**
 - A. Brief Overview of the Fires..... 2
 - B. Overall Impacts..... 3
 - C. The Tubbs Fire Factors and Characteristics..... 4
 - D. City Strengths in the Wake of Disaster..... 6
 - E. Areas for Improvement 7
 - F. Most Critical Recommendations in Priority Order 8
 - G. City Actions Taken Since the Fires..... 9
- Introduction13**
 - A. Scope 13
 - B. Methodology 13
- The Perfect (Fire) Storm: Factors Contributing to Devastation by the Tubbs Fire33**
- City Emergency Preparedness: A Brief Discussion.....38**
- Key Findings and Recommendations.....41**
 - A. Strengths 41
 - B. Areas for Improvement 41
- Conclusion58**
- Appendix A: Narrative Descriptors.....59**
- Appendix B: Detailed Timeline of Events.....60**
- Appendix C: Individuals Who Participated In Formal Interviews83**
- Appendix D: joint Powers Authority Formation to Support Local Vegetation Management in the North Bay Region88**
- Appendix E: Unified San Diego County Emergency Services Agreement91**
- Appendix F: Acronyms & Definitions.....92**
- References.....95**



EXECUTIVE SUMMARY

This independent after action report was commissioned by the City of Santa Rosa to review the events and actions around the October 2017 Fire Siege that directly affected the community and neighboring areas. The focus of this report is the response to the Tubbs and other fires, which created unprecedented devastation to Santa Rosa in the early morning hours of October 8-9, 2017, and that continued until October 31, 2017.

The purposes of this report include:

- Tell the story of the immediate response by City employees and departments in the subsequent days and weeks;
- Develop a better understanding of those events and actions;
- Identify the strengths and areas for improvement of general disaster response efforts; and
- Identify ways in which the City of Santa Rosa can improve resiliency in the face of wildfires.

The City Manager and Council are making this report public to both the people of Santa Rosa as well as other jurisdictions so that they also may better understand the City's response to the incident and engage in the opportunities to create a more resilient Santa Rosa.

The report presents 23 findings and 54 related recommendations for improvements based on research, interviews, best practices, federal and state guidelines, and local realizations based on firsthand experience with the fires. While not all recommendations can be immediately implemented, we recommend the City consider each one in earnest and develop implementation priorities and strategies based on the availability of funding and other resources. Finally, these fires do not respect municipal boundaries. Although this report is focused on Santa Rosa, we recommend potential regional approaches to some of the ongoing challenges including vegetation management. And again, although this report is focused on Santa Rosa, we want to acknowledge the substantial actions taken by Sonoma County since the incident as well.

A. Brief Overview of the Fires

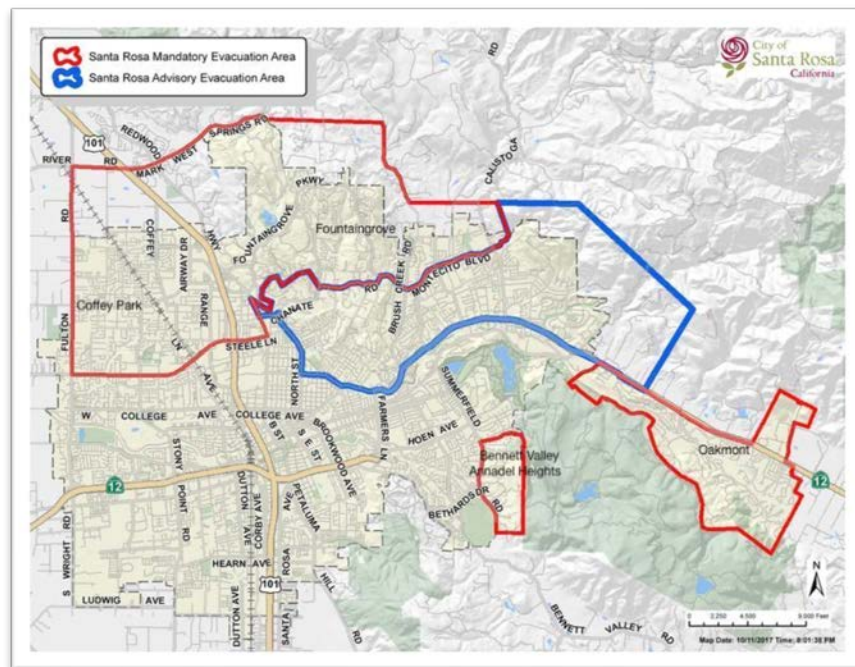
See Appendix B for a more complete timeline of the fires.

On Sunday, October 8, 2017 there was a Red Flag Warning issued by the National Weather Service (NWS). Santa Rosa and surrounding areas were experiencing above-normal wind speeds. Because of the windy conditions, more-than-normal numbers of fires were reported in the county. Within Santa Rosa, SRFD responded to 20 vegetation fires and six structure fires between 6:00 p.m. and midnight.

The Tubbs Fire ignited near Highway 128 and Bennett Lane in Calistoga at 9:45 and raced toward Sonoma County and Santa Rosa. Meanwhile, SRFD was responding to multiple fires in the City and adjacent areas. A multiple alarm structure and grass fire late in the evening required the remaining SRFD and all on-duty SRPD resources to respond in order to contain and put out the fire and conduct evacuations of nearby buildings.

Throughout the night SRFD personnel responded to fires all over the city. The City Emergency Operations Center (EOC) was activated at 12:21 a.m. and a Unified Command Post was established at 12:45 a.m. on October 9th. By 1:10 a.m. the fire had reached the Fountaingrove neighborhood and it jumped Highway 101 at 2:01 a.m.

The night was chaotic, and the fire moved rapidly. Many people woke to smoke and flames or to family, friends, or neighbors calling or pounding on their doors to tell them to evacuate. Throughout the night, personnel from the Santa Rosa Fire and Police Departments moved through the City, evacuating neighborhoods, putting out fires, and assisting wherever they could. As the night wore on, they were augmented by work crews from the Water Department and the Department of Transportation and Public Works. Many of these city workers performed their duties not knowing the fate of their own home and families. One firefighter went from fire to



Mandatory and advisory evacuation areas for the fires. Source: City of Santa Rosa



Coming Together in Crisis – The Santa Rosa Story

fire for nearly eight hours not knowing if his family had survived their drive to escape the fire. Scores of City of Santa Rosa workers lost their home that night.

Shelters were opened throughout the City, the County, and in neighboring counties. City buses helped evacuate ambulatory and non-ambulatory patients from the Kaiser Permanente Medical Center and numerous senior care facilities.

Fire ravaged the Fountaingrove neighborhood, Journey’s End Mobile Home Park, and Coffey Park. Structures in other areas of the city caught fire from embers blown up to a half-mile on the strong winds. City staff coordinated activities and support from the EOC, departmental operations centers, and the UCP.

Finally, at about 5 a.m. the winds died down and “the flames went vertical”. About the same time the first large numbers of resources requested through mutual aid began to arrive.

Over the coming days and weeks, the people of Santa Rosa struggled to overcome, first, the fire, and secondly the shock of losing lives and homes. Parts of the Fountaingrove neighborhood experienced drinking water contamination.

The recovery process began soon thereafter and continues to this day.

B. Overall Impacts

In the span of a few hours, life profoundly changed for thousands of people in Santa Rosa. The fires continued to rage for several weeks and were finally declared contained on October 30 (Nuns Fire) and October 31 (Tubbs Fire).

Major impacts experienced by the City of Santa Rosa, Sonoma County, and nearby counties, all of whom fell victim to the 2017 October Fire Siege, include:

- **Fatalities.** A total of 44 people lost their lives to the fires: nine in Santa Rosa, fifteen in other parts of Sonoma County, seven in Napa County, nine in Mendocino County, and four in Yuba County.
- **Displacement.** An estimated 100,000 people countywide evacuated from their homes.
 - 43 emergency shelters opened serving up to 4,162 people at the peak of operations in Sonoma County.
 - 3 emergency shelters opened in Santa Rosa – Finley Community Center, Cook Middle School, and Elsie Allen High School.
- **Destruction.** Thousands of buildings were destroyed, mostly residential homes but also a Hilton hotel and K-Mart store.
 - 3,043 residential units were destroyed in Santa Rosa, constituting five percent of the city’s residential building stock (1,527 in Fountaingrove; 1,432 in Coffey Park; and 2 in Oakmont Village).
 - The infrastructure in Journey’s End Mobile Home Park was completely destroyed. No recovery has started, but owners have mentioned redevelopment plans for low-income housing and mixed-use neighborhood.

Coming Together in Crisis – The Santa Rosa Story

- 2,236 homes were destroyed in other parts of Sonoma County.
 - 36 commercial buildings were destroyed in the city, and 95 commercial buildings destroyed in other parts of Sonoma County.
 - Losses were estimated at \$13 billion, of which \$11 billion was insured.¹
- **Santa Rosa City Government.** Many City employees were affected by the fire in their professional capacity, and 62 City employees lost their homes. Financial effects to the City, as a whole, include:
 - The Santa Rosa Fire Department experienced one firefighter injured, one fire engine damaged, and one active and one decommissioned fire station destroyed.
 - The City spent approximately \$9 million in reserves to cover initial response and recovery costs.
 - The financial reserve level is below city policy requirements as a result of initial response and recovery expenditures.
 - A ¼ cent City sales tax increase was approved by Santa Rosa voters on the November 6, 2018, ballot to help support the rebuild of City infrastructure damaged or destroyed by the fires.



Coffey Park, October 28, 2017. Photo by William Lokey

C. The Tubbs Fire Factors and Characteristics

The Tubbs Fire has been compared with the 1964 Hanly Fire and the Great Fire of 1870, both of which have similar characteristics. The major difference for the Tubbs Fire is that Santa Rosa is now much more densely populated. The table below shows the various characteristics of the three fires.

Table 1: Comparison of characteristics among the Tubbs, Hanly, and Great Fires.

¹ Aon Benfield – Artemis.bm downloaded Sep 5, 2018



Coming Together in Crisis – The Santa Rosa Story

	Tubbs Fire	Hanly Fire	Great Fire
City Population	175,000 ²	31,000 ³	900 ⁴
Date ignited	October 8, 2017 Sunday	September 19, 1964 Saturday	October 15, 1870 Saturday
Exacerbated by	High winds	High winds	High winds
Acreage burned	36,800	53,000	Unknown
Fatalities	Nine	None	None
Neighborhood(s) affected	Fountaingrove, Journey’s End, Coffey Park, Oakmont	Fountaingrove	Fountaingrove

1. Wind Conditions

On Friday, October 6, the National Weather Service (NWS) had issued a Red Flag Warning for Sonoma County for the period from Sunday morning (October 8) until Tuesday morning (October 10). A Red Flag Warning essentially means that conditions present a very high risk for wildfire ignition and spreading due to a combination of factors, one of which is windy conditions.

“Strong winds played an essential role in both the initiation and maintenance of the Wine Country wildfires, with gusts reaching 60-95 knots [69-109 mph] near and downstream of the crests of the regional terrain. An important characteristic of the winds during this event were their limited duration, with a rapid increase during the evening of Sunday, October 8 and a rapid decline during the morning of October 9th.”⁵

Over and over, fire and police personnel who were interviewed talked about how windy it was, how fast the fire moved, and how quickly it jumped firelines. The Tubbs Fire **did** move extremely quickly, spreading at an average speed of approximately 4.5 miles per hour, or one mile every 13.3 minutes.

2. Other Concurrent Fires Burning

Both the police and fire dispatch centers were very busy throughout the night of October 8-9. REDCOM is the fire dispatch center for Santa Rosa and most of Sonoma County; it experienced

² U.S. Census Bureau. *City of Santa Population as of 2017*. (Website: <https://www.census.gov/quickfacts/fact/table/santarosacitycalifornia,US/PST045217>).

³ Bay Area Census. *City of Santa Rosa Population in 1960*. (website: <http://www.bayareacensus.ca.gov/cities/SantaRosa50.htm>).

⁴ Sonoma County Historical Society. *Sonoma County Timeline*. (website: <http://www.sonomacountyhistory.org/sonoma-county-timeline/>).

⁵ Clifford F. Mass and David Ovens “The Northern California Wildfires of October 8-9, 2017: The Role of a Major Downslope Wind Event,” Department of Atmospheric Sciences, University of Washington.



Coming Together in Crisis – The Santa Rosa Story

approximately 900 calls for service per hour during the Tubbs Fire’s peak periods of devastation. The normal volume of calls for service for REDCOM is 900 per day.

The Tubbs Fire was only one of several fires affecting nearby jurisdictions that evening, and SRFD had sent personnel to support firefighting efforts as part of a well-established mutual aid system in the county. Not only was SRFD supporting mutual aid, it was also contending with several fires within the city. On October 8-9, the SRFD was stretched so thin that it was forced to dispatch less than the optimal number of engines and personnel to fight fires. The chart below compares SRFD resources that are dispatched under normal conditions to fight a particular type of fire (center column), and those that were dispatched October 8-9 (right hand column) to fight the same type of fire.

Table 2: Comparison of Santa Rosa Fire Department (SRFD) resources dispatched during normal operations with those dispatched during the October 9-10 event.

Type of Fire	Normal Response	October 8-9 Response
10-acre grass fire	<ul style="list-style-type: none"> • 6 engines • 1 water tender • 2 Chief Officers • 22 firefighters 	<ul style="list-style-type: none"> • 5 firefighters with backpack sprayers and hand tools
2-unit apartment fire	<ul style="list-style-type: none"> • 6 engines • 2 water tenders • 2 Chief Officers 	Initial response: <ul style="list-style-type: none"> • 1 engine • Captain
Commercial structure fire	<ul style="list-style-type: none"> • 6 engines • 2 water tenders • 2 chief officers 	<ul style="list-style-type: none"> • 1 engine • 1 chief officer

D. City Strengths in the Wake of Disaster

The greatest strength identified during the research for this report was that people, including City employees, were **willing to do anything to help** residents even in the face of danger. They went door-to-door to warn of the approaching fire and the need to evacuate, supported fire suppression efforts, and volunteered in the shelters. The actions of community members and City staff saved countless lives and improved the quality of response and recovery efforts.

Another key to success was the **attitude** of City employees. Police officers routinely went into houses to alert residents as bushes and trees burned in their front yards. Police officers and firefighters met on street corners to decide on the next area to evacuate, on their own initiative. Firefighters with minimal resources stood their ground to save critical structures, many of them still inhabited. City staff responded rapidly to open the City’s EOC and emergency evacuation shelters, sometimes doing jobs for which they were not formally trained or trained at all. A common refrain during interviews was, “We did what we could with what we had,” and generally, what the staff did was to creatively and quickly solve problems and execute plans to reduce pain, suffering, and the loss of life.



Coming Together in Crisis – The Santa Rosa Story

A third strength was **leadership**. The City’s leaders were trained and remained calm. The City Manager, Emergency Preparedness Coordinator, and Department directors and deputies quickly responded to the EOC and initiated emergency actions, including issuing evacuation orders and alerts. Leaders listened to recommendations made by staff and quickly executed required actions. Leaders also trusted their staff to operate in a way which promoted efficiency in solving problems.

E. Areas for Improvement

As with every disaster, there are areas where improvements are indicated. Below are the most critical findings, with a complete list starting on page 41.

Overall, information sharing and situational awareness (developing an overall understanding of the extent of the fires and the immediate needs of the population) was insufficient. The City should review the major hazards for the City and develop triggers to activate operations centers. For each hazard, critical information requirements must be identified, as well as a list of all City personnel trained in attaining and sharing that information. Regular contact must be initiated and maintained with key disaster response nodes (County of Sonoma EOC, surrounding city and county EOCs, CAL FIRE Unified Command Post, etc.)⁶. Additionally, the City EOC should produce regular situation reports.

The City should continue to improve and enhance evacuation plans that assigns the SRPD as the lead with identified roles and responsibilities for all partner agencies and train and exercise to the evacuation plan. Include a communications component for sharing timely information with the public and partner agencies.

The City’s organization, staffing, and training for disasters are lacking in some areas. Full-time and emergency staffing should be reviewed against ordinances, policies, and plans to ensure they meet the needs of the community. The City should develop an Executive Policy Group to provide strategic direction during an emergency. The Executive Policy Group should be comprised of, at a minimum, the Mayor, the Vice Mayor, the City Manager, the City Attorney, Fire Chief (or designee) and Police Chief (or designee). Other department directors and specialists should be included as needed. Staff training and exercises should be increased and

⁶ Under the Standardized Emergency Management System (SEMS), local government EOCs coordinate their requirements through Operational Area EOCs. However, 19 CCR § 2407(c) states “Communications and coordination shall be established between a local government EOC, when activated, and any state or local emergency response agency having jurisdiction at an incident occurring within that local government's boundaries.” And 19 CCR § 2407(d) states “Local government shall use multi-agency or inter-agency coordination to facilitate decisions for overall local government level emergency response activities.” These citations indicate the expectation that communication and coordination are occurring. Neither SEMS nor regulations specifically prohibit local EOCs making direct contact and sharing information either before, during, or after disasters.

Coming Together in Crisis – The Santa Rosa Story

tracked so that all City staff is proficient in their assigned emergency roles and capable of assuming other roles as necessary.

Recovery is moving forward but Santa Rosa could benefit from formal pre- and post-disaster recovery plans to help coordinate the long-term recovery effort. Additionally, most of the recovery effort is being carried out by current City staff. The challenge with this methodology is it oftentimes doubles the workload and contributes to potential employee burnout.

Finally, some City Councilmembers did not feel they had a clear role and situational awareness during the initial hours of the event. The City should strive for transparency with all their elected and appointed leaders. The roles and responsibilities of City Council Members during disasters should be reviewed, refined, and practiced.



Coffey Park October 28, 2017. Photo by William Lokey

F. Most Critical Recommendations in Priority Order

The following recommendations are the high-priority actions that the City must implement. These were prioritized based on a combination of statutory requirements, well-established national best practices, input from subject matter experts, and opinions expressed by City employees. A complete list of recommendations is included in this report's Key Findings and Recommendations section.

1. Establish a formal emergency preparedness training policy, including a list of required training courses, required staff participants, annual refresher training, and a training calendar. (Recommendation 16.A)
2. Identify SRFD administrative staff (i.e. Administrative Chief, Fire Marshal, or a light-duty line officer) to have the primary responsibility to report to the EOC. (Recommendation 2.A)
3. Due to the increased threat of losses due to the large number of people living in the woodland-urban interface, increase full-time staffing to support the City's Emergency Preparedness Coordinator. (Recommendation 10.A)
4. Review the main hazards for the City and develop triggers that require the EOC to be taken from a "cold" status to a "warm" status (EOC set up and ready to occupy). (Recommendation 12.A)

5. The City should review the entire preparedness, response, recovery and mitigation cycle and determine the need to create a Joint Powers Authority (JPA) with the County of Sonoma and other appropriate jurisdictions ensuring overlapping roles, responsibilities, and requirements are clearly delineated. (Recommendation 9.A)

G. City Actions Taken Since the Fires

The City government has already begun to identify problems and implement solutions. Most critically, City of Santa Rosa Emergency Management staff now have the access, training, and ability to send Integrated Public Alert and Warning System (IPAWS) alerts. IPAWS provides public safety officials an effective way to alert and warn the public about serious emergencies using the Emergency Alert System (EAS), Wireless Emergency Alerts (WEA), the National Oceanic and Atmospheric Administration (NOAA) Weather Radio, and other public alerting systems—all from a single interface. To see more information about IPAWS, visit <https://www.fema.gov/integrated-public-alert-warning-system>.



City of Santa Rosa can now issue IPAWS alerts, which includes Wireless Emergency Alerts (WEA).

1. Notification and Warning

The City Manager’s Office, Office of Community Engagement, SRPD, and SRFD are working together to improve public outreach, including public education and comment on alerting systems. The City and County have made great strides in improving the alerting systems available for public notifications, alerts, warnings, and advisories. The alerting systems now available to the City include:

- **IPAWS** (discussed above)
- **SoCo Alert** – An **opt-in** alerting system used for all emergency notifications and advisements. Sign-up online at SoCoAlert.com or by phone at 866-939-0911. Download the free app from CodeRED.
- **Nixle** (www.nixle.com) – An **opt-in** alerting system used for all emergency and non-emergency notifications and advisements. Download the free app or text your zip code to 888777 to opt-in.
- **Alerting system information cards** – Cards containing details about different alerting systems have been produced and distributed. Alerting information has been included on Fire Department website and social media accounts.

In the event of evacuation warnings or orders, all three systems—EAS, WEA, and SoCoAlert—will be used. The public and City personnel are being highly encouraged to sign up for both of the opt-in systems – SoCo Alert and Nixle.

The City continues to work with their partners in Sonoma County to improve and evolve all alert and warning systems to build a robust, integrated, and streamlined system that is identical in use and application throughout the region.

Coming Together in Crisis – The Santa Rosa Story

The use of outdoor warning sirens is being investigated. The feasibility, usefulness, and cost of siren systems are being closely examined by several entities within the city. The City is holding a series of public meetings to receive community input on the issue.

SRFD has purchased actual red flags that will be flown above all City government facilities when a Red Flag Warning is in effect. The department is developing operational protocols and a public education campaign to assist project implementation.

2. Water Infrastructure

The Santa Rosa Water Department conducted an after action review of its Department Operations Center (DOC) activities and decisions during the fires. Based on the findings, the department changed notification procedures and the layout of the DOC. Training was conducted on the new procedures. Water Department representatives also meet biweekly with the SRFD to discuss forecasted impacts to the water delivery system. During Red Flag Warnings, the Water Department raises reservoir levels to maximum operating capacity while ensuring water quality remains high. The Department commissioned a study by an engineering firm on the issue of water pressure during the Tubbs Fire response. It is considering the study's recommendations and is now implementing some of them.

3. Transportation and Public Works Department

The Santa Rosa Transportation and Public Works Department conducted an after action review of its Department Operations Center (DOC) activities and decisions during the fires. Based on the findings, the department changed notification procedures and the layout of the DOC. Training was conducted on the new procedures. A recommendation was made to change the notification and response language on the back of City ID cards for consistency.

4. Fire Department Preparedness

SRFD has developed internal procedures to ensure the entire department is at a maximum state of readiness during Red Flag Warnings. It has committed to better communication with the public before, during, and after the fire season, including holding community meetings and providing public information via multiple communications channels. This will include weather information as well as “do’s and don’ts” during dangerous weather conditions. The community will be asked to check www.srcity.org/Emergency; @santarosafire (Twitter); City of Santa Rosa Fire Department (Facebook); and santarosafire (Instagram). Breaking information on new events is posted on Fire Department social media outlets listed above.



SRFD Facebook page shows alerts and warnings as well as general information.



Coming Together in Crisis – The Santa Rosa Story

SRFD has increased its equipment and staffing plans based on the 2018 Sonoma County Operations Area Upstaffing Plan.⁷ For all Red Flag Warnings this fire season, two additional local government strike teams or task forces have been staffed within the county. SRFD has issued a policy memorandum stating that providing additional SRFD resources will be considered at a much more liberal pace this season and in the future. Upstaffing may be based on predicted or actual weather conditions or on incidents in the surrounding jurisdictions/ regions, rather than just for fires already burning. Careful consideration is given to department commitments for out-of-county assignments, ensuring the community is protected with appropriate resources.

The Fire Department Fleet Manager works closely with the Santa Rosa Transportation and Public Works Department to ensure that apparatus out of service for maintenance can be returned to service as quickly as possible during the fire season. During Red Flag Warnings, non-safety maintenance is deferred to allow all frontline and reserve apparatus to be available for immediate use.

SRFD participates in a weekly conference call with all other fire departments in Sonoma County to discuss the common operating picture for the region. Enhanced forecasts, staffing, resources, and events are discussed at a high level to ensure all partner agencies are better coordinated with shared information. SRFD also now works closely with the National Weather Service, PG&E, and CAL FIRE Predictive Services to produce more accurate microclimate-based forecasting for the area.

SRFD has initiated the use of an assigned Liaison Officer during moderate- to high level emergency events. This position will serve as a direct link among City EOC, elected officials, and non-governmental organizations until a sufficient emergency command structure and communications network are established.

Two personnel are hired back two days a week during weed abatement season. This has resulted in more inspections conducted, more complaints handled, and faster completion earlier in the fire season that will reduce the fire danger from weeds on private properties.

To date, SRFD has received a grant from the FEMA Hazard Mitigation Grant Program for the development of a Community Wildfire Protection Plan. SRFD will continue to apply for state and federal grants focused on vegetation management, “home hardening” education, and chipper assistance.

⁷ Sonoma County. Sonoma County Op Area Upstaffing Plan Summer 2018. (<http://www.sonomachiefs.org/home/sonomafirechiefs/Fire%20and%20Rescue%20Op%20Area/XSN%20Op%20Area%20Upstaffing%20Plan%20-%20Final%20v3.pdf>).

5. Economic Resiliency

To facilitate the recovery and long-term rebuilding effort, the City established a separate office to expedite the permitting and licensing process for Santa Rosa residents and businesses working to rebuild after the fire. As of February 2019, 1,362 building permits have been issued.

6. Other Communities.

At the time in October 2017, the Tubbs Fire in Santa Rosa was the worst urban fire in California history in terms of lives lost and lives disrupted. In the summer of 2018, the Mendocino Complex Fire was the largest recorded fire complex in California history; in November 2018, the Camp Fire in Butte County became the worst in California history in terms of lives lost, and structures destroyed, and residents displaced. Although they are still dealing with their own challenges here, the leadership and employees of the City of Santa Rosa have reached out to help recently devastated communities through mutual aid support and by providing counsel and lessons learned to the leaders of those communities.



Santa Rosa City Hall, Photo by Charlie Fisher

INTRODUCTION

In the wake of the October 2017 Fire Siege that left parts of Santa Rosa in complete devastation and its community members in absolute disbelief, the City government was searching for answers. More than anyone else, its leaders were asking hard questions: they wanted to know if the City did all that it could in the moments leading up to and during the fire, and they wanted to know how the City could significantly improve its preparations and responses for the future. They initially commissioned an after action report focusing on the actions of the Emergency Operations Center team. This report was subsequently commissioned to provide a larger review of activities in the field in addition to the EOC in those initial days, as well as to provide a longer perspective more than a year after the event.

A. Scope

This After Action Report (AAR) provides a detailed account of the City government's immediate response to the fire from the perspective of its own employees, discusses standard preparedness measures the City had been undertaking before the fire to improve its capabilities in all phases of emergency management (mitigation, protection, preparedness, response, and recovery), and evaluates the City's overall response to the fires, noting strengths and areas for improvement.

This report covers only the fires that directly affected Santa Rosa, which are the Tubbs and Nuns fires, and only the direct impacts on this community. It discusses City actions from the day the Tubbs Fire ignited and for the several weeks following the initial response to the fire. Although this report touches on some recovery actions and provides recommendations on improving the City's recovery process, it does not provide detailed information on what the City has been doing to recover from the 2017 Fire Siege.

B. Methodology

1. Data Collection

To develop this report, Witt O'Brien's collected feedback from City departments, responders, and stakeholders using a variety of methods, including archival research, informal discussions with City employees and residents, and formal interviews of key City officials and response partners. Witt O'Brien's also reviewed City policies, plans, and procedures, as well as Incident Action Plans and other response documents developed during the event. Finally, Witt O'Brien's reviewed reports and documents developed by various agencies after the fires, including:

- October Fire Emergency Response (Sonoma County Civil Grand Jury, June 2018).
- October 2017 Complex Fires Emergency Operations Center After Action Report and Improvement Plan (County of Sonoma, June 2018).
- Assessment Report: Emergency Management Program (County of Sonoma Fire & Emergency Services Department, June 2018).
- Assessment Report: Community Alert and Warning (County of Sonoma Fire & Emergency Services Department, June 2018).
- Santa Rosa Water DOC After Action Report (City of Santa Rosa Water Department, October 2017) and the revised report from November 2018.



Coming Together in Crisis – The Santa Rosa Story

- Evaluation of the Water System’s Response in Fountaingrove to the October 2017 Fire (Black & Veatch, August 2018).
- City of Santa Rosa Emergency Operations Center’s Response to the 2017 Firestorm, A Chronicle of Tireless Determination (Kelle Kroll Group, March 2019).

In addition to City of Santa Rosa employees, two employees of Sonoma County were formally interviewed for clarification on some systems the County owned but was used by the City. The team did not interview any other county, state, federal, or voluntary agency personnel. It should be recognized that other jurisdictions and response partners may develop evaluations and after action reports based on their specific roles and experiences. The City of Santa Rosa should continue to review the findings and recommendations from the reports prepared by other agencies as they become available. We especially want to acknowledge the substantial actions taken by Sonoma County since the incident.

The report team’s goal was to allow full, open, honest, and frank discussions from all participants in a safe and comfortable environment for them to tell their stories that often were very heavy with emotion. For this reason, the team did not conduct any interviews under oath, nor were recording devices used for any discussions regarding the event. In some cases, this was the first time individual firefighters shared their stories of how they fought the fires while not knowing the fate of their own families and homes.

2. Data Analysis

Because formal interviews were conducted at least ten months after the start of the 2017 Fire Siege, people who were interviewed often lacked specific detail in their recollection of events. When practical, the timeline of events was developed by analyzing several accounts of the same activity or action and correlating them to verified times of an activity or action that would naturally occur with that other activity or action.

After all information was collected, Witt O’Brien’s analyzed the City’s actual response to the 2017 Fire Siege against its standard policies, plans and procedures; federal and state policies and guidance for emergency response and recovery; and well-accepted best practices in emergency management and those specific to fire incident response.

Witt O’Brien’s identified relevant observations within the data, and then organized the data into the following themes:

- Situational awareness and information sharing
- Organization, staffing, and training
- Transition to recovery and long-term recovery
- Fire safety

For each theme, a brief discussion is included, as well as key findings. Each finding includes an analysis of key observations and recommendations for future improvement. Recommendations may be based on the City’s response plans, on well-accepted national best practices, or on input from interviewees.

3. Report Content

Primary sources for the accounts and descriptions of the event were the interviewees themselves. Quotes throughout the report were also collected, verbatim, from interviewees. Unless information otherwise required it, individual names are generally not included in this report in order to preserve the protected environment that the interviewees were assured during their meetings with the Witt O'Brien's team.

The findings and recommendations do not mention individuals or specific positions. Rather, this report focuses on the improvement of processes and systems, not on personnel. It should be noted that some observations and feedback, lacking context or supporting details, may not be represented in this document.

THE STORY: SANTA ROSA BURNING

During the evening of October 8, 2017, very fast moving and destructive fires struck the North Bay region, including the City of Santa Rosa. One of those fires, the Tubbs Fire, raced towards the community in just a few short hours and ravaged Santa Rosa neighborhoods at a speed that no one could fathom at the time. This is the story of how the first responders and other workers for the City of Santa Rosa fought the fire, evacuated and sheltered thousands of residents, and worked tirelessly in the subsequent weeks to help restore community spirit.⁸

Not Like Any Other Night

The winds had been howling for hours on the evening of Sunday, October 8, 2017. The City of Santa Rosa Fire Department (SRPD) was busy, to say the least. Within the city limits, SRFD firefighters responded to 20 vegetation fires and six structure fires between 6:00 p.m. and midnight. In addition, some SRFD firefighters were sent to neighboring jurisdictions to help them combat several fires of their own. At the time, the firefighters thought that this was not all that unusual, and in fact, they were very often sent to help other departments in the region as part of regional and statewide firefighting mutual aid systems. Because of the windier conditions, they even knew there likely would be more fires to fight that night, fires that might threaten populated areas but would not actually reach communities. Unbeknownst to them, this night would not be like any other busy night and this fire would not be like any other fire they had experienced.

Nearing 8:00 p.m., SRFD Fire Chief Officer 2 was returning home from a fishing trip. While driving south on Highway 20, he realized that he had never seen it so windy.⁹ At the time, he didn't notice any smoke or see any flames. Soon after arriving home, he received a number of phone calls updating him on fires burning in Santa Rosa. Even though he was told that the fires were under control, he felt compelled to go into town to see for himself.

As Fire Chief Officer 2 arrived, he noticed the wind gusting harder and sustaining its presence. SRPD calls for service started ramping up, too. There were several calls for possible smoke and fires, including one from a homeowner in Fountaingrove neighborhood who reported smelling smoke but not yet seeing a fire.

At approximately 10:00 p.m., Fire Chief Officer 4 was awakened at home by Fire Chief Officer 6 and asked to cover the City and provide command supervision as resources were depleted. Fire Chief Officer 4's first dispatch was to a fire at Paradise Ridge Winery on Thomas Lake Harris Drive. It was not known at the time, but this was the first taste of the Tubbs Fire, which ignited at approximately 9:43 p.m. at Highway 128 and Bennett Lane in Calistoga. The winery eventually succumbed to the fire; firefighters did not have enough resources immediately available because they were in other places actively fighting other fires.

⁸ This narrative has been compressed to highlight major actions by the City and to provide some first-hand accounts of immediate life-saving actions by the brave men and women who worked in the night and early morning hours of October 8-9. For a detailed timeline of events, see Appendix B.

⁹ Names of City employees have been replaced with descriptors. A list of descriptors and the types of position they represent can be found in Appendix A.



Coming Together in Crisis – The Santa Rosa Story

In fact, this was the recurring theme during the night of October 8 – lack of sufficient resources. But Santa Rosa firefighters quickly adapted and embodied the mantra, *do as much as we can with what we have*. Fire Chief Officer 3 reported to Fire Station (FS) #1 from home, loaded his command SUV, and was dispatched to a house and grass fire southeast of downtown Santa Rosa. Initially, only one engine responded, but then firefighters and equipment trickled in. With the multiple fires, resources were scarce. “We had to ask people to do stuff we normally wouldn’t ask them to do,” he stated. Although they lost two homes, they were able to eventually get ahead of that fire and put it out.

At 10:41 p.m., SRFD Dispatch issued an alarm for a reported vegetation fire on West 6th Street in downtown Santa Rosa. By 10:56 p.m., the fire spread to an adjacent apartment building, which became fully involved. Four fire engines, one fire truck, and many firefighters eventually responded to fight this fire. SRFD requested assistance from the Santa Rosa Police Department (SRPD) to evacuate the adjacent neighborhood; because the winds were strong, firefighters were concerned that the fire could easily make it to that neighborhood because homes were very close to the fire. This 6th Street fire was eventually put out and did not spread; SRPD also safely and successfully evacuated residents from their homes while the blaze was actively raging.

While firefighters were battling the 6th Street fire, SRFD Fire Marshal 1 (who was the Public Information Officer [PIO] for SRFD) was at home providing social media updates about the series of fires in Santa Rosa. He was also the PIO for a regional Type 3 Incident Management Team (IMT), and at about that time, his team was called to provide support to the command post fighting the Tubbs Fire.

After completing his duties at the 6th Street fire, Fire Marshal 1 continued to his initial task of responding to the command post with his fellow regional IMT members. Before departing, he exchanged words with Police Lieutenant 1 who requested that Fire Marshal 1 keep him aware of what was going on. Because SRFD and SRPD were both very busy with incidents within the city itself, no one had any situational awareness of all the other fires raging in nearby jurisdictions throughout Sonoma County.

Fire Chief Officer 5 was awakened by a phone call and ordered to report for duty. As he drove in, he spotted embers blowing sideways across the road. He had just returned from supporting the hurricane response in the Southeastern United States and thought it was “just like being in a hurricane, except instead of water it was embers blowing sideways.” He arrived at FS #2, which was empty of people and equipment.

After ensuring the 6th Street Fire was under control, Fire Chief Officer 2 drove up Fountaingrove Parkway to a high point. It wasn’t windy, but he could see an orange glow in the distance toward Napa. About this time, Chief Officer 6 called all fire department managers and told them to report to their stations.

The Emergency Preparedness Coordinator (EPC) for the City of Santa Rosa received a call at home from the American Red Cross around 11:51 p.m. who asked him if he knew anything about a fire in the county. This was the EPC’s first indication that there was an emergency situation developing – not like any other night. Within ten minutes, the EPC received another

Coming Together in Crisis – The Santa Rosa Story

phone call, this one from Fire Chief Officer 2, who informed him that there were currently five fires burning within the city limits (that were not related to the Tubbs Fire).

As Fire Marshal 1 drove up Highway 101 and Mark West Springs Road toward Napa, he saw the glow of the fire to the east. Once he realized the extent of the fire, he called the IMT leader, who told him he was seeing the Tubbs fire. Fire Marshal 1 decided to turn back and return to Santa Rosa. By the time he got to Fountaingrove, the fire had already arrived. He called Fire Chief Officer 2 and told him “The Tubbs Fire is here. We have to evacuate Fountaingrove.”

They Did What They Could with What They Had

Once they realized the Tubbs Fire¹⁰ was a real threat to the city, SRFD and SRPD personnel acted fast. Remembering his conversation with Police Lieutenant 1, Fire Marshal 1 called him next and told him the Fountaingrove neighborhood needed to be evacuated. Police Lieutenant 1 and SRPD officers immediately responded to the area and underwent more than two hours of evacuation operations with thick smoke hanging right above their heads. At one point, the smoke was so thick that Police Lieutenant 1 had to drive with his police cruiser door open, shining his flashlight down at the ground and looking at the double yellow lines to help him navigate through the smoke. Many residents had already self-evacuated, but two victims did not make it out. One resident was inside her car in her garage, but the fire had already knocked out power in the neighborhood and she was apparently unable to open her garage door. An elderly resident in Fountaingrove had trouble walking and could not evacuate. He urged his wife to leave him in order to increase her chances of getting out safely. She was able to get through the flames while he stayed in the house, which became completely engulfed by the fire.



“Smoke fills the air in Coffey Park neighborhood in the early morning hours of October 9, 2017. Photo by John Snetsinger

By 1:00 a.m., all on-duty SRFD firefighters and SRPD officers were assisting with the protection of the city, and all other SRFD and SRPD personnel who were fit for duty and in California were responding from their homes to support these efforts. SRFD set up a Unified Command Post in the K-Mart parking lot to coordinate firefighting resources specifically for Santa Rosa (and not for the other fires raging in the area), and the EPC activated the EOC.

Throughout the early morning hours, no one had a real grasp of where the Tubbs Fire would threaten next, or if any other

¹⁰ At the actual time of the event, no one knew the fires they were seeing and/or fighting were part of the Tubbs Fire. Any fires that devastated within city limits in the early morning hours of October 8-9 were either part of or ignited by the Tubbs Fire only or independently ignited by a source within the city.



Coming Together in Crisis – The Santa Rosa Story

nearby fires were threatening the city. There was also no real understanding of what the surrounding area was also contending with – by this time, Napa County had requested 40 strike teams from CAL FIRE to support their fire operations, Sonoma County had requested 25 strike teams, and Rincon Valley had ordered 10 strike teams.

Up to this point, no mutual aid fire resources had responded to support the City’s efforts simply because they were already engaged in active firefighting somewhere else that requested support first. But finally, a five-engine task force from Rincon Valley arrived in Santa Rosa, and they were ordered by Fire Chief Officer 2 to assist in Fountaingrove. Fire Chief Officer 2 then requested five strike teams from CAL FIRE, which had experienced 77 prior requests for strike teams in just that night.

“There were instances where you had to make a stand or people would die. And people—fire and police—stayed to do what they had to do.”

In Santa Rosa, it was difficult for anyone in the field to establish a proactive posture; the fire was simply moving too fast and its blowing embers were igniting more fires too quickly for available resources to handle. As SRFD attempted to assess the fire in a neighborhood, it was already time to actively fight the fire in that area. The winds and the speed of the fire made it a very chaotic situation. “We had a hard time comprehending how big [the fire] was.” At one point, Fire Chief Officer 2 smelled smoke and realized that Mountain Mike’s Pizza on the other side of K-Mart was on fire. He tried to get a fire crew to respond, but no crews were available, so he told a firefighter with an SUV to “Go over there, [and] see what’s going on...”. It was very smoky and windy, and they could see the fire coming down the hill.

At 2:01 a.m., the Tubbs Fire “jumped” Highway 101 – something that no one could fathom before it happened. The winds were gusting up to 70 mph at this point, and sustained winds were giving field personnel no reprieve. These winds carried embers from one side of the highway to the other that ignited several areas, causing ever-growing concerns and challenges for field personnel.

Coming Together in Crisis – The Santa Rosa Story

One police officer commented, “It was complete chaos – nobody had situational awareness or any idea of what was going on. It was the middle of the night, pitch black and electricity was out. We’re paid to help people and I felt helpless.” Nonetheless, field personnel didn’t quit. They did all that they could with what they had, never once thinking of the potential dangers that they could and did face that morning. At one point, Police Lieutenant 1 crossed paths west of Coffey Park with two commercial water truck drivers, who offered their help. With no fire department resources to be found in the area, he asked if the men could execute defensive measures. They hooked up their trucks to nearby fire hydrants and stayed in the area putting water on the fire, saving 12 homes.



Volunteer civilian water tankers help with firefighting efforts during the October 2017 fires. Photo by John Snetsinger

When SFRD personnel arrived at their respective fire stations from home, they formed into teams and got into reserve equipment. When that equipment ran out, they got into any service vehicles they could find. Everyone was trying to get into service in any way they could.

Transportation and Public Works maintenance managers and personnel quickly responded to the City’s maintenance facility. There were three fire engines in the City facility and one in Windsor at the dealer for repair. TPW personnel repaired all the fire equipment in the City facility and went to Windsor to retrieve the fire engine there.

Many fire crews simply went from one fire to another. They would stay in one area, and as they either knocked down a fire or were forced out of an area, they would find the next fire to fight. If there was no water available, they used their hand tools to attack the fire or pull flammable materials, such as fences and outdoor furniture, away from homes. Most crews were in constant action for 24-36 hours, often without food. Some firefighters related that water pressure was an issue throughout the night. At times, water pressure was fine, but at other times it was low or non-existent. A number of crews described hooking up to the hydrant that had no water pressure, then moving on to another area. When they came back later to the original hydrant, it often had pressure again.

“The fire was so totally overwhelming that another 100 engines wouldn’t have made a difference until the wind stopped.”

The Santa Rosa Transportation and Public Works (TPW) and Water departments activated their Department Operation Centers (DOC) and recalled their staffs to support firefighting efforts. Some TPW personnel filled roles usually conducted by police officers – they directed traffic and



Coming Together in Crisis – The Santa Rosa Story

provided perimeter security at evacuation areas, not knowing when they would be relieved. Other TPW personnel from Transit drove City buses to help with evacuations – they successfully transported evacuees from their neighborhoods to the shelters despite the difficulty in navigating the smoke, and many times reaching fire lines and needing to find another route to safety.

The Water Department worked to keep pump stations operating. At one point, staff noticed that the water control system wasn't reporting changes as they were being made. They realized that operations data was frozen in the system and they couldn't rely on that information. It was later discovered that AT&T landlines that carried the data had burned. Water Manager 1 ordered all pumps be turned on to keep reservoirs filled, regardless of what the control system said the water levels were.

Recreation and Parks Department staff also responded to assist with shelter operations. The Finley Community Center was opened as a temporary evacuation shelter and it very quickly reached maximum occupancy. Rec and Parks Staff, with assistance from a Red Cross representative, successfully adapted to provide adequate shelter space for evacuees, doing what they could with what they had despite the great number of residents arriving in such a short period of time.

Fire Chief Officer 1 was dispatched to Guerneville Road and Marlow Road where a commercial building, two houses, and a field were on fire. He was alone at this fire for a while, then one ladder truck and a water tender arrived. A fire this size would normally have been a two-alarm fire that would have required two ladder trucks, six engines, and water tenders assigned to it. He remembered thinking it must be really busy if those were the only resources he got. At one point, he noticed that the wind was blowing so hard that electrical lines were flapping and hitting each other, causing sparks to fall into a field.

In another part of the city, Fire Chief Officer 4 took three engines with him to Solstice Senior Living Facility, out of concern that the fire would move towards it. He found that there were still 120 people inside the facility, and it was too late to evacuate. He asked Fire Captain 1, "Can we save it?"; Fire Captain 1 replied, "What choice do we have?" Fire Chief Officer 4 and his crews stood their ground and fought the fire for almost three hours, until it was not a threat to the senior living facility and its residents. These firefighters saved the lives of 120 people and the structure was left unscathed.

After the Solstice Senior Living Facility was saved, Fire Chief Officer 4 went to the Hilton Hotel, which had six or seven buildings in the complex. When he arrived, the restaurant and main building were fully involved, and two or three other buildings were on fire. There were two fire engines and crews present trying to knock the fire down. He scouted the fire and was deciding how to fight it when two people walked up. One was the hotel manager and the other a security guard. The manager had some paper in his hand. Fire Chief Officer 4 said, "Please tell me that's your bed count." The manager replied, "Yes, and we have 100 percent of our guests accounted for." There was one couple standing to the side; the manager related that they were tourists who didn't have a car. With only two engines and five firefighters and no lives at stake, after discussing the situation with the fire captains, Fire Chief Officer 4 told the manager that the hotel was too far gone, and they didn't have the resources to save it. The manager left and as

Coming Together in Crisis – The Santa Rosa Story

the security guard started to leave, Fire Chief Officer 4 asked if he could drop the tourists off at the shelter on his way home, which he did.

“Mutual aid was absolutely essential to our success.”

“They were a Godsend.”

“We couldn’t have done it without them.”

Because of the fire’s speed along with the overwhelming radio traffic, Fire Chief Officer 2 simplified the command and control aspect of fighting the fire. He established rough geographic areas and assigned available resources to them. He then developed his Leader’s Intent, which outlined the strategy for fighting the fire. Dispatch regularly broadcasted the intent: *“To any apparatus entering the unit – the priorities are life safety, rescuer safety, evacuation, and perimeter control where possible. Execute independent action in accordance with the Leader’s Intent.”*



*Santa Rosa K-Mart destruction as the sun starts to rise on October 9, 2017.
Photo by Les Hause, courtesy of John Snetsinger*

As the early morning hours passed, the EOC issued several evacuation orders through SoCo Alert, Reverse 911, and Nixle, all of which are opt-in notification systems. Police officers also went to the neighborhoods in the evacuation areas and did what they could to make door-to-door notifications. Sometimes the fire had already engulfed parts of a neighborhood, thus preventing officers from reaching every house to make sure all had been evacuated.

While Police Lieutenant 1 commanded evacuation operations in Fountaingrove, Police Lieutenant 2 commanded evacuation operations at Kaiser Permanente Santa Rosa Medical Center, which initially reported that they would shelter in place, and Journey’s End Mobile Home park, parts of which were already engulfed in fire. The fire at the mobile home park caused smoke to enter the hospital, and the Hospital Director then requested all ambulatory patients to self-evacuate. Since the fire was nearing the medical center when Police Lieutenant 2 arrived, he and his officers had to work fast to evacuate the remaining patients, all of whom were non-ambulatory. As one officer noted, “[We] pulled off a miracle. [We] put multiple people into ambulances, patients into employees’ cars to get them out of there.” Three transit buses were also used to move patients to Kaiser’s San Rafael Medical Center.

Coming Together in Crisis – The Santa Rosa Story

After evacuation of the medical center, officers went into Journey’s End to evacuate residents. The fire had already devastated parts of the neighborhood. Officers were able to evacuate some residents, but the smoke soon became so thick they couldn’t see or breathe. Evacuation efforts were called off because officers could not safely enter. Two residents of Journey’s End became victims of the fires. One victim was found within the frame of her bed, which indicates she may have been sleeping at the time. Another resident was trapped in her home when fire blocked its front and back doors. She told her daughter she was trapped. Police officers were aware that she was still in her home, but they did not have the resources, nor could they see or breathe, to go back into the fire and search for her.

Fire Chief Officer 5, who had responded to the medical center, believed that the hospital could be lost if even one ember landed on the roof. Hospital engineering personnel were ready and willing to stand on the roof with fire extinguishers, while Fire Chief Officer 7 looked for resources to fight the fire. He found a single fire engine and crew from a small rural volunteer fire department in the area. He ran up to them and laid out the plan: “Run out a hose, bust through this fence, go over the creek and through the next fence, and put water on the homes along the Kaiser hospital.” The single engine slowed the fire, but it was still moving through Journey’s End. They eventually received help by a water tender, saving the hospital, but by then the fire had already destroyed water and sewer lines under Journey’s End, making the mobile home park uninhabitable.



Coffey Park home after its fire was extinguished. Photo by Les Hause, courtesy of John Snetsinger

In Coffey Park, Fire Chief Officer 1 drove up Hopper Avenue and turned north on Skyview Lane. All he saw were people fleeing – cars were driving out through thick smoke, people were on foot, houses and cars were on fire. The wind was so strong that he saw flames going completely sideways. A house was on fire and the flames streamed sideways catching a car on fire. The flames from the car went sideways across the street, catching another car on fire that, in turn, caught another house on fire. Fire Chief Officer 5 could hear police vehicles with loudspeakers going through the neighborhoods telling people to evacuate. A fire chief from another department who lived in Coffey Park appeared with burn victims that he had been evacuating in his personal vehicle. He told Fire Chief Officer 1 that there was another victim stuck between two houses. He had tried to get in and reach her, but the fire was too intense, and he couldn’t get to her.

Fire was everywhere. Fire Chief Officer 1 developed a defense strategy to try to hold the fire north of Hopper Avenue and east of Coffey Lane. He told arriving fire engines to try to hold those lines, but he immediately received reports that the fire had already jumped Hopper. He then ordered the line to be held at Tuliptree Way and Mocha Lane, but as soon as he put out that directive, he received reports that the fire had already jumped Mocha Lane. The fire continued to move fast. He then set the lines at Barnes Road in the west, San Miguel Avenue in

Coming Together in Crisis – The Santa Rosa Story

the south, and Coffey Lane in the east. Fire Chief Officer 7 arrived, and Fire Chief Officer 1 assigned him the San Miguel Avenue division.

Initially, Fire Chief Officer 1 had seven or eight engines; he told them to use their “deck guns” (large monitors on top of the engines that could provide 1,000 gallon per minute water flow) to combat the flames. He told them to douse everything to try and hold the line. As more engines arrived, he went to talk to them and looked behind the line and saw that there were houses on fire – the fire kept jumping the defense lines by embers being blown by the wind (“embercast”).



Coffey Park devastation. Photo by Les Hause, courtesy of John Snetsinger

The evacuation of Coffey Park, which was commanded by Police Lieutenant 1, took several hours, but the fire engulfed many homes in a matter of minutes. SRPD worked valiantly to go door-to-door to tell residents to evacuate; many officers did this until they could barely see and breathe. Additionally, SFRD continued to fight the fire as best they could. In the end, five residents were unable to escape. One resident, who was non-ambulatory and required a wheelchair, was not able to evacuate from her residential care facility. Another resident also did not have an opportunity to evacuate; she was found in an area farthest away from the front door, indicating she may have been trapped in the home. One resident became separated from her family when she went back into the house to retrieve the family dog. She became trapped in the home with the dog and could not get out. Another resident may have been asleep when the fire took her house. Neighbors pounded on her door to get her attention but could not do so and could not find a way into the house. SRPD was notified in the early morning hours that another resident could not be reached by her husband, who was out of town. They attempted to find her but could not get to her residence because, by that time, a majority of the houses on the street were already engulfed by the fire.

Police Lieutenant 2 and his crew of police officers were dispatched to the Oakmont senior living community for evacuation operations. By this time, there were officers from several other police departments who had responded through mutual aid. Approximately 30 officers went door-to-door to get people out. Police Lieutenant 2 was then contacted by the Oakmont Gardens Residential Care facility for the elderly, many who were non-ambulatory or needed assistance. He and several police officers met up with some firefighters at this facility and literally carried or individually assisted each resident out of the building and into buses. Because of traffic congestion, it took a long time for buses to arrive. After the residents were in buses and on their way, the evacuation team realized that their assistive devices (e.g., walkers, canes, wheelchairs) had been left behind. The team put the equipment onto one bus to follow the residents to the evacuation center.



Coming Together in Crisis – The Santa Rosa Story

There was a sharp drop in wind speeds at approximately 5:10 a.m. Many firefighters recall the moment it happened because they all had the same feeling, a feeling that all these fires would finally be manageable. Although there would be much more work in the coming days, they still felt a sense of relief, that this is the beginning of the end of this response, though the beginning of a long recovery.

“If the winds had lasted another 6 hours we would have lost half the city.”

The Sun Comes Up

The fires continued to burn and continued to threaten different parts of Santa Rosa. But by the time the sun came up, SRFD had a better grasp of the scope of the Tubbs Fire and other fires in surrounding areas. Many firefighters, fatigued and hungry, still kept on fighting the fires. Some could not even recall their specific activities throughout the early morning hours, other than that they were fighting fires.

Fire Chief Officer 8 recalls that he was on duty on Engine 6 and was assisting with an evacuation in Adobe Canyon. He heard on the radio that the fires had reached near where he lived. He called his wife and woke her up just in time, as the flames had already reached the home. She was able to rouse the kids, get the dog and cat, and escape in the car. He contacted a friend who was waiting for them a few miles away at the end of their road. But they never showed up.

Not knowing his family’s situation, he kept fighting the fires in Adobe Canyon for the next eight hours. Only on the next day did he learn that his family had met a sheriff’s deputy who was evacuating others. They were able to find shelter in the Mark West Springs Lodge, which survived the fire. He described himself as tired and beat up. He did not remember trying to contact his wife but found on his phone that he had called her 34 times.

The EOC continued to issue evacuation orders and City leadership realized that this was going to be a long-term activation. After staff gained a better understanding of the impacts of the fire to the city, they transitioned the Finley Community Center from a bare-bones evacuation shelter (no food, cots, or other amenities) to an emergency shelter. Rec and Parks Department staff set up cots while American Red Cross representatives worked to get equipment and other necessary resources. Two other shelters also were opened, one at Elsie Allen High School and one at Cook Middle School.

“I couldn’t be more impressed with the way the team responded to this incident. The team includes the whole city, all departments. I can’t point to a single entity that didn’t do well.”

Firefighters were all still actively working in the field. Sometime Monday morning, Fire Chief Officer 1 was assigned to an area that included Fountaingrove. These personnel were able to use the assistance of commercial water tenders that would find a water source, fill up, and then drive to where the engines were. Near the top of Hadley Hill, Fire Chief Officer 1 found a number of lone engines and formed them into a task force. He had about 14 engines in the area in which he was working, and they spent the balance of the day moving and reacting to fires throughout the neighborhood.

Firefighter 1 suggested that SRFD send a text directing all firefighters who were not currently assigned to report to Fire Station 10. Only two other firefighters showed up, since the rest were still assigned. The three firefighters found a 15-passenger van, and contacted Fire Dispatch, which had 300 pending calls, to let them know that they would start clearing the calls. They cleared all but six calls that required dispatch to send a request for resources.

The Aftermath

Even though all fires within the city were put out and further threats were abated the City of Santa Rosa still had plenty of work to do. Thousands of residents were displaced, many losing their homes, while others could not yet re-enter their neighborhoods because evacuation orders had not been lifted for safety and security reasons.

One week after the incident, while evacuation orders were still in place, reentry planning began. Representatives from many of the city agencies met at the EOC to discuss the issues surrounding getting people back into the evacuated areas that were not damaged by fire and to make recommendations on how to proceed.

Meanwhile, Police Lieutenant 1 organized a group of police officers to go into the off-limits but intact neighborhoods and visit house-to-house, verifying identities, and issuing passes to the



Poster presented to SRFD and hanging in the Fire Administration Building. Photo by Doug Mayne

Coming Together in Crisis – The Santa Rosa Story

residents so they could get through the checkpoints. Residents outside the evacuation areas could go to police headquarters, present identification, and receive a pass to get through the checkpoints.

Based on the recommendations of the reentry planning team, Police Lieutenant 1 managed the execution of the City’s formal reentry plan. Once the mandatory evacuation order was lifted, the goal was to ensure only residents were allowed back in “so they have protected time to assess and grieve.”¹¹ The police department established two check-in locations, one in the Kohl’s parking lot and the other in the parking lot at Round Barn Boulevard and Centrum Place. The check-in locations were set up with cones, similar to a DUI checkpoint. A police officer would confirm that occupants of the vehicle were in fact residents of the neighborhood using valid forms of identification such as a driver’s license or verification through data systems such as the National Crime Information Center. Once residents were issued reentry passes, they received a bucket with safety and cleaning materials, such as gloves, brush, masks, and informational guidelines, and they were sent on their way to one of the neighborhood entry points.

The EOC worked around the clock to manage all the activities and coordinate resources directly related to this incident. Primary and alternate EOC staff were supported by other City employees to create a rotating, 3-shift 24-hour schedule. This continued for ten days until the schedule was reduced to one 12-hour shift per day. Critical EOC personnel executed their EOC roles every day, in addition to their normal job duties to serve the rest of Santa Rosa, throughout the several weeks the EOC was activated.

On Tuesday, October 31, CAL FIRE declared that the Tubbs Fire was 100 percent contained, and the EOC formally demobilized. While the shelters at Elsie Allen High School and Cook Middle School closed within a week of the initial devastation, the Finley Community Center kept its doors open as a shelter until Thursday, November 9. Although at the moment City staff and officials started feeling they were out of the crosshairs of dangerous hazards, they then experienced another emergency from collateral damage by the fires. As rain started to fall on November 9, sinkholes started to appear in the Fountaingrove neighborhood. Water Department crews investigated and found some of the storm drain pipes had been compromised by the extreme heat of the fire. Made from high-density polyethylene (HDPE), pipelines had disintegrated in some



Fountaingrove devastation as observed on October 28, 2017. Photo by William Lokey

¹¹ City of Santa Rosa announcement on Nextdoor, October 20, 2017.



Coming Together in Crisis – The Santa Rosa Story

places and holes had developed in other places. Evidence of erosion due to rainwater runoff was seen in some Fountaingrove neighborhoods. The Water Department DOC was again activated, this time to support storm drain infrastructure assessments, and the department deployed 10 CCTV-equipped teams to assess the storm drains in Fountaingrove. Contaminants also were found in some drinking water, and the Water Department issued a “no drink/no boil water advisory” to 13 homes in Fountaingrove.

On Saturday, November 11, the City EOC was activated to support the Water Department DOC. Storm drain assessments continued; 14 areas were prioritized for team deployments. By Tuesday, November 14, approximately 95 percent of the Fountaingrove storm drain system had been assessed and areas of concern addressed. Teams then assessed the storm drain system in Coffey Park and they discovered another sinkhole there. The Water Department continued assessments and repairs for several more days until everything was deemed safe. On Wednesday, November 22, the City EOC deactivated.

Recovery

As with all major disasters, recovery from the Tubbs Fire will be a years-long process. The City took several immediate steps to pave the way for that process.

- Just 12 days following the fires, the City of Santa Rosa and County of Sonoma established the “Sonoma County Recovers” website, a one-stop hub the City and County use to share recovery information and provide forms and links to organizations and resources assisting in the recovery.
- A debris removal task force was quickly established to help ensure streets and lots were safely cleared and made ready for rebuilding.
- Santa Rosa City Council adopted an urgency ordinance, which expedited review process for hillside development and design review, waived fees for discretionary planning, demolition, and temporary housing permits and allowed residents to live in temporary housing units, such as RVs, manufactured homes and tiny homes, on their properties while rebuilding.
- City Council approved funding a separate permit center exclusively for fire survivors rebuilding to expedite the rebuilding permit process and not cause further delays for routine permit business. The Resilient City Permit Center officially opened in November 2017 and as of April, 2019, nearly 1,500 building permits had been issued.
- City Council adopted 2017-18 goals which included “rebuild/build downtown and fire areas” and “downtown housing” in the Near Term and Tier 1 priorities.
- In spring of 2018, to expedite *new* housing development, the City Council adopted Resilient City Development Measures to streamline the City’s permitting process in areas where it has prioritized housing, which include Roseland and areas near transit including the downtown. (srcity.org/2802/Resilient-City-Development-Measures)
- In March 2018, the City applied for the Metropolitan Transportation Commission (MTC) Priority Development Area (PDA) Planning Grant Program. The application, which requested the full grant amount of \$800,000, was requested for a proposed amendment to the 2007 Downtown Station Area Specific Plan. MTC awarded the City the full amount. The proposed amendment to the Downtown Station Area Specific Plan will analyze the existing development policies and regulations in the downtown area

Coming Together in Crisis – The Santa Rosa Story

- through a comprehensive community engagement process, to focus on adding density and housing to Santa Rosa’s downtown core.
- Santa Rosa recently launched the Downtown Station Area Specific Plan amendment process which will focus on a 650-acre area at the center of the city that includes Courthouse Square, Railroad Square and surrounding residential neighborhoods. (plandowntownsr.com/)

The City could benefit from the development of a formal long-term recovery plan. “[Long Term Community Recovery] is the process of establishing a community-based, post-disaster vision and identifying projects and project funding strategies best suited to achieve that vision, and employing a mechanism to implement those projects... The LTRC program must be developed quickly in order to provide direction and focus to community rebuilding efforts.”¹² Practice has shown that communities that immediately begin a post-disaster recovery planning process recover more quickly than communities that do not.



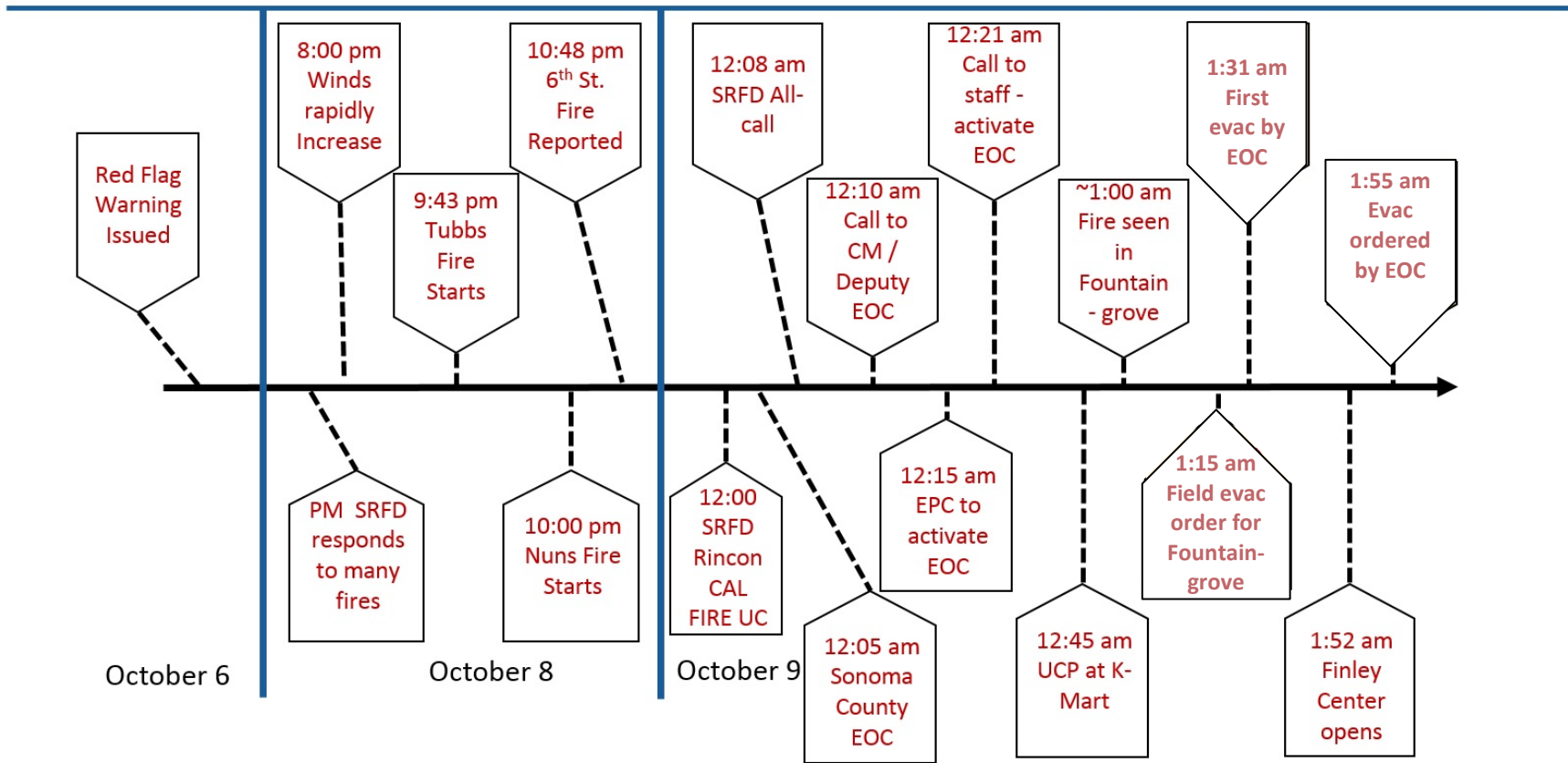
Rebuilding Santa Rosa, one house at a time. Photo by Doug Mayne

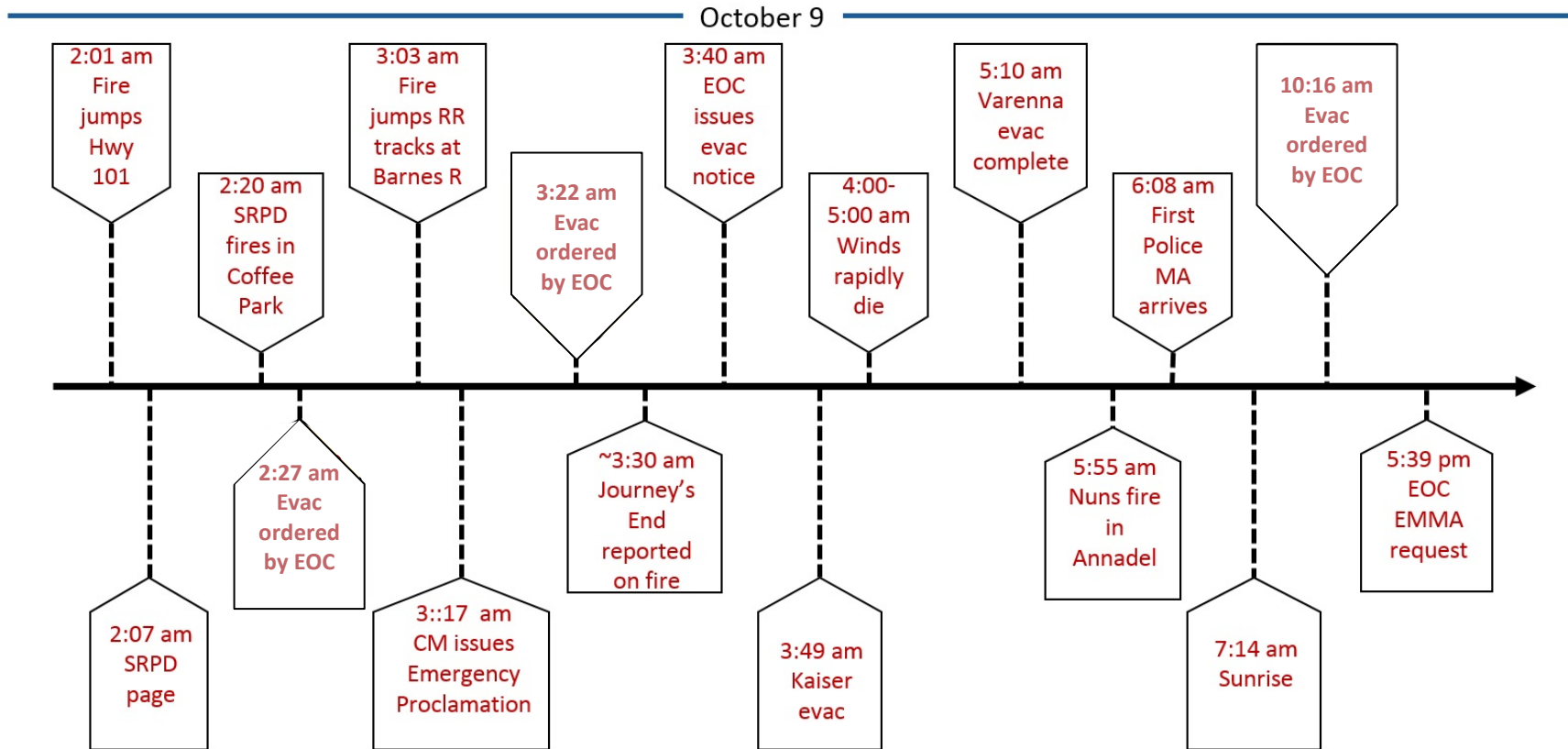
There are a number of ways to manage recovery efforts and the City decided not to create a separate organization focused on rebuilding efforts. Current City employees are performing additional duties to support recovery efforts and many reported being under a great deal of stress from the added responsibilities and workloads.

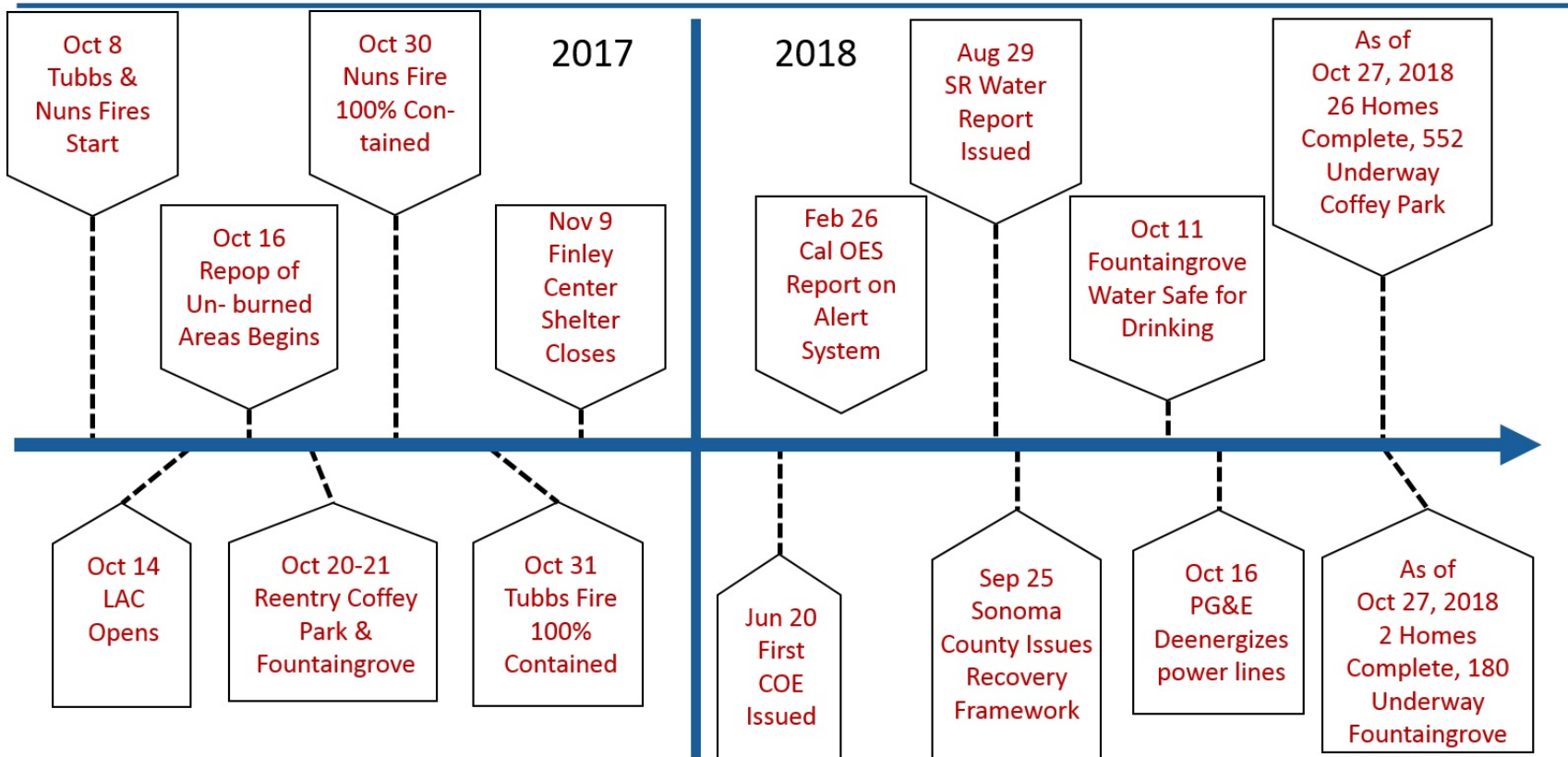
¹² “Long Term Community Recovery Planning Process, A Self-Help Guide”, December 2005, downloaded from FEMA.gov

Visual Timeline

For a complete timeline, see Appendix B









THE PERFECT (FIRE) STORM: FACTORS CONTRIBUTING TO DEVASTATION BY THE TUBBS FIRE

There is one word that has been used repeatedly to describe the 2017 Fire Siege: *unprecedented*. The number of fires burning at one time in the region was unprecedented. The speed of travel of the fire towards the City of Santa Rosa was unprecedented. The damage and cost of the devastation was unprecedented. Overall, the event was unprecedented.

To the City of Santa Rosa, it is unprecedented because the community has not ever experienced such an amount of destruction –not because this type of fire has never occurred before. In fact, the Tubbs Fire, which caused the devastation within city limits, can be likened to previous fires – the Great Fire in 1870 and the Hanly Fire in 1964.

A. The Fires of 1870 and 1964

The Great and Hanly fires burned when Santa Rosa’s population was considerably smaller than now. Not only were there fewer people in the area, but there significantly fewer homes and structures.

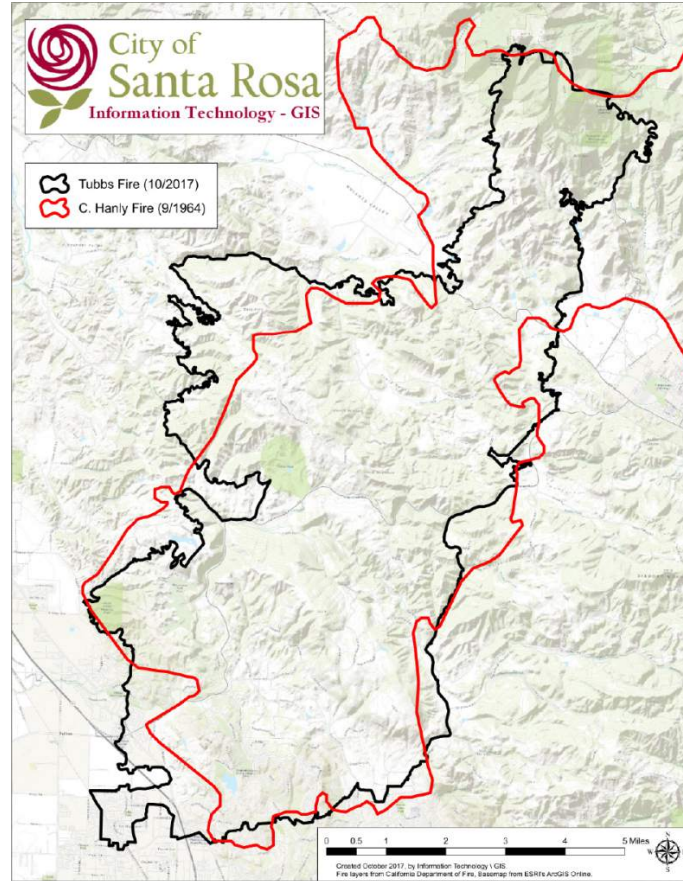
We do not know what ignited the Great Fire in October 1870, but accounts of the fire by residents at the time mentioned how windy the conditions were for several days before the fire finally reached the city.¹³ Additionally, the Great Fire also ignited in the area of Calistoga and eventually burned the area of Santa Rosa now known as the Fountaingrove neighborhood.¹⁴

The Hanly Fire was ignited on September 19, 1964, by a discarded cigarette. Extremely high winds also spread that fire, which was one of many already burning in the region. Although the Hanly Fire burned approximately 53,000 acres, more than the Tubbs Fire at 36,000 acres, it had an identical movement towards the city. The Hanly Fire was stopped before it hit Santa Rosa in the area where the now-lost Journey’s End Mobile Home Park was built.¹⁵

¹³ Unknown author. (1870, September 22). The Great Fire. *Sonoma Democrat*, p.5.

¹⁴ Santa Rosa History. The Forgotten Great Fire of 1870. (website: <http://santarosahistory.com/wordpress/2018/05/the-forgotten-great-fire-of-1870/>).

¹⁵ Marin County. *The Hanly Fire*. (website: <https://www.marinfirehistory.org/1964-hanly-fire-sonoma-county-mutual-aid.html>).



Map comparing area burned by the Hanly Fire of 1964 with the Tubbs Fire of 2017. Source: City of Santa Rosa

These fires show that the Tubbs Fire should not be considered unusual. All three fires ignited in the Calistoga area; occurred in autumn months; burned a similar path; and were exacerbated by the same hot northerly winds. Though it is difficult to predict when the next fire disaster might occur, these factors combined likely can cause another perfect fire storm.

B. Available Fuel

Winter of 2016-2017 brought higher-than-normal precipitation, although welcome after five years of drought, it also encouraged the growth of bushes, weeds, and grass, among other types of vegetation.

“In summary, although the summer of 2017 was warmer than normal over central coastal California, heavy winter precipitation and typical summer rainfall left the surface moisture in a state that was dry, but not exceptional, for early October. With substantial precipitation the preceding winter, the growth of

Coming Together in Crisis – The Santa Rosa Story

grasses was enhanced, making above-normal amounts of fuels available for burning during the late summer and early fall.”¹⁶

It is natural for wildfires to ignite and burn heavy vegetation, and firefighters typically can contain these fires before they become problematic, as noted by SRPD personnel. Additionally, larger-than-normal amount of fuel available to burn is not, by itself, a concerning factor. Although the actual cause of the Tubbs Fire has still not been determined, there is no doubt that the abundance of nearby brush caused its spread towards the city.

C. Sustained High Winds

One of the primary contributing factors to the severity of the wildfires was the strong wind. It was highly variable, with gusts up to about 70 mph at lower elevations and from 70-110 mph at high elevations. The National Weather Service issued a Red Flag Warning, which means that conditions are ideal for wildfire ignition and spreading, for the period of Sunday morning October 8 until Tuesday morning, October 10.

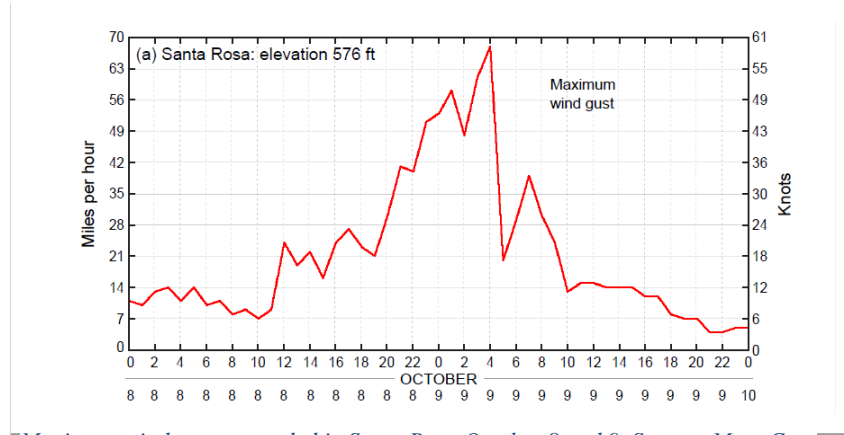


Red Flag Warning issued October 6, 2017. Source: NWS

The Tubbs Fire ignited and rapidly spread to and throughout Santa Rosa when peak sustained winds were experienced from approximately 8:00 p.m., October 8, to approximately 5:00 a.m. October 9.

¹⁶ Mass, C. and Owens, D, p 8.

Coming Together in Crisis – The Santa Rosa Story



Maximum wind gusts recorded in Santa Rosa October 8 and 9. Source: Mass C., and Owen, D., p. 34.

When the Tubbs Fire reached the city limits, the wind gusts were regularly occurring at more than 50 mph. Flames were blowing horizontally, and embers appearing to fire personnel as large as dinner plates were landing several hundred feet from where they originated. These conditions made it very difficult to stop the fires and hold defense lines; even Highway 101, a six-lane freeway, could not serve as a fire break.

“Over central/northern California...strong, dry offshore winds are known as Diablo or North winds and are close cousins to the Santa Ana winds of southern California; all of these winds are most frequent during the fall and early winter when high pressure builds inland over the intermountain West, producing an offshore pressure gradient and dry easterly flow.”¹⁷

Because of these sustained high winds, the Tubbs Fire moved extremely fast. Its average speed was approximately 4.5 mph— one mile every 13.3 minutes, or more than the length of a football field every minute. From its ignition point in Calistoga, the Tubbs Fire reached the city limits within three hours.

D. Other Fires Burning Concurrently

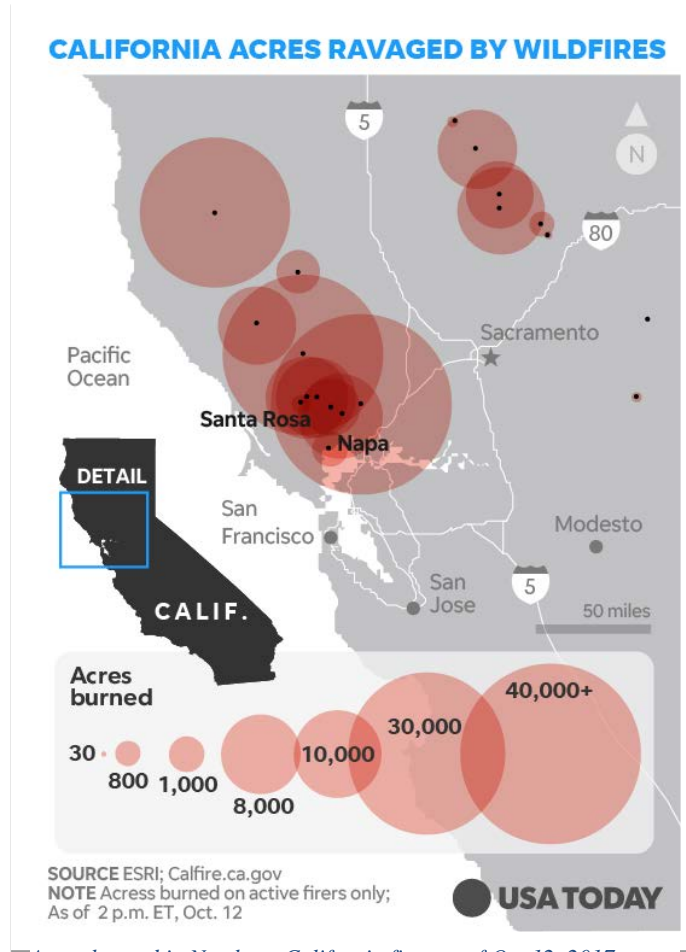
A total of 12 fires broke out across Northern California on October 8. Shortly after the Tubbs Fire ignited, the Nuns Fire ignited in the Sonoma County area north of Glen Ellen while the Atlas Fire began in nearby Napa County. Because of the number of fires in the area, SFRD dispatched equipment and personnel through the mutual aid system early in the evening of October 8 to help neighboring fire districts, a well-established practice for participating fire departments.

CAL FIRE established several command posts in Napa County to battle the Tubbs and Nuns Fires, and it requested 40 strike teams to assist. Meanwhile, Sonoma County requested 25 strike teams and Rincon Valley requested 10 strike teams. With five engines in each strike team, the 375 engines requested greatly outstripped the resources available in surrounding areas. When

¹⁷Mass, C. and Owens, D., p 4.

Coming Together in Crisis – The Santa Rosa Story

SRFD requested strike teams to assist its efforts to protect Santa Rosa around midnight on October 8, none were immediately available.



*Acres burned in Northern California fires as of Oct 12, 2017.
 Source: USA Today.*

Much of the mutual aid requested for Santa Rosa was diverted or delayed due to other fires. While on its way to Santa Rosa, the Marin County Strike Team came across an unreported wildland fire and stopped to fight it, limiting the burn to 1,600 acres. It was not until approximately 36 hours into the Tubbs event that an appreciable amount of fire mutual aid became available for Santa Rosa. On Tuesday morning, October 10, only approximately 30 firefighters were at the morning briefing for mutual aid crews supporting City efforts. By Saturday morning, October 14, more than 1,000 firefighters attended.

CITY EMERGENCY PREPAREDNESS: A BRIEF DISCUSSION

The Tubbs Fire may not have been unavoidable, but City officials, residents, and other community members have wondered how prepared the City was to handle a fast-moving hazard essentially had no notice. Discussions with interviewees often led to a similar thought: the City had been preparing for a different kind of disaster: an earthquake, not a massive urban fire.

It is a well-established principle for disaster planning and preparation that agencies must consider all hazards. Regardless of what type of disaster hits, the City should therefore be capable of managing the response to and recovery from that event.

The City's capabilities have a foundation in the preparedness policies discussed below. This section simply describes the actions the City takes to maintain its capabilities. Findings and recommendations to improve upon the current preparedness policies and activities are included in the following section on Key Findings and Recommendations.

A. Training

It is current policy that all City employees are required to complete two FEMA courses within two days of hiring – ICS 100 (Introduction to the Incident Command System) and ICS 700 (Introduction to the National Incident Management System).

The Emergency Manager stated that several emergency preparedness and Emergency Operations Center training and exercise opportunities are provided throughout the year. The City does not require formal documentation and tracking of the training sessions conducted throughout the year, including which employees attend the training.

B. Exercises

The City EOC staff participates in an annual exercise sponsored by the Bay Area Urban Area Security Initiative (Bay Area UASI). This exercise is typically a functional exercise and is either a half- or full- day in duration in alternate years. All primary and alternate EOC staff are encouraged to participate but are not required to attend; there are no incentives for attending and no consequences for not attending. Departmental Operations Centers do not participate in these exercises. The City itself does not conduct or participate in any full-scale exercises.

The Emergency Preparedness Coordinator conducts periodic EOC setup drills with the EOC Logistics Section. These drills showed their value in the rapidity with which the City EOC was established on October 9, 2017. Various City departments also conduct DOC activation drills.

At the time of the fires, there was no City policy that required tracking of employees who participated in such exercises, making it difficult to ascertain the overall capability of the City staff to carry out their emergency roles and responsibilities. The City is developing a policy that will require tracking of employees who participate in such exercises. It is expected that the policy will be implemented by the beginning of FY 2019/20.



Coming Together in Crisis – The Santa Rosa Story

C. Plans

The City currently has an Emergency Operations Plan (EOP) that provides general guidance to the City and to certain departments on how to manage an emergency or disaster response. The EOP was revised in the beginning of 2017 and approved in June 2017. Santa Rosa City Council members were briefed on the updated EOP, and the Emergency Preparedness Coordinator also provided an EOP orientation to City staff.

At the time of the fires, there was no requirement for individual departments to maintain emergency plans, but departments with a larger role in emergencies, such as SRFD, SRPD, Transportation and Public Works, Water, and Recreation & Parks, did maintain departmental emergency plans. These department plans include policies, processes, and procedures specific to those departments' emergency response, as well as how they support an overall City response and the City EOC. The City has addressed this deficiency by requiring departments to maintain emergency plans.

D. EOC

Primary and alternate personnel have been designated for each EOC staff position. Employees designated to staff the EOC understand their general roles but do not necessarily know their associated key responsibilities, activities, and considerations while in the EOC.

The City uses an automated phone system (1-866 number) to notify EOC personnel of an activation. A message is recorded and goes out to EOC members on the pre-loaded notification list. This system is tested quarterly, and those on the list receive a test phone call with a recorded message.

E. Vegetation Management

At the time of the fires, the City did not have a citywide vegetation management program. Vegetation management was usually done at the request of a homeowner as part of the City's weed abatement ordinance.

SRFD currently conducts a weed abatement program through the Fire Prevention Bureau. In addition to Fire Inspectors performing inspections and enforcement, two additional Operations personnel are hired on an overtime basis during the weed abatement season to inspect properties in the Wildland Urban Interface Fire Area to ensure they meet code requirements related to defensible space, mitigation measures for the home, and avoidance of certain types of vegetation.

The City is currently in the development phase of a local Community Wildfire Protection Plan (CWPP). In December 2017 City staff created an application to develop a CWPP intended to be an annex to the City's Local Hazard Mitigation Plan, specific to the Wildfire section of the currently adopted plan. The application was reviewed by State and Federal officials and funding was awarded in June 2018. In December 2018, the RFP process was opened to solicit proposals for the development of the CWPP. In January four applications were reviewed and one candidate, Geo Elements, LLC was selected based on their prior experience. The City Council approved a Resolution in April 2019 to enter into a Professional Services Agreement



Coming Together in Crisis – The Santa Rosa Story

with Geo Elements, LLC for the development of a Wildfire Annex to the existing Local Hazard Mitigation Plan and creation of a Community Wildfire Protection Plan in compliance with the Healthy Forests Restoration Act.

KEY FINDINGS AND RECOMMENDATIONS

This section discusses the key findings for the City’s capabilities in planning for, responding to, and recovering from the October 2017 Fire Siege.

A. Strengths

The following are the most notable strengths that the City demonstrated in the face of disaster, and it should continue to foster and promote these strengths among its employees.

- **Willingness to help in the face of danger.** The greatest strength identified during the research for this report was that people, including City employees, were willing to do anything to help residents even when facing extreme danger. Employees went door-to-door to warn residents of the approaching fire and the need to evacuate; creatively supported fire suppression efforts with limited resources; and volunteered in the emergency shelters beyond their normal duties. The actions both of City staff and Santa Rosa community members saved countless lives and improved the quality of response and recovery efforts.
- **Unrelenting positive attitude.** Police officers routinely went into houses to alert residents as bushes and trees burned in their front yards. Police officers and firefighters met on street corners to decide on the next area to evacuate or where to relocate resources, often working independently without direction from their supervisors. Firefighters with minimal resources stood their ground to save critical structures, many of them still inhabited by residents needing assistance to move. City staff responded rapidly to open the City’s EOC and emergency evacuation shelters, sometimes doing jobs for which they were not formally trained or trained at all. A common refrain during interviews was, “We did what we could with what we had,” and staff generally was able to solve problems and execute the plans to reduce the loss of life, pain, and suffering.
- **Leadership.** The City’s leaders were trained and remained calm. The City Manager, Emergency Preparedness Coordinator, and Department Directors and Deputies quickly responded to the EOC and initiated emergency actions, including issuing evacuation orders and alerts. Police and Fire leaders at all levels exhibited remarkable dedication and professionalism. Leaders listened to recommendations made by staff and quickly executed required actions. Leaders also trusted their staff to operate in a way which promoted efficiency in solving problems.

B. Areas for Improvement

The following are the most notable areas upon which the City can improve. Each area for improvement includes a brief discussion, findings, and associated recommendations on what the City can do in that area to become more prepared for and resilient during a disaster.

Area for Improvement 1: Situational Awareness and Information Sharing

All accounts relate the busy day SRFD had on October 8. By 9:00 p.m., there were higher-than-normal numbers of grass and structure fires throughout the community that required the dispatch of all SRFD resources. Additionally, there were numerous fire-related actions were



Coming Together in Crisis – The Santa Rosa Story

taking place across both Sonoma and Napa Counties, but information was not being shared among agencies. Some of these information shortfalls included:

- The Santa Rosa Fire Chief held conversations with the Rincon Valley Fire Chief and a CAL FIRE Battalion Chief but did not receive any information about fires in areas adjacent to Santa Rosa, nor did he receive information about strike teams being requested through CAL FIRE:
 - Napa County had requested 40 firefighting strike teams.
 - The County of Sonoma had requested 25 strike teams.
 - The Rincon Valley Fire Department had requested 10 strike teams.
- REDCOM provides dispatch services for SRFD and for all but two fire departments in the county. Information about fires and resource requirements in the county areas were not shared with SRFD leadership.
- The Sonoma County Sheriff's Office was evacuating areas between Santa Rosa and Napa County but did not inform any City officials that there were evacuations occurring in county areas.
- Santa Rosa fire and police resources were dispatched piecemeal as situations developed and were fully committed before the scope of the fire approaching the city was known.

The first indication that the Tubbs Fire was approaching Santa Rosa was at about 1:00 a.m. when the SRFD Fire PIO called the SRFD Fire Chief and told him that the fire was in Fountaingrove and they needed to evacuate the area. By this time, fire resources were fully committed elsewhere, and none were initially available to respond to Fountaingrove.

As the City EOC activated, it was quickly staffed, but no fire personnel were present. Two SRPD Captains responded to the EOC; one assumed the role of Operations Section Chief and the other became the Law Enforcement Branch Director. Other police management personnel responded to the recall and went into the field to direct tactical operations.

EOC personnel attempted to gain an understanding of the scope of response operations both in the City and surrounding areas. There was a complete lack of information flow between the City EOC, UCP, County of Sonoma EOC, and CAL FIRE operations in St. Helena. This resulted in a lack of situational awareness in the EOC until well into Tuesday, October 10. As the response progressed the first week, many entities reported not receiving necessary information in a timely manner from the City EOC. Throughout the event, the City issued alerts through SoCoAlert and Nixle. The Emergency Preparedness Coordinator was the only person trained and authorized to issue the alerts, which added to the already-high demands on his time.

Many issues raised in this report require solutions that are greater than the geographic and political boundaries of the City of Santa Rosa. The City should review the entire preparedness, response, recovery and mitigation cycle and determine the need to create a Joint Power Authority (JPA) with the County of Sonoma and other appropriate jurisdictions.

Findings and Recommendations: Situational Awareness and Information Sharing

1

Finding 1: Dispatch of fire and police resources escalated throughout the evening and night, and all resources were committed before the dispatch centers realized this was a major response. This led to resources being committed piecemeal, and neither fire nor police department leadership had the opportunity to fully develop a command and control structure to manage information and their limited resources.

Activating the EOC earlier in the incident could have helped bring structure to the response. In this instance, the Red Flag Warning issued by the NWS should have triggered a partial activation of the EOC, at the least. This would have ensured a response structure was in place when resources become overwhelmed.

Recommendation 1.A: Develop clear triggers to activate the City EOC and DOCs earlier based on hazard levels and the percentage of critical City resources committed (including fire, police, water department, and transportation and public works resources) to ensure senior leaders are cognizant of increasing emergency levels and remain at the strategic level for direction and management of the emergency.

2

Finding 2: All operational Fire Department leadership were in the field supporting tactical operations, and there was a lack of trained fire operational personnel in the EOC, resulting in critical information not being provided to the EOC.

An EOC liaison from SRFD who has direct communication with firefighters directly involved in response operations can mitigate the issue of situational awareness and create a better picture for the EOC, which can relay this information to City officials and other stakeholders for critical decision-making.

Recommendation 2.A: Identify SRFD administrative staff (i.e. Administrative Chief, Fire Marshal, or a light-duty line officer) to have primary and secondary responsibility to report to the EOC.

Recommendation 2.B: Identify an auxiliary or retired firefighter to coordinate EOC firefighting functions.

Recommendation 2.C: Identify the fire information needed by EOC leadership to make informed decisions and manage resources and establish a system to provide that information.

Findings and Recommendations: Situational Awareness and Information Sharing

3

Finding 3: During the first 36 hours of the fires, City leadership did not gain a complete understanding of the full scope of the emergency.

Recommendation 3.A: Develop an information collection plan for different hazards so departments supporting response operations understand the type of information that is needed, who is to collect it, and to whom they are to send the information.

Recommendation 3.B: Train and require all field crews to submit reports on critical observations made during field operations (roads blocked, trees down, fires, signs out, etc.) to assist with developing situational awareness.

Recommendation 3.C: Ensure field teams and DOCs are providing appropriate information to the EOC to help build situational awareness.

Recommendation 3.D: Research and acquire an emergency management software system. Require every department to build the new EOC management system into everyday operations. Customize the system so that what the departments track on a daily basis (such as work assignments of crews, locations of outages, status of systems and facilities) are tracked through the EOC management system. This will ensure that the system is used on a daily basis and thoroughly understood by the users when needed during emergencies. **Note: The City purchased an emergency management software system called DLAN in 2018.**

Findings and Recommendations: Situational Awareness and Information Sharing

4

Finding 4: There was a critical lack of situational awareness caused by gaps in information flow between the City EOC, County EOC, Unified Command and CAL FIRE.

Disasters do not happen in a silo, and they demand communication and coordination across City departments as well as across jurisdictions. Especially in an event that affected multiple counties, agencies, and communities, there should have been more communication and coordination across jurisdictional lines, so that each entity can provide their own needed resources, know what others’ needed resources are, and communicate what resources, if any, they can provide others. Although one of the requirements of the OA EOC is to coordinate information flow, in a situation such as this, with the OA EOC fully involved in directing emergency response activities for the county, local governments should be prepared to share information directly between EOCs.

Recommendation 4.A: Develop checklists to prompt senior officials to contact external agencies and organizations for information and updates during developing situations. Link checklist implementation to hazard levels or activity.

Recommendation 4.B: Establish communication and coordination with all area EOCs as they are activated and identify information that various EOCs need to share among themselves.

Recommendation 4.C: Identify and train liaison officers to deploy to critical nodes, including any established ICP/UCPs, the County EOC, and others as necessary, to share and get critical information.

Recommendation 4.D: Incorporate initial and sustained communication procedures in the EOC guidebooks and position guides.

5

Finding 5: The City EOC did not produce regular situation reports.

Situation reports include the most critical data about the incident. It gives a snapshot of the City’s overall operations, which helps City officials and stakeholders make informed decisions, as well as helps City personnel develop and revise objectives and priorities to resolve the incident.

Recommendation 5.A: Utilize a “Planning P” or similar process matrix and develop EOC Situation Report templates to guide the swift and practical development and distribution of situation reports, IAPs, and other incident management documents.

Findings and Recommendations: Situational Awareness and Information Sharing	
6	<p>Finding 6: Organizations reported not receiving necessary information in a timely manner from the City EOC.</p> <p>Even after the immediate response, many City departments and external organizations did not feel like they had a good understanding of the ongoing response operations. Though it is not practical to continually provide information to stakeholders, it is important to provide them with the most updated and relevant information at regular intervals during response operations.</p> <p>Recommendation 6.A: Develop a once-daily senior leader update template, which can be used to provide the City leadership with critical information.</p> <p>Recommendation 6.B: Produce a once-per shift update brief and have it play constantly on monitors throughout City offices to keep all departments and employees informed about the ongoing emergency.</p>
7	<p>Finding 7: City Council members felt like they had to search for information through sources other than City officials.</p> <p>Throughout the incident, and especially in the immediate hours following initial response, Councilmembers did not feel they had a “connection” with the EOC. They obtained their information elsewhere, whether it was from a constituent, social media feeds, or news media contacts. Having regular communication with Councilmembers can be beneficial to the City, since they are in close contact with the community and can relay what the community wants/needs in times of disaster. When the Council is required to make emergency policy decisions, this ongoing communication will help them obtain a better understanding of what is needed.</p> <p>Recommendation 7.A: Assign a liaison officer to specifically communicate with Councilmembers.</p>
*8	<p>Finding 8: The City of Santa Rosa undertook an impressive effort to provide emergency alerts and warning to the community. These systems were administered by the City's Emergency Preparedness Coordinator (EPC), which placed a great burden on the use of the EPC's time, with no back up identified.</p> <p>Recommendation 8.A: Revise the City's policies, procedures, and systems used to provide emergency alerts, warnings, and notifications to the community, and increase the number of Departments and staff positions that are authorized and trained to activate and launch messaging systems.</p>

Findings and Recommendations: Situational Awareness and Information Sharing

*9	<p>Finding 9: Many issues raised in this report require regional solutions.</p> <p>Recommendation 9.A: The City should review the entire preparedness, response, recovery and mitigation cycle and determine the need to create a Joint Powers Authority (JPA) with the County of Sonoma and other appropriate jurisdictions ensuring overlapping roles, responsibilities, and requirements are clearly delineated.</p> <p>Recommendation 9.B: Through a county-wide JPA, ensure inclusion of all partner agencies (including Voluntary Agencies Active in Disaster [VOAD], not-for-profits and community-based organizations) that have pre-determined emergency roles and/or agreements with the City or County, and ensure roles, responsibilities, and duties are coordinated through the City or County EOC as appropriate.</p> <p>Recommendation 9.C: Work with local government emergency managers and administrators in Sonoma County to request and support funding to establish the emergency call center function in the regional 2-1-1 center. While the City has a new Call Center manager within the EOC structure, this is seen as a temporary solution for this vital emergency function.</p>
-----------	---

*Identified and substantiated in a report prepared by the Kelle Kroll Group “City of Santa Rosa Emergency Operation Center’s Response to the 2017 Firestorm”

Area for Improvement 2: Organization, Staffing, and Training

The EOC was activated at 12:27 a.m. on October 9. Staff quickly arrived and the EOC was set up and operational within 45 minutes. All City employees are required to take two FEMA on-line courses, and some personnel had been through EOC training conducted by the EPC. Many people, however, either did not go through training or were thrust into unfamiliar roles.

Throughout the first hours of the emergency, City departments recalled their personnel, and some established Departmental Operations Centers to coordinate internal activities and support overall response operations. At the EOC, the City Manager assumed the role of Incident Commander and the EPC became the EOC Manager. Senior City officials filled roles as Section Chiefs and Branch Directors. Due to lack of senior fire personnel responding to the EOC, the Police Department filled the Operations Section Chief position and the Fire Branch Director position was vacant or filled by a non-operational member of the Fire Department.

Staffing the EOC throughout the emergency proved problematic. City personnel related that numerous people were rotating through positions in the EOC and often had no training or experience in the tasks they were trying to perform. Some employees were directed to return to their normal duties, often when there were staff shortages in the EOC or for supporting the disaster response. Additionally, a small number of City staff did not respond when the automated message went out that activated the EOC.



Coming Together in Crisis – The Santa Rosa Story

Despite stress, confusion, and staffing issues, the EOC was still able to operate in a relatively effective and efficient manner, and City employees exerted great effort over many long days and weeks to ensure the safety and well-being of the residents of Santa Rosa.

Findings and Recommendations: Organization, Staffing, and Training

10

Finding 10: The City’s emergency preparedness coordinator function is understaffed for daily responsibilities.

In areas that experience large disasters more frequently than has been the case for California over the past 25 years, local government tends to recognize the need for larger emergency management staffs. Given the Tubbs/Nuns fires and two subsequent record-setting fires, communities with neighborhoods in the wildland-urban interface should consider increasing emergency management staffing. Additionally, Santa Rosa’s EPC is responsible for a large number of emergency-management related programs, including planning, training, and exercises. In order to ensure the City is adequately prepared for future disasters, the EPC needs additional staffing resources to assist with day-to-day and strategic activities.

Recommendation 10.A: Due to the increased threat of losses due to the large number of people living in the woodland-urban interface, increase full-time staffing to support the City’s Emergency Preparedness Coordinator.

Recommendation 10.B: Consider training and utilizing volunteers with relevant skills, as well as paid interns to help support the full-time functions of the Emergency Preparedness Coordinator and other full-time staff that might be hired.

Findings and Recommendations: Organization, Staffing, and Training

11

Finding 9: Senior City personnel (City Manager, department directors and deputies) were used to fill EOC staff roles rather than providing overall direction for the City.

City officials should not be part of field and EOC response operations. Rather, they should act as a policy group that can focus on policy decisions, strategy, and other overall City issues.

Recommendation 11.A: Assign and train personnel below the director level to function as EOC Section Chiefs and Branch Directors.

Recommendation 11.B: Develop a policy group structure that includes appropriate officials.

Recommendation 11.C: Develop position descriptions for the policy group.

Recommendation 11.D: Conduct training for the policy group and include the group in exercises.

Findings and Recommendations: Organization, Staffing, and Training

12

Finding 12: City staff required about 45 minutes to establish the EOC from a “cold” status.

The City EOC is not a full-time facility – equipment is stored in a Water Department training room and the EOC is set up in that room when needed. That the City staff took only 45 minutes to fully establish the EOC highlights their training and other steps taken prior to the disaster to minimize delays in establishing operations. However, any delay during fast-moving situations can create confusion and cause delays to coordinating response activities. Most local governments the size of Santa Rosa have EOCs that are only established when needed. However, this does create a risk that during no-notice events there could be significant delay in establishing the EOC and beginning the coordination effort. Additionally, the EPC reported that there is difficulty scheduling the facility for use during drills and exercises.

Recommendation 12.A: Review the main hazards for the City and develop triggers that require the EOC to be taken from a “cold” status to a “warm” status (EOC set up and ready to occupy).

Recommendation 12.B: Develop and adopt a policy that ensures the availability of the EOC facility for an appropriate number of days each year for use during drills and exercises.

Recommendation 12.C: Research the appropriate size and cost of a full-time, stand-alone EOC and investigate different methods to fund the project, including federal and state grants.

Recommendation 12.D: Create policy that requires notification, at minimum, to EPC of unusual events.

Findings and Recommendations: Organization, Staffing, and Training

13

Finding 13: Ensure a clear understanding of roles for councilmembers.

City Council members related that during the fire and its aftermath they wanted to assist but there were no clear roles already established for them to fill. After a few days, a liaison to the Council was appointed and regular updates were provided to individual Council Members.

Recommendation 13.A: While the Mayor and Council do not have a formal role in directing or managing the City’s response/recovery activities, the key roles elected officials fulfill during emergency situations should be acknowledged. City Management and EOC leadership should significantly improve communications and engagement with the Mayor and Council during major emergencies, and better leverage the broad capabilities of their staffs and their strong neighborhood networks, without violating key provisions of the Charter.

Recommendation 13.B: City Management should work with the Mayor and Council and seek to create an inventory of organizations and individuals to support emergency preparedness, response, and communication efforts. City Management can engage the staff annually to update the inventory. In addition, they should seek informal collaborations with elected officials in the area of soliciting donations, disseminating information to residents through their social networks, and assisting in developing volunteer activities.

Recommendation 13.C: The City Manager should proactively work to establish communication protocols with the Mayor and Council, so they have the most timely information before and during disasters. Now is the time to work with Council on developing/updating these protocols. They should be reviewed every year with the Council in a public meeting. Consider using Council study sessions to focus on the topic.

Recommendation 13.D: City Management should engage the Council on regional, state, and federal policy issues related to emergency management. When appropriate, ask the Mayor and Council to advocate via formal communication with county, state, and federal levels of government. Explore opportunities for the Council to participate in emergency management-related issues and legislation at state and federal level, including asking them to testify before committees and subcommittees.

Recommendation 13.E: Develop an emergency preparedness training plan for elected officials or leverage the League of California Cities, the National League of Cities, or other sources for Conferences and trainings.

Findings and Recommendations: Organization, Staffing, and Training

<p style="text-align: center; font-size: 24pt; font-weight: bold;">14</p>	<p>Finding 14: Current staffing levels in the EOC and DOCs are inadequate for large-scale disasters and there is no Citywide staffing plan that includes moving personnel between departments to fill shortages.</p> <p>It is a best practice both to fill primary and alternates for each EOC/DOC position and also to cross-train employees on different roles and responsibilities. Though it does not often happen, there are times when 24-hour operations must be sustained for many days (as in this incident), and the City should have adequately prepared staff who are familiar with the various roles and can capably rotate through shifts and assignments.</p> <p>Recommendation 14.A: Conduct a bottom to top disaster staffing review based on requirements outlined in City ordinances, the City’s Emergency Operations Plan, and experiences gained during the fires. Define three EOC and DOC staffing levels (medium, large, and catastrophic) by actual or potential impacts. Identify needed positions and whether they have to be City employees or can be filled through mutual aid, reserve personnel, or trained volunteers.</p> <p>Recommendation 14.B: Develop a Citywide plan to move personnel between departments, as needed during disasters, to ensure that people are appropriately and effectively assigned.</p> <p>Recommendation 14.C: Explore alternative staffing solutions during disasters (e.g., developing programs for reserve employees or a disaster volunteer corps, using retired City employees, etc.).</p>
<p style="text-align: center; font-size: 24pt; font-weight: bold;">15</p>	<p>Finding 15: During the second activation of the EOC/Water DOC to address the storm drain concerns, the Water Department delayed requesting EOC staff support through mutual aid. It did, however, request and utilize technical experts from other local water departments to assist during the investigation and repair of the water system contamination.</p> <p>Recommendation 15.A: The Water Department’s plans should be modified to recommend the immediate use of mutual aid to provide staff augmentation at the EOC for long-term activations.</p>

Findings and Recommendations: Organization, Staffing, and Training

16

Finding 16: The City does not have a sufficient training and exercise program. Although the EPC conducts trainings throughout the year, there is no requirement or system to track what training was conducted and who attended the training. Additionally, full scale exercises have not been conducted in adherence to the City’s Emergency Operations Plan, which states: “The City follows the best practices of the Homeland Security Exercise and Evaluation Program (HSEEP), including the building block concept of seminars, small-scale tabletop exercises, functional exercises, and full-scale exercises.” (Paragraph 8.1.3.)

Training and exercises increase individuals’ knowledge and capabilities as well as evaluates specific individuals’ and the City’s overall ability to manage response and recovery to emergencies.

Recommendation 16.A: Establish a formal emergency preparedness training policy, including a list of required training courses, required staff participants, annual refresher training, and a training calendar.

Recommendation 16.B: Track training and exercise attendance and develop accountability procedures for attending required training and exercises.

Recommendation 16.C: Create a Multi-Year Exercise Plan and adhere to the schedule.

Recommendation 16.D: Establish a policy for mandatory exercises for assigned personnel.

Findings and Recommendations: Organization, Staffing, and Training

17

Finding 17: Activation of EOC staff was difficult due to some staff not identifying the 866 prefix as an EOC recall phone number; some phone numbers were wrong; and some phone lines were down. Additionally, some departments had difficulty reaching their personnel, either because there was nobody assigned to make notifications or because there was no current list of department emergency personnel and/or updated contact information.

Recommendation 17.A: Train City staff on EOC recall procedures, including recognizing the area code of the phone number for the recall system (866) and adding the number to cell phone contact lists.

Recommendation 17.B: Require semi-annual updates to the EOC recall list and all departmental phone rosters.

Recommendation 17.C: Require phone lists and rosters to include primary and back-up phone numbers for each employee.

The City has primarily fixed this issue through purchasing a new notification system and implementing notification policies for all emergency employees.

Area for Improvement 3: Water System

Even after the last of the fires were extinguished, damage to the City’s water system continued to appear. On November 8, the Water Department responded to customer calls regarding an unusual taste and odor in the municipal water in Fountaingrove, where 13 homes survived. With support from the California Division of Drinking Water and the U.S. Environmental Protection Agency, the City conducted water testing in the area and found significant traces of benzene. The City later determined that benzene was introduced by melted plastics, smoke, soot and ash that entered the water system during the fire. The City developed a task force to investigate and resolve the contamination and conducted additional tests. It was determined that major repairs to the drinking water system were needed. Ultimately, water services lines to 352 properties, eight hydrants, 28 blow-off valves, and 1,265 feet of water main were replaced, costing approximately \$8 million. The water safety advisory was not lifted until nearly a year later on October 11, 2018. Bottled water was supplied to these 13 homes during this period.¹⁸

¹⁸ Additional engineering analysis of water-system issues is beyond the scope of this after action report, but readers may refer to the Black and Veatch report, which can be found on the Water Department’s website.

Findings and Recommendations: Water System	
18	<p>Finding 18: The extreme heat of the fire melted plastic pipes and plastic components in water meters releasing chemicals which, in addition to smoke, soot and ash, entered the water system and caused contamination in the water supply.</p> <p>Recommendation 18.A: The Water Department should document the benzene contamination incident and share this information with the American Water Works Association with the potential for updated standards, practices, and materials regarding water quality following intense fires.</p> <p>Recommendation 18.B: Check water pipes for chemical contamination before approving them for use after a fire.</p>

Area for Improvement 4: Transition to Recovery and Long-term Recovery

The City Manager has taken on the role of Recovery Manager and has mostly assigned the various recovery tasks to City departments using current staff. The City was proactive in establishing a recovery website and revising building permit processes to speed recovery activities. The Department of Housing and Community Services is working to provide sources of recovery funding, including seeking a recovery bond measure, appealing to retain certain local tax revenues now going to the state to support schools, and maximizing community development block grants. Many City employees reported they were performing job duties that could easily amount to at least two different job positions. The challenge with this methodology is it contributes to potential employee burnout.

Findings and Recommendations: Transition to Recovery and Long-term Recovery	
19	<p>Finding 19: There are several alternative approaches to managing a recovery effort. Some develop a formal comprehensive recovery plan and form a separate office to implement it. Given the structural deficit it faced even before the fire and the impact of the incident on City finances, Santa Rosa is taking an alternative structured approach. The City has retained consultants to facilitate the challenging FEMA and Housing and Urban Development (HUD) recovery processes. They are working with Sonoma County’s Recovery Officer. They have also worked to accelerate the rebuilding efforts through a separate office for zoning and permits for those impacted by the fires.</p> <p>Recommendation 19.A: Continue the ongoing recovery actions underway. Given the potential of a future major disaster (e.g., fire or earthquake) incorporate best practices and lessons learned from this event and recovery effort into a pre-disaster recovery plan or considering working on one jointly with Sonoma County.</p>

Findings and Recommendations: Transition to Recovery and Long-term Recovery

20 **Finding 20:** A brief Citywide after action report (AAR) was submitted to the State as part of the Sonoma County Operational Area’s AAR as required in California; however the City’s Emergency Operations Plan states (p. 12) “...California requires any city and/or county proclaiming a local emergency ... to complete and transmit an after action report (AAR) ... within 90 days of the close of the incident period.” The City did not submit a separate AAR and the EPC could not provide a copy of the County’s submission. The City commissioned two independent after-action reports subsequently. The Water Department independently contracted its own detailed AAR following the fire and has implemented many of the recommendations.

Recommendation 20.A: Assign personnel to an AAR team under the Situation Unit and train them in gathering data and compiling AAR information during each exercise and activation.

Recommendation 20.B: The City should carefully consider the findings and recommendations of the Black and Veatch report, including the recommendation to study water pressure in Coffey Park during the fires.

Area for Improvement 5: Fire Safety

Following the fires, the City of Santa Rosa hired engineer consultants Black and Veatch to analyze issues related to the loss of water pressure in Fountaingrove. Black and Veatch determined that the loss of water pressure resulted primarily from water spilling from large feeder pipes for the sprinkler systems of commercial facilities and from distribution lines to residences that had burned. This allowed the water to flow freely. Destroyed commercial properties included the Hilton Hotel, K-Mart, and others, as well as thousands of homes.

Findings and Recommendations: Fire Safety

21 **Finding 21:** Water supply was intermittent during firefighting operations. A number of large-diameter water mains became free-flowing when the structures where they terminated were destroyed.

Recommendation 21.A: Consider updating the building code to require facilities with large-diameter (10” and up) water mains to have automatic shut-off valves that activate when water pressure drops below safe levels as established by state and federal guidance/regulations.

Findings and Recommendations: Fire Safety	
22	<p>Finding 22: Hospital staff were placed in a fire watch role on the roof of the building with extinguishers to put out spot fires started by embercast.</p> <p>Recommendation 22.A: Consider updating the building code to require critical infrastructure and large-capacity commercial structures (hospitals, nursing care facilities, hotels, etc.) to have sprinkler systems installed on their exterior roof surfaces to address fires started by embercast.</p> <p>Recommendation 22.B: Ensure that private sector staff are trained and have proper tools and personal protective equipment (PPE) to conduct fire watch operations when and where sprinkler systems are not installed or are non-operational.</p>
23	<p>Finding 23: At the time of the fires, Santa Rosa did not have any staff dedicated to support a citywide vegetation management program, which helps to mitigate fire hazards by reducing hazardous vegetation within the city.</p> <p>Recommendation 23.A: Wildfires do not respect municipal borders. Although the City should enhance their own vegetation management program, the full solution to this problem requires a regional solution. The City of Santa Rosa should consider working with Sonoma and North Bay region counties and municipalities on the development of a Joint Powers Authority (JPA) for emergency services associated, but not necessarily limited to, the types of wildfires experienced in California in the past two years. This issue is discussed in further detail in an appendix to this report. The Unified San Diego County Emergency Services Agreement could serve as a possible model or at least a starting point for such an authority; it is also included as an appendix.</p>

CONCLUSION

The 2017 Fire Siege, especially the devastation by the Tubbs fire on October 8-9, was a seminal event in Santa Rosa’s history. It is the dividing line between a seemingly safe and secure community of the past and the recovering and more resilient city of the future.

Initial response to the fires was chaotic, and some systems did fail. However, the overwhelming consensus among community members has been that the overall the response to the fires was energetic, efficient, and well-organized. The valor of the residents of the City of Santa Rosa and Sonoma County cannot be overstated. By waking neighbors, helping them evacuate, and caring for them throughout the emergency and to the present, the strength of community ties has lessened much of the tragic consequences of the fires.

City employees, from administrative staff to first responders, answered their phones and responded to the emergency without hesitation. Many reported and carried out their duties without knowing the fate of their own homes and families; some lost their homes in the fire but still continued to come to work to support City efforts and help other residents in need.

In the first hours of the fires, City employees went door-to-door in neighborhoods that were aflame, drove City buses to evacuate residents, and fought fires continuously with no rest for several days. The EOC became fully operational within an hour of activation and was fully staffed every day, around the clock, for several weeks. City employees remained flexible and dedicated to not only provide the essential services the City provides every day but also to support fire-related response and recovery efforts.

Community recovery has started, with 1,478 building permits now issued. However, there are still years, if not decades, of work to come to restore and improve the resiliency of Santa Rosa. Community engagement, support, and leadership will remain crucial throughout the recovery process.

This report focusses on Santa Rosa. But these fires do not respect municipal borders. A true regional approach is required to fully address contributing factors such as vegetation management. We recommend the region consider development of a Joint Powers Authority in efforts to mitigate against future fires and other emergencies.



Fountaingrove area October 2018. Recovery and growth continue among the reminders of the fires. Photo by Doug Mayne



APPENDIX A: NARRATIVE DESCRIPTORS

Names have been replaced with descriptors for this report. They are listed in the table below.

Descriptor	Positions Represented
Santa Rosa Fire Department (SRFD)	
Fire Chief Officer	Fire Chief, Deputy Fire Chief and Battalion Chiefs
Fire Marshal	All members of the Fire Prevention Bureau
Fire Captain	All Captains in the SRFD
Firefighter	All Firefighters
Santa Rosa Police Department (SRPD)	
Police Captain	All Captains in the SRPD
Police Lieutenant	All Lieutenants in the SRPD
Other Organizations	
TPW (Transportation and Public Works) Manager	Transportation and Public Works Department
Water Manager	Water Department

APPENDIX B: DETAILED TIMELINE OF EVENTS

FRIDAY, OCTOBER 6, 2017

The San Francisco Office of the National Weather Service issued a Red Flag Warning for 11:00 a.m., Sunday, October 8, through 5:00 a.m., Tuesday, October 10, predicting low humidity, wind gusts to 55 mph, and rapid spreading of any fires.

SUNDAY, OCTOBER 8, 2017

Fire Chief Officer 1 was the on-duty Battalion Chief (BC) for the Santa Rosa Fire Department (SRFD) on October 8, which had been a busy day. They responded to 20 vegetation fires and six structure fires between 6:00 p.m. and midnight. The on-duty fire crews reported running from call to call, and as soon as they knocked down one fire they would be dispatched to another. Because of the number and types of fires, Fire Chief Officer 1 remembers wondering if they had a fire bug deliberately setting them.

On October 8, 2017, Police Lieutenant 1 was the on-call lieutenant for the Santa Rosa Police Department (SRPD).

8:00 p.m. Fire Chief Officer 2 returned from a fishing trip. While driving south on Highway 20, he realized that he had never seen it so windy. At the time, he didn't notice any smoke or see any flames.

9:00 p.m. Fire Captain 1 was working on Engine #3 in Coffey Park. They received a large number of calls reporting fires – so many that they sent single fire engines to what would normally require three engines, a ladder truck, and a chief officer.

9:15 p.m. Fire Chief Officer 2 received phone calls about a number of fires in Santa Rosa. He decided to go into town and see what was happening.

9:45 p.m. The Tubbs Fire started near Highway 128 and Bennett Lane in Calistoga.

Sometime before 10:00 p.m., Fire Chief Officer 1 was dispatched to Cross Creek Drive in the Fountaingrove neighborhood for a smoke check. A homeowner reported smoke and seeing fire in the distance. He had heard that there was a fire in the neighboring county and went to check. He could smell smoke but couldn't see any fire. He determined that the glow reported by the homeowner was a reflection from street lights.

10:00 p.m. The Nuns Fire started near Highway 12 north of Glen Ellen.

Fire Chief Officer 3 was called at home because of multiple fires. He reported to Fire Station (FS) #1, loaded his command SUV and was dispatched to a house and grass fire southeast of downtown Santa Rosa. Initially, only one engine responded, but then people and equipment trickled in. With the multiple fires, resources were scarce. "We had to ask people to do stuff we normally wouldn't ask them to do," he stated. Although they lost two homes, they were able to eventually get ahead of the fire and put it out.



Coming Together in Crisis – The Santa Rosa Story

Fire Chief Officer 4 was awakened at home by Fire Chief Officer 6 and asked to cover the City and provide command supervision as resources were depleted. Fire Chief Officer 4's first dispatch was to a fire at Paradise Ridge Winery on Thomas Lake Harris Drive. He arrived, but the dispatched firefighting resources initially failed to arrive due to the high number of calls.

10:41 p.m. Fire dispatch issued an alarm for a reported vegetation fire on West 6th Street. The alarm was subsequently upgraded to a structure fire and four engines, one truck, and a number of supervisors were dispatched to the scene.

10:48 p.m. Fire Chief Officer 1 left Fountaingrove and responded to the 6th Street fire. When he arrived at 10:56 p.m., the building was fully involved and there were grass fires in the creek bed behind the structure.

Fire Marshal 1 served as the Public Information Officer (PIO) for the SRFD. At 10:45 p.m., he was at home providing social media updates due to the series of fires in Santa Rosa. He was also the PIO for a regional Type 3 Incident Management Team (IMT), and at about that time, his team was called to provide support to the command post fighting the Tubbs Fire in Napa. At 10:51 p.m., he received a call from fire dispatch to respond to the 6th Street fire in Santa Rosa.

10:51 p.m. Fire Chief Officer 2 arrived at the 6th Street fire.

11:00 p.m. All on-duty police officers were dispatched to the 6th Street fire to assist in evacuating the surrounding neighborhood. The on-duty Patrol Sergeant called Police Lieutenant 1 to advise him of the situation. Police Lieutenant 1 responded to the 6th Street fire and took control of evacuation operations.

Fire Marshal 1 arrived at the 6th Street fire and met with Fire Chief Officer 2 and Police Lieutenant 1. Once finished with his duties at the 6th Street fire, Fire Marshal 1 decided to head to Napa to link up with his IMT. As he was leaving, Police Lieutenant 1 asked to be informed if anything was going on.

Fire Chief Officer 5 was awakened by a phone call and ordered to report for duty. As he drove into Santa Rosa, there were embers blowing sideways across the road. He had just returned from supporting the hurricane response in the southeastern part of the U.S. and thought it was "just like being in a hurricane, except instead of water it was embers blowing sideways." He arrived at FS #2, which was empty of people and equipment.

11:15 p.m. Fire Chief Officer 2 drove up Fountaingrove Parkway to a high point. It wasn't windy, but he could see an orange glow in the distance toward Napa. About this time, Fire Chief Officer 6 called all fire department managers and told them to report to their stations.

11:30 p.m. Fire Marshal 1 was driving up Highway 101 and Mark West Springs Road toward Napa. Cars from the Sonoma County Sheriff's Office were heading back to Santa Rosa with lights and sirens on. He headed out of the city and saw the glow of the fire to the east. Once he realized the extent of the fire, he called his IMT leader who told him he was seeing the Tubbs fire.

11:51 p.m. The Emergency Preparedness Coordinator (EPC) for the City of Santa Rosa received a call from the American Red Cross asking if he knew anything about a fire in the county. This was



Coming Together in Crisis – The Santa Rosa Story

his first indication that there was an emergency situation developing. Within ten minutes, Fire Chief Officer 2 called and informed him there were five fires burning within the city limits, but they weren't related to the Tubbs Fire.

MONDAY, OCTOBER 9, 2017

12:00 a.m. Tubbs Fire Unified Command was established by CAL FIRE in Napa County.

Fire Captain 2 called Fire Chief Officer 2 who directed him to start putting firefighters on all available reserve equipment. Fire Captain 2 asked if they should recall the entire department. Fire Chief Officer 2 directed him to initiate a complete recall of the fire department.

12:01 am: EPC received a phone call from SRFD Fire Chief, advising EPC of five active fires burning in the city unrelated to any fires in the county mentioned by the Red Cross representative.

12:05 a.m. Sonoma County Emergency Operations Center (EOC) was activated.

12:08 a.m. Santa Rosa Fire Department issued a One Call Page to recall all SRFD personnel. A total of 140 of 143 firefighting personnel eventually responded to the recall. The three who did not respond were out of state (two in foreign countries) on personal leave.

Shortly after midnight, Fire Chief Officer 2 called the Chief of the Rincon Valley Fire District and asked for a CAL FIRE Battalion Chief to be assigned to the area. They met in town to discuss the situation. There was smoke in the air, but it was calm.

There were fires being actively fought in areas around Santa Rosa, but critical information was not being shared among agencies. By this time, Napa County had requested 40 strike teams from CAL FIRE to support their fire operations, Sonoma County had requested 25 strike teams, and Rincon Valley had ordered 10 strike teams. Additionally, the Sonoma County Sheriff's Office was conducting evacuations at this time. None of this information was relayed to SRFD Fire Chief Officer 2.

Fire Chief Officer 2 talked with the CAL FIRE Battalion Chief and they decided to establish a unified command consisting of the Santa Rosa Fire Department, Rincon Valley Fire Department, and CAL FIRE. The Unified Command Post (UCP) would be set up in the K-Mart parking lot on Cleveland Avenue so they could coordinate response activities. Fire Chief Officer 2 was NOT told that CAL FIRE had already ordered 40 strike teams for the Tubbs Fire.

Meanwhile, SRFD personnel began reporting to the stations, where they formed into teams and got onto reserve equipment. When equipment ran out, they got into any service vehicles they could find. They pulled engines out of maintenance and repair shops. Six firefighters went to the Transportation and Public Works yard, cut the locks on the gates, and took six county vehicles. Everyone was trying to get into service in any way they could.

12:10 a.m. Fire Chief Officer 2 called the City Manager to recommend opening the City's Emergency Operations Center (EOC). When he was unable to reach the City Manager, Fire Chief Officer 2 called the Deputy City Manager, who immediately authorized EOC activation and activation of the Finley Community Center as an emergency evacuation shelter.



Coming Together in Crisis – The Santa Rosa Story

12:15 a.m. Fire Chief Officer 2 contacted the EPC and told him to activate the EOC. Fire Chief Officer 2 then talked with police dispatch and asked for more personnel to support evacuations. Dispatch told him nobody was available.

12:27 a.m. The EPC activated the EOC. He initiated the recall of personnel through “Code Red” an automated messaging system. The message stated “‘A’ Shift report to the EOC, this is not a Drill...”

12:25 a.m. Police Captain 1 received the automated notification to report to the EOC. As he drove to the EOC, he could see the glow of the fire. There was some radio traffic about putting police tape up and starting evacuations, but it was still light. As he arrived at the EOC, radio traffic increased when the Fountaingrove neighborhood was being evacuated.

12:28 am: SRPD Dispatch sends email notification to its own personnel requesting them to respond and puts out a mutual aid request to the surrounding jurisdictions.

12:30 am: The Administrative Secretary in the Planning and Economic Development Department arrived at the City EOC. She was the first City employee to arrive and was alone in the parking lot for about ten minutes. She watched fire trucks going by and saw what she thought was sheet lightning in the hills. It was, in fact, the light from houses bursting into flames. The wind was blowing hard and there was ash everywhere.

12:40 a.m. The EPC was the next person to arrive at the EOC; he opened the facility and began setting it up. City staff continued to arrive and immediately assisted with establishing the EOC. They worked methodically and efficiently as they had been trained to do during drills, and the EOC was fully functional within 45 minutes.

TPW 1 (Transportation and Public Works (TPW) Director and acting Recreation and Parks Department Director) arrived at the EOC and helped with set up. He directed Recreation and Parks staff to support the opening of the shelter at the Finley Community Center, then established the Public Works Branch in the EOC and called TPW personnel to open their Departmental Operations Center (DOC).

Sometime after midnight, Fire Chief Officer 4 drove north from the Paradise Ridge Winery where he saw a “wall of fire heading toward Fountaingrove.”

12:45 a.m. The UCP was established in the K-Mart parking lot.

City staff arrived at Finley Community Center, 2060 W. College Avenue, to open and establish it as an evacuation center.

Many people reported that notifying City staff was difficult. Phone lists were often out of date, phones were turned off, calls were dropped, or phone lines were down. Many City employees were impacted by the fires and evacuation orders, or they lived outside of Santa Rosa and were delayed in reporting by closed roads and traffic jams. One employee noted during interviews, “We didn’t know who’s here, who’s not here, or why they aren’t here.” City employees found out about the event in a number of ways – by the automated notification system activated by the Emergency Preparedness Coordinator, by notification systems activated by their



Coming Together in Crisis – The Santa Rosa Story

departments, by friends and family arriving who had been evacuated or lost their homes, or by friends and family texting them.

Although some of the City staff had undergone training and EOC drills, some trained personnel were not available. As personnel arrived, the EPC assigned them to the critical functions that needed to be performed, regardless of their training.

1:00 a.m. Fire Chief Officer 1 handed the 6th Street fire off to one of the Captains to complete the mop up. As soon as he became available, he was dispatched to Guerneville Road and Marlow Road where a commercial building, two houses, and a field were on fire. He was alone at the fire for a while, then one ladder truck and a water tender arrived. A fire this size would normally have been a two-alarm fire and would have had two ladder trucks, six engines, and water tenders assigned to it. He remembered thinking it must be really busy if that's all he was going to get. Two more engines eventually arrived and they got control of the fire. At one point, he noticed that the wind was blowing so hard that electrical lines were flapping and hitting each other, causing sparks that were falling into a field.

Recreation and Parks Department staff arrived at the Finley Community Center to establish an evacuation shelter. They received the initial notification for EOC activation and confirmed the need to also activate Finley Center. An American Red Cross shelter representative arrived shortly thereafter to support set up and help manage operations.

Fire Marshal 1, who was heading to Napa to join his IMT, turned around and headed back toward Santa Rosa. By the time he got to Fountaingrove (about 1:10 a.m.), the fire had already arrived. He called Fire Chief Officer 2 and told him "The Tubbs Fire is here - and we have to evacuate Fountaingrove."

Fire Marshal 1 remembered that Police Lieutenant 1 had asked to be kept informed, so he called him and told him to send everyone he could to evacuate Cross Creek Road, Saint Andrews Drive, and Skyfarm Drive.

Police Lieutenant 1 immediately contacted police dispatch and directed that all officers in the city report to Fountaingrove and assist with the evacuation. The initial evacuation line was set along Mark West Springs Road and Porter Creek Road. He then headed to Fountaingrove and began assisting with evacuations.

Once the UCP was set up at K-Mart, the wind started to blow very hard, making it extremely hard to operate outside. Additionally, there were a large number of people in the parking lot who approached the UCP to ask questions. This required the SRPD to put up police tape to keep people away. The winds and speed of the fire made it a very chaotic situation. "We had a hard time comprehending how big [the fire] was." At one point, Fire Chief Officer 2 smelled smoke and realized that Mountain Mike's Pizza on the other side of K-Mart was on fire. He tried to get a fire crew to respond, but no crews were available, so he told a firefighter with an SUV to "Go over there, [and] see what's going on...". It was very smoky and windy, and they could see the fire coming down the hill.

Sometime after 1:00 a.m., equipment and fire crews arrived at the Paradise Ridge Winery. Fire Chief Officer 4 took control of them, and they headed down the hill to Fountaingrove to help with evacuations. He knew the area well and was concerned about the Solstice Senior Living



Coming Together in Crisis – The Santa Rosa Story

Facility on Round Barn Boulevard. He took three engines with him and found that there were 120 people inside the facility. He asked Fire Captain 3, “Can we save it?”; Fire Captain 3 replied, “What choice do we have?” Fire Chief Officer 4 told the crews they had to make a stand. They saved the structure and the residents, who were later safely evacuated.

1:15 a.m. Field-level mandatory evacuation orders were given for Cross Creek Road, Saint Andrews Drive, and Skyfarm Drive, with residents directed to the evacuation shelter at the Finley Community Center.

Police officers reported to duty, oftentimes after evacuating their own families. They surged to the Fountaingrove neighborhood where police sergeants gathered groups of officers together. They then moved into different areas, some of them burning, to notify people to evacuate and to check houses to make sure they are empty. Police officers from Santa Rosa Junior College deployed on their own initiative to assist the effort. One officer commented, “It was complete chaos – nobody had situational awareness or any idea of what was going on. It was the middle of the night, pitch black and electricity was out. We’re paid to help people and I felt helpless.”

A five-engine task force from Rincon Valley arrived in Santa Rosa and Fire Chief Officer 2 ordered them to Fountaingrove. He then ordered dispatch to request five “immediate needs” strike teams. This was the 78th request for strike teams to hit the CAL FIRE mutual aid request system that night.

Because of the speed with which the fire was moving and the now overwhelming radio traffic, Fire Chief Officer 2 simplified the command and control aspect of fighting the fire. He established rough geographic units and assigned available resources to them. He then developed his Leader’s Intent which outlined the strategy for fighting the fire. Dispatch regularly broadcasted the intent: *“To any apparatus entering the unit – the priorities are life safety, rescuer safety, evacuation, and perimeter control where possible. Execute independent action in accordance with the Leader’s Intent.”*

Fire Marshal 1 spent several hours with SRPD police officers going through the Fountaingrove area with loudspeakers and sirens to alert people to evacuate. The smoke was so thick, he couldn’t see people on the side of the road. He drove with the windows open and embers blowing into the car in the hope that he could hear people who needed assistance.

For two hours, numerous police officers were evacuating people from parts of Fountaingrove that were on fire, oftentimes going into houses where the vegetation in the front yard was burning. Numerous homes were already empty. Due to the warm night, many people were sleeping with their windows open, were awakened by the winds, the smell of smoke, or by their neighbors, and fled their homes. Police officers coordinated on the fly – as one area was cleared they would meet at the side of the road and coordinate which areas they would go into next. One officer noted, “Nobody stood around asking for direction. People identified what needed to be done and did it.”

At one point, Police Lieutenant 1 was alone in a Fountaingrove neighborhood threatened by fire. No fire department resources were in the area. Two commercial water trucks arrived and asked what they could do. The trucks hooked up to fire hydrants and stayed in the area putting water on the fire, saving 12 homes.



Coming Together in Crisis – The Santa Rosa Story

The smoke was so thick it was difficult to see. Police Lieutenant 1 was heading to the UCP at the K-Mart lot and found two people on the side of the road needing evacuation. He picked them up and had to drive down the center of the road with his door open, leaning out and shining the flashlight down to see the center strip as a guide.

As SRPD continued evacuations of Fountaingrove, the fire engulfed parts of the neighborhood, preventing officers from reaching every house to make sure all had been evacuated. Many residents had already self-evacuated, but two victims did not make it out.

One resident was inside her car in her garage. The fire had knocked out power in the neighborhood, and she was apparently unable to open her garage door.

A second resident in Fountaingrove had trouble walking and could not evacuate. He urged his wife to leave him in order to increase her chances of getting out safely. She was able to get through the flames while he stayed in the house, which became completely engulfed by the fire.

1:27 a.m. Fire Marshal 1 indicated that fire had reached the areas of Fountaingrove, Montecito Heights, Brush Creek, and Mark West Springs.

1:31 a.m. Fire Chief Officer 2 called the City Emergency Manager and ordered the evacuation of Fountaingrove to Mendocino Avenue. The EOC issued the alert through SoCo Alert, Reverse 911, and Nixle, all of which are opt-in notification systems. The SRPD issued a department-wide page that the UCP was established at the K-Mart parking lot.

Meanwhile, the UCP called dispatch for more resources to assist with the evacuation of Fountaingrove, but all fire resources were committed. They would have to conduct the evacuation (an area with 1,500 homes) with the single five-engine strike team already sent to the area. Fire Chief Officer 2 directed dispatch to call all county fire departments to respond to Santa Rosa. Fire Chief Officer 5 arrived at the UCP to help provide structure to the response.

SRFD Truck 1 was dispatched as the Keysight Technologies campus was threatened. Keysight staff informed the fire department that if the main building burned, the chemicals released would be “really bad.” The crew of Truck 1 stayed and, although one building on the campus was lost, they saved the key buildings.

About this time, Fire Marshal 1 left Fountaingrove and met Fire Chief Officer 2 at the UCP. In order to get an idea of the size of the fire, he drove through the city. He saw the neighborhood where he lived in flames and realized he had lost his home with everything he owned except the clothes he was wearing.

A Recreation and Parks Department supervisor and crew were in Fountaingrove where trees had fallen and blocked the evacuation route. They used chainsaws to open the road and keep it open for hours to allow the evacuation to proceed.

1:30 a.m. Water Manager 1 received a text at home that there was a fire, and a water crew was taking a generator to Pump Station #2, which was standard operating procedure when there was a possibility of losing power at the pump station. He knew there was a fire in the area but didn’t know how big it was. He contacted Water Manager 2 – the Water Department Director – who was already at the EOC and was told to report there. When Water Manager 1 reached



Coming Together in Crisis – The Santa Rosa Story

Santa Rosa, he could see there was an issue – there was considerable traffic through town and a lot of smoke, so it took a long time to reach the EOC.

Once he arrived at the EOC, Water Manager 1 was directed to open the Water Department’s Departmental Operation Center. Upon arrival at the Water Department, he checked the water control systems to see if there were problems with the water infrastructure. There were no indications that there were any issues at this time.

Water Manager 1 called people in to open the DOC and prepare equipment for deployment as needed. He attempted to perform a quick assessment of the situation, but no information was available. At one point, he noticed that the water control system wasn’t reporting changes as they were being made. He realized that data was frozen in the system and they couldn’t rely on the accuracy of that information. It was later discovered that the AT&T landlines that carried the data had burned. Water Manager 1 ordered all pumps to be turned on to keep reservoirs filled, regardless of what the control system said their water levels were.

1:52 a.m. The Finley Community Center opened as an evacuation center.

1:53 a.m. The EOC issued an alert through SoCoAlert, Reverse 911, and Nixle. The message stated “Evacuate Skyfarm, Fountaingrove Parkway, and Montecito Heights. Shelter available at Finley.”

1:55 a.m. Staff from the City Attorney’s Office began preparing the emergency proclamation.

1:58 a.m. The City PIO sent alerts via Facebook, Nextdoor, and City Web with the 1:55 a.m. evacuation message.

2:00 a.m. Due to the conditions, Fire Chief Officer 2 ordered the UCP to move to Fire Station #3 at 3311 Coffey Lane, about a mile away.

Volunteers from the American Red Cross began arriving at the Finley Community Center.

2:01 a.m. The Tubbs Fire jumped Highway 101 north of K-Mart, with reported residential structure fires behind Kohl’s. There were no Fire Department staff members in the EOC; all personnel were in the field supporting firefighting operations.

As operations became established at FS #3, Fire Chief Officer 2 knew that there were fires in Fountaingrove, Rincon Valley, the Journey’s End mobile home park, and an apartment building on Hopper Avenue in the Coffey Park neighborhood. At this time, the UCP created five geographical areas for assigning resources: Mark West Springs Road, Fountaingrove, Larkfield, Coffey Park, and Journey’s End. As firefighting resources arrived, they were assigned to these areas. Resources were also directed to provide specific protection to three critical structures – two hospitals (Kaiser Permanente Medical Center and the Sutter Santa Rosa Regional Hospital) and the fire dispatch center (REDCOM) at 2796 Ventura Avenue in Santa Rosa.

The first TPW employee to answer the recall was a mechanic who lost his house to the fire. He packed what he could into an RV and drove it to the TPW maintenance yard where he immediately went to work. He stayed onsite 24/7 for two weeks.



Coming Together in Crisis – The Santa Rosa Story

Fire Chief Officer 1 was dispatched to Coffey Lane. The initial call was for a single address, as though one house was on fire; then he was told there were a number of fires in the area. At about the same time, he heard a call go out that any fire engines in the county that were available were to respond to Santa Rosa to provide structure protection.

He drove up Hopper Avenue and turned north on Skyview Lane. All he saw were people fleeing—cars were driving out through thick smoke, people were on foot, houses and cars were on fire. The wind was so strong that he saw flames going completely sideways. A house was on fire and the flames streamed sideways catching a car on fire. The flames from the car went sideways across the street, catching another car on fire that, in turn, caught another house on fire.

2:05 a.m. The EOC repeated the 1:55 a.m. evacuation message.

2:06 a.m. Highway 101 was reported as closed at Mark West Springs Road.

2:07 a.m. A department-wide page for police was issued. In the end, a total of 135 law enforcement personnel responded to the call out.

2:09 a.m. The EOC received reports of embers falling on Banyan Drive.

2:16 a.m. The EPC made an internal call-out for B-Shift as the EOC was shorthanded.

2:20 a.m. The northern side of Hopper Lane Apartments was reported to be completely engulfed in flames.

SRPD units reported many fires in the Coffey Park neighborhood. The EOC Director and Law Branch Chief discussed the situation and decide to evacuate Coffey Park.

2:24 a.m. The Operations Section called for three to four buses for evacuees. The County opened the Veteran’s Memorial Building for evacuees.

2:26 a.m. Fire Chief Officer 2 received a call from the CAL FIRE Division Chief for the Tubbs Fire. Fire Chief Officer 2 was informed that the UCP in Santa Rosa was now a Branch of the CAL FIRE operation fighting the Tubbs Fire. Fire Chief Officer 2 was not told that the Nuns and Atlas Fires were also burning at this time.

2:27 a.m. The EOC issued an alert through SoCoAlert, Reverse 911, and Nixle. The message stated, “Hopper Lane neighborhood evacuate now due to fires; there are shelters at Finley Center and Veterans Memorial.”

2:33 a.m. The EOC repeated the 2:27 a.m. evacuation message.

2:46 a.m. Approximately 100 people were reported to be on Fountaingrove Parkway waiting for a bus.

2:48 a.m. Fountaingrove Parkway now had 300 residents needing buses. Solstice Senior Living at 3585 Round Barn Boulevard reported 130 people needing buses.

2:53 a.m. The fire crossed Fountaingrove Parkway going down Parker Hill.



Coming Together in Crisis – The Santa Rosa Story

3:00 a.m. There were two public works crews deployed to assist police and fire and two more were at the TPW DOC ready for deployment.

Fire Marshal 2 arrived at the EOC at about 3:00 a.m. and became the Fire Branch Director. He was the senior person from SRFD in the EOC, but as a non-operational member of the Fire Department, he could not answer many questions that were raised.

3:00 a.m. Fire Chief Officer 3 was dispatched to Fountaingrove to try to gain control of the fire in the area. By the time he arrived, the fire had already moved through and residents had evacuated, but there were still some unburned areas. He spent the next 24 hours going from fire to fire in the area, meeting up with fire crews to defend structures, and then moving on to the next hot spot. Engines, water tenders, and crews arrived in the area to fight the fires. Water pressure in the fire hydrants was an issue – sometime there was full pressure, sometimes partial pressure, and sometimes none at all. When they were out of water, the water tenders would leave to find water. Sometimes they came back and sometimes they went elsewhere.

The Finley Community Center reported that it was at maximum capacity. Later that night, the City opened other shelters at Elsie Allen High School and Cook Middle School. Sonoma County opened shelters at the Fairgrounds Pavilion and the Veteran’s Memorial Building. Several surrounding communities opened shelters, as did nonprofit and faith-based organizations.

Additionally, the Finley Community Center parking lot was completely full, causing traffic congestion on the adjacent main road and backing traffic up into the evacuation areas. SRPD Police Lieutenant 1 was afraid that people would abandon their cars, blocking the roads. As he later related, “I basically got on the radio and said, ‘I don’t care who does this, but somebody needs to start working traffic control to get this traffic jam moving.’” Police officers were dispatched to provide traffic control, waving vehicles to keep moving past the Finley Center; traffic started moving again. He felt bad that officers had to leave their evacuation of people to become traffic control, but he believed it was the right choice.

Fire Chief Officer 4 left the Solstice Senior Living Center and made his way to the Hilton Hotel, which had six to seven buildings in the complex. When he arrived, the restaurant and main building were fully involved, and two to three other buildings were on fire. There were two fire engines and crews present trying to knock the fire down. He scouted the fire and was deciding how to fight it when two people walked up. One was the hotel manager and the other a security guard. The manager had some paper in his hand. Fire Chief Officer 4 said, “Please tell me that’s your bed count.” The manager replied, “Yes, and we have 100% of our guests accounted for.” There was one couple standing to the side; the manager related that they were tourists who didn’t have a car. With only two engines and five firefighters and no lives at stake, after discussing the situation with the fire captains, Fire Chief Officer 4 told the manager that the hotel was too far gone, and they didn’t have the resources to save it. The manager left and as the security guard started to leave, Fire Chief Officer 4 told him to drop the tourists off at the shelter on his way home.

In the Coffey Park area, Fire Chief Officer 1 realized that no engines were coming to help. He could hear vehicles with loudspeakers going through the neighborhoods telling people to evacuate. Fire was everywhere. He developed a defense strategy to try to hold the fire north of Hopper Avenue and east of Coffey Lane.



Coming Together in Crisis – The Santa Rosa Story

A fire chief from another department who lived in Coffey Park appeared with burn victims that he had been evacuating in his personal vehicle. He told Fire Chief Officer 1 that there was another victim stuck between two houses. He had tried to get in and reach her, but the fire was too intense and he couldn't get to her.

Fire Chief Officer 1 told arriving fire engines to try and keep the fire north of Hopper Avenue and east of Coffey Lane, but immediately received reports that the fire had already jumped Hopper.

A major problem with this fire was that it wasn't just a "fire front" being fought. They also had to deal with fires started by embers as large as dinner plates flying up to one-half mile in front of the fire. This allowed the fire to hopscotch over and around the established defensive firelines.

Fire Chief Officer 1 then ordered the line to be held at Tuliptree Way and Mocha Lane, but as soon as he put out that directive, he received reports that the fire had already jumped Mocha Lane (3:04 a.m.). The fire kept moving quickly. He then set the lines at Barnes Road in the west, San Miguel Avenue in the south, and Coffey Lane in the east. Fire Chief Officer 7 arrived, and Fire Chief Officer 1 assigned him the San Miguel Avenue sector.

Initially, Fire Chief Officer 1 had seven or eight engines; he told them to use their "deck guns" (large monitors on top of the engines that could provide 1,000 gallon-per-minute water flow) to combat the flames. He told them to dowse everything to try and hold the line. As more engines arrived, he went to talk to them and looked behind the line and saw that there were houses on fire – the fire kept jumping the defense lines by embers being blown by the wind ("embercast").

The evacuation of Coffey Park took several hours while the fire engulfed many homes in minutes. SRPD worked valiantly to go door-to-door to tell residents to evacuate; many officers did this until they could barely see and breathe. Additionally, SRFD continued to fight the fire as best they could. In the end, five residents were unable to escape:

- One resident who was non-ambulatory and required a wheelchair was not able to evacuate from the residential care facility where she was residing.
- Another resident also did not have an opportunity to evacuate. She was found in an area farthest away from the front door, indicating she may have been trapped.
- One resident became separated from her family when she went back into the house to retrieve the family dog. She became trapped with the dog and could not get out safely.
- Another resident may have been asleep when the fire took her house. Neighbors pounded on her door to get her attention but could not do so and could not find a way into the house.
- SRPD was notified in the early morning hours that another resident could not be reached by her husband, who was out of town. They attempted to find her but could not get to her residence because a majority of the houses on the street were already engulfed by the fire by that time.

3:03 a.m. The fire jumped the railroad tracks at Barnes Road and Hopper Avenue and headed west.

3:13 a.m. The Finley Evacuation Center reported they were at maximum capacity.



Coming Together in Crisis – The Santa Rosa Story

3:15 a.m. The EOC started directing evacuees to Petaluma.

3:17 a.m. The City Manager, acting as Director of Emergency Services, issued a local proclamation of civil emergency. He also issued a mandatory evacuation order for certain areas of the city and imposed curfews in these areas.

New Vintage Church was reported on fire.

3:18 a.m. The EOC Operations Section held a briefing for the City Manager.

3:22 a.m. Police called for school buses to assist with evacuations in Fountaingrove.

3:22 a.m. The EOC issued an alert through SoCoAlert, Reverse 911, and Nixle for evacuations west of Highway 101 for Industrial Drive, Hopper Avenue, the Piner Place area, and Coffey Park. The message stated, "Evacuate now: fire conditions. Shelter at Finley and Veterans Memorial." The message did not include the areas to be evacuated.

3:24 a.m. The EOC lost power and phones. The emergency generator immediately started and there was no disruption to operations.

3:26 am: EOC issues mandatory evacuations in the Bennett Valley/Annadel area.

3:28 a.m. The EOC Operations Section called for police escort to help buses navigate Bicentennial Way and Fountaingrove area because of thick smoke.

SRFD administrative staff reported to the SRFD Administration Building that night and began answering phone calls from the public. They were the only people in the headquarters area until Tuesday, October 10. They slept at their desks and even brought children and pets to work to make sure they could be available. They logged over 2,000 phone calls and provided support to crews in the field.

3:36 a.m. The EOC repeated the 3:22 a.m. evacuation message.

3:39 a.m. CAL FIRE reported Calistoga Road as closed at Highway 12.

3:40 a.m. The EOC issued an alert through SoCoAlert, Reverse 911, and Nixle to evacuate the area bounded by Piner Road, Cleveland Avenue, Guerneville Road, and Coffey Lane. The message stated "Evacuate now. Fire danger. Finley and Veterans buildings open as shelters. Leave now."

3:41 a.m. Kaiser Permanente Santa Rosa Medical Center reported they were sheltering in place and not evacuating the hospital.

About the same time, dispatch reported there was a fire near the Kaiser Permanente Medical Center. Fire Chief Officer 2 directed Fire Chief Officer 5 to go. The Hospital Director had already decided to evacuate due to smoke in the hospital from a fire at the Journey's End Mobile Home Park next door. There were no fire resources in the area. A team of SRPD officers led by Police Lieutenant 2 were called to assist the evacuation.



Coming Together in Crisis – The Santa Rosa Story

Fire Chief Officer 5, Police Lieutenant 2, and the Hospital Director worked together and quickly developed an evacuation plan. The hospital “pulled off a miracle. They put multiple people into ambulances, patients into employees’ cars.”

3:43 a.m. Law mutual aid was reported to be on the way from Marin and Alameda Counties and the City of Petaluma.

3:49 a.m. The EOC directed evacuees to go to Rohnert Park and Petaluma.

The Kaiser Medical Center began evacuating.

Fire Chief Officer 5 believed that the hospital could only be lost if embers land on the roof, so he placed all the hospital engineering personnel on the roof with fire extinguishers and told them he would be back for them in the morning.

Fire Chief Officer 5 then checked on Journey’s End, where at least a quarter of the 160 mobile home coaches in the park were on fire. He pushed aggressively into the park to try to determine the exact situation, but exploding propane tanks forced him out. He knew that if the line of homes along the hospital boundary caught fire, that would directly threaten the hospital.

Fire Chief Officer 5 found a single fire engine and crew from a small rural volunteer fire department in the area. He ran up to them and laid out the plan: “Run out a hose, bust through this fence, go over the creek and through the next fence, and put water on the homes along the Kaiser hospital.” The single engine slowed the fire, but it was still moving.

After evacuating Kaiser Permanente Hospital, SRPD officers went to Journey’s End to help residents still in the park to evacuate. The fire had already destroyed parts of the neighborhood. Officers were able to evacuate some residents, but the smoke soon became so thick they couldn’t see or breathe. Evacuation efforts were called off because officers could not safely enter. Two residents of Journey’s End became victims of the fire.

- One victim was found within the frame of her bed, which indicates she may have been sleeping at the time.
- Another resident was trapped in her home when fire blocked the front and back doors of the home. She told her daughter she was trapped. Police officers were aware that she was still in her home, but they did not have the resources, nor could they see or breathe, to go back into the fire safely and search for her.

Fire Chief Officer 5 received a SRFD water tender about 5:00 a.m. and got the feeling that they could hold the line. In the end, the hospital was saved, but only 45 of the 160 coaches could be saved. Unfortunately, the fire also destroyed the underlying water and sewer lines, making the park uninhabitable.

3:53 a.m. The EOC repeated the 3:36 a.m. evacuation message.

3:57 a.m. More space for evacuees is reported at the Finley Center.

Throughout the night and early morning, firefighters continued arriving at the fire stations, often finding them empty of equipment and vehicles. Many used personal initiative to find



Coming Together in Crisis – The Santa Rosa Story

transportation, round up other firefighters, and literally drive into the fire. Command staff in the field would form teams, if possible, and loosely direct their actions (e.g., “Go to Coffey Park and help the evacuation,” or “Do what you can in Oakmont to save homes.”). Some firefighters never saw command staff or received direction from dispatch; they used their training and their initiative, and worked together as much as possible to save what they could.

Many fire crews simply went from one fire to another. They would stay in one area, and as they either knocked down a fire or were forced out of an area, they would find the next fire to fight. If there was no water available, they used their hand tools to attack the fire or pull flammable materials, such as fences and outdoor furniture, away from homes. Most crews were in constant action for 24-36 hours, often without food.

Some firefighters related that water pressure was an issue throughout the night. At times, water pressure was fine, but at other times it was low or non-existent. A number of crews described hooking up to hydrant that had no water pressure, then moving on to another area. When they came back later to the original hydrant, it often had pressure again.

Water Manager 1 never realized there was a lack of water. Early on, he asked fire representatives if they had water, who responded that the pressure was down, but they weren't out of water. Initially, they could not get their crews into the field, which kept them from having an immediate impact. “There're a lot of things you can do to increase water pressure if you can get out in the field.” They worked with fire and police to get escorted into the burned areas to shut off open water lines.

4:00 am: SRPD request 50 staff members from Marin to report to Command Post at Fairgrounds.

4:16 a.m. The EOC Operations Section requested “cell on wheels” (mobile cell towers) from Verizon, one to be placed at the EOC and one at Fire Station #3.

4:25 am: Request for a bus at the Sebastopol Evacuation Center.

4:26 a.m. The EOC Operations Section requested buses for Varenna at Fountaingrove (a senior facility) because 30 people were mobility-impaired and needed evacuation.

5:00 a.m. Fire Chief Officer 5 checked in with Fire Chief Officer 2 and was ordered to check out Fountaingrove and develop a perimeter defense plan. Initially, it was slow going because he only had three to four crews and they kept getting pushed back by the fire. Resources started to arrive, and he directed the crews to “anchor and hold.”

Eventually, Fire Chief Officer 5 had over 40 crews. Normally, that would be too large for one person to effectively manage, but due to the severity and swiftness of the fire, and the piecemeal manner in which fire resources arrived, he never had the breathing space to establish a tiered firefighting structure. He managed them through clear and simple instructions and Commander's Intent: He established the lines to hold; assigned crews to areas; directed them to let anything inside the area burn; gave guidance that they had to hold the line; and told them to execute appropriate independent action to execute the mission.



Coming Together in Crisis – The Santa Rosa Story

Police Lieutenant 2 and his crew of police officers were dispatched to the Oakmont senior living community for evacuation operations. By this time, there were officers from several other police departments who responded through mutual aid request. Approximately 30 officers went door-to-door to get people out.

Police Lieutenant 2 was then contacted by the Oakmont Gardens Residential Care facility for the elderly, many who were non-ambulatory or needed assistance. He and several police officers met up with some firefighters at this facility and literally carried or individually assisted each resident out of the building and into the buses. Because of traffic congestion, it took a long time for the City buses to arrive. After the residents were in buses and on their way, the evacuation team realized that their assistive devices (e.g., walkers, canes, wheelchairs) had been left behind. The team put the equipment onto a bus to follow the residents to the evacuation center.

Chief Officer 4 knew the situation was dire. He kept requesting resources from the UCP, but none were available.

The winds started to subside in the early morning.

A strike team from Berkeley arrived in the Coffey Park neighborhood, and the crews finally had the fire nailed down at about 5:00 a.m. when the wind died. Fire Chief Officer 1 remembers the moment that the flames went vertical as the wind dropped.

5:07 a.m. The Fire Department reported that their staging area is at FS #3, and Highway 116 to Sebastopol and Highway 37 to Napa are reported closed due to fire.

5:10 a.m. The EOC received a report that the evacuation of Varenna at Fountaingrove was complete.

5:15 a.m. Elsie Allen High School was opened as an evacuation shelter.

About this time, the winds finally subsided but the fires continued to burn.

5:18 a.m. Petaluma Community Center was reported as full and evacuees were directed to Elsie Allen High School.

5:23 a.m. Elsie Allen High School shelter was reported full.

5:39 a.m. A City bus was directed to Kaiser Rohnert Park with Kaiser evacuees; the EOC requested two to three more buses to do the same.

5:50 a.m. The K-Mart building and Ursuline campus (Roseland Collegiate Prep) were reported as destroyed.

5:55 a.m. The EOC received reports that the Nuns Fire was spreading into Annadel State Park east of Santa Rosa.



Coming Together in Crisis – The Santa Rosa Story

6:00 a.m. Firefighting resources started arriving to help Chief Officer 4 in the Fountaingrove area. Between the arrival of additional firefighting resources and the wind dropping, they were able to establish a line and keep the fire from spreading further south into the city.

6:08 a.m. First police mutual aid (eight Berkeley police and three Richmond police) arrived at the staging area.

6:11 a.m. The EOC made a second call for B-Shift to report as the EOC lacked staff.

6:14 a.m. The EOC received a report that Coddington Mobile Home Park needed evacuation.

6:32 a.m. The EOC received a report that the area near Range Avenue and Russell Avenue were evacuating.

7:04 a.m. The Logistics Section reported they were procuring portable toilets for the Finley Community Center.

7:14 a.m. Fire Chief Officer 1 drove through Coffey Park. He hadn't realized the scope of the fire – he saw boats on trailers burning in yards; the lot where the K-Mart had been; the Journey's End mobile home park; and up the hill at where the Hilton had stood. The devastation was almost overwhelming. Coffey Park had been a horrible experience and he didn't feel very heroic.

7:19 a.m. Request received at the EOC for stop signs at Marlow Road and Guerneville Road.

Fire Chief Officer 8 was on duty on Engine 6 and was assisting with an evacuation in Adobe Canyon. He heard on the radio that the fires had reached near where he lived. He called his wife and woke her up just in time, as the flames had already reached the home. She was able to rouse the kids, get the dog and cat, and escape in the car. He contacted a friend who was waiting for them a few miles away at the end of their road. But they never showed up.

Not knowing her situation, he kept fighting the fires in Adobe Canyon. The next day, he learned the family had met a sheriff's deputy who was evacuating others, and they were able to find shelter in the Mark West Springs Lodge, which survived the fire. He described himself as tired and beat up. He did not remember trying to contact his wife but found on his phone that he had called her 34 times.

7:22 a.m. The EOC conducted an update briefing: B-Shift will assume duties at 1:00 p.m. and A-Shift is to report back at 1:00 a.m.

7:52 a.m. Home Depot reported OK.

7:58 a.m. Police radio relayed an urgent need for officers at Russell Road and Range Avenue to evacuate an apartment complex.

8:01 a.m. 901 Russell Avenue large apartment fire reported.

8:08 a.m. Field-level evacuation began in Oakmont. Buses were staged at the Oakmont entrance.



Coming Together in Crisis – The Santa Rosa Story

8:20 a.m. Fire encroached on Maria Carrillo High School.

Sometime Monday morning, Fire Chief Officer 1 was assigned to an area that included Fountaingrove. Fire personnel were able to use the assistance of commercial water tenders that would find a water source, fill up, and then drive to where the engines were. Near the top of Hadley Hill, he found a number of lone engines and formed them into a task force. He had about 14 engines in the area in which he was working, and they spent the balance of the day moving and reacting to fires throughout the neighborhood.

9:00 a.m. With a better understanding of the impacts of the fire, the Finley Community Center transitioned from a bare-bones evacuation shelter (no food, cots, or other amenities) to an emergency shelter. Recreation and Parks Department staff set up cots while American Red Cross representatives worked to get equipment and other needed resources. They also started calling Recreation and Park employees to help staff the shelter.

10:00 a.m. Firefighter 1, who had the day off and was on a hunting trip, drove back to Santa Rosa to join Truck 1. He suggested that SRFD send a text directing all firefighters who were not already assigned to report to Station 10. Two showed up. He gathered them, found a 15-passenger van, and contacted fire dispatch, which had 300 pending calls. He and his crew started checking the pending calls for those that needed a response. They cleared most of them while identifying six that required dispatch to send a response.

10:16 a.m. The EOC issued an alert through SoCoAlert, Reverse 911, and Nixle. The message stated “Mandatory evacuation. All areas North of Montecito Boulevard from Brush Creek to Eastern city limits.”

10:23 a.m. The EOC repeated the 10:16 a.m. message.

10:46 a.m. The EOC issued an alert through SoCoAlert, Reverse 911, and Nixle. The message stated: “Mandatory evacuation of Rincon Valley, all areas North of Montecito from Brush Creek to the Eastern city limits, and all of the Oakmont area East of Melita due to the Tubbs Fire. Head West.”

10:55 a.m. The EOC repeated the 10:46 a.m. evacuation message.

11:03 a.m. The City issued an alert through SoCoAlert, Reverse 911, and Nixle. The message stated “Large Fire on White Oak Drive. Mandatory Evacuation. Highway 12 open for evacuation.”

11:05 a.m. The EOC sent out emergency information, which stated: “In an abundance of caution, if you have no or low water pressure, it is recommended that you boil your water before drinking. For more information call 707-543-4511 or go to SRCity.org/emergency.”

11:11 a.m. The EOC repeated the 11:03 a.m. message.

11:14 a.m. The EOC repeated the 11:05 a.m. message.

12:00 p.m. PG&E reported that over 17,000 customers are without power in Sonoma County.



Coming Together in Crisis – The Santa Rosa Story

Monday afternoon, October 9. The UCP formalized the geographic areas established earlier, referred to as Branches, with a chief officer assigned as a Branch Director for each. This solidified the organizational configuration for fighting the fires in Santa Rosa and clarified the command structure, enabling more efficient use of resources.

The Care and Shelter Unit in the EOC helped coordinate the opening of shelters at Elsie Allen High School and Cook Middle School. The Recreation and Parks Department staff supporting the EOC found volunteers to manage and staff the two shelters; these included some Recreation and Parks employees, employees from the schools serving as shelters, and a few volunteers from the community. In the coming days, several more shelters would open, managed by members of the community (e.g., churches). Rec & Parks staff worked to provide any informational support these “pop-up” shelters needed.

The shelter at Cook Middle School closed on October 15 and the Elsie Allen High School shelter closed on October 16. The Finley Center shelter remained open until November 9. The American Red Cross fully supported operations at Finley Center until November 1. Catholic Charities took over operations on November 1 to assist with the homeless population that remained.

At some point during the day, Fire Chief Officer 1 was in Happy Valley in his Fire Department SUV and was watching the fire roll down the hill – there were vegetation fires and homes burning here and there. He was alone and there were no fire resources to send to the area. There were people still in the neighborhood and they were angry that nothing was being done to save their homes.

5:22 p.m. CAL FIRE established the Central LNU Complex to coordinate fire management in Sonoma, Lake, and Napa counties.

5:39 p.m. The EOC submitted the first Emergency Management Mutual Aid (EMMA) staffing request through the Sonoma County EOC to Cal OES. Positions requested were a Deputy Logistics Chief, a Deputy PIO, an EOC Coordinator, and a Care and Shelter Branch Director.

6:00 p.m. The CAL FIRE IMT established the UCP at the Sonoma County Fairgrounds to oversee the Tubbs Fire response.

7:00 p.m. An Office of Community Engagement employee arrived for the night shift at the EOC. Although she had not received any training, she filled a position for someone who was unavailable. “I showed up, was assigned, and figured it out as I went along,” she stated.

TUESDAY, OCTOBER 10, 2017

President Trump approved a Major Disaster Declaration for California due to wildfires.

Tuesday morning:

- Water Department crews repaired the City’s reservoirs. As they drove through the city, if they saw water running from open pipes, crews stopped and closed the valves.
- SRPD established a DOC at police headquarters.
- Fire resources began pouring into Santa Rosa, and Fire Chief Officer 1 was assigned as a second Battalion Chief to respond to fires within Santa Rosa. This allowed SRFD personnel to be fed, and equipment to be fueled and maintained.



Coming Together in Crisis – The Santa Rosa Story

- “Boil water advisory” was issued for Fountaingrove area residents.
- Mutual aid staff began first shift.

7:02 a.m. The EOC issued an alert through SoCoAlert, Reverse 911, and Nixle. Message stated: “Fire moving from Southwest into Oakmont. Evacuate now.”

7:11 a.m. Repeat of the 7:02 a.m. message.

2:14 p.m. The EOC issued an alert through SoCoAlert, Reverse 911, and Nixle. The message stated: “Nuns Fire is rapidly approaching Oakmont. Oakmont is still under mandatory evacuation. All residents must leave now.”

2:24 p.m. Repeat of the 2:14 p.m. message.

A Town Hall meeting was held in Santa Rosa Tuesday evening. CAL FIRE representatives said there is a potential of 3,000 structures lost in the Tubbs and the Atlas Fires.

WEDNESDAY, OCTOBER 11, 2017

The initial quantitative private property damage assessment began.

SRFD crews returned to their fire stations while mutual aid crews conducted firefighting operations.

Fire Chief Officer 2 dispatched Fire Chief Officer 4 to Bennett Valley in case fire approached. Even though it was in the area managed by CAL FIRE in Napa, he was directed to request resources from SRFD because they would get there more quickly.

5:00 p.m. A news briefing was held at the Sonoma County Fairgrounds. CAL FIRE, Sonoma County, City of Santa Rosa, and state and federal representatives were present.

THURSDAY, OCTOBER 12, 2017

SRFD crews were back to normal operations.

FRIDAY, OCTOBER 13, 2017

The County/City Joint Information Center (JIC) officially opened at the Fairgrounds.

There was a spot fire north of Oakmont that was contained during the day, however, it grew rapidly in size overnight. The fire threatened the Oakmont community and was moving quickly to the west threatening the Los Alamos Road area and Mountain Hawk neighborhood.

At the end of the week, the mandatory evacuation orders were still in place, and CAL FIRE was not yet able to assess the area in order to lift the evacuation order. Because the CAL FIRE IMT had assumed command of the Tubbs and Nuns Fires, they controlled access to the evacuated areas. This prevented residents from returning to their homes, including many that were in areas that were not affected or were no longer threatened by any fire.



Coming Together in Crisis – The Santa Rosa Story

Residents were eager to get back in their homes, especially in undamaged neighborhoods that were still inside the evacuation areas. Residents sneaked into the neighborhoods, avoiding the entry control checkpoints by going down creek beds and over fences.

Police Lieutenant 1 developed a plan to allow repopulation of the undamaged neighborhoods, while a group of staff in the EOC, led by TPW 1 and including Police Lieutenant 3, developed a reentry plan to be executed on October 20 and 21. These processes were distinct: one for repopulation of neighborhoods where homes were unharmed, and another for reentry to neighborhoods that had been devastated.

SATURDAY, OCTOBER 14, 2017

4:52 a.m. The City issued an alert through SoCoAlert, Reverse 911, and Nixle for a mandatory evacuation East of Calistoga Road and North of Melita Road.

CAL FIRE issued additional evacuation orders for 400 homes in Sonoma Valley, including Oakmont Retirement Community, due to a high wind advisory.

A Local Assistance Center (LAC) opened at 427 Mendocino Avenue, Santa Rosa.

SUNDAY, OCTOBER 15, 2017

Cook Middle School shelter closed.

MONDAY, OCTOBER 16, 2017

Elsie Allen High School shelter closed.

Repopulation began for areas that were not damaged by fire. Police Lieutenant 1 organized a group of police officers with good people skills, and they went into the off-limits but intact neighborhoods. They went house-to-house, verified identities and issued passes to the residents so they could get through the checkpoints. Residents outside the evacuation areas could go to police headquarters, present identification, and receive a pass to get through the checkpoints.

No official announcements of this program were made, but the information quickly spread through word of mouth, and soon most people were back in the homes in these neighborhoods.

TUESDAY, OCTOBER 17, 2017

The City EOC moved from 24-hour operations to one 12-hour shift per day (7:00 a.m. to 7:00 p.m.). Many leaders, including the EOC Director, Section Chiefs, and the PIO, still worked from 5:00 a.m. to 11:00 p.m. daily.

Police Lieutenant 1 managed the execution of the reentry plan. Once the mandatory evacuation order was lifted, the goal was to ensure only residents were allowed back in “so they have protected time to assess and grieve” (City of Santa Rosa announcement on Nextdoor, October 20, 2017).



Coming Together in Crisis – The Santa Rosa Story

The police department established two check-in locations, one in the Kohl's parking lot and the other in the parking lot at Round Barn Boulevard and Centrum Place. The check-in locations were set up with cones, similar to a DUI checkpoint. A police officer would confirm that occupants of the vehicle were in fact residents of the neighborhood using valid forms of identification such as a driver's license or verification through data systems such as the National Crime Information Center. Once a passes for residents were issued, they received a bucket with safety and cleaning materials (e.g., gloves, brush, masks, and informational guidelines) and were sent on their way to one of the neighborhood entry points.

FRIDAY, OCTOBER 20, 2017

Coffey Park, Orchard Park, and Journey's End controlled reentry operations began and continued until October 29.

SATURDAY OCTOBER 21, 2017

Fountaingrove controlled reentry operations began and continued until October 29.

FRIDAY OCTOBER 27, 2017

CAL FIRE Incident Command Post closed.

MONDAY, OCTOBER 30, 2017

Nuns Fire was declared 100% contained by CAL FIRE.

TUESDAY, OCTOBER 31, 2017

Tubbs Fire was declared 100% contained by CAL FIRE.

City of Santa Rosa demobilized the EOC.

FEMA closed the incident period.

THURSDAY, NOVEMBER 9, 2017

The final City-operated emergency shelter at Finley Community Center closed. It reopened for regular operations on November 13.

Evidence of erosion due to rainwater runoff was seen in some Fountaingrove neighborhoods.

Water Department deployed ten CCTV-equipped teams to assess the storm drains in Fountaingrove.

FRIDAY, NOVEMBER 10, 2017



Coming Together in Crisis – The Santa Rosa Story

With rain now falling, some sinkholes in the Fountaingrove neighborhood started to appear. Water Department crews investigated and realized some of the storm drain pipes made from high-density polyethylene (HDPE) had been compromised by the extreme heat of the fire. In some places the pipes had disintegrated, in other places holes had developed. Evidence of erosion due to rainwater runoff was seen in some Fountaingrove neighborhoods.

Water Department DOC was activated to support storm drain infrastructure assessments in Fountaingrove.

Contaminants were found in some drinking water, and the Water Department issued a “no drink/no boil water advisory” to 13 homes in Fountaingrove.

SATURDAY, NOVEMBER 11, 2017

The City EOC was activated to support the Water Department DOC.

Storm drain assessments continued; 14 areas were prioritized for team deployments.

TUESDAY, NOVEMBER 14, 2017

90-95 percent of the Fountaingrove storm drain system had been assessed and areas of concern addressed.

Teams assessing storm drains began reassignment to Coffey Park.

WEDNESDAY, NOVEMBER 15, 2017

None of the Coffey Park storm drain system had been assessed.

Sinkhole was discovered at Dafford Place.

WEDNESDAY, NOVEMBER 22, 2017

City of Santa Rosa demobilized the EOC.

FEBRUARY 26, 2018

Governor’s Office of Emergency Services released report titled “Public Alert and Warning Program Assessment for Sonoma County.”

JUNE 2018

Sonoma County released its “Emergency Operations Center After Action Report and Improvement Plan.”

JUNE 11, 2018

Sonoma County released its “Assessment Report: Community Alert and Warning.”



Coming Together in Crisis – The Santa Rosa Story

Sonoma County released its “Assessment Report: Emergency Management Program.”

JUNE 20, 2018

Sonoma County Civil Grand Jury issued “Report 5-31: CSD Fire Emergency Response.”

Sonoma County issued the first Certificate of Occupancy for a home rebuilt after being destroyed in the 2017 fires.

AUGUST 29, 2018

City of Santa Rosa released its “Evaluation of the Water System’s Response in Fountaingrove to the October 2017 Fire.”

SEPTEMBER 6, 2018

California Department of Social Services moved to revoke licenses of Villa Capri and the Varenna at Fountaingrove.

OCTOBER 17, 2018

City of Santa Rosa Fire Department conducted first public meeting on public alert and warning systems at the Finley Community Center.



APPENDIX C: INDIVIDUALS WHO PARTICIPATED IN FORMAL INTERVIEWS

Position	Name
City Council	
Mayor	Chris Coursey
Council member	Julie Combs
Council member	Ernesto Olivares
Council member	Chris Rogers
Council member	Tom Schwedhelm
Council member	Jack Tibbetts
City Manager's Office	
City Manager	Sean McGlynn
Deputy City Manager	Gloria Hurtado
Communications/Intergovernmental Relations/PIO	Adriane Mertens
City Attorney's Office (CAO)	
Assistant City Attorney	Adam Abel
Assistant City Attorney	John Fritsch
City Clerk's Office	
City Clerk	Daisy Gomez
Deputy City Clerk	Stephanie Williams
Fire Department	
Chief	Tony Gossner
Deputy Fire Chief	Scott Westrope
Emergency Preparedness Coordinator	Neil Bregman



Coming Together in Crisis – The Santa Rosa Story

Position	Name
Fire Marshal	Scott Moon
Assistant Fire Marshal / Fire PIO	Paul Lowenthal
Assistant Fire Marshal	Ian Hardage
Fire Inspector	Kemplen Robbins
Battalion Chief A-Shift	Matt Dahl
Battalion Chief B-Shift	Mark Basque
Battalion Chief B-Shift	Ken Sebastiani
Battalion Chief - Support Services Division	Jason Jenkins
Battalion Chief - Training & Safety Division	Travers Collins
Captain - Training Division	Mike McCallum
Captain - Training Division	Steve Suter
Engine 2/A	Scott Bristow, Jeff Peterson, Albert Armanini
Engine 5/B	Don Ricci, Ian Hodges, Patrick Bradley
Engine 11/B	Keenan Lee, Chad Goff, Josh Gagnebin
Engine 3/C	Doug Dahme, Drew Peterson, Matthew Gloeckner
Engine 8/C	Tony Camilleri, Brian White
Engine 10/C	Ray Spradlin, Mel Taua, Jim Ritchie
Truck 1/B	Kyle Bunch, Michael Musgrove, Jeff Brown, Alex Serrano
Truck 1/C	Matt Cox, Johnny Miu, Frank Damante
Truck 2/A	Mike MaGahan, Cameron Cornelssen, Brian Buchanan, Guerrero Lopez



Coming Together in Crisis – The Santa Rosa Story

Police Department	
Chief	Robert "Hank" Schreeder
Captain	Rainer Navarro
Captain	Craig Schwartz
Lieutenant	John Snetsinger
Lieutenant	Rick Kohut
Office of Community Engagement (OCE)	
Director	Caluha Barnes
Community Engagement Coordinator	Nicole Ronshausen
Community Outreach Coordinator	Julie Garen
Administrative Analyst	Nicole Rathbun
Finance	
Deputy Director	Alan Alton
Purchasing Agent	Brandalyn Tramel
Housing and Community Services (HCS)	
Director	David Gouin
Deputy Director	Carmelita Howard
Human Resources (HR)	
Risk Manager	Dominique Kurihara
Information Technology (IT)	
IT Supervisor / GIS Manager	Dennis Shakespeare
Application Services Manager	Brian Tickner



Coming Together in Crisis – The Santa Rosa Story

Planning and Economic Development (PED)	
Director	David Guhin
Deputy Director	Clare Hartmann
Admin Assistant / Document Lead for Planning & Finance in EOC	Patti Pacheco Gregg
Economic Development Manager	Raissa De la Rosa
Recreation and Parks	
Director (Acting)	Jason Nutt
Deputy Director / Finley	Kelley Magnuson
Deputy Director / EOC Logs Chief	Jen Santos
Recreation Supervisor / EOC Care & Shelter Unit	Don Hicks
Recreation Supervisor / Lead at Finley	Rob Beal
Administrative Services Officer / EOC support	Jason Parrish
Research and Program Coordinator / EOC support	Terri Bladow
Transportation and Public Works (TPW)	
Director / EOC	Jason Nutt
Deputy Director / TPW DOC	Steve Kroeck
Deputy Director / EOC	Rob Sprinkle
Street Maintenance Supervisor / TPW DOC	Jeremy Gundy
Fleet Superintendent	Zac Brand
Transit Superintendent	Steve Roaraus
Administrative Services Officer / DOC support	Renee Young



Coming Together in Crisis – The Santa Rosa Story

Water Department	
Director	Ben Horenstein
Deputy Director Water & Engineering Resources	Jennifer Burke
Deputy Director Water Operations	Joe Schiavone

APPENDIX D: JOINT POWERS AUTHORITY FORMATION TO SUPPORT LOCAL VEGETATION MANAGEMENT IN THE NORTH BAY REGION

As more attention is focused on the effects of wildland fire suppression and fuels management, top-down demands for vegetation management threaten local control over these issues. California is a collection of micro-geographies or regions with unique climates, weather patterns, topography, vegetation, and population densities. Not only are these regions unique unto themselves, there are interdependencies requiring regional solutions.

The California Constitution and the Government Code respectively provide solutions that encourage both local control and regional solutions. Examples include regional emergency medical services authorities implementing prehospital care regulations, regional public safety dispatch entities dispatching law enforcement and/or fire resources for multiple jurisdictions, and regional vegetation management in watersheds that cross multiple jurisdictions to address flooding and levee maintenance.

This paper explores the conditions of Wildland Urban Interface (WUI) and a regional approach to vegetation management for fire protection that is locally controlled. It explores the options for regional governance, the use of governmental devices to match the needs of vegetation management to the natural topography, and complementary services that could enhance the agency's effectiveness in related areas to provide a complete solution. **Wildland Urban Interface Fires**

Much has been written about the Wildland Urban Interface (WUI) by fire professionals, where the built environment is no longer relegated to urban population centers. Instead, some people move away from commonly established urban population centers that are flat, simply developed areas and into the wildland. Some of this is driven by the need for additional housing options near population centers and jobs. It also is a result of people willing to pay higher costs for rural homesteads.

The East Bay Hills Fire of 1991 was, at the time of a US Fire Administration after action report, the largest dollar fire loss in United States history and prompted reforms in fire suppression and emergency management, embodied in the Standardized Emergency Management System (SEMS). Codified into Section 8607 et seq. of the California Government Code and Title 19 of the California Code of Regulations, SEMS required, among other things, changes in firefighting equipment. It did not fundamentally change any of the requirements regarding defensible space and did not address any of the historic urban design issues such as the density of housing, proliferation of non-native species such as eucalyptus, or problems with road system design.

Vegetation management continues to be significant issue today.

Collaborative Government. Counties, cities, a city and county (consolidated government), special districts, and joint powers authorities (JPAs) are all recognized as local governments in California. With 58 counties, 482 incorporated towns and cities, 4,500 school and special



Coming Together in Crisis – The Santa Rosa Story

districts, and more than 1,800 JPAs, California offers many options for people to organize and tax themselves in order to provide a publicly-funded service. This provides unique tools not found in every state that allow for governmental collaboration to help increase service delivery and reduce cost.

Joint Powers Authorities. The following is a summary¹⁹ of JPAs, their legal foundation, and their basic construct.

Joint Powers Authorities are legally created entities that allow two or more public agencies to jointly exercise common powers. Forming such entities may not only provide a creative approach to the provision of public services, but also permits public agencies with the means to provide services more efficiently and in a cost-effective manner.

The Joint Exercise of Powers Act, as codified in California Government Code section 6500, governs JPAs. Under the Act, JPAs are restricted to use by public agencies only. However, the term public agency is defined very broadly. A public agency can include, but is not limited to, the federal government, the state or state department, mutual water companies, public districts and recognized Indian tribes.

The Act authorizes two kinds of JPA arrangements. The first allows two or more public agencies to contract to jointly exercise common powers. The second allows two or more public agencies to form a separate legal entity. This new entity has independent legal rights, including the ability to enter into contracts, hold property and sue or be sued. Forming a separate entity can be beneficial because the debts, liabilities and obligations of the JPA belong to that entity, not the contracting parties.

To enter into a JPA (either to jointly exercise common powers or to form a separate legal entity), the public agencies must enter into an agreement. This agreement must state both the powers of the JPA and the manner in which it will be exercised. The governing bodies of all the contracting public agencies must approve the agreement.

A 2007 Senate Local Government Committee Report noted that JPAs have played an increased role in California's governmental services, with more than 1,800 JPAs and counting. Thus, a JPA arrangement could be an advantageous avenue for public agencies when exploring better ways to provide public services.

¹⁹ This article originally appeared on the now-defunct BBKnowledge blog, where Best Best & Krieger authors shared their knowledge on emerging issues in public agency law. Content downloaded on 1/19/19: <https://www.bbklaw.com/news-events/insights/2016/authored-articles/01/the-ins-and-outs-of-joint-powers-authorities-in-ca>



Coming Together in Crisis – The Santa Rosa Story

Identification of Logical Regions. A fundamental challenge for local government is determining what services to provide and how to pay for it. The economic foundation of a community, its proximity to urban centers and transportation routes, perceptions of desirability, and the fundamental cost of adapting the built environment to the environment, drive the relative cost of living in that area.

County Service Areas – Given that existing subdivisions of the state do not perfectly establish boundaries that coincide with logical boundaries that might drive the need for a public service, creative solutions have to be employed. Many counties use County Service Areas (CSAs) to divide parcels into logical groupings in order to provide a fee assessment area for special services. CSAs can be further subdivided into Zones.

Pragmatic Identification of Areas for Vegetation Management – Sensible vegetation management requires a pragmatic approach to matching areas that need proper vegetation management to the natural topography. Foresters and forest ecologists could support mapping efforts to delineate areas requiring not only proper fire management, but also flood management, since these same environments can suffer from more than one disaster threat.

A Potential Solution. JPAs are a potential solution for vegetation management. The question for North Coast jurisdictions concerned about vegetation management as it pertains to fire protection is how to structure that activity. SRA boundaries are a good starting point for defining territory needing local involvement in vegetation management. It may be that if Sonoma County was a central hub, there may be more than one logical JPA due to different topographical conditions. Some communities in California have already formed JPAs for vegetation management related to flood control. These activities could be combined for a comprehensive approach to vegetation management across multiple threats.



APPENDIX E: UNIFIED SAN DIEGO COUNTY EMERGENCY SERVICES AGREEMENT

IF PUBLIC, PROPOSE INCLUDING WORD VERSION OF THE SAN DIEGO COUNTY DOCUMENT HERE.



APPENDIX F: ACRONYMS & DEFINITIONS

AAR	After Action Report
BC	Battalion Chief
CAD	Computer Aided Dispatch
CAL FIRE	California Department of Forestry and Fire Protection
Cal OES	California Governor’s Office of Emergency Services
DOC	Departmental Operations Center
EOC	Emergency Operations Center
EPC	Emergency Preparedness Coordinator
FS	Fire Station
IMT	Incident Management Team
LNU	Sonoma-Lake-Napa-Unit
PIO	Public Information Officer
SRFD	Santa Rosa Fire Department
SRPD	Santa Rosa Police Department
TPW	Transportation and Public Works
UCP	Unified Command Post

Chief Officer (SRFD): One of seven command-level officers, consisting of the fire chief, the deputy fire chief and five battalion chiefs. Ranks in the Santa Rosa Fire Department below the chief officers are captain, engineer and firefighter.

Engine Strike Team: An engine strike team consists of five fire engines of the same type and a lead vehicle. There are three or four personnel on each engine and one or two personnel in the lead vehicle. The strike team leader is usually a captain or a battalion chief.

Full-Scale Exercises (FSE): A full-scale exercise is a multi-agency, multi-jurisdictional, multi-discipline exercise involving functional (e.g., joint field office, emergency operation centers, etc.) and “boots on the ground” response (e.g., firefighters decontaminating mock victims).



Coming Together in Crisis – The Santa Rosa Story

Functional Exercise (FE): A functional exercise examines and/or validates the coordination, command, and control between various multi-agency coordination centers (e.g., emergency operation center, joint field office, etc.). A functional exercise does not involve any “boots on the ground” (i.e., first responders or emergency officials responding to an incident in real time).

Fully Involved: Firefighting term of size up (initial evaluation) meaning fire, heat, and smoke in a structure are so widespread that internal access must wait until fire streams can be applied. (<http://www.translationdirectory.com/glossaries/glossary093.htm>)

Fire Engine: A fire engine, also known as a fire pumper, carries: thousands of feet of fire hose, nozzles, hose couplings, and other equipment. It also carries 500 gallons of water in a tank for a quick attack on a fire which is critical to fire control until they can establish a dedicated water supply from a fire hydrant. (City of Alameda <https://alamedaca.gov/fire/faq/257>)

Fire Truck: A fire truck, also known as a ladder truck, carries: multiple ground ladders of varying length and purpose; an aerial ladder used to reach upper floors of buildings; rescue equipment for forcible entry, extrication, etc.; numerous power tools such as chain saws, ventilation fans, and lighting equipment. (City of Alameda <https://alamedaca.gov/fire/faq/257>)

Incident Command Post (ICP): The field location at which the primary tactical-level, on-scene incident command functions are performed. (<https://training.fema.gov/emiweb/is/icsresource/assets/icsglossary.pdf>)

Incident Management Team (IMT): The Incident Commander and appropriate Command and General Staff personnel assigned to an incident. In the United States, there are predominantly five types of incident management teams (IMTs). (<https://training.fema.gov/emiweb/is/icsresource/assets/icsglossary.pdf>)

1. **Type 5: Local Village and Township Level** – a "pool" of primarily fire officers from several neighboring departments trained to serve in Command and General Staff positions during the first 6–12 hours of a major or complex incident.
2. **Type 4: City, County, or Fire District Level** – a designated team of fire, EMS, and possibly law enforcement officers from a larger and generally more populated area, typically within a single jurisdiction (city or county), activated when necessary to manage a major or complex incident during the first 6–12 hours and possibly transition to a Type 3 IMT.
3. **Type 3: State or Metropolitan Area Level** – a standing team of trained personnel from different departments, organizations, agencies, and jurisdictions within a state or DHS Urban Area Security Initiative (UASI) region, activated to support incident management at incidents that extend beyond one operational period. Type 3 IMTs will respond throughout the state or large portions of the state, depending upon State-specific laws, policies, and regulations.
4. **Type 2: National and State Level** – a federally- or state-certified team; has less training, staffing and experience than Type 1 IMTs, and is typically used on smaller scale national or state incidents. There are 35 Type 2 IMTs currently in existence, and operate through interagency cooperation of federal, state, and local land and emergency management agencies.
5. **Type 1: National and State Level** – a federally- or state-certified team; is the most robust IMT with the most training and experience. 16 Type 1 IMTs are now in existence,



Coming Together in Crisis – The Santa Rosa Story

and operate through interagency cooperation of federal, state, and local land and emergency management agencies.

Red Flag Warning: A term used by fire-weather forecasters to call attention to limited weather conditions of particular importance that may result in extreme burning conditions. It is issued when it is an ongoing event or the fire weather forecaster has a high degree of confidence that Red Flag criteria will occur within 24 hours of issuance. Red Flag criteria occur whenever a geographical area has been in a dry spell for a week or two, or for a shorter period, if before spring green-up or after fall color, and the National Fire Danger Rating System (NFDRS) is high to extreme and the following forecast weather parameters are forecasted to be met:

1. a sustained wind average 15 mph or greater;
2. relative humidity less than or equal to 25 percent; and
3. a temperature of greater than 75 degrees F.

In some states, dry lightning and unstable air are criteria. A Fire Weather Watch may be issued prior to the Red Flag Warning. (National Weather Service Glossary)

Strike Team: An *engine strike team* consists of five fire engines of the same type and a lead vehicle. There are three or four personnel on each engine and one or two personnel in the lead vehicle. The strike team leader is usually a captain or a battalion chief. (CAL FIRE)

Task Force: Any combination of single resources assembled to accomplish a specific mission. Task forces have a designated leader and operate under common communications. (ok.gov)

Unified Command: An application of ICS used when there is more than one agency with incident jurisdiction or when incidents cross political jurisdictions. Agencies work together through the designated members of the Unified Command, often the senior person from agencies and/or disciplines participating in the Unified Command, to establish a common set of objectives and strategies and a single Incident Action Plan.

<https://training.fema.gov/emiweb/is/icsresource/assets/icsglossary.pdf>

Unified Command Post (UCP): The field location at which the primary tactical-level, on-scene incident command functions are performed for a unified command.

Upstaffing: The practice of increasing staffing during certain conditions, usually by activating additional personnel to operate reserve fire equipment.



REFERENCES

Black and Veatch, "Evaluation of the Water System's Response in Fountaingrove to the October 2017 Fire," August 29, 2018.

City of Santa Rosa, "City of Santa Rosa Action Plan, Fountaingrove Stormdrains Emergency Assessment," November 12, 2017.

City of Santa Rosa, "City of Santa Rosa Action Plan, Fountaingrove Stormdrains Emergency Assessment," November 13, 2017.

City of Santa Rosa, "City of Santa Rosa Action Plan, Fountaingrove Stormdrains Emergency Assessment," November 14, 2017.

City of Santa Rosa, "City of Santa Rosa Action Plan, Fountaingrove Stormdrains Emergency Assessment," November 15, 2017.

City of Santa Rosa, "City of Santa Rosa Action Plan, Fountaingrove Stormdrains Emergency Assessment," November 16, 2017.

City of Santa Rosa, "City of Santa Rosa Action Plan, Tubbs and Adobe Fires, 1600-2400," October 11, 2017.

City of Santa Rosa, "City of Santa Rosa Action Plan, Tubbs and Adobe Fires, 0700-1900," October 14, 2017.

City of Santa Rosa, "City of Santa Rosa Action Plan, Tubbs and Adobe Fires, 1900-0700," October 14, 2017.

City of Santa Rosa, "City of Santa Rosa Action Plan, Tubbs and Adobe Fires, 0700-1900," October 15, 2017.

City of Santa Rosa, "City of Santa Rosa Action Plan, Tubbs and Adobe Fires, 1900-0700," October 15, 2017.

City of Santa Rosa, "City of Santa Rosa Action Plan, Tubbs and Adobe Fires," October 17, 2017.

City of Santa Rosa, "City of Santa Rosa Action Plan, Tubbs and Adobe Fires," October 18, 2017.

City of Santa Rosa, "City of Santa Rosa Action Plan, Tubbs and Adobe Fires," October 19, 2017.

City of Santa Rosa, "City of Santa Rosa Action Plan, Tubbs and Adobe Fires," October 20, 2017.

City of Santa Rosa, "City of Santa Rosa Action Plan, Tubbs and Adobe Fires," October 21, 2017.

City of Santa Rosa, "City of Santa Rosa Action Plan, Tubbs and Adobe Fires," October 22, 2017.

City of Santa Rosa, "Emergency Operations Plan – Part I (Base Plan)," June 2017



Coming Together in Crisis – The Santa Rosa Story

City of Santa Rosa, “Emergency Operations Plan, Part II: Hazard Annexes, Wildfire,” August 2017.

City of Santa Rosa, “Emergency Operations Plan, Part III: Functional Annexes, Mass Care and Shelter,” June 2017.

County of Sonoma, “October 2017 Complex Fires, Emergency Operations Center After Action Report and Improvement Plan,” June 2018.

County of Sonoma, “Assessment Report: Alert and Warning,” June 11, 2018.

County of Sonoma, “Assessment Report: Emergency Management Program,” June 11, 2018.

Governor’s Office of Emergency Services “Public Alert and Warning Program Assessment for Sonoma County,” February 26, 2018.

Kelle Kroll Group, “City of Santa Rosa Emergency Operations Center, October 2017 Tubbs/Nuns Fires After Action Report and Improvement Plan,” draft report dated May 2018.

Mass, Clifford F. and David Ovens “The Northern California Wildfires of October 8-9, 2017: The Role of a Major Downslope Wind Event,” Department of Atmospheric Sciences, University of Washington.

Santa Rosa Fire Department, Memorandum, “Summary of Fire Department Operational Enhancements October 2017 – October 2018,” October 18, 2018.

Santa Rosa Fire Department, “Policy 101, Emergency Recall.”

Santa Rosa Fire Department, Special Notice, “Fire Season Operational Guidelines,” June 6, 2018.

Santa Rosa Fire Department, Special Notice, “Response Assignments in CAD,” November 19, 2016.

Santa Rosa Fire Department, Standard Operating Procedures, “Procedure 6.5.1 Wildland Fire Response,” May 1, 2012.

Santa Rosa Fire Department, Standard Operating Procedures, “Procedure 6.8.2 Pre-Designated Strike Team / Task Force / Single Resource Assignment,” May 1, 2011.

Santa Rosa Water Department, “After Action Report, Consolidated Feedback,” October 25, 2017.

Sonoma County Civil Grand Jury, “2017-2018 Final Report,” June 20, 2018.