

December 2014

# South Napa Earthquake

## AFTER ACTION REPORT







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# EXECUTIVE SUMMARY

On Sunday, August 24, 2014, at 3:20 a.m., a magnitude 6.0 earthquake struck South Napa County. The epicenter was located approximately 4.2 miles northwest of American Canyon along the West Napa Fault. This was the largest earthquake to strike the San Francisco Bay Area since the 1989 Loma Prieta earthquake. The damage from this earthquake is estimated at \$362.4 million.

The South Napa earthquake claimed the life of 1 victim and injured nearly 200 people. American Red Cross shelters opened to provide emergency assistance and disaster relief services to the residents of the County.

Several public facilities and critical infrastructure were significantly damaged, resulting in the temporary closure of several County businesses and government services. Many of the occupants of the facilities were forced to relocate in order to provide critical County services. The residents in the County are still experiencing degraded housing, relocation, job loss, economic impacts, and emotional and mental health impacts. Overall, the whole community is facing a long-term recovery effort with significant stress on community resources and personnel.

As a result of the South Napa earthquake, County officials have chosen to develop this after action report (AAR). An AAR is an extremely valuable means to identify best practices, resource gaps, lessons learned, and opportunities for improvement. As a first step in the development of this AAR, County staff participated in a hotwash, which is a discussion and evaluation of the County's performance during the South Napa earthquake response and recovery efforts. The format for the hotwash included a general discussion and eight breakout groups to obtain focused feedback on the strengths and areas for improvement the County staff observed during response and recovery operations. A series of stakeholder interviews was conducted after the hotwash to augment the information obtained during the hotwash.

This AAR is composed of four sections: preparedness activities, response activities, recovery activities, and general activities. Each section begins with an overview statement and concludes with key recommendations for the strengths and areas for improvement identified in the section. Within each section, specific strengths and areas for improvement are documented and analysis is provided for each area for improvement.

## OVERARCHING STRENGTHS AND AREAS FOR IMPROVEMENT

To identify the strengths and areas for improvements after the South Napa earthquake, key members of County staff reviewed all aspects of the County's preparedness for, immediate response to, and initial recovery efforts. This team analyzed a wide variety of data and supporting information from the County and whole community partners.

Listed below are the overarching strengths and areas for improvement identified during the response and recovery from the South Napa earthquake.

### Overall Key Strengths

The following key strengths were identified:

- **Initial Response:** County staff and stakeholders were able to quickly alert, mobilize, and coordinate personnel. Additionally, several County staff mobilized and self-deployed to the emergency operations





center (EOC). Personnel responded based on their training, job responsibilities, and ownership of positions.

- **Cohesiveness:** County staff functioned as a cohesive team and adapted to changing circumstances well during response operations. The development of solid management goals early in the incident by EOC command staff provided guidance and direction to EOC staff. These goals enabled EOC staff to focus their attention and guide their overall response activities. County staff established communication with the Board of Supervisors swiftly, which provided good situational awareness and a cohesive leadership structure.
- **Continuity of Operations:** When the primary EOC was damaged during the earthquake, County staff quickly addressed the challenge and selected an alternate site for the EOC. Continuity of operations and continuity of government was a top priority in order to perform response operations and to continue to provide essential County functions and services.
- **Flexibility:** County staff demonstrated flexibility in relocating to the alternate EOC and accommodated many challenging situations in support of the overall response and recovery efforts. They worked well together and accomplished their assignments in a coordinated and flexible manner.
- **Cooperation:** The City of Napa (City) and the County coordinated well with each other during the recovery phase, especially on the activation and operation of the local assistance center (LAC), to include responsibilities, funding, location, and messaging.

## Overall Key Areas for Improvement

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The following key areas for improvement were identified:

- **Planning:** The County emergency operations plan (EOP) should be updated and the development of additional plans, procedures, and policies that focus on continuity of operations, evacuation, donations management, access and functional needs/vulnerable populations, and debris management is necessary.
- **Training:** While many staff members have participated in disaster preparedness training courses and exercises, additional targeted training is needed to better prepare County staff to respond to a significant no-notice incident. Additional training on recovery-related activities would also be helpful for key County staff. Training on EOC roles and responsibilities should include all EOC staff and stakeholders.
- **Staffing:** During the initial response, some staff members were originally assigned to the incorrect positions within the EOC. The availability of staff to perform response duties was sometimes strained because they were often diverted to address issues related to their normal job functions. A review of the current EOC staffing should be done to ensure County personnel are assigned to the correct positions.
- **Public Information:** The City of Napa and the County handled public information separately, which caused some confusion. Opening a joint information center (JIC) and including representation from the affected cities (Napa and American Canyon) would help to reduce inconsistent and mixed messages being given to the public.
- **Communication and Coordination:** Better operational communication and coordination with the City of Napa and the State of California is needed.

## NEXT STEPS

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Every incident response is an opportunity for the County to learn how to respond better next time. The strengths and areas for improvement presented in this report are critical for improving the County's ability to prepare for, respond to, and recover from future incidents.

In recognition of the importance of the findings in this report, the County has already begun to address a number of the areas for improvement, such as the update to the County EOP and the development of the EOC checklists. By initiating this report, the County has demonstrated a deep commitment to learning lessons from response and recovery operations, developing solutions to identified issues, and following through on their implementation in the interest of better serving the residents of the County.



# INCIDENT OVERVIEW



The 2014 South Napa earthquake occurred on August 24 at 3:20 a.m. The earthquake measured 6.0 on the moment magnitude scale. The epicenter of the earthquake was located approximately 4.2 miles northwest of American Canyon, six miles southwest of Napa, and nine miles southeast of Sonoma, according to the United States Geological Survey (USGS). The USGS estimated that, 15,000 people experienced severe shaking, 106,000 people felt very strong shaking, 176,000 felt strong shaking, and 738,000 felt moderate shaking.

Significant damage to homes and businesses and several fires were reported across the County. The South Napa earthquake claimed the life of 1 victim and injured approximately 200 people. The Health and Human

Services Agency (HHSA) activated its department operations center (DOC) to manage the health and medical component of the response operations. Health care facilities dealt with damage to their facilities while experiencing a significant surge of victims, particularly seniors, children, and other vulnerable populations.

The County's alternate EOC was activated at a Level 3 and operational by 6:00 a.m. All EOC sections were staffed and members began to gather situational awareness and conduct critical response operations. EOC leadership scheduled meetings and briefings twice daily to coordinate operations. Additionally, EOC staff used action plans to maintain situational awareness and coordinate operations. The swift activation of the County alternate EOC demonstrated a deep commitment to managing response operations through multi-agency coordination and collaboration. After five days, the County shifted from an EOC to a recovery operations center (ROC). Over 60 persons worked in the EOC and ROC over the course of the incident response and initial recovery operations.

The South Napa earthquake resulted in wide-ranging response and recovery activities for the County as well as the City of Napa, the City of American Canyon, the Napa Valley Unified School District, and a host of other special districts and community organizations. More than 60 organizations and estimated 1,500 individuals supported the response and continue to support the recovery efforts. After 1 week of response operations, the Emergency Volunteer Center (EVC) staff reported working over 260 hours.



# SEQUENCE OF EVENTS/TIMELINE

The sequence of events is intended to provide context of the response and recovery activities taken by the City, County, and State organizations and agencies in response to the South Napa Earthquake.

## **August 24, 2014**

- South Napa Earthquake occurs at 3:20 a.m. local time.
- Napa County EOC activates at 6:00 a.m.
- Board of Supervisors adopts local emergency resolution at 8:00 a.m.
- Napa County proclaims local emergency at 10:00 a.m.
- Governor Brown declares a state of emergency and issues a State of California emergency proclamation.
- Napa County requests state aid from Governor Brown.
- Cal OES deploys three urban search and rescue teams to Napa County.
- American Red Cross opens an evacuation shelter at Crosswalk Community Church.
- California Utilities Emergency Association reports that there are approximately 29,000 power outages.
- PG&E activates its EOC and dispatches emergency crews to Napa County.
- Several Napa County buildings are closed:
  - » Napa County Administration Building
  - » Carithers Building
  - » Information Technology Services, Self-Sufficiency, and Adoption Services Building
  - » Napa County Library
  - » Partial Closure of Napa County Health and Human Services Campus
- One local road is closed (Old Sonoma Road) and several roadways sustain minor damage.
- State Water Resources Control Board's Division of Drinking Water with City of Napa Public Works Department issue boil water notice to residents who lost water pressure.
- Initial HAZUS estimates \$362.4 million in losses.

## **August 26, 2014**

- PG&E reports that all power is restored.

## **August 27, 2014**

- Napa Valley Unified School District reopens.

## **August 28, 2014**

- Transition from EOC to ROC at 8:00 a.m.

## **August 29, 2014**

- Preliminary damage assessment teams begin to assess damage in Napa County.
- Sonoma County proclamation is issued.



## **September 2, 2014**

- Governor Brown requests presidential disaster declaration.

## **September 8, 2014**

- Napa County LAC opens.
- Wine industry damage estimate is over \$80 million with 60% of Napa County wineries sustaining damage.

## **September 9, 2014**

- The joint LAC is averaging 180 residents per day.

## **September 11, 2014**

- Presidential major disaster declaration is declared for CA.

## **September 15, 2014**

- Bridge inspections by Cal Trans is completed.

## **September 18, 2014**

- County and City of Napa submit Individual Assistance Supplemental Information package to Cal OES.

## **September 19, 2014**

- Estimated loss is at \$320 million.
- 67 residents are still in the American Red Cross shelters.

## **September 25, 2014**

- Transition to Virtual ROC.

## **September 26, 2014**

- Several Napa County buildings partially reopen.

## **October 27, 2014**

- Federal Individual Assistance is approved.

## **October 30, 2014**

- Cal OES and FEMA open disaster recovery center in the City of Napa at the LAC.

## **November 5, 2014**

- State and federal disaster assistance exceeds \$2.4 million.

## **November 10, 2014**

- FEMA Disaster Survivor Assistance Teams are providing services in Napa County.



# 1.0 PREPAREDNESS ACTIVITIES

## 1.1 OVERVIEW

Given its history of floods, wildfires, and earthquakes, the County of Napa has maintained an active involvement in regular various emergency management preparedness activities, such as plan development, providing training to County staff, and conducting both discussion-based and operations-based exercises. While preparedness activities have taken place over the past several years, the earthquake highlighted the potential for additional preparedness efforts and initiatives to be instituted. The information contained in this section identifies the strengths and areas for improvement in the preparedness-related activities taken by the County of Napa to prepare its staff for an incident.

## 1.2 PLANNING

The earthquake provided an opportunity for County staff to validate key concepts contained in the many plans that were activated during the incident. The County completed crisis action planning during the incident. The County's Recovery Plan was in draft form awaiting review and approval at the time of the earthquake but was quickly authorized for use. Additionally, the response to the earthquake highlighted the need for certain plans to be updated and new plans to be developed.

### Planning Definitions

**Deliberate Planning** is conducted under nonemergency conditions to prepare for known or perceived risks arising from natural hazards or man-made threats.

**Crisis Action Planning** is time-sensitive planning conducted in response to a specific, imminent threat or to an incident that has already occurred.

### 1.2.1 Strengths

**Strength 1:** The County effectively implemented its recovery plan and shared it with the City of Napa.

### 1.2.2 Areas for Improvement

**Area for Improvement 1:** The County EOP needs to be updated.

**Analysis:** The County's current EOP needs to be revised based on lessons learned during the response to the earthquake. Specific updates to the EOP should include priorities that specifically address earthquake priorities, including the IDE, SAP inspections, and IA/PA PDA process. Additionally, incident-specific annexes that detail information related to different disasters such as earthquakes, fires, and flooding could be developed.



**Area for Improvement 2:** The County of Napa needs to develop a continuity of operations (COOP) plan to ensure County departments can continue to function and provide essential services following an incident.



**Analysis:** During the earthquake, several County buildings were damaged, causing County employees to be displaced and requiring them to work from alternate locations. The County was successful in performing COOP operations in spite of not having a formal plan, and they were able to relocate approximately 500 employees to different locations. While the County performed this function successfully, a formal COOP plan should be developed incorporating lessons learned from this incident. A formal COOP plan will allow County departments and agencies to focus internally to address the needs of their staff and identify what it takes to keep their department running so they will still be able to perform their external responsibilities.

**Area for Improvement 3:** A Jail Evacuation Plan is needed.

**Analysis:** Portions of the jail were damaged during the earthquake. The damage necessitated the need to relocate approximately 50 inmates to other facilities in the region as well as to other areas in unaffected areas of the jail. In developing the evacuation plan, consideration must be given to the requirements of the different inmate populations.

**Area for Improvement 4:** A Donations Management Plan is needed.

**Analysis:** During the response, many organizations and entities inquired as to where they could donate physical goods and services. Because the County does not have a donations management plan outlining a process to manage and receive donations, the County was unable to accept donations, resulting in having to turn the donations away.

**Area for Improvement 5:** More detailed planning to address access and functional needs of the community is needed.

**Analysis:** Addressing the needs of individuals with access and functional needs is a key component in emergency management planning. Recent lawsuits in Oakland and Los Angeles as well as Department of Justice investigations highlight the need to identify and implement systems and resources that can address the identified needs of the vulnerable populations in the County.

**Area for Improvement 6:** A formal debris management plan is needed.

**Analysis:** The County currently does not have an approved debris management plan. While the County successfully developed a plan, during the response, for handling debris caused by the earthquake, there is a need for a formal debris management plan to be developed. Lessons learned from the earthquake should be incorporated into the new plan.

## 1.3 TRAINING

### 1.3.1 Strengths

**Strength 1:** County employees have had the opportunity to receive training on a number of subjects, including the Incident Command System, the Planning P, and other response-related activities.

### 1.3.2 Areas for Improvement

**Area for Improvement 1:** Additional EOC training is needed.

**Analysis:** EOC staff indicated that while they have had the opportunity to attend many different training courses, it



would be helpful for them to receive additional EOC training that is specific and focused on different types of incidents, such as earthquakes, floods, and wildfires.

**Area for Improvement 2:** Training needs to be tailored so that it is specific to Napa County and recovery-related topics.

**Analysis:** While County staff has participated in various training courses, there is a need for tailored classes specific to Napa County operations. The response to the earthquake has given EOC staff a different perspective on the types of training that would be beneficial, including focusing on recovery-specific activities such as financial recovery and damage assessment processes.

**Area for Improvement 3:** Conducting coordinated training with the City of Napa and other jurisdictions would be beneficial.

**Analysis:** Due to immediate staffing demands, the City and County of Napa staff did not communicate as effectively as possible during the initial earthquake response. Incorporating staff from the City and other jurisdictions into County training classes would build better working relationships and develop clear coordination and communication among the City, the County, and other jurisdictions.

## 1.4 EXERCISES

### 1.4.1 Strengths

**Strength 1:** The County of Napa regularly conducts emergency management exercises focusing on response-related activities, providing County staff the opportunity to validate current plans, policies, and procedures.

### 1.4.2 Areas for Improvement

**Area for Improvement 1:** Additional exercises focusing on recovery-related activities are needed to further enhance County staff's capabilities for recovering from an incident.

**Analysis:** As identified above in the training section, there is also a need to conduct exercises that focus specifically on recovery-related topics. Consider beginning exercises on day 2 or 3 of an incident where initial response activities have taken place and the focus is on conducting damage assessments, tracking employee time in the field, emergency public information, or financial recovery-related topics.



Source: <http://community.fema.gov>



## KEY RECOMMENDATIONS

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The following key recommendations address the areas for improvement identified above.

### **Planning:**

1. Update County EOP
2. Develop additional plans or annexes focusing on the following:
  - a. COOP
  - b. Jail Evacuation
  - c. Donations Management
  - d. Access and Functional Needs Populations – consider partnering with nonprofit organizations
  - e. Debris Management

### **Training:**

1. Develop and conduct additional trainings focusing on the following:
  - a. EOC procedures
  - b. Napa County-specific recovery-related subjects
  - c. Joint operations with the City of Napa

### **Exercises:**

1. Conduct additional tabletop and functional exercises focusing on recovery-related issues and activities



# 2.0 RESPONSE ACTIVITIES

## 2.1 OVERVIEW

The County responded quickly following the earthquake and was able to activate the EOC in an alternate location due to damage at the primary EOC location. The information contained in this section identifies the successes and areas for improvement for the response-related activities taken by Napa County.

## 2.2 EMERGENCY OPERATIONS CENTER

### 2.2.1 Strengths

**Strength 1:** Once it was determined that the primary EOC location was unusable, County staff members were able to effectively and efficiently organize and activate an alternate EOC in response to the earthquake.

**Strength 2:** EOC command staff members were able to develop solid management goals early in the incident, which provided guidance and direction to EOC staff in being able to focus their attention and guide their overall response activities.

**Strength 3:** A large number of County buildings were damaged during the earthquake, resulting in the need to relocate over 500 County employees to alternate locations. EOC staff members were able to effectively coordinate the relocation of affected employees to ensure County continuity of operations.



### 2.2.2 Areas for Improvement

**Area for Improvement 1:** The County and the City need to establish better incident response coordination and communication protocols.

**Analysis:** The City and County of Napa did not communicate as effectively as possible during the initial stages of the incident. The communication improved as both organizations moved into the recovery phase. While the County did assign a liaison to the City EOC who was providing daily updates back to the County, it would have been helpful to have had a counterpart City liaison at the County EOC. Having liaisons in each location would facilitate better communication and coordination between the County and the City and facilitate providing key updates regarding County and City operations, which ultimately would result in having improved situational awareness and would foster a better working relationship.

**Area for Improvement 2:** The County and City together should clarify the roles and communication and coordination procedures for various types of incidents.

**Analysis:** During the response to the earthquake, the purpose and scope of activities of the HHSA DOC operation versus supporting the Medical Branch from the County EOC was unclear. The HHSA DOC



activated their command structure, which seemed redundant to some EOC functions. The HHSA DOC also has a PIO function, which makes sense for public health disasters but may not be warranted during an earthquake. The interests seemed to be competitive at first, and it was much more functional to have the HHSA DOC PIO on the EOC team rather than being on their own.

Additional clarification and understanding regarding the specific roles and responsibilities for the EOC and the HHSA DOC is needed. This clarification should also be expanded to other DOCs. County Departments should consider having the EOC and key DOCs co-located in close proximity to one another to foster better coordination and collaboration and to clarify the differences between the operations centers.

**Area for Improvement 3:** The County EOC and the HHSA DOC should coordinate on mass care and shelter functions.

**Analysis:** There is a need to clearly identify the role of the Care & Shelter Branch within the Operations Section and their specific function within the EOC. HHSA provides an individual to staff the Care and Shelter Branch in the EOC and another individual who serves as the liaison to the DOC. During the earthquake, there was some confusion regarding the role of the EOC and DOC, and many thought there was a duplication of efforts between the two entities because each one staffs similar sections (Planning, Operations, Logistics, etc.). Having a better understanding of the specific roles and responsibilities of the EOC and DOC may help with better communication and coordination between the two entities.

**Area for Improvement 4:** County EOC staff should be trained on and utilize WebEOC.

**Analysis:** WebEOC is an electronic tool that is designed to help agencies track and share disaster-related information to provide an overall situational awareness to EOC staff. A version of this is also used by the State of California (“CalEOC”) to link Operational Area EOCs and the State Operations Center. WebEOC can be customized to meet the County’s needs and provide different status summary boards for each function. The County used its SharePoint site as a place to post information. Several EOC staff members would like to implement the use of WebEOC through trainings, drills, exercises, and real world events.

**Area for Improvement 5:** The County should develop a procedure to obtain situational awareness from affected jurisdictions.

**Analysis:** During the response to the earthquake, it was difficult for the County to receive updated status information from the affected jurisdictions. There is a need to develop a process to contact jurisdictions for situation status reports immediately upon opening the EOC and regularly throughout the incident.

**Area for Improvement 6:** Have an EOC Operations Manual on site that includes detailed checklists for EOC functions and positions should be developed.

**Analysis:** Although EOC staff had received training on their positions, it was identified that EOC function-specific checklists would be beneficial and would aid staff in being able to effectively perform their respective responsibilities, especially since this was the first time that many staff worked in the EOC during a real incident.

**Area for Improvement 7:** The County should identify a hardened (seismically reinforced, outside of the flood plain, etc.) facility location that can serve as the primary EOC and is furnished with necessary resources and equipment.

**Analysis:** The primary location for the County EOC is currently on the third floor of the County Administration Building. County EOC staff members put the equipment and resources needed to operate

**Finance/Administration Section Chief Position Checklist**

The following checklist should be considered as the minimum requirements for this position. Note that some of the tasks are one-time actions; others are ongoing or repetitive for the duration of the incident. Tasks may be delegated to the appropriate Unit Leader.

- | <input type="checkbox"/>            | <b>Task</b>  |
|-------------------------------------|--|
| <input checked="" type="checkbox"/> |  |
| <input type="checkbox"/>            | 1. Obtain briefing from Incident Commander: <ul style="list-style-type: none"> <li>• Incident objectives.</li> <li>• Participating/coordinating agencies.</li> <li>• Anticipated duration/complexity of incident.</li> <li>• Determine any political considerations.</li> <li>• Obtain the names of any agency contacts the Incident Commander knows about.</li> <li>• Possibility of cost sharing.</li> <li>• Work with Incident Commander and Operations Section Chief to ensure work/rest guidelines are being met, as applicable.</li> </ul> |
| <input type="checkbox"/>            | 2. Obtain briefing from agency administrator:  |



the EOC upon activation notification. During the earthquake, the primary EOC location suffered damage and was not usable. Because of this, an alternate location at the Sheriff's Department was used, and the EOC equipment and supplies were not accessible. As a result, it took longer than usual to set up the EOC and staff did not have the necessary supplies and forms requiring them to start from scratch. Having a "warm" EOC in a hardened facility with equipment and supplies already pre-staged and available upon activation would be beneficial.

**Area for Improvement 8:** The County should clarify the protocols for establishing and operating the Emergency Volunteer Center.

**Analysis:** The EVC was activated through a senior fire staff member to an EVC volunteer. The EVC Manager was not notified until approximately 9:00 a.m. on the morning of the earthquake. The EVC Manager should have been notified of the need to activate the EVC and involved in the decision-making process. Additionally, the EVC was not represented during the daily OES briefings. The County should clarify the protocol for EVC activation, reporting procedures, and incorporating the EVC into the daily OES briefings.

## 2.3 COMMAND

### 2.3.1 Strengths

**Strength 1:** County staff effectively performed duties as expected during the response to the earthquake.

**Strength 2:** The command staff provided immediate communication and guidance to activate the EOC. Once it was determined that the primary EOC could not be used due to damage, an alternate location for the EOC was quickly selected.

**Strength 3:** The command staff was able to rapidly establish communication with the Board of Supervisors to keep them informed of the situation.

**Strength 4:** The early identification of incident objectives provided guidance and direction to EOC staff.

**Strength 5:** Continuity of operations was identified early as a high priority.

### 2.3.2 Areas for Improvement

**Area for Improvement 1:** The County should develop an elected officials emergency guide that describes their roles and responsibilities during a disaster.

**Analysis:** County leadership stated that having an elected officials guide that identified roles and responsibilities, initial tasks, and communication protocols would be beneficial.

**Area for Improvement 2:** EOC Staff should develop agenda protocols for EOC shift change that list the topics for each EOC shift change meeting.

**Analysis:** Shift change briefings occurred on regular basis. Oncoming EOC staff must be clear on what was accomplished during the previous 12 hours and the priorities for the current shift. Shift change briefings agenda procedures should be incorporated into EOC training and exercises.

**Area for Improvement 3:** A policy for staff self-reporting to the EOC needs to be developed.



**Analysis:** Many County staff from various departments self-reported to the EOC following the earthquake and while this demonstrated the commitment of County staff to serve Napa residents it also caused confusion. EOC staff recommended that a policy should be put into place that outlines what the self-reporting processes are with a delineation of staff such as A, B, and C. Employees designated with an “A” would be service critical employees such first responders, public works, and those individuals deemed critical for staffing key positions needed for the first 24-48 hours of an incident. This will help ensure that critical staff report for duty even if the County notification and call-out system is non-operational.

**Area for Improvement 4:** The County needs better situational awareness of the efforts and needs of cities and towns throughout the county during a response.

**Analysis:** Under California’s Standardized Emergency Management System (SEMS), the County is the lead for the operational area and is responsible for maintaining situational awareness of what is happening throughout the County and to assist with resource request or to submit resources request up to the state if the Operational Area cannot fulfill the requirements. Because of this responsibility, it is important for the County to receive information from all jurisdictions. This information will allow the County to better support the jurisdictions as well ensure adequate staffing and resources needed to maintain County’s services.

## 2.4 OPERATIONS

### 2.4.1 Strengths

**Strength 1:** County staff worked effectively and functioned well as a team. This was the result of previous training and NIMS/SEMS compliance.

**Strength 2:** County staff was flexible and adapted well to various situations.

### 2.4.2 Areas for Improvement



**Area for Improvement 1:** The Operations Section should clarify the roles and responsibilities of each position in the Operation Section.

**Analysis:** EOC Staff did not have a clear understanding of the roles and responsibilities for each position within the Operations section and this resulted in confusion and duplication of efforts. Additional planning and training is needed to clarify the roles and responsibilities of each position in the Operations Section.

**Area for Improvement 2:** The EOC organization chart needs to be updated to include the Care and Shelter Branch position under the Operations Section.

**Analysis:** HHSA provides staff to the County EOC to support the Care and Shelter Branch. There were some EOC members who did not realize this position was staffed. This position should be added to the overall EOC organization chart. Once the EOC is activated, the organization chart can be displayed visually so that all EOC members are aware of the various positions that are staffed.



## 2.5 PLANNING

### 2.5.1 Strengths

**Strength 1:** The Planning P was successfully implemented throughout the course of the response to the earthquake.

**Strength 2:** Planning Section staff understands basic Incident Command System (ICS) concepts. This understanding enabled the Planning Section staff to perform their jobs in the EOC in an effective manner.

**Strength 3:** There was a natural transition from the EOC to the ROC, and staff members were able to focus on recovery-related activities.

**Strength 4:** County kept functioning in spite of unexpected challenges.

### 2.5.2 Areas for Improvement

**Area for Improvement 1:** The Planning Section should be scaled to support Section needs and requirements.

**Analysis:** While the Planning Section was staffed in a manner that allowed them to perform their responsibilities in the EOC, additional Planning Section staff was needed to assist with overall organization, documentation, and other Planning Section responsibilities. The Planning Section Chief indicated that it would have been helpful to have had an additional 12-14 people within the first 24 hours to provide various support, such as serving as liaisons to jurisdictions or as observers in the other EOC sections to capture information needed to support Planning Section activities.

**Area for Improvement 2:** The Planning Section should be trained on data collection and how to maintain situational awareness.

**Analysis:** The Planning Section staff struggled with the development of the situation status reports because there was a general lack of understanding of why and how specific data and information was being collected. It would be helpful for the Planning Section staff to have additional training on why certain information is collected and what the information is then used for. Additionally, it was identified that it would be helpful to know what standard data products are available ahead of time. Knowing this will help to put a plan in place on how to collect the required data so staff can better focus their efforts.



**Area for Improvement 3:** The County needs to develop and conduct training on how to gather impact assessment information and data immediately following an incident.

**Analysis:** State OES provided incorrect guidance to the County and City on how to conduct initial damage assessments. The data gathered was inconsistent and incomplete, thus resulting in the County Damage Assessment Teams having to redo initial estimates. A clear, comprehensive, approach on how to gather the impact assessment data from the beginning of the incident would help ensure that the information is collected in a consistent manner. Collecting good information the first time will allow the County to provide accurate information to the State and FEMA regarding estimated damages.

**Area for Improvement 4:** Planning Section staff should develop document templates to make it easier to gather and display the appropriate information.

**Analysis:** The Planning Section spent valuable time formatting action plan documents. Document templates developed prior to an incident would eliminate redundancies and make it easier for Planning Section staff to gather and display the key information appropriately. Additionally, having updated standardized templates available to Planning Section staff would assist them in the collection of data from public agencies so that consistent information is being obtained and then included in the necessary products to provide better situational awareness regarding the incident. Staff members assigned to the units within the Planning Section should develop these templates.

## 2.6 LOGISTICS

### 2.6.1 Strengths

**Strength 1:** Logistics Section employees demonstrated they were willing to do what was necessary to support the response to the earthquake. Employees were very flexible and demonstrated the willingness and ability to learn on the fly as many were asked to do things they may have never done before.

**Strength 2:** There was cohesiveness among the staff, and they worked well together.

### 2.6.2 Areas for Improvement

**Area for Improvement 1:** The Logistics Section should develop and be trained on the process for ordering heavy equipment and resources.

**Analysis:** There was some confusion on the part of the Logistics Section staff on how to obtain resources like dump trucks, etc. Staff was unsure of when they could use mutual aid agreements to get resources from other jurisdictions, what they could get locally by going directly to a vendor, and when they needed to go directly to Cal OES. Additionally, the County experienced difficulty in getting additional SAP inspectors from the State. It appeared that the State was challenged in understanding why the County needed the additional inspectors. However, the State bypassed the County and provided SAP inspectors directly to the City.

The form is titled 'RESOURCE ORDER' and includes the following sections:

- 1. INCIDENT INFORMATION:** Includes fields for INITIAL DATE/TIME, INCIDENT/PROJECT NAME, INCIDENT PROJECT ORDER NUMBER, OFFICE REFERENCE NUMBER, DESCRIPTIVE LOCATION/RESPONSE AREA, SEC, TYP, PHZ, SEVER, MCM, INCIDENT BASEPHONE NUMBER, JURISDICTION/AGENCY, and ORGANIZATION OFFICE.
- 2. AIRCRAFT INFORMATION:** Includes fields for AIRCRAFT TYPE, AIRCRAFT MAKE OR MODEL, AIRCRAFT REGISTRATION, AIRCRAFT WEIGHT, AIRCRAFT LENGTH, AIRCRAFT WIDTH, AIRCRAFT HEIGHT, AIRCRAFT WEIGHT, AIRCRAFT LENGTH, AIRCRAFT WIDTH, AIRCRAFT HEIGHT, AIRCRAFT WEIGHT, AIRCRAFT LENGTH, AIRCRAFT WIDTH, AIRCRAFT HEIGHT.
- 3. RESOURCE TRACKING:** A table with columns for Resource Name, Change Date/Time, Status, Resource Required, Requested Date/Time, Status, Unit, Agency, Resource Assigned, Released Date, and Status.
- 4. ORDER RELATED:** Includes fields for ORDER RELATED, ACTION TAKEN, ORDER RELATED, and ACTION TAKEN.

**Area for Improvement 2:** Logistics Section staff should coordinate with Operations and Planning Section to better understand resource needs and requirements.

**Analysis:** Many of the staff working in the Logistics Section were unfamiliar with some of the terminology and did not fully understand the technical requirements of various resources that were requested. This was demonstrated when a request was made for "CALBO" inspectors, and the Logistics Section staff did not know what this term meant. Additionally, they did not know that there is a difference between CALBO inspectors and SAP inspectors. The Logistics Section should work closely with the Operation Section and with the Planning Section through the life of an incident to better identify the requirements for various resources.

**Area for Improvement 3:** The County should work with jurisdictions and the State to establish a resource-tracking system.

**Analysis:** The County was not able to obtain resource tracking and deployment information from the State or for the local jurisdiction to which resources were deployed to. On several occasions, the State informed the County that a certain individual would be deployed, but when the person arrived at that



location, it was someone entirely different. State employees also arrived without a mission tasking number. The lack of resource deployment and tracking information made it difficult to identify which resources needs had been met and which still remained unfilled.

**Area for Improvement 4:** EOC staff should be trained on how to complete the ICS 213 form.

**Analysis:** At the beginning of the event, EOC staff members were using the ICS 213 forms to capture everything related to actions being taken. As the response to the earthquake progressed, the ICS 213 forms were used more often to order resources through the Logistics Section. When items are ordered and the invoices are received, there is a need to be able to link the ICS 213 forms with the invoices and provide them as backup documentation. Many times the invoices had different amounts than what was documented on the ICS 213 form. This caused confusion for both the Logistics Section and the Finance and Administration Section. A better process and clearer guidance on what information needs to be captured on the 213s is needed to reduce the amount of time it takes staff to track down the correct information to process orders and associated invoices.

## 2.7 FINANCE AND ADMINISTRATION

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### 2.7.1 Strengths

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**Strength 1:** A purchasing tracking sheet was created for the Purchasing Unit to use to track costs. While the form was created quickly and this incident was the first time it was used, the sheet worked well.

**Strength 2:** Collaboration and coordination among the members of the Finance and Administration Section was successful and everyone worked well together.

### 2.7.2 Areas for Improvement

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**Area for Improvement 1:** The Logistics Section and Finance and Administration Section should be located physically closer in the EOC.

**Analysis:** Currently, the Logistics Section and Finance and Administration Section are located at opposite sides of the EOC, which makes it difficult to easily coordinate with one another. Because these two sections need to coordinate with each other regularly during an EOC activation, these sections should be located physically closer together to facilitate a more collaborative working relationship.

**Area for Improvement 2:** The County should examine the Finance and Administration Section and Logistics Section organization structure and the roles and responsibilities assigned to the branches and units within each section.

**Analysis:** Currently the Supply Unit (which is responsible for ordering supplies and resources) is under the Logistics Section, while the Procurement Unit (which is responsible for paying for the supplies and resources) is under the Finance and Administration Section. EOC staff was confused about each unit's responsibilities. The County should research the best organization structure to meet the County's needs and capabilities and revise plans and procedures to clarify the specific roles and responsibilities of these two units and the reasoning behind the placement in their respective sections.

**Area for Improvement 3:** County leadership should establish a pre-approved emergency spending limit prior to an emergency.

**Analysis:** The County has current spending limits established for routine day-to-day activities. However, during the response to an event, these spending limits are easily exceeded. The County should establish pre-approved spending limits prior to an emergency incident.



**Area for Improvement 4:** The County should work with jurisdictions to establish a process for tracking personnel time and costs.

**Analysis:** Once personnel resources arrive in the County, there is no process to track and record staff time at the various site locations. The County should establish a process and utilize the ICS 214 Activity Log form to keep track of time. Once this process has been established, the county should train EOC staff and responders on how to keep track of their time.

**Area for Improvement 5:** The County needs a consistent work and compensation policy for emergencies.

**Analysis:** Finance and Administration Section staff spent several days trying to determine and understand the current policy for personnel affected by a disaster. The current policy only addresses those employees impacted by an emergency who are unable to report to work because their building is damaged. Initial guidance and direction conflicted with the current written policy. The County should establish a policy that defines the work and compensation procedures for County employees impacted and not impacted by the disaster.

**Area for Improvement 6:** The Finance Section should clarify the check-in and check-out process to ensure accurate information is being captured regarding staff activities.

**Analysis:** The check-in and check-out process is primarily a responsibility of the Resource Unit in the Planning Section. Because this process was not established as a priority the first couple days of the response, the Finance and Administration Section performed this duty. There needs to be better guidance given regarding the level of detail that is needed on the ICS 214 forms. Finance and Administration Section staff is still going back through the 214s and adding additional information to capture the activities completed. Requirements such as information required to complete the ICS 214 forms should be conveyed to EOC staff during the shift change briefings. The County should also examine if the Finance Section is the most appropriate EOC section to conduct the check-in and checkout process.

**Area for Improvement 7:** County finance and administration staff should receive training on the FEMA disaster reimbursement process.

**Analysis:** Finance and Administration staff did not have a clear idea on the type of information needed on the ICS 213 and 214 forms. The Finance and Administration Section staff stated that more training on the FEMA disaster reimbursement process and tips on how to maximize the FEMA reimbursement following a disaster would have been beneficial.

DEMobilIZATION CHECK-OUT (ICS 221)			
1. Incident Name: _____		2. Incident Number: _____	
3. Planned Release Date/Time: _____		4. Resource or Personnel Released: _____	
Date: _____		Time: _____	
5. Order Request Number: _____			
6. Resource or Personnel: _____ You and your resources are in the process of being released. Resources are not released until the checked boxes below have been signed off by the appropriate overhead and the Demobilization Unit Leader (or Planning Section representative).			
<b>LOGISTICS SECTION</b>			
<input type="checkbox"/> Supply Unit	Remarks	Name	Signature
<input type="checkbox"/> Communications Unit			
<input type="checkbox"/> Facilities Unit			
<input type="checkbox"/> Ground Support Unit			
<input type="checkbox"/> Security Manager			
<b>FINANCE/ADMINISTRATION SECTION</b>			
<input type="checkbox"/> Unit/Leader	Remarks	Name	Signature
<input type="checkbox"/> Time Unit			
<b>OTHER SECTION/STAFF</b>			
<input type="checkbox"/> Unit/Other	Remarks	Name	Signature
<input type="checkbox"/>			
<b>PLANNING SECTION</b>			
<input type="checkbox"/> Unit/Leader	Remarks	Name	Signature
<input type="checkbox"/> Documentation Leader			
<input type="checkbox"/> Demobilization Leader			
7. Remarks: _____			
8. Travel Information: _____			
Room Overnight: <input type="checkbox"/> Yes <input type="checkbox"/> No		Actual Release Date/Time: _____	
Destination: _____		Estimated Time of Arrival: _____	
Travel Method: _____		Contact Information While Traveling: _____	
Manifest: <input type="checkbox"/> Yes <input type="checkbox"/> No		Area/Agency/Region Notified: _____	
Number: _____			
9. Reassignment Information: <input type="checkbox"/> Yes <input type="checkbox"/> No			
Incident Name: _____		Incident Number: _____	
Location: _____		Order Request Number: _____	
10. Prepared by: Name: _____		Position/Title: _____	
Signature: _____		Signature: _____	
ICS 221		Date/Time: _____	

## 2.8 GEOSPATIAL INFORMATION SYSTEMS

### 2.8.1 Strengths

**Strength 1:** GIS staff was eager to assist in any way.

### 2.8.2 Areas for Improvement

**Area for Improvement 1:** EOC staff need a better understanding of GIS capabilities so GIS can be integrated in the overall EOC process and decision-making.



**Analysis:** The GIS team can assist in gathering and analyzing data that will help EOC leadership plan inspections and track efforts to avoid duplication of response efforts, as well as provide maps and other products that will assist with maintaining situational awareness. Throughout the response, the GIS Team and their place in the overall ICS structure, was not fully understood by the EOC team. As a result, there were many times that the GIS team was answering to multiple parties for various requests. Additionally, there were times that several individuals requested data and maps from the GIS team without fully understanding the scope of their request and the level of accuracy needed. Including and integrating the GIS team in future trainings and exercises would provide the EOC and GIS teams an opportunity to work together and to gain a greater understanding of the GIS team's capabilities.

**Area for Improvement 2:** County GIS personnel need additional training and resources in order to be better prepared to support the needs of the EOC during a response to an incident.

**Analysis:** Napa County currently does not have a usable Census/demography dataset that can be easily used for GIS purposes. Normally it takes days of acquiring and preparing Census data to make it usable. It would be helpful to start preparing this type of information now because there will not be enough time to do so during the next disaster. Additionally, other datasets such as school locations, hospitals, and EMS locations with heliports, etc., could prove mission-critical in a larger disaster and the layers should be inventoried and updated on a regular basis prior to an incident so that this data can be accessed by the GIS team when needed.

The GIS team took an entire day to develop a map showing inspection results because the GIS team did not have an organized process for recording inspection results and gathering additional data. A GIS Standard Operating Guide (SOG) should be developed to outline every aspect of the GIS function including how data is structured and where it is located to how the GIS unit fits within the overall ICS structure. This document could be shared across the EOC Sections and with outside agencies to help them better understand the GIS unit's role in the EOC. The GIS SOG would greatly enhance the ability of the GIS team to deliver GIS functions and products in a timely manner.

In addition the GIS team should participate in all EOC training and exercises. County GIS staff should receive ICS/disaster training to ensure that there are adequate numbers of trained GIS team members who understand EOC operations and can more effectively deploy GIS services to the team.

**Area for Improvement 3:** The County and the City GIS teams should develop a coordinated GIS approach to develop consistent GIS products.

**Analysis:** The County's GIS team spent an excessive amount of time trying to use City of Napa data that was structured in a completely different way than the County's data. The City of Napa had only one-person to provide GIS services and it would have been better for the City's GIS unit leader to integrate into the larger County EOC. The County's GIS staff is small so the pooling of City and County resources and staff would help ensure GIS support throughout the response and would result in more consistent and coordinated GIS products.

## 2.9 HEALTH AND HUMAN SERVICES AGENCY DEPARTMENT OPERATIONS CENTER

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### 2.9.1 Strengths

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**Strength 1:** The overall operation of the HHSA DOC went well. DOC staff members were able to produce an incident action plan (IAP) within six hours on the first day of the event.

**Strength 2:** Communication and coordination with the State flowed well and occurred the way it is supposed to.



**Strength 3:** Procurement procedures went well. Logistics Section staff members were familiar with their roles and responsibilities and knew what they could and could not do.

**Strength 4:** HHSA staff members were quickly able to establish contact with all healthcare facilities in the County regarding their status following the activation of the DOC. This can be attributed to the list of healthcare facilities that was developed and available in the DOC.

**Strength 5:** The DOC structure was redesigned during the recovery phase, which was beneficial. The recovery organization worked well.

**2.9.2 Areas for Improvement**

**Area for Improvement 1:** HHSA should work with healthcare organizations to develop a process for tracking patients.

**Analysis:** Patient tracking at the hospitals was problematic and difficult to do. A new process or method for tracking patients needs to be developed. Consider developing or adopting an existing standard format that includes patient information and a tracking number so it will be easier for the hospitals and the HHSA DOC to know the location and status of patients.

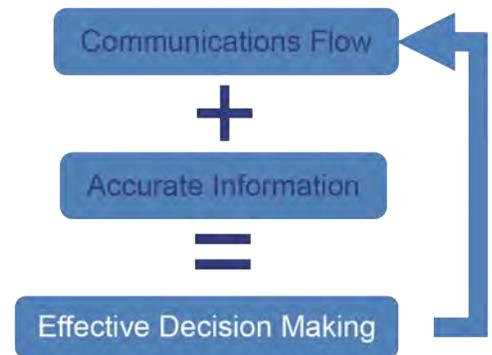
**Area for Improvement 2:** HHSA DOC and the County EOC should develop written protocols for coordination and communication with each other.

**Analysis:** Coordination between the HHSA DOC and the County EOC is a key component in being able to ensure both departments have and maintain situational awareness. While there was an HHSA employee who staffed the Care & Shelter Branch at the County EOC, additional coordination and communication between the HHSA DOC and County EOC is needed. Protocols need to be developed to outline effective communication methods to ensure appropriate coordination is taking place.

Additionally, the HHSA DOC and County EOC use different forms. The two departments should coordinate to make sure information is being collected and disseminated in a similar manner.

**Area for Improvement 3:** The HHSA DOC and County EOC should clarify roles and responsibilities to eliminate confusion and possible duplication of efforts.

**Analysis:** The role of the HHSA DOC during a response to an incident is different from that of the County EOC. The HHSA DOC focuses specifically on managing the health and medical aspect and the coordination with healthcare facilities and EMS. The County EOC focuses on the coordination of all County response and recovery-related activities following an event. The County EOC and HHSA DOC should develop plans and procedures that clarify the roles and responsibilities and test these plans during joint exercises.



**2.10 IT AND COMMUNICATIONS**

**2.10.1 Strengths**

**Strength 1:** The IT and Communications staff members were able to quickly set up an alternate EOC with the basic equipment.



**Strength 2:** IT and Communications staff have the in-house expertise and ability to meet identified deadlines.

**Strength 3:** IT and Communications staff who were not assigned to the EOC were available to assist other departments as needed.

**Strength 4:** Once the damage to the Data Center was discovered, IT and Communications staff developed multiple options to ensure connectivity was maintained.

### 2.10.2 Areas for Improvement

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**Area for Improvement 1:** The County should establish an alternate Data Center network connection to ensure sufficient level of redundancy.

**Analysis:** As a result of the earthquake, the Data Center sustained damage that almost resulted in the loss of the primary network connection leading to the Data Center. While the IT and Communications staff members were able to identify and develop multiple alternatives that ensured connectivity was maintained, the earthquake highlighted the need for an alternate network connection. If the Data Center had been lost its network connection, the entire County would not have been able to communicate which would have significantly impacted response and recovery efforts.

**Area for Improvement 2:** EOC staff experienced difficulty logging into EOC laptops and accessing needed data.

**Analysis:** EOC staff could not easily log in to their EOC computers using their EOC credentials. The default is for personnel to use their personal County network credentials to allow them access to County data and information. However, EOC staff had difficulties logging into and accessing the County's network because the credential of the previous EOC shift was already logged into the system.

**Area for Improvement 3:** County IT and Communications staff need better guidance and direction for providing IT support services during an emergency to all County departments.

**Analysis:** While the IT and Communication staff who provide support to the EOC have a good understanding of their roles and responsibilities, a greater management structure for IT and Communication staff outside of the EOC is needed. This structure will ensure that IT needs are being met for all County employees and not just those who are supporting the EOC.

**Area for Improvement 4:** The IT and Communications staff would be able to provide more support if there was more advance warning of potential IT needs and clarification from EOC Command Section on what IT and Communication requests are a high priority.

**Analysis:** The County was only able to support field operations and the LAC through the use of contractors. The IT and Communications department could provide more support if they receive more advance warning. Additionally, EOC command staff should provide more direction on prioritizing IT and Communication support requests.



## 2.11 LEGAL

### 2.11.1 Strengths

**Strength 1:** Preparedness activities and previous work completed provided the County the ability to submit the Disaster Proclamation for assistance to the State of California in a timely manner following the earthquake.

**Strength 2:** The ability to communicate and to have access to the internet provided the Legal staff the ability to access needed resources, information, and key personnel to accomplish their tasks effectively.

### 2.11.2 Areas for Improvement

**Area for Improvement 1:** The County should develop an emergency services legal handbook.

**Analysis:** An emergency services legal handbook will provide a step-by-step process on common legal activities that the County may need to implement during an emergency. The handbook could contain emergency response forms and resolutions, necessary orders and authorities for each type of incident (health emergency, fire, earthquake, etc.); emergency contract authorizations and appropriate forms, pertinent disaster relief laws and regulations, and a list of mutual aid agreements. In the event that County Legal staff is unable to support the response due to personal reasons, this handbook provides the necessary information and guidance to someone who is unfamiliar with the County operations if they were called upon to support. Once developed, the handbook should be updated regularly. Upon completion, the handbook should be available both in written hardcopy format as well as online.

**Area for Improvement 2:** The County should conduct a comprehensive review of current mutual aid agreements and update them to reflect current needs and capabilities.

**Analysis:** The earthquake highlighted the need for a regular review and update of mutual aid agreements. The County should conduct an annual review of each mutual aid agreement to check for changes in law, new resources or personnel, and to make sure it is still valid. This review would help County staff identify gaps and/or deficiencies that may exist. To assist with future reviews and potential use of these agreements, the County should develop a database containing a list of all of the mutual aid agreements, who they are with and for what services, as well as the expiration date. Each year as the agreements are reviewed, the database should be updated as well.

**Area for Improvement 3:** The County should develop a comprehensive donations and volunteer management plan.

**Analysis:** The County has very clear guidance regarding the types of donations that can be accepted following a disaster; however, the process for distributing those donations needs to be developed and included in a donations management plan. County Legal Counsel should be consulted during the development of the plan to ensure the appropriate language is included to address any workers compensation or liability issues that could arise when deploying donated goods, as well as a system in place to ensure an equitable distribution.

The County does have a government code that identifies provisions for County immunity during an “emergency”, but the County’s Legal Counsel should review current insurance provisions to see how the County is covered and to ensure the County is appropriately covered.



## 2.12 PUBLIC INFORMATION

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### 2.12.1 Strengths

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**Strength 1:** County public information staff self-activated to the EOC in response to the earthquake and the team worked very well together.

**Strength 2:** The use of a SharePoint site provided an opportunity for County PIOs to share information and to maintain situational awareness.

**Strength 3:** There are strong internal relationships among County PIO staff, and they have a strong understanding and knowledge of their roles and responsibilities.

**Strength 4:** There was an effective web presence thanks to a new webmaster.

### 2.12.2 Areas for Improvement

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**Area for Improvement 1:** Napa City and the County should coordinate public information efforts and establish a JIC.

**Analysis:** The City was reluctant to set up and participate in a JIC during the response phase of the incident. The County and City PIO staff worked independently from each other which resulted in some conflicting information being disseminated to the public. However, the establishment of a JIC during the recovery phase allowed for more coordinated efforts in developing and disseminating timely information regarding recovery-related activities.

**Area for Improvement 2:** The County public information office should obtain the capability to translate public information messages, both written and spoken, into Spanish quickly.

**Analysis:** There is a large Spanish-speaking population in Napa County. While the County was able to use Google Translate, this web-based translation capability did not fully meet the translation needs of the County. The County requires translation and interpretation services for both written and oral communications. The County should consider partnering with community-based organizations for these services.

It is also important to ensure messages are communicated in a culturally appropriate manner. At one point during the earthquake response someone translated “Child Support Services” literally and the PIO team later learned that Child Support has a common way they like to translate their department name based on a description of what they do. Developing a list of commonly used phrases and terms may assist with ensuring that Departments are appropriately referenced and culturally sensitive terms are avoided.

**Area for Improvement 3:** The PIO team needs access to the information being collected and developed in the EOC.

**Analysis:** Responding to media inquiries with limited information was challenging for the PIO team. The PIO team needs access to information being collected and developed in the EOC and contained in the situation status reports. Having access to this information would provide the ability of the PIO team to disseminate accurate information in a timely manner.

**Area for Improvement 4:** The PIO team should clearly define the roles and responsibilities of various members.

**Analysis:** While the PIO team worked very well together, they need to define the roles within the team. Defining the specific functions and assigning specific tasks to a PIO position would make the team more effective.



**Area for Improvement 5:** The PIO Team should develop an evaluation process to ensure that it is meeting the needs and expectations of the media and the public.

**Analysis:** It is difficult to evaluate if the PIO team is meeting public information expectations and perceptions. The PIO team should consider developing a tool or a feedback mechanism that can be used to gather this type of information so that if deficiencies are identified, the PIO team can address the most critical issues.

**Area for Improvement 6:** The County should establish a protocol that requires all County departments to coordinate press releases through the PIO team.

**Analysis:** There were some County departments who issued their own press releases without coordinating them through the County PIO team, which may have appeared to be inconsistent or disorganized and not in line with overall county messaging. A protocol indicating that all incident related press releases and contact with the media are to be coordinated and communicated to the incident PIO needs to be established.

## 2.13 DEPARTMENT OF CORRECTIONS

### 2.13.1 Strengths

**Strength 1:** Leadership engaged supervisors, brought them together for debriefings, and had honest and frank confidential conversations. This transparency allowed people to be calm and do their jobs with confidence. Because the staff was calm, they were able to keep the inmates calm.

**Strength 2:** Staff worked well as a team, fulfilled responsibilities effectively, and was willing to work extra shifts as needed.

**Strength 3:** Staff understood basic and core emergency principles and performed their duties accordingly.

### 2.13.2 Areas for Improvement

**Area for Improvement 1:** The County should consider having a Department of Corrections liaison in the County EOC.

**Analysis:** The jail experienced a number of issues, including the loss of power, loss of water and water pressure, and security and access issues. Approximately 50 inmates were relocated to other facilities in the region because of the damage. Additionally, in some areas of the jail, inmates were able to taking pieces of concrete off the walls, which resulted in additional security concerns. The elevators were also not working and thus staff had to walk four flights of stairs.

The Department of Corrections staff was in constant contact with the EOC; however, they had immediate needs that were not addressed in a timely manner. As a result, Department of Corrections staff members were reassigned to handle various situations. An example of this is in working to resolve the water issues. Department of Corrections staff contacted the EOC Logistics Section for assistance; however, the EOC Logistics Section recommended that they go directly to the Water Department to get the issue resolved. This was problematic in that Department of Corrections staff needed to be working the issues in the jail and not out in the community. In addition, there was a piece of damaged glass that was hanging from a fourth story window of the jail, and requests were made through



the EOC for assistance in getting it removed and repaired. Approximately two weeks later, when a senior member of the EOC staff was conducting a walk-through of the jail and noticed the glass, the repairs were made and the situation was addressed. Having a Department of Corrections liaison in the EOC could have assisted in the coordination with the various EOC sections and could act as the conduit to ensure issues are being addressed so that Department of Corrections staff can focus on their internal operations.

The Department of Corrections potentially presents the largest liability for the County. If the needs of the jail are not met in a timely manner, and the Department of Corrections is precluded from providing key services to inmates as well as addressing identified needs effectively and efficiently, could potentially cause problems for the County in future incidents.

**Area for Improvement 2:** Department of Corrections staff need training on alternate processes and procedures.

**Analysis:** The tunnel from the jail to the Courthouse was damaged during the earthquake and deemed unsafe. The Department of Correction had to transfer the inmates to court using City streets. While the Sheriff’s Department deputies are familiar with escorting inmates on City streets because they do it on a regular basis, Department of Corrections staff are not trained to escort inmates on public streets. The Sheriff’s Department could not support the Department of Corrections because Sheriff deputies were assigned to assist with other emergency related activities. Department of Corrections officers should be trained on how to transport inmates on public streets.

**Area for Improvement 3:** The County needs to clarify the term Disaster Service Worker (DSW) accounting for Department of Corrections staff and provide more in-depth training to prepare Department of Corrections Staff.

**Analysis:** Department of Corrections officers are required to respond immediately and should be viewed as other first responding entities. The County needs to provide additional clarification on the term DSW as it applies to Department of Corrections staff so that the Department of Corrections can better prepare and ensure these responsibilities are included in updated plans, policies, and procedures and that staff receive adequate training.

## 2.14 PACIFIC GAS AND ELECTRIC

### 2.14.1 Strengths

**Strength 1:** Communication and coordination with the County went very well. The County assisted in connecting PG&E with contacts within the County to use County facilities for base camps at the State fairgrounds and airport.

**Strength 2:** All electricity was restored within 26 hours of the event.

### 2.14.2 Areas for Improvement

**Area for Improvement 1:** Napa City and the County should coordinate its efforts regarding communication and coordination with utilities such as PG&E.

**Analysis:** During the response to an event, PG&E’s plan is to partner with the County with the idea that the cities will feed information into the County through the EOC. This did not happen during the response to the earthquake. PG&E received calls directly from the City. Because of this lack of coordination between the City and County, PG&E deployed two representatives to the County EOC and two representatives to the City EOC, and as time went on, additional resources were provided to the City.



**Area for Improvement 2:** The County should coordinate with PG&E personnel to conduct damage assessments.

**Analysis:** PG&E protocols require them to pull the electricity and natural gas for all buildings that are red-tagged. The inconsistencies that occurred during the damage assessment process and buildings changing rankings had an effect on residents and caused problems for those who had homes or other structures that were initially red-tagged, but then later in the day were yellow-tagged or green-tagged. Once this change happened, the residents needed PG&E to come back out and restore their services, which added to the workload of PG&E in trying to get the overall County services restored. The County and PG&E should work together to conduct inspections. If possible, PG&E would like to be a part of the inspection teams.



**Area for Improvement 3:** PG&E and the County should develop and agree upon a list of high-priority restoration facilities.

**Analysis:** PG&E has a draft priority restoration list of critical infrastructure sites throughout the County. While PG&E recognizes that this is subject to change; PG&E would like to validate their list against the County's list of high priority restoration facilities.

## KEY RECOMMENDATIONS

The following key recommendations address the areas for improvement identified above.

### **EOC:**

1. Coordinate with the City to have a liaison report to the County EOC and include the process in the updated EOP.
2. Conduct additional training on the following topics:
  - a. Role of the EOC and HHS A DOC
  - b. EOC section roles and responsibilities
3. Develop a process and protocol for the County EOC and HHS A DOC to coordinate on mass care and shelter functions.
4. Procure WebEOC, and once WebEOC is up and running, provide training on its use.
5. Develop a procedure to obtain situational awareness information from jurisdictions and include that process in the updated EOP.
6. Develop an EOC Operations Manual that includes detailed checklists for EOC functions and positions.
7. Identify a location for the establishment of a "warm" EOC.
8. Develop protocols for establishing the Emergency Volunteer Center and provide additional training to County and City staff.

### **Command:**

1. Develop an elected officials emergency guide.
2. Develop shift change protocols and conduct training on EOC A and B shift transition.
3. Develop a policy regarding staff self-reporting to the EOC.



### **Operations:**

1. Conduct additional training on Operations Section staff roles and responsibilities.
2. Update the EOC organization chart to include the Care and Shelter Branch position.

### **Planning:**

1. Identify additional County staff who can be utilized to staff the Planning Section.
2. Provide additional training to Planning Section staff regarding the development of the situation status reports.
3. Develop a process to gather impact assessment data.
4. Develop updated document templates.

### **Logistics:**

1. Conduct additional training for Logistics Section staff:
  - a. The ordering process for heavy equipment and resources
  - b. Overall EOC roles and responsibilities and terminology
2. Develop a resource tracking system.
3. Develop a process for the completion of the ICS 213 forms.

### **Finance and Administration:**

1. Consider relocating the Logistics and Finance and Administration Sections to be physically located next to each other in the EOC.
2. Conduct additional research to examine the organization structure of the Logistics and Finance and Administration Sections.
3. Consider establishing pre-approved emergency spending limits.
4. Develop a process for tracking personnel time and costs.
5. Develop an emergency work and compensation policy.
6. Develop a clearer check-in and check-out process.
7. Conduct training on recovery-related activities and FEMA reimbursement processes.

### **GIS:**

1. Include GIS in future training and exercises.
2. Develop a GIS SOG.
3. Develop a coordinated GIS approach between the City and the County.

### **HHSa DOC:**

1. Develop a patient tracking process.
2. Develop written protocols outlining coordination and communication procedures between the HHSa DOC and County EOC.
3. Conduct training with the County EOC regarding the roles and responsibilities of the HHSa DOC.

### **IT and Communications:**

1. Establish an alternate Data Center network connection to be used the primary connection is lost.
2. Establish EOC-specific logins to be used when the EOC is activated.
3. Develop a process including procedures for IT and Communications staff to support the needs of field vs. EOC locations.



## **Legal:**

1. Develop an emergency services legal handbook.
2. Conduct annual review of mutual aid agreements.
  - a. Develop a mutual aid agreement database.
3. Develop a comprehensive donations and volunteer management plan.

## **Public Information:**

1. Establish a JIC during an event.
2. Identify a source to obtain Spanish translation services for the development of public information messages needed during an incident.
3. Develop a process for the PIO team to access situation status reports. Coordinate this process with the Planning Section.
4. Conduct training on PIO team roles and responsibilities.
5. Develop a public information feedback tool and a process for receiving this feedback following an incident.
6. Develop a protocol establishing the process for releasing information to the public and the media.

## **Department of Corrections:**

1. Consider having a Department of Corrections liaison seat in the County EOC.
2. Develop and conduct training on alternate procedures for Department of Corrections staff on transporting inmates in different situations.
3. Conduct additional training to Department of Corrections staff regarding the meaning as well as roles and responsibilities of DSWs.

## **Pacific Gas and Electric**

1. Coordinate with the City and County to develop a protocol for providing PG&E representatives to support the response to an incident.
2. Consider including PG&E on the damage assessment teams.
3. Coordinate and share priority restoration lists between PG&E and the County.



# 3.0 RECOVERY ACTIVITIES

## 3.1 OVERVIEW

The transition from response to recovery was smooth. While the City and County struggled to effectively coordinate and communicate with one another during the response phase, the recovery phase was different in that the City and the County worked well together. The transition from the EOC to the ROC went very smoothly. The information contained in this section identifies the successes and areas for improvement in the recovery-related activities performed by Napa County following the earthquake.

## 3.2 DAMAGE ASSESSMENT PROCESS

### 3.2.1 Strengths

**Strength 1:** County staff demonstrated responsiveness and flexibility to a rapidly evolving situation.

**Strength 2:** The overall damage assessment process was a valuable learning experience for County staff and many lessons learned were identified and captured for future reference.

### 3.2.2 Areas for Improvement

**Area for Improvement 1:** The County and the City should develop and follow a resource ordering request process for inspectors.

**Analysis:** The County and City currently do not have a process or plan in place for how damage assessment inspectors should be requested. The City of Napa incorrectly ordered inspectors by going directly through Cal OES instead of making the request through the County. This caused confusion as to how many inspectors were actually in the County conducting assessments and where the assessments were being completed. Overall, it was difficult to get the correct number of inspectors to complete the assessments.

**Area for Improvement 2:** County staff need a better understanding of the damage assessment process.

**Analysis:** A clearer understanding of the differences between an IDE and a PDA is needed. There was some confusion regarding what was needed to gather the appropriate information for each. Additionally, the use of information and the method for gathering information during the safety assessments was not compatible with the needs of the PDA teams. With this clearer understanding of each of these processes and what is needed, the command staff will be able to provide better guidance and direction to the EOC staff so the correct documentation is developed.

**Area for Improvement 3:** The County needs to establish a consistent inspection process and rating system for the PDA.



**Analysis:** Once the damage assessment information was submitted, it was found that there were inconsistencies in the information coming back from the inspectors. For example, the jail received two different assessments from two groups of inspectors with no supporting information on the rationale for the different ratings. Additionally, in some areas of Napa City and County, every house on a particular street was inspected and damages documented, but in other areas, the inspectors only went up and down the streets and reported damages based on windshield assessments. This inconsistency caused confusion and impacted the ability of the County in being able to accurately report damage assessment numbers to the State and potentially impacted PA and IA declarations.

**Area for Improvement 4:** County staff need more training on the differences between “safety inspections” and “damage assessments”.

**Analysis:** The terminology used to describe the results or findings from safety inspections and damage assessments do not necessarily correlate one with another. The designations of red, yellow, or green represent a safety level and are not a reflection of the extent of damage a structure sustains, which is designated by the use of the terms “major”, “minor”, and “affected”. These terms are not interchangeable, do not correlate, and can cause confusion. A red-tagged building can have minor damage and a green-tagged building can have major damage. To help clarify the status of a particular building or structure, it may be helpful to conduct the safety inspections and damage assessments in conjunction with one another. County personnel should obtain additional training on the differences.

**Area for Improvement 5:** County staff should receive more training on the PA and IA grant process requirements.

**Analysis:** Napa County was given conflicting information from the State while they were preparing their PA and IA declaration documents. Initially, the County was told that insurance is not considered in the PDA process. They were also told that based on initial estimates that the receipt of an IA declaration was a given and that the PA did not meet the threshold for a declaration. Because of this information, the County focused more on PA, and it overshadowed the IA process. This resulted in the IA justification being deemed insufficient for a declaration. Had Napa County been given different guidance and advice from the State, they would not have focused on one area over another. This conflicting and incorrect information has caused duplication of effort and work in being able to further justify the amount of damage to secure an IA declaration. The County needs more training on the PA and IA grant process and documentation requirements.



**Area for Improvement 6:** The County needs to establish an effective approach and tool for tracking damage assessment information.

**Analysis:** The damage assessments were not tracked effectively. There was duplication and conflicting damage assessment information. Once these conflicts were identified, it was not an easy process to go back and make changes to the information. A display board listing all of the damage assessment information and the current status of each structure would have assisted with better overall situational awareness.



## 3.3 LOCAL ASSISTANCE CENTER

### 3.3.1 Strengths

**Strength 1:** The County EOC worked closely with the HHSa DOC in implementing the LAC plan and was able to effectively combine the two plans into one.

**Strength 2:** The County and City worked together on overall LAC planning, site acquisition, staffing, and costs.

**Strength 3:** The operation of the LAC was successful. All of the partners collaborated and worked effectively together.

### 3.3.2 Areas for Improvement

Most  
Frequently  
Asked  
Questions  
at the LAC

- Where is FEMA?
- Are there other forms of grants/aid?
- Why hasn't the individual assistance been granted from FEMA?
- Are there resources for temporary housing?
- How do I start the repairs on my tagged home?

**Area for Improvement 1:** The EOC should identify personnel who start to plan for establishing a LAC at the beginning of the response.

**Analysis:** To efficiently and effectively establish a LAC, the County and the EOC should begin planning for establishing and operating a LAC at the start of the response so that the necessary resources and staff are in place when it is time to actually open. The plan

should establish an overall approach and timeline for when a LAC will be activated, what resources and workshops will be included and offered, and the demobilization process. While there was some initial concern that it took too long to open the LAC, by early October, there was concern that the LAC had been opened too soon because attendance was lagging and the County was having difficulty identifying and conducting relevant workshops.

**Area for Improvement 2:** The LAC team should work with the PIO team to develop a public information strategy for the LAC.

**Analysis:** The PIO team struggled with how to keep the LAC current and relevant so that people would continue to use it. The PIO team should develop a public information strategy for the LAC that includes different types of information that can be disseminated to continue to generate interest in residents utilizing the LAC until it is ready to be closed.



## KEY RECOMMENDATIONS

The following key recommendations were identified for the areas for improvement identified above:

### **Damage Assessment Process:**

1. Develop a process and plan for ordering and deploying inspectors to conduct damage assessments. Based on what is known now, consider a process that would include dividing the County into a grid and send inspection teams into those grids to inspect every property.
2. Conduct additional training on the damage assessment process.
3. Develop a more deliberate process for the PDA and safety assessment process and consider having County personnel on the inspection teams paired with the State and FEMA inspectors.
4. Provide additional training on the PA and IA procedures.
5. Develop a process or tool to capture damage assessment information.

### **LAC:**

1. Include the process for establishing the LAC in the EOC checklists to ensure this is done at the beginning of the response.
2. Develop a public information strategy for the LAC



Over 4,000 calls were received by the LAC in a 9-day period.



# 4.0 GENERAL ACTIVITIES

## 4.1 OVERVIEW

During the response and recovery to the earthquake, several issues were identified that were consistent throughout various sections in the EOC. Instead of repeating the issues in each section, they are outlined here and provide an overview of the challenges experienced.

### 4.1.1 Strengths

Strength 1: Personnel performing response and recovery activities at the task level demonstrated professionalism in a dynamic, fast paced, and sometimes potentially dangerous environment. This level of service delivery in the face of significant challenges is attributed to the ownership of the roles and responsibilities with the support and guidance of their leadership to accomplish these tasks in a challenging environment. Personnel employed innovative solutions to maintain situational awareness, allocate resources, accomplish objectives of service to their residents, and provide a platform of communications between County and City departments and agencies.

### 4.1.2 Areas for Improvement

**Area for Improvement 1:** The County should examine EOC staffing and clarify the roles and responsibilities of EOC staff.

**Analysis:** During the response to the earthquake, there were many times that County employees who were working in the EOC were pulled away to address issues relating to their normal “day jobs”. This caused confusion and EOC staff was not able to focus on the response actions. This situation highlights the need for better awareness that all County employees are considered a DSW and that they may be called upon to perform other duties outside of their normal everyday responsibilities.

Additionally, individuals who serve in management positions in their departments were initially assigned as EOC Section Chiefs, which was problematic because they also needed to support the operation of their department to maintain continuity while also working in the EOC. Because of the challenges experienced during the earthquake, it was identified that there is a need for the Command Section to reevaluate staffing for key EOC positions.

**Area for Improvement 2:** County leadership needs multiple and redundant methods for communicating with County employees during an emergency.

**Analysis:** As a result of the earthquake, many County facilities were damaged. While County leadership did provide guidance and direction to County employees regarding their facility and where to report



for work, many employees never received the information. Many employee offices were relocated, and some employees were not able to report to work for a couple of days until an alternate location could be found. Because not all employees received the notifications, there was confusion regarding what they were supposed to do. A better process and redundant communication methods to communicate with employees should be identified.

**Area for Improvement 3:** Inconsistency in damage assessments for HHSAs facilities caused confusion and uncertainty for staff.

**Analysis:** Many HHSAs and other County department facilities were damaged during the earthquake, causing many staff and their offices to be relocated to alternate facilities. As damage assessments were conducted and buildings were inspected, there were several occasions in which a building was given one rating by a team of inspectors and then another rating by a different inspection team. These inconsistencies caused confusion, and staff members were unsure of the status of buildings. Additionally, there were instances when employees were entering into buildings that were unsafe without knowing it.

## KEY RECOMMENDATIONS

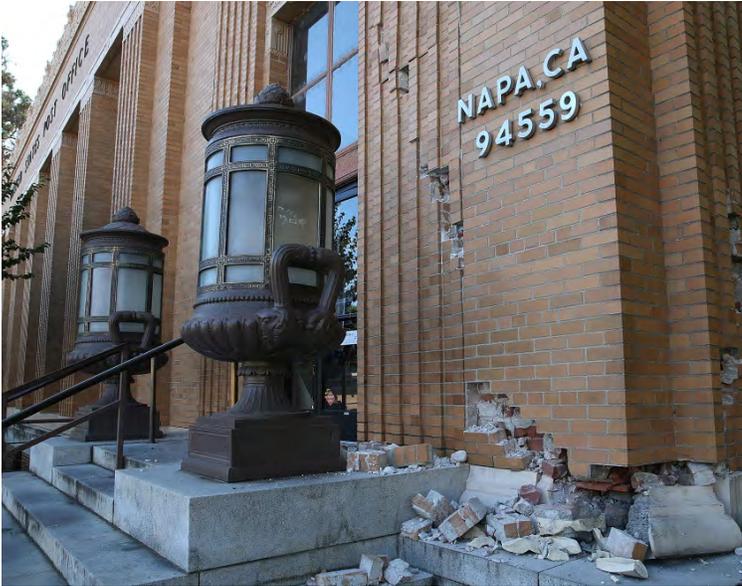
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The following key recommendations were identified for the areas for improvement identified above:

1. Conduct additional EOC Section training so staff has a better understanding of their specific roles and responsibilities.
  - a. Reevaluate EOC section positions and their assigned personnel.
2. Develop an employee notification process and procedure.
3. Develop a consistent standard process to conduct damage assessments.



# CONCLUSION



The South Napa Earthquake provided a significant test of the County's capabilities and its whole community partners. The scale and severity of the earthquake resulted in extensive response and recovery efforts, and offered the County employees the opportunity to demonstrate an effective response to and recovery from an earthquake. This incident was the first opportunity many staff members had to work in the EOC and to perform their duties, and they were able to do so effectively. The actions County staff took during the response and recovery phases following the earthquake revealed several strengths, while also highlighting areas for improvement for future incidents.

While the earthquake's impact was damaging, the County recognizes the need to plan for larger and even more significant disasters. The County will use the strengths and areas for improvement in this report to guide their preparedness activities. In reviewing all aspects of the County's preparations for, immediate response to, and initial recovery from the earthquake, the Napa County staff will have the opportunity to address identified strengths and areas for improvement with key recommendations.

In recognition of the importance of the findings within the report, the County has already begun to address a number of the areas for improvement. Together with its whole community partners, the County is demonstrating its commitment to learning lessons from response and recovery operations and better serving the members of the community. For many of the victims, recovery will be measured in years. The County remains committed to working closely with them to meet their long-term needs and to achieve a full recovery.



# South Napa Earthquake



# APPENDICES

After Action Report



# South Napa Earthquake



# APPENDIX A: IMPROVEMENT PLAN

This improvement plan has been developed as a result of the actions taken during the South Napa Earthquake, which occurred on August 24, 2014.

Issue/Area for Improvement	Corrective Action	Capability Element	Primary Responsible Organization	Organization Point of Contact	Start Date	Completion Date
<b>1.0 Preparedness Activities</b>						
<b>1.2 Planning</b>						
1. The County EOP needs to be updated.	Update County EOP	Planning	OES	Kevin Twohey	October 2014	June 2015
2. The County of Napa needs to develop a continuity of operations (COOP) plan to ensure County departments can continue to function and provide essential services following an incident.	Develop COOP Plan	Planning	OES	Kevin Twohey	Spring 2015	June 2016
3. A Jail Evacuation Plan is needed.	Develop Jail Evacuation Plan	Planning	Department of Corrections		Spring 2015	June 2016
4. A Donations Management Plan is needed.	Develop Donations Management Plan	Planning	OES/Finance	Kevin Twohey / Tracy Schulze	Spring 2015	June 2016
5. More detailed planning to address access and functional needs of the community is needed.	An Access and Functional Needs planning element should be incorporated into the County EOP.	Planning	HHSA	Lisa Fletcher	Spring 2015	June 2016
6. A formal debris management plan is needed.	Develop Debris Management Plan	Planning	OES	Kevin Twohey	Spring 2015	June 2016
<b>1.3 Training</b>						
1. Additional EOC training is needed.	Conduct training focusing on EOC-related issues and activities.	Training	OES	Kevin Twohey	Spring 2015	June 2016





Issue/Area for Improvement	Corrective Action	Capability Element	Primary Responsible Organization	Organization Point of Contact	Start Date	Completion Date
2. Training needs to be tailored so that it is specific to Napa County and recovery-related topics.	Conduct training focusing on Napa County-specific recovery related issues subjects.	Training	OES	Kevin Twohey	Spring 2015	June 2016
3. Conducting coordinated training with the City of Napa and other jurisdictions would be beneficial.	Conduct training focusing on joint operations with City of Napa.	Training	OES	Kevin Twohey	Summer 2015	December 2016
<b>1.4 Exercises</b>						
1. Additional exercises focusing on recovery-related activities are needed to further enhance County staff's capabilities for recovering from an incident.	Conduct additional tabletop and functional exercises focusing on recovery-related issues and activities.	Exercise/ Training	OES	Kevin Twohey	Spring 2015	June 2016
<b>2.0 Response Activities</b>						
<b>2.2 Emergency Operations Center</b>						
1. The County and the City need to establish better incident response coordination and communication protocols.	Coordinate with the City to have a liaison report to the County EOC and include the process in the updated EOP	Planning	OES	Kevin Twohey	October 2014	June 2015
2. The County should clarify the roles and communication and coordination procedures between the County EOC and established DOCs for various types of incidents.	Conduct additional training on the following topics: <ul style="list-style-type: none"> <li>• Role of the EOC and HHSA DOC</li> <li>• EOC section roles and responsibilities</li> </ul>	Planning	OES/HHSA	Kevin Twohey / Lisa Fletcher	Fall 2014	November 2015
3. The County EOC and the HHSA DOC should coordinate on mass care and shelter functions.	Develop a process and protocol for the County EOC and HHSA DOC to coordinate on mass care and shelter functions.	Planning	OES/HHSA	Kevin Twohey / Lisa Fletcher	Fall 2014	November 2015

Issue/Area for Improvement	Corrective Action	Capability Element	Primary Responsible Organization	Organization Point of Contact	Start Date	Completion Date
4. County EOC staff should be trained on and utilize WebEOC.	Procure WebEOC, and once WebEOC is up and running, provide training on its use.	Systems/ Equipment	OES	Kevin Twohey	October 2014	June 2015
5. The County should develop a procedure to obtain situational awareness from affected jurisdictions.	Develop a procedure to obtain situational awareness information from jurisdictions and include that process in the updated EOP.	Planning	OES	Kevin Twohey	January 2015	December 2015
6. An EOC Operations Manual that includes detailed checklists for EOC functions and positions should be developed.	Develop and EOC Operations Manual to include EOC function checklists.	Planning	OES	Kevin Twohey	October 2014	June 2015
7. The County should identify a hardened (seismically reinforced, outside of the flood plain, etc.) facility location that can serve as the primary EOC and is furnished with necessary resources and equipment.	Identify a location for the establishment of a warm EOC.	Planning/ Systems/ Equipment	Public Works/ OES	Jason Campbell / Kevin Twohey	October 2014	October 2016
8. The County should clarify the protocols for establishing and operating the Emergency Volunteer Center.	Develop protocols for establishing the Emergency Volunteer Center and provide additional training to County and City staff.	Planning/ Training	OES/Volunteer Center	Kevin Twohey / Jim Tomlinson	Spring 2015	December 2015
<b>2.3 Command</b>						
1. The County should develop an elected officials emergency guide that describes their roles and responsibilities during a disaster.	Develop an elected officials emergency guide.	Planning/ Training	OES/CEO	Kevin Twohey / Larry Florin	January 2015	December 2015



# South Napa Earthquake

Issue/Area for Improvement	Corrective Action	Capability Element	Primary Responsible Organization	Organization Point of Contact	Start Date	Completion Date
2. EOC Staff should develop protocols that explain the types of information and activities that should be coordinated during an EOC shift change.	Develop shift change protocols and conduct training on EOC A and B shift transition.					
	Planning/ Training	OES	Kevin Twohey	Spring 2015	December 2015	
3. A policy for staff self-reporting to the EOC needs to be developed.	Develop a policy regarding staff self-reporting to the EOC.	Planning	OES/Planning	Kevin Twohey	January 2015	June 2015
4. The County needs better situational awareness of the efforts and needs of cities and towns throughout the county during a response.	Develop a process and protocol for obtaining information from the cities and towns and include in the updated EOP.	Planning	OES	Kevin Twohey	January 2015	December 2015
<b>2.4 Operations</b>						
1. The Operations Section should clarify the roles and responsibilities of each position in the Operation Section.	Conduct additional training on Operations Section staff roles and responsibilities.	Training	OES	Kevin Twohey	Spring 2015	December 2015
2. The EOC organization chart needs to be updated to include the Care and Shelter Branch position under the Operations Section.	Update the EOC organization chart to include the Care and Shelter Branch position.	Planning	OES	Kevin Twohey	October 2014	June 2015
<b>2.5 Planning</b>						
1. The Planning Section should be scaled to support Section needs and requirements.	Identify additional County staff who can be utilized to staff the Planning Section.	Planning	OES/Planning	Kevin Twohey / John McDowell	January 2015	December 2016
2. The Planning Section should be trained on data collection and how to maintain situational awareness.	Provide additional training to Planning Section staff regarding the development of the situation status reports.	Training	OES/Planning	Kevin Twohey / John McDowell	January 2015	December 2015



Issue/Area for Improvement	Corrective Action	Capability Element	Primary Responsible Organization	Organization Point of Contact	Start Date	Completion Date
3. The County needs to develop and conduct training on how to gather impact assessment information and data immediately following an incident.	Develop a process to gather impact assessment data and include in the updated EOP.	Planning	OES working with County Departments	Kevin Twohey – coordinate with EOC Section Chiefs	October 2014	June 2015
4. Planning Section staff should develop document templates to make it easier to gather and display the appropriate information.	Develop updated document templates.	Planning	Each County Department	Each EOC Section	January 2015	December 2015
<b>2.6 Logistics</b>						
1. The Logistics Section should develop and be trained on the process for ordering heavy equipment and resources.	Conduct additional training for Logistics Section staff on the ordering process for heavy equipment and resources	Planning/ Training	OES	Kevin Twohey / Logistics Section Chief	January 2015	December 2016
2. Logistics Section staff should coordinate with Operations and Planning Section to better understand resource needs and requirements.	Conduct additional training for Logistics Section staff on overall EOC roles and responsibilities and terminology.	Training		Logistics Section Chief	January 2015	December 2016
3. The County should work with jurisdictions and the State to establish a resource-tracking system.	Develop a resource tracking system	Planning	OES/Logistics	Kevin Twohey / Jeff Brooner	January 2015	December 2015
4. EOC staff should be trained on how to complete the ICS 213 form.	Develop a process for and conduct training on the completion of the ICS 213 forms.	Planning/ Training	OES	Kevin Twohey	January 2015	December 2015
<b>2.7 Finance and Administration</b>						



# South Napa Earthquake

Issue/Area for Improvement	Corrective Action	Capability Element	Primary Responsible Organization	Organization Point of Contact	Start Date	Completion Date
1. The Logistics Section and Finance and Administration Section should be located physically closer in the EOC.	Consider relocating the Logistics and Finance and Administration Sections to be physically located next to each other in the EOC.	Planning/ Training	OES	Kevin Twohey	January 2015	December 2015
2. The County should examine the Finance and Administration Section and Logistics Section organization structure and the roles and responsibilities assigned to the branches and units within each section.	Conduct additional research to examine the organization structure of the Logistics and Finance and Administration Sections to determine the best place for purchasing people to be.	Planning	OES/Finance	Kevin Twohey / Tracy Schulze	January 2015	December 2015
3. County leadership should establish a pre-approved emergency spending limit prior to an emergency.	Consider establishing pre-approved spending limits.	Planning	Finance	Tracy Schulze	January 2015	December 2015
4. The County should work with jurisdictions to establish a process for tracking personnel time and costs.	Develop a process for requesting and tracking personnel time and costs.	Planning/ Training	Finance	Tracy Schulze	January 2015	December 2015
5. The County needs a consistent work and compensation policy for emergencies.	Develop an emergency work and compensation policy.	Planning	County Administration	Leanne Link	January 2015	December 2015





Issue/Area for Improvement	Corrective Action	Capability Element	Primary Responsible Organization	Organization Point of Contact	Start Date	Completion Date
6. The Finance Section should clarify the check-in and check-out process to ensure accurate information is being captured regarding staff activities.	Develop a clearer check-in and check-out process.	Planning	Finance	Tracy Schulze	January 2015	December 2015
7. County finance and administration staff should receive training on the FEMA disaster reimbursement process.	Conduct training on recovery-related activities and FEMA reimbursement processes.	Training	OES/Finance	Kevin Twohey / Tracy Schulze	January 2015	June 2016
<b>2.8 Geospatial Information Systems</b>						
1. EOC staff need a better understanding of GIS capabilities so GIS can be integrated in the overall EOC process and decision-making.	Include GIS in future training and exercises.	Training	OES	Kevin Twohey	January 2015	December 2015
2. County GIS personnel need additional training and resources in order to be better prepared to support the needs of the EOC during a response to an incident.	Develop a GIS SOG	Planning	GIS	Pat Kowta	January 2015	December 2015
	Include GIS in future training and exercises.	Training	OES/GIS	Kevin Twohey	January 2015	June 2016
3. The County and the City GIS teams should develop a coordinated GIS approach to develop consistent GIS products.	Develop a coordinated GIS approach between the City and the County.	Planning	GIS	Pat Kowta	January 2015	December 2015
<b>2.9 Health and Human Services Agency Department Operations Center</b>						
1. HHSA should work with healthcare organizations to develop a process for tracking patients.	Develop a patient tracking process.	Training/Planning	HHSA	Lisa Fletcher	January 2015	December 2015

Issue/Area for Improvement	Corrective Action	Capability Element	Primary Responsible Organization	Organization Point of Contact	Start Date	Completion Date
2. HHSA DOC and the County EOC should develop written protocols for coordination and communication with each other.	Develop written protocols outlining coordination and communication procedures between the HHSA DOC and County EOC.	Planning	HHSA/OES	Lisa Fletcher / Kevin Twohey	Fall 2014	November 2015
3. The HHSA DOC and County EOC should clarify roles and responsibilities to eliminate confusion and possible duplication of efforts.	Conduct training with the County EOC regarding the roles and responsibilities of the HHSA DOC					
	Training	HHSA/OES	Lisa Fletcher / Kevin Twohey	Fall 2014	November 2015	
<b>2.10 IT and Communications</b>						
1. The County should establish an alternate Data Center network connection to ensure sufficient level of redundancy.	Establish an alternate network connection to be used the primary connection is lost.	Systems/ Equipment	IT	Jon Gjestvang	Fall 2014	December 2015
2. EOC staff experienced difficulty logging into EOC laptops and accessing needed data.	Establish EOC-specific logins to be used when the EOC is activated.	Systems/ Training	IT	Jon Gjestvang	January 2015	December 2015
3. County IT and Communications staff need better guidance and direction for providing IT support services during an emergency to all County departments.	Develop a process including procedures for IT and Communications staff to support the needs of field locations.	Systems/ Training/ Planning	IT	Jon Gjestvang	January 2015	December 2015



Issue/Area for Improvement	Corrective Action	Capability Element	Primary Responsible Organization	Organization Point of Contact	Start Date	Completion Date
4. The IT and Communications staff would be able to provide more support if there was more advance warning of potential IT needs and clarification from EOC Command Section on what IT and Communication requests are a high priority.	Develop a process including procedures for IT and Communications staff to support the needs of field locations.	Systems/ Training/ Planning	OES/IT	Kevin Twohey / Jon Gjestvang	Spring 2015	Spring 2016
<b>2.11 Legal</b>						
1. The County should develop an emergency services legal handbook.	Develop an emergency services legal handbook.	Planning	Legal	Minh Tran	December 2014	December 2015
2. The County should conduct a comprehensive review of current mutual aid agreements and update them to reflect current needs and capabilities.	Conduct annual review of mutual aid agreements.	Planning	Legal	Minh Tran		Ongoing – Annually
	Develop a mutual aid agreement database.	Planning	Legal/Logistics	Minh Tran / Jeff Brooner	January 2015	December 2015
3. The County should develop a comprehensive donations and volunteer management plan.	County Legal Counsel should be consulted in the development of the donations and volunteer management plan.	Planning	Legal	Minh Tran / Jeff Brooner	Spring 2015	Spring 2016
<b>2.12 Public Information</b>						
1. Napa City and the County should coordinate public information efforts and for bigger incidents, establish a JIC.	Establish a JIC during an event.	Training/ Planning	County and City	PIO Teams	Ongoing	Ongoing



# South Napa Earthquake

Issue/Area for Improvement	Corrective Action	Capability Element	Primary Responsible Organization	Organization Point of Contact	Start Date	Completion Date
2. The County public information office should obtain the capability to translate public information messages, both written and spoken, into Spanish quickly.	Identify a source to obtain Spanish translation services for the development of public information messages needed during an incident.	Planning/ Training	PIO	Molly Rattigan	October 2014	June 2015
3. The PIO team needs access to the information being collected and developed in the EOC.	Develop a process for the PIO team to access situation status information, and coordinate with the Planning Section.	Planning	PIO	Molly Rattigan	January 2015	December 2015
4. The County should clearly define the roles and responsibilities of various positions within the PIO team.	Conduct training on PIO team roles and responsibilities.	Training	OES/PIO	Kevin Twohey / Molly Rattigan	January 2015	December 2015
5. The PIO Team should develop an evaluation process to ensure that it is meeting the needs and expectations of the media and the public.	Develop a public information feedback tool and a process for receiving this feedback following an incident.	Planning	PIO	Molly Rattigan	January 2015	December 2015
6. The County should establish a protocol that requires all County departments to coordinate press releases through the PIO team.	Develop a protocol establishing the process for releasing information to the public and the media.	Planning	PIO	Molly Rattigan	January 2015	December 2015
<b>2.13 Department of Corrections</b>						
1. The County should consider having a Department of Corrections liaison in the County EOC.	Consider having a Department of Corrections liaison seat in the County EOC.	Planning	OES	Kevin Twohey	November 2014	December 2015



Issue/Area for Improvement	Corrective Action	Capability Element	Primary Responsible Organization	Organization Point of Contact	Start Date	Completion Date
2. Department of Corrections staff need training on alternate processes and procedures.	Develop and conduct training on alternate procedures for Department of Corrections staff on transporting inmates in different situations.	Training	Department of Corrections		January 2015	December 2015
3. The County needs to clarify the term Disaster Service Worker (DSW) accounting for Department of Corrections staff and provide more in-depth training to prepare Department of Corrections Staff.	Conduct additional training to Department of Corrections staff regarding the meaning as well as roles and responsibilities of disaster service workers.	Planning	Department of Corrections		January 2015	December 2015
<b>2.14 Pacific Gas and Electric (PG&amp;E)</b>						
1. Napa City and the County should coordinate its efforts regarding communication and coordination with utilities such as PG&E.	Coordinate with the City and County to develop a protocol for providing PG&E representatives to support the response to an incident.	Planning	City of Napa			
County of Napa						
PG&E	Kevin Twohey / Mark van Gorder	January 2015	December 2015			
2. The County should coordinate with PG&E personnel to conduct damage assessments.	Consider including PG&E on the damage assessment teams.	Planning/ Training	OES/PG&E	Kevin Twohey / Mark van Gorder	January 2015	June 2015
3. PG&E and the County should develop and agree upon a list of high-priority restoration facilities.	Coordinate and share priority restoration lists between PG&E and the County.	Planning/ Training	OES/PG&E	Kevin Twohey / Mark van Gorder	January 2015	June 2015





Issue/Area for Improvement	Corrective Action	Capability Element	Primary Responsible Organization	Organization Point of Contact	Start Date	Completion Date
<b>3.0. Recovery Activities</b>						
<b>3.2 Damage Assessment Process</b>						
1. The County and the City should develop and follow a resource ordering request process for inspectors.	Develop a process and plan for ordering and deploying inspectors to conduct damage assessments and include in the updated EOP.	Planning	OES	Kevin Twohey	October 2014	June 2015
2. County staff need a better understanding of the damage assessment process.	Conduct additional training on the damage assessment process.	Planning	OES	Kevin Twohey	October 2014	Ongoing
3. The County needs to establish a consistent inspection process and rating system for the PDA.	Develop a more deliberate process for the PDA and safety assessment process and consider having County personnel on the inspection teams paired with the State and FEMA inspectors.	Training/ Planning	OES	Kevin Twohey	October 2014	June 2015
4. County staff need more training on the differences between "safety inspections" and "damage assessments".	Provide additional training on the damage assessment process and clarify the terminology.	Training	OES	Kevin Twohey	October 2014	December 2016
5. County staff should receive more training on the PA and IA grant process requirements.	Provide additional training on the PA and IA procedures.	Training	OES	Kevin Twohey	October 2014	December 2016
6. The County needs to establish an effective approach and tool for tracking damage assessment information.	Develop a process or tool to capture damage assessment information.	Planning/ Training	OES	Kevin Twohey	October 2014	December 2016

Issue/Area for Improvement	Corrective Action	Capability Element	Primary Responsible Organization	Organization Point of Contact	Start Date	Completion Date
<b>3.3 Local Assistance Center</b>						
1. The EOC should identify personnel who start to plan for establishing a LAC at the beginning of the response.	Include the process for establishing the LAC in the EOC checklists to ensure this is done at the beginning of the response.	Planning	OES	Kevin Twohey	October 2014	June 2015
2. The LAC team should work with the PIO team to develop a public information strategy for the LAC.	Develop a public information strategy for the LAC.	Planning	PIO	Molly Rattigan	Spring 2015	December 2015
<b>4.0 General Activities</b>						
1. The County should examine EOC staffing and clarify the roles and responsibilities of EOC staff.	Conduct additional EOC Section training so staff have a better understanding of their specific roles and responsibilities.	Planning/ Training	OES	Kevin Twohey	October 2014	December 2016
	Reevaluate EOC section positions and their assigned personnel.	Planning	OES	Kevin Twohey	December 2014	December 2015
2. County leadership needs multiple and redundant methods for communicating with County employees during an emergency.	Develop an employee notification process and procedure.	Planning/ Training	OES	Kevin Twohey	January 2015	June 2015
3. Inconsistency in damage assessments for HHSA facilities caused confusion and uncertainty for staff.	Develop a consistent standard process to conduct damage assessments.	Planning	OES	Kevin Twohey	January 2015	June 2015



# South Napa Earthquake



# APPENDIX B: TIMELINE

The following timeline represents the activities of the South Napa Earthquake.



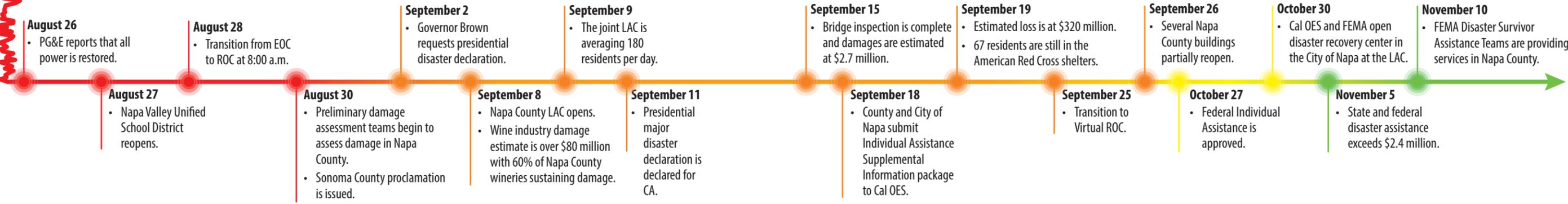
# South Napa Earthquake





# August 24, 2014

- South Napa Earthquake occurs at 3:20 a.m. local time.
- Napa County EOC activates at 6:00 a.m.
- Board of Supervisors adopts local emergency resolution at 8:00 a.m.
- Napa County proclaims local emergency at 10:00 a.m.
- Governor Brown declares a state of emergency and issues a State of California emergency proclamation.
- Napa County requests state aid from Governor Brown.
- Cal OES deploys three urban search and rescue teams to Napa County.
- American Red Cross opens an evacuation shelter at Crosswalk Community Church.
- California Utilities Emergency Association reports that there are approximately 29,000 power outages.
- PG&E activates its EOC and dispatches emergency crews to Napa County.
- Several Napa County buildings are closed:
  - » Napa County Administration Building
  - » Carithers Building
  - » Information Technology Services, Self-Sufficiency, and Adoption Services Building
  - » Napa County Library
  - » Partial Closure of Napa County Health and Human Services Campus
- One local road is closed (Old Sonoma Road) and several roadways sustain minor damage.
- State Water Resources Control Board's Division of Drinking Water with City of Napa Public Works Department issue boil water notice to residents who lost water pressure.
- Initial HAZUS estimates \$362.4 million in losses.





# APPENDIX C: SOUTH NAPA EARTHQUAKE BY THE NUMBERS

The following table provides a snapshot of the effects of the South Napa Earthquake.

Category	Number
Deaths	2
Injuries	300
Damage Assessments (total)	3,680
Red-Tagged	163
Yellow-Tagged	1,749
Green-Tagged	1,768
Structures downgraded from Yellow to Green	38
Structures downgraded from Red to Yellow	31
Structures downgraded from Red to Green	12
Structures changed from Yellow to Red	2
Structures changed from Green to Yellow	3
Structures changed from Green to Red	3

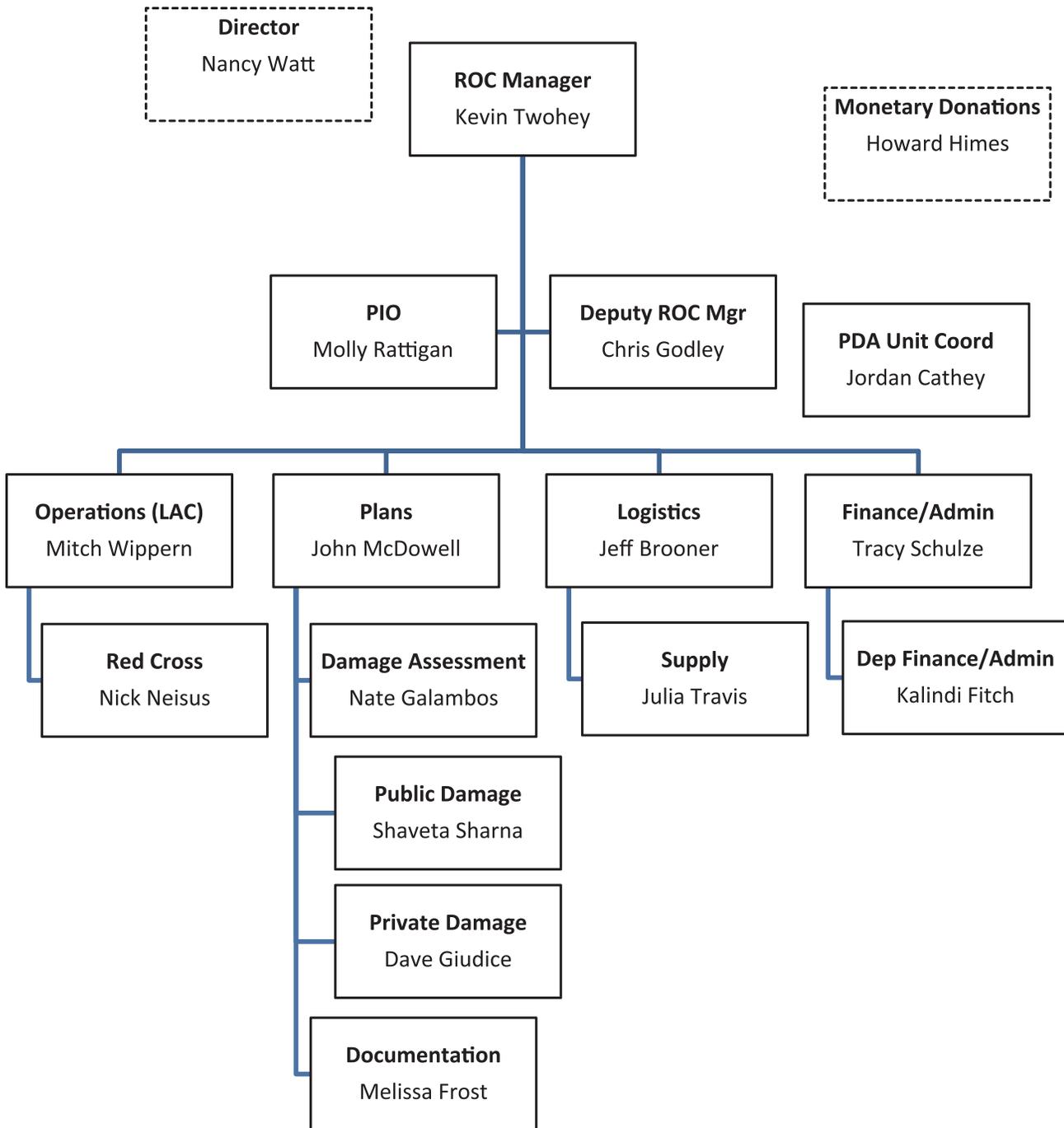
Additional information can be found in Appendix F.



# South Napa Earthquake



# APPENDIX D: RECOVERY OPERATIONS CENTER ORGANIZATION CHART



# South Napa Earthquake



# APPENDIX E: HHSA DOC ORGANIZATION CHART



# South Napa Earthquake



# APPENDIX F: LOCAL ASSISTANCE CENTER METRICS



## Attendance Metrics

**Type:** In-Person | **Location:** Napa LAC Center | **Date:** 9.8.14 – 10.4.14

Saturday's (10/4) Visits = 73 with 20 speaking English, 53 speaking Spanish

Total Visits = 2046

### Spoken Language:

- English 1702
- Spanish 487
- Other 1

### Total Volunteers = 49

- Volunteer Center of Napa County
- San Francisco & E
- San Rafael Fire Department
- Military, First Responders, and US Coast Guard
- High School Students
- Misc. (CBO, FBO, word of mouth)

### Entrance Numbers

Week1	Week2	Week3	Mon	Tues	Wed	Thurs	Fri	Sat	Total
9/8-13	9/15-20	9/22-29	9/29	9/30	10/1	10/2	10/3	10/4	
946	477	338	57	49	80	99	71	73	2190

### Partner Contacts (Partner data was not made available on 10/4)

Week1	Week2	Week3	Mon	Tues	Wed	Thurs	Fri	Sat	Total
9/8-13	9/15-20	9/22-29	9/29	9/30	10/1	10/2	10/3	10/4	
1947	589	269	60	40	91	80	64		3140

Number of Damage Surveys = 35

Number of Building Permits issued at the LAC (as of Monday, 9/29) = 450



## Top FAQs

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1. Where is FEMA?
2. Are there other forms of grants/aid?
3. Why hasn't the IA been granted from FEMA?
4. Are there resources for temporary housing?
5. How do I start the repairs on my tagged home?

## Most Visited Partner Tables

---

- Salvation Army
- American Red Cross
- Season of Sharing
- City Permitting

**Type:** Phone | **Location:** (707) 258-7829 | **Date:** 9.8.14 – 10.4.14

### Inspection Requests

Total number of inspection requests (as of 10/4) = 1,911

Completed: 1,683

Remaining: 228

### Call Center from 9.15.14 to 10.4.14

1. Call Center received 16 calls today.

The Call Center has received a grand total 881 calls, of which:

- 193 were for Inspections
- 319 were referred to the LAC
- 116 were referred to an outside agency
- 25 were follow-up calls
- 52 were for general information
- 222 calls were not categorized by the type of call.

**Type:** Web Visit | **Location:** napaquakeinfo.com | **Date:** 9.5.14 – 10.2.14

- 13,189 Page Views
  - » 73.4% New Visitor
  - » 26.6% Returning Visitor



# APPENDIX G: INDIVIDUAL ASSISTANCE SUPPLEMENTAL INFORMATION

The following document is the IA Supplemental Information that was provided to FEMA as part of the IA request package.



# South Napa Earthquake



# **2014 South Napa Earthquake Individual Assistance (IA) Supplemental Information**

September 22, 2014



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## EXECUTIVE SUMMARY

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The August 24, 2014 South Napa Earthquake has created significant ongoing hardships for a large percentage of the County's residents, businesses, and non-governmental organizations. The City and County of Napa have been diligent in securing funds from local resources to help start the community's recovery. However, the damage is far reaching and has overwhelmed local and state resources.

The community suffered hundreds of injuries and one fatality from the earthquake. Hospitals were filled with patients for weeks while simultaneously managing the damage to their own facilities. The loss of health care facilities and the strain of increased demand has had cascading effects on health care services in the community.

Thousands of homes and businesses have sustained major damage causing many residents to seek shelter. The lack of housing for displaced populations presents a critical need. The area does not have adequate temporary housing to support people with damaged homes. Currently, many displaced residents are staying with friends and family. As time goes on, they will require more secure temporary housing. This issue is expected to balloon in the coming months.

Health care providers that service vulnerable populations have been significantly impacted by structural damage resulting in facility closures and interrupted services. Vulnerable populations will continue to struggle as the community works through the long-term recovery process.

The impacts of the earthquake have also had devastating effects on local businesses. Many have closed temporarily while many others will not reopen. Prior to the earthquake, Napa County was experiencing an upward economic trajectory after decades of downturn. The community had worked hard to attract new tourism to the unique agricultural area and bolster the local economy. Following the earthquake, local businesses have suffered an estimated \$110 million. This has set back the gains Napa County had achieved and will have long-range impacts and could weaken the community.

This briefing is intended to provide the data and context to support a recommendation by the Federal Emergency Management Agency (FEMA) for the President to provide relief through the FEMA Individual Assistance program. This summary includes information about the preliminary damage assessment process, impacts on the community from service interruptions and trauma as well as structural damage to homes and businesses. Also included are the resources the community has already exhausted in efforts to manage their own recovery.

This community is suffering and needs federal assistance to continue recovery efforts. Individuals - especially those with pre-existing challenges - are in need of basic services including housing, employment assistance and mental health outreach. If local businesses continue to remain closed along with prolonged service interruptions, the community could suffer irrevocable economic loss. The scope and magnitude of the damage reaches far beyond local and state capabilities. Napa County will continue to be diligent in securing donated and local resources; however, the community needs federal assistance to continue recovery efforts.

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## ACRONYMS/ABBREVIATIONS

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Acronyms/Abbreviations	Definition
PDA	Preliminary Damage Assessment
GIS	Geographic Information Systems
IA	Individual Assistance
LAC	Local Assistance Center
Cal OES	California Governor's Office of Emergency Services
MMI	Modified Mercalli Intensity

### BACKGROUND

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Napa County, California, is home to approximately 139,000 citizens residing within five incorporated cities and outlying unincorporated area. Napa County is located to the northeast of San Pablo Bay in the Greater San Francisco Bay Area. Unlike the other nine counties that make up the Bay Area, Napa County is smaller than many of the cities within its sister counties. Its urban area land designation is entirely based on its geographic proximity to the Bay Area and not an indication of prevailing land use pattern. Over 90 percent of the overall land area of Napa County is set aside solely for agricultural land uses and open space. Napa County is also home to the first agricultural preserve in the United States established in 1968. Urban development is centered in the five incorporates enclaves. The two largest of these cities are Napa and American Canyon located in the southern portion of the County. The City of Napa is the largest with a population of over 78,000. American Canyon has a population of just under 20,000. The majority of Napa County residents live within the southern third of the county. The county features an iconic fertile valley known for producing world class wines - known as America's original wine country. This valley is bracketed by two mountain ranges; the Mayacamas to the west and the Tulocay Range to the east. These mountain ranges correspond with the earthquake faults and seismic activity. The southwestern area of the county is where residents live and work.

In recent years, the City of Napa has experienced a rebirth of its Downtown after decades of economic decline. Although the city is the gateway to the world famous wine country, competing tourist destinations have edged out Napa Valley since the 1970's. For decades, the City has primarily been a bedroom community for nearby wine and tourism industry. Over the last several years, the City has bolstered tourism as trends in wine industry tourism have shifted from mostly day visitors to multi-day vacationers drawn by food, wine, luxury hotels and cultural experiences.

Historically, Napa County has seen several great earthquakes. On September 3, 2000, Napa County experienced a 5.2 magnitude event damaging 3,500 buildings as well as roads and utilities. The Federal Emergency Management Agency (FEMA) quickly responded by providing aid to the devastated community with Individual Assistance to over 5,000 applicants.

### 2014 SOUTH NAPA EARTHQUAKE

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On August 24, 2014 Napa County, again, experienced an earthquake, this time with magnitude of 6.0. Like the earthquake in 2000, the energy and rupture struck to the north on the same strike-slip plane, but this earthquake was several times stronger than the 2000 earthquake. In fact, it was the strongest earthquake since the Loma Prieta event that hit the San Francisco area in 1989. Most buildings in Napa have damage of some sort, ranging from non-structural cracks and broken appurtenant features to complete structural failure.

The City of American Canyon, which was much closer to the epicenter than Napa City, sustained only glancing blow. However, even this glancing blow is proving to be quite damaging to the small community. As residents become more aware of the damage, the city continues to provide inspections. Most requests are for damaged chimneys.

### COMPARISON OF 2000 AND 2014 EARTHQUAKE IMPACTS

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Although much smaller in magnitude (5.2) than the 2014 Earthquake, the September 3, 2000 earthquake impacted much the same community and federal Individual Assistance is credited with speeding and reinforcing the recovery. Below are the statistics from that event alongside of the most recent data from the current event.

Notably, in 2000, there were over 5,000 IA applicants. Given the more than four-fold increase in the magnitude and severity of the 2014 event, there is every indication that there would be at least, if not many more, IA applicants now.

**Table 1: Comparison of the 2000 and 2014 Napa Earthquake Events**

	2000 Earthquake	2014 Earthquake*
Magnitude	5.2	<b>6.0</b>
Shaking Intensity (MMI)	VII	<b>VIII</b>
Aftershocks > 3.0M	0	<b>5</b>
Fatalities	0	<b>1</b>
Injuries	41	<b>283</b>
Residential units damaged		<b>1568</b>
Total damage estimate	\$50M	<b>\$362M</b>
Water system breaks	22	<b>177</b>
Building permits issued	566	
IA applicants	5,136	<b>TBD</b>
IA Disaster Housing grants (#)	(3,932) \$5.1M	<b>TBD</b>
IA SBA Disaster Loans (#)	(1,025) \$17M	<b>TBD</b>
IA Individual & Family Grants	(351) \$301K	<b>TBD</b>
Total IA Assistance	\$25M	<b>TBD</b>

\* As of 9/19/2014

## PRELIMINARY DAMAGE ASSESSMENTS

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One of greatest challenges in responding to an earthquake event is identifying and cataloging damages to homes, apartments, commercial buildings, roadways, bridges, and underground utilities such as natural gas, water, sanitary sewers, and storm drains. In comparison to other hazards such as flooding or wildfire, earthquake damage is effectively spread throughout the entire community, subtly weakening all built structures, and whose effects are compounded by aftershocks. Most importantly, earthquake damage is not always readily apparent – it can be hidden behind walls, under floors or be almost completely invisible as is the case with roofs which have lost their watertight seals. As seen following the 1994 Northridge and 2011 Virginia earthquake events, damage can go undiscovered for years.

The older neighborhoods in the downtown area of Napa were significantly impacted. GIS mapping indicates that every neighborhood in this city had some damage. Through life safety inspections, many of the homes and business in this area have been identified as having severe or moderate structural damage and have been

assigned “red” and “yellow” tags indicating either no entry or only limited entry is permitted. In addition, over 8,000 structures have been either “green tagged” or otherwise cleared for occupancy. However, the designation of a green tag is not an indication of absence of damage. Initial earthquake building permit data strongly suggests that hundreds and possibly thousands of green tagged properties will require repairs for damage that FEMA Preliminary Damage Assessment (PDA) criteria would classify as either “minor” or “affected”.

In addition to those properties for which a safety inspection has been conducted, there are numerous private properties where no requests have been made for government inspections. Notably, of the 292 earthquake building permits issued by the City of Napa in the first three weeks, 99 permits were issued to properties that had not been identified or inspected previously but had sustained damage qualifying as either “minor” or “affected” per FEMA PDA definitions.

Presently, there is a backlog of approximately 900 unmet inspection requests for Napa City. Despite up to 200 inspections performed daily, the City continues to receive between 50 to 80 new inspection requests per day unabated since the disaster. Similar requests for inspections continue in unincorporated Napa County and the City of American Canyon. In addition, there is a substantial portion of the affected citizens that are either unaware or unwilling to request government inspection of their property.

**Figure 1: Typical Earthquake Chimney Damage**



With the commencement of the Preliminary Damage Assessment (PDA) just 5 days after the earthquake, local jurisdictions were not well positioned to develop a complete list of Individual Assistance (IA) target sites for the IA field site assessment teams. An additional challenge was the early emphasis on conducting the Public Assistance (PA) element of the PDA resulting in the IA PDA receiving relatively less focus and resources. The opportunity to continue the IA PDA process has been critical in enabling local jurisdictions to identify and assess damages as they continue to be reported and discovered. However, the subtle and extensive nature of the damages has not allowed for a complete inventory even some four weeks after the event.

In addition to the timing of the IA PDA effort, the County of Napa and the City of Napa have identified some areas of process that could be clarified or amended. Most critically, there remains some question as regards the IA Damage Categories. For example, due to relatively high value of homes in California, reaching the 50% threshold for repair costs isn't going to be a common occurrence in this event. However, to suggest that a homeowner facing upwards of \$150,000 for foundation repairs qualifies only as "Minor Damage" would seem to bear further discussion. Also, even though chimneys falling down outside a home might seem a nuisance, the average cost to replace that chimney is approximately \$12,000 – which would seem to qualify as "Minor Damage" rather than the current ratings of "Affected." Given the clear and continuing increase in the number and severity of damages affecting homeowners and renters, the IA PDA process is an area where the County and City would like to ensure that all parties have a common approach that best represents the interests of those impacted by this disaster.

**Table 2: FEMA IA PDA Findings (as of 9/19/14)**

FEMA IA	8/25-8/29	9/8-9/9	9/10-9/11	9/12-9/17	9/18-9/19	TOTAL
Major/Destroyed	76	24	20	1	3	124
Minor	216	251	546	98	71	1182
Affected	0	77	105	34	46	262
<b>TOTAL</b>						<b>1568</b>

**Table 3: Small Business Administration (SBA) IA PDA Findings to Date**

SBA	8/25-8/29	9/8-9/9	9/10-9/11	9/12-9/17	9/18-9/19	TOTAL
Residential Major	41	8	13	0	2	64
Residential Minor	204	340	640	115	118	1417
Business Major	26	5	3	0	2	36
Business Minor	59	26	56	48	21	210
PNP	0	0	2	0	0	2
<b>TOTAL</b>						<b>1727</b>

**Table 4: Estimated Incomplete Inspection Requests as of 9/11/2014**

Municipality	Incomplete Inspection Requests	Completed Inspection Requests	Green Tags	Red/Yellow Tags
Napa County	19	213	131	82
City of Napa	980	10,118	7,803	2,315
City of American Canyon	104	415	392	59
Yountville	0	2	0	2
<b>TOTAL</b>	<b>1,103</b>	<b>10,748</b>	<b>8,326</b>	<b>2,458</b>

## CONCENTRATED DAMAGE

*Napa County sustained significant damage to homes and local businesses because of the earthquake. This significant damage compels the critical need for Individual Assistance.*

### Impacted Areas

Although the earthquake was felt throughout Northern California, its effects were narrowly focused in the southern portion of Napa County – specifically within the City of Napa. Due to the types of soils in the area, effects were especially pronounced in areas west of the Napa River. See the Earthquake location, Peak Velocity, Damage Inspection maps attached. The surface rupture ripped through the western side of the City severely damaging the residential neighborhoods of Brown Valley and reaching into North Napa. Surface fractures are visible from the Carneros Vineyard Region south of the City to the vineyards just north of the city limits. The fractures pass through the center of several homes, garages, yards, swimming pools, and streets.

**Figure 2: Residents Living Outside Their Damaged Home – 24 Days after the Earthquake**



### **HAZUS Damage Estimate**

In attempting to identify locations and the severity of damage, the County conducted an assessment of the data provided by FEMA's Hazards US (HAZUS) software program on the day after the earthquake. This approach was taken due to the success of HAZUS in forecasting the effects of the September 2000 Napa Earthquake. Per FEMA, HAZUS is an appropriate method for supplementing the PDA process. The computer model made use of the same parameters (location/magnitude) as the actual earthquake but did not account for the effects of aftershocks. In comparing the HAZUS forecast with the actual damages identified to date, the HAZUS model indicates additional public and private housing damage while underestimating the impact to infrastructure. While not an exact match, HAZUS damage categories are "very comparable" to FEMA IA PDA damage definitions. The following table provides key comparisons between HAZUS forecast and actual damages.

**Table 5: Comparison of HAZUS Forecast and Actual Damages**

	HAZUS	Actual / Estimated*
Building Damage		
Slight	12,056	<b>262</b>
Moderate	2,190	<b>1182</b>
Extensive	286	<b>124</b>
Complete	23	<b>6</b>
Essential Facilities Damage (<50% functionality)	0	<b>2</b>
Transportation System Damage		
Highways, Bridges	0	<b>2</b>
Railways	0	<b>1</b>
Airport	0	<b>1</b>
Utility Systems Damage		
Potable Water Leaks/Breaks	189	<b>177</b>
Waste Water Leaks/Breaks	95	<b>TBD</b>
Natural Gas Leaks/Breaks	33	<b>44</b>
Fires	0	<b>3</b>
Displaced Households	107	<b>100+</b>
Shelter residents	72	<b>67</b>
Fatalities	0	<b>1</b>
Injuries	41	<b>283</b>
Economic Loss – Income	\$50.9M	<b>\$80M</b>
Economic Loss – Capital Stock	\$228M	<b>\$320M</b>
Total IA Assistance	\$25M	<b>TBD</b>

\* As of 9/19/2014

## TRAUMA

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### Fatalities and Casualties

*Napa County incurred significant loss including many injuries and one fatality because of the earthquake. The physical, psychological and emotional impacts of the event compels a critical need for Individual Assistance.*

The 2014 South Napa Earthquake caused one fatality and 283 injuries. The fatality occurred when falling debris stuck a resident in her home. Following surgery, she succumbed to her injuries two weeks later.

Both Napa County based hospitals treated earthquake victims while also managing their own facility damage.

- Queen of the Valley Medical Center (QVMC) treated a total of 234 patients while experiencing facility structural damage including the closure of 6 out of 16 ICU beds.
- St. Helena Hospital (SHH) treated a total of 12 and also experienced water contamination issues.

### Services Interrupted

*Service disruptions in Napa County have caused cascading impacts and hardship on the community. The loss of critical services compels a critical need for Individual Assistance.*

#### Health and Human Services Impacts

Several Health and Human Services Agency's (HHSA's) facilities sustained varying levels of damage, necessitating relocations and consolidations of staff and services for extended periods. Although staff endeavored to reconstitute mission essential functions; however, disruptions inevitably occurred while staff, files, and equipment were in transit or inaccessible. HHSA used previously vacant County-owned space at 2751 Napa Valley Corporate Drive (South Campus) to accommodate critical operations. Additional accommodations will be necessary within the next year to vacate South Campus for pre-planned tenant improvements.

HHSA's Comprehensive Services for Older Adults division relocated in its entire operations to South Campus due to damage at its primary location at 900 Coombs Street (Carithers Building). Relocation caused temporary disruptions to the following services:

- Adult Protective Services
- In-Home Supportive Services
- Medi-Cal and CalFresh Eligibility
- Older-Adult Mental Health
- Public Authority
- Public Guardian
- Public Health Nursing
- Veterans' Services

These services will remain at South Campus until repairs at the Carithers Building are completed.

HHSA's administrative divisions – Fiscal, Operations, Quality Management, and Agency Administration – also relocated to South Campus due to damage at their primary locations in Old Sonoma Road/Elm Street Buildings K, N, O, P, Q, and S. Disruptions in agency administrative services occurred while staff and equipment from these divisions relocated. Although their primary locations are now habitable, these administrative divisions remain at South Campus so that other divisions providing services to clients may occupy their primary locations as needed.

Mental Health Access has been forced to consolidate into buildings already occupied by HHSA programs.

#### Healthcare Facilities Impacts

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Many of the healthcare facilities in the area are closed due to damage. Prolonged closures will have compounding effects on the community including delays in critical healthcare services. The following health facilities have been impacted:

- Community Health Clinic Ole – Women’s Health Clinic remains closed; due to the lack of space some patient visits are being rescheduled; Women’s health Clinic serves approximately 80 patient visits per week on average.
- Kaiser Clinics – major damage to both pharmacies including loss of material and structural damage, overtime costs; Pharmacy 2 remains closed and requires major repairs.
- Queen of the Valley Medical Center - Structural damage requiring repair to 6 ICU beds and 3 banks of elevators. Miscellaneous damage to other structures and water damage to some facilities.
- St. Helena Hospital – significant disruption to water system needing repair.
- Napa State Hospital – 3 administrative buildings are red tagged.

### Mental Health Impacts

At the Local Assistance Center, 51 people were referred to a mental health counselor on site. Rob Weiss, executive director of Family Service of Napa Valley said, “We are seeing a lot of people with symptoms of trauma following the quake. An earthquake or natural disaster of this magnitude is a traumatic event. Literally, the ground beneath people is shaking. It’s expected that there will be a whole range of responses.” Residents who have been focused on cleanup efforts and addressing immediate needs may now be slowing down for the first time. During this phase of recovery, they might be just realizing the mental and emotional toll the quake has taken on them. For those residents, getting help early is key, according to mental health care providers. At this point, Napa County does not have the resources to conduct effective mental health outreach efforts.

**Figure 3: Residents Facing Earthquake Damage**



### Postal Service

Napa’s historic downtown post office remains closed after sustaining severe damaged by the earthquake. The post office was added to the National Historic register on January 11, 1985. The building is red tagged and closed indefinitely, no date as to possible reopening.

The main Post Office building on Trancas Street was initially red tagged and is now yellow tagged. No customer access is allowed to the lobby or service windows. Postal customers are being served out of the rear parking lot under a series of tents. Mail is being sorted in the rear of the building and in the back parking lot. It is unknown

when the building will reopen. Customers who have packages to weigh and mail have been directed to the Yountville post office or several USPS-approved shippers in Napa. The downtown UPS store has been closed due to a damaged wall at next-door neighbor Napa Square.

Although many services have been relocated and interim processes have been established, loss of these touchstone community institutions has increased the strain in the community's social fabric.

**Figure 4: Building Damage to Post Office**



### City Public Works Impacts

The Development Engineering Division within the City of Napa's Public Works Department has been unable to review and process private development project maps and plans due to the earthquake. The staff has been assigned to perform damage assessment and building inspections since August 24th. The inability to provide the necessary resources to review projects due to the temporary reassignments has impacted private developers and property owners.

With an approximately four week delay, developers are in a position that their construction may not be able to occur in this current (summer/fall) construction season because substantial grading activities should not commence as the rainy season begins. Two subdivision project sale agreements have been stalled. One is in jeopardy of not moving forward due to the disruption of services and lack of available staff to provide information. A downtown developer is unable to complete a large multi-million dollar property sales contract until the City is able to process a parcel map. In general, all engineering reviews of active private development projects have been delayed which impacts the local economy.

### City Impact on Code Enforcement Division

The facility that houses the Community Development Department has incurred damage from the earthquake that has interrupted services. No public services were available for over seven days after the earthquake.

Code Enforcement Division employees have been reassigned to staff damage assessment teams and all standard work assignments have been halted indefinitely. The divisions continues to receive new code enforcement cases; however personnel are unable to respond to, file, or review the severity of the cases. The resulting backlog of new cases alone will take approximately four weeks to investigate once regular business activities resume.

Building Division employees have been reassigned to staff damage assessment teams and the Local Assistance Center (LAC). Although short-term staff members have been brought on to assist, building permit review timeframes lag five days behind schedule at a time when these services are so critical to the community's recovery.

Planning Division employees have been reassigned to staff damage assessment teams and the LAC. All standard work assignments have been halted indefinitely. Only a single staff member remains available on a part-time basis to assist the public with general inquiries and to provide support services to both internal and external agencies such as the Building Division (building permits), the Finance Department (business licenses), and the California Department of Alcoholic Beverage Control (zoning clearances). The division continues to receive new applications; however, personnel are unable to initiate the review of these projects. The resulting backlog of existing and new projects has added approximately 12 weeks to project review timeframes.

The inability to process cases, permits, and projects in a timely manner is severely and negatively impacting residents and businesses. Delays have immediately increased the costs associated with the development of their projects for property owners and businesses as additional time is required to review applications before new businesses can open. The regional economy will be negatively affected as private investment is postponed or cancelled.

### Economic Impact

At this early stage it is challenging to define the economic impact of the recent earthquake, as losses are still being quantified and unknown losses will be revealed in the weeks and months to come. Nevertheless, Napa County and the City of Napa, with help from local business organizations, have attempted to capture meaningful data which will be described in this summary.

Many secondary impacts are not known nor will be for some time, such as business-to-business impacts, total job loss over time and resulting secondary spending, and whether businesses whose owners feel optimistic today about recovery will actually survive the impact in the longer term. The earthquake may have lasting effects on Napa's tourism market, which could be detrimental for some business categories such as wineries, lodging, restaurants, entertainment, and retail stores who are largely supported by overnight visitors. Those businesses in turn are serviced by local suppliers including food and beverage wholesalers, finance, insurance, real estate, legal, and other professional services, and other support businesses. The multiplier effect could be long-lasting and quite profound on Napa's economy.

The impacts measured to date include:

- Wine Industry impacts / losses known to date (countywide);
- Lodging industry impacts / losses known to date (countywide and for the City of Napa);
- Business impacts (primarily small businesses) located in the City of Napa and its downtown

As described in more detail below, the total estimated business loss to date is approximately \$110 million.

### Wine Industry Impacts

Napa County has maintained an agricultural community where the wine industry is a major economic driver from the production and sales of wine and the tourism it draws. The 2014 South Napa Earthquake severely impacted the Napa wine industry, with conservative losses estimated at \$80 million.

With an annual national economic impact in excess of \$50 billion, the 2014 South Napa Earthquake will have a notable effect on the local, state, and national economies. The greatest impact will be felt by the family farms, wineries, farm workers, and winery employees working and living in Napa County.

In an effort to forecast potential economic loss, the Silicon Valley Bank estimated the financial impact to the Napa Valley wine business and community resulting from the earthquake. The estimate is based on the following considerations:

- Damage estimates in the region continue to climb as new damage is discovered and as contractors are retained to provide more precise property estimates.

- Estimates developed within the short time period since the incident may be high or low although it is believed that these loss estimates will prove conservative in the final accounting.

Silicon Valley Bank provided the following analysis:

While impossible to attain a precise estimate of damage, we are able to apply proprietary financial information, direct interviews with the wineries suffering the worst damage, first hand inspections of a sample of the most impacted wineries, survey responses from more than 50% of Napa wineries, our own knowledge of the market, and our knowledge of the locations of inventory and production capacities of Napa wineries – each of which help us in arriving at our conclusions which we believe to a thoughtful and balanced perspective given the facts at hand.

Included in our analysis of winery losses are damage to buildings and infrastructure such as waste water ponds and private bridges, winemaking equipment, cleanup and removal costs, vineyard irrigation, bottled inventory in current release, bottling supplies, finished inventory ready for bottling, bulk wine, barrels, lost revenue from damaged tasting rooms, losses from business interruption, and loss of wine held in wine libraries.

Losses from standalone vineyard operations including losses to machinery, supplies, cleanup costs, irrigation and piping, loss of revenue from delayed harvest, and damaged infrastructure should easily fall in a range of \$10M to \$20M with an expected loss of \$15M.

The losses to warehouse and wine storage operations that were at the quake epicenter will be several million dollars but under the circumstances were surprisingly low due to newer building codes and the earthquake preparedness of the warehouse operators. Those losses are not considered in this estimate and would raise the estimation if considered. Losses in custom crush facilities were quite significant and are included in our calculations.

Given our analysis, we believe the earthquake losses to Napa wineries and vineyards will conservatively fall in the range of \$70M to \$100M with a most likely loss approximating \$80M.

Other Conclusions:

- We estimate that 60% of Napa County wineries sustained some degree of damage, and up to 25% of wineries suffered moderate to severe damage exceeding \$50,000 per winery, ranging upwards to \$8M in the most devastating circumstance.
- The majority of the damage was located in the Southern and Western county, as well in business operations in the City of Napa.
- Businesses supporting warehousing and shipping at the epicenter experienced significantly lower damage that would be expected.
- The AVA's in the Carneros Region of Napa, Mt Veeder, Yountville, and Oak Knoll areas suffered the greatest damage.

Custom crush facilities experienced outsized losses which may necessitate additional review of earthquake and safety protocols in such operations.

In order to complete this analysis within the narrow analytic window required, we combined survey information from two separate sources as a foundation. That information represents slightly more than half of the winery community of the Napa Valley. We were able to make direct contact with most of the wineries who suffered the largest losses to ascertain their damage estimates. Those losses are continuing to grow.

Publicly traded companies are less willing to share information that could prove to be insider information, so estimates of their losses were made based on specific productive capacities combined with the locations of their facilities and wine storage, with higher loss rates attributed to those in the most impacted

areas of the quake. That was combined with information we gained from confidential sources to make what we consider reasoned estimates of public winery losses.

Many wineries and custom crush facilities are still cleaning up and still unable to fully estimate their losses. Understanding the type and extent of damage has given us the ability to make informed estimates in those cases. Most wineries have reported their losses in the form of bulk wine losses which are significantly less costly than would be the loss of bottled wine. Bulk wine at this time of year however is often finished and ready for bottling so the real loss isn't the accounting cost of the lost bulk wine. The real loss of bulk wine is the lost opportunity to sell that wine in the market in future periods. That lost revenue has been estimated and captured in our analysis.

Because Napa Valley wine carries a worldwide reputation and wine produced at any winery is specific to the soil, the finished wine that has been lost in this disaster is irreplaceable. It is not possible to bring in wine from another appellation to replace the loss of estate produced wine. Wineries need to have their product in their markets to maintain awareness with their consumers. Specific brands will experience stock-outs in the market that will have a financial impact to particular brands. We have not included in our estimates the losses due to this brand damage.

Business losses will continue through the next several years as wine is sold. We have audited information about the margins of Napa wineries which we were able to apply to arrive at a reasoned estimate of lost revenue as a consequence of ruined 'wine in process.'

Knowing which wineries have tasting rooms, where they were located, combined with self-reported information regarding a winery's ability to operate through the remainder of the year allows us to compute the losses from impacted and closed direct to consumer sales operations.

### Lodging Industry Impacts

Visit Napa Valley (VNV), Napa's countywide tourism marketing entity, surveyed its members to help quantify damage and business lost as a result of the earthquake. To date, 50 of 131 lodging properties have responded (38 percent of total). Only nine of the respondents reported no damage. Of the remaining 41 properties, 21 are located in the City of Napa and the other 20 throughout the county. There are at least two larger hotel properties in the city that have not officially reported (Westin Verasa, 180 rooms; and Hyatt Hotel Andaz, 141 rooms), and the extent of their damage and resulting business loss is anticipated to be significant.

The survey concludes the total direct business loss for lodging properties to date is \$5 million countywide, with \$4.26 million occurring in the city of Napa (based on reported loss only). This includes loss of revenue; damage to facilities, fixtures and equipment; and food and beverage loss. In the city of Napa, lodging properties reported approximately 27,000 lost room nights (which includes two non-reporting properties with known extensive damage). The secondary impact of lost visitor spending in other business categories (retail, restaurants, wine purchases, and entertainment venues) amounts to over \$19 million countywide. Added together, the earthquake's known economic impact on the tourism industry four weeks after the event is \$24 million countywide. This is expected to result in decreased employment, wages, and secondary services.

### City of Napa Small Business Impacts

The City of Napa worked with the Napa Chamber of Commerce, Downtown Napa Association and Napa Valley College Small Business Development Center to survey local businesses that would help quantify business loss and economic impacts in the city. Lodging was excluded from this survey. The types of businesses reporting losses included retail, restaurants, personal service, professional service and non-profit businesses.

Approximately 120 businesses have completed the survey to date. Reported losses to date total \$5.5 million with 3% of total jobs lost, and multiple businesses facing permanent relocation.

In the weeks preceding the earthquake, the City of Napa was constructing downtown public improvements associated with converting First and Second streets (between Main and Jefferson streets) to two-way circulation.

Improvements included new traffic signals and associated underground electrical work, complete replacement of sidewalks and street trees on First Street along a primary retail corridor; and street paving. This work occurred over several weeks and caused noise, dust, difficult access, and overall disruption to the retail businesses along First Street. With the improvements recently completed, the two-way traffic conversion was scheduled to occur on August 27. Due to the earthquake, the conversion has been postponed in order to allow buildings to be secured with fencing, often with encroachments in the travel lane, and large equipment in the public right of way for repairing and cleaning buildings. Upon completion of the street improvements, the impacted downtown businesses were anxious to resume activity and to capture sales during the latter part of the summer and fall, which is peak tourist season in Napa. The untimely earthquake has compounded losses for businesses along First Street in particular.

Much of the damage has not yet been reported, including some of the most heavily impacted businesses in Downtown Napa including Napa's only grocery store and pharmacy – Safeway. According to the local store manager, it will take several months for repairs to be made, items to be re-stocked and operations to be functioning as normal. The loss of sales due to a three-month closure of this store is estimated at \$1.5 million. More importantly, due to its central location and proximity to residential neighborhoods, this store will no longer be able to serve the broad cross section of Downtown residents including workers, social service recipients and the elderly.

**Figure 5: Downtown Napa Business Damage**



### Additional Potential Impacts

In response to the current drought facing all of California, the City of Napa had minimized its usage and was actually able to sell some of its “excess” water supply to the City of American Canyon to assist them in addressing their shortfalls. The City had also been supporting rural residents and farms by selling them water via private water trucks which tapped into metered fire hydrants. However, the earthquake has created water losses in water main breaks and leaks as well as loss of significant storage capabilities. Despite a temporary increase in groundwater flows into creeks, the overall loss has forced the City of Napa to implement water reduction measures beyond what were already in place for the drought. This may be a long-term challenge given the potential for a 4<sup>th</sup> year of drought.

## SPECIAL POPULATIONS

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*Interruptions to Napa County health care and human services have adversely impacted low income populations that depend upon critical government services. Housing challenges for the most vulnerable segments of the community have been profoundly compounded by the loss of available housing. The adverse affects on vulnerable populations compels a critical need for Individual Assistance.*

### **Affordable Housing Impacts**

*Napa County is currently experiencing a significant shortage of affordable housing. This shortage compels a critical need for Individual Assistance.*

44 CFR 206.48 (b) (3) requires consideration when “special populations, such as low-income, the elderly, of the unemployed are affected, and whether they may have a greater need for assistance.” These special populations are the most vulnerable in disasters because they have the least resources, tend to live in the least safe structures, and are typically not represented in the politics of recovery.

The need for Individual Assistance is often overshadowed by the request for Public Assistance during the disaster recovery process. For example, the Governor’s letter to the President, drafted by California Office of Emergency Services (CalOES), only mentioned the need for Individual Assistance in two sentences in its three pages documenting the needs of governmental entities and businesses.

California housing element law requires counties and cities to assess the housing needs of such “special population”. Their housing element reports thoroughly document such “greater need for assistance” prior to the disaster. For example, Napa City and County housing element reports documents unaffordability of rental housing for lower income households, high development costs of affordable housing, lack of state and federal funds for affordable housing, and inability of many elderly homeowners to afford repairs. These housing reports provide the best pre-earthquake assessments of housing conditions for special populations and a starting point for determining how the disaster made those conditions worse.

For example, the City of Napa’s housing element explains the its overall vacancy rate of less than 5% reveals a housing shortage and its apartment vacancy rate of 2.3% shows a critical shortage. That housing shortage was made much worse by the extensive loss of earthquake damaged units.

Evaluation of the fourth factor requires consideration of all of these critical needs and conditions, not just the immediate rental needs of displaces or costs of repairs for homeowners. 44 CFR § 206.48 requires consideration of the overall “impact of the disaster” particularly as it applies to the special populations who are “affected” by it, directly or indirectly. Moreover, the definition of “adequate, alternate housing” under the IA program “means housing that accommodates the needs of occupants is within the normal commuting patterns of the area or is within reasonable commuting distance of work, school, or agricultural activities that provide over percent of the household income; and is within the financial ability of the occupant.

The City of Napa’s housing element explains the need to provide adequate housing for its low-income workers, including the farm workers in its vineyards and service workers in its public agencies and retail stores. The governmental agencies, businesses and workers are all interdependent. The fall together in a disaster and must rise together in recovery.

### **Housing in Rural Areas**

*Napa County has a significant shortage of housing in rural areas. This shortage compels a finding of a critical need for Individual Assistance for vulnerable populations.*

44 CFR § 206.48(6) states the “[t] here is no set threshold for recommending Individual Assistance” and sets forth average amounts of IA by State which may be useful in developing disaster relief plans. The table shows greater amounts of IA for larger stated with high disaster applications and for disasters with large numbers of homes

which are destroyed or had major damage, i.e., which are red tagged. While California is a large state, Napa is a rural area with a relatively small population and its housing crisis compels special considerations even if the numbers of application and damaged units are not high.

Disaster areas with serious affordable housing shortages require consideration of yellow, as well as red, tagged units to ensure proper evaluation of the needs for Individual Assistance. Even though yellow tagged units are theoretically inhabitable, the damage may cause landlords not to rent them. Even if they do, the units may not be decent, safe, and sanitary. Lower income homeowners such as those on social security urgently need Individual Assistance to repair their homes. Without Individual Assistance, the housing crisis continues.

**Figure 6: Resident Burned out of Mobile Home**



### **Housing Cost Burden Impacts**

The greater the housing cost burden on the population, the less income is available to make repairs to impacted homes. Homeowners who have greater cost burden have greater need for Individual Assistance.

Table 5 presents data on housing cost burden for owner and renter households in the unincorporated area, by income category. The data are generated by ABAG from the same 2006-2010 CHAS data set. HUD estimates monthly housing cost burden as a share of a household's monthly income. The common measure of an excessive cost burden for housing is one that exceeds 30 percent, ranging up to 50 percent, of a household's monthly income. A severe cost burden is one that consumes more than 50 percent of the monthly household income. For renters, housing cost burden includes rent plus utility charges. For owners, utility charges are not included, but mortgage principal, interest, property taxes, and insurance (PITI) are included in the cost burden calculation.

As shown in Table 5, within the unincorporated area, there were a total of 1,731 lower-income households who paid more than 30 percent of their income for housing. Within this number, 1,101 lower-income households were paying more than 50 percent of their income towards housing. There were 530 extremely low-income households who paid more than 30 percent of their income for housing, and 470 extremely low-income households who paid more than 50 percent of their income for housing.

#### *Overpayment Among Lower-Income Renters*

A total of 750 lower-income renters in the unincorporated area paid more than 30 percent of their income for housing. Of these, 480 paid more than 50 percent of their income for housing.

Extremely low-income households represented 230 of the renter household that were paying more than 30 percent of their income for housing, and extremely low-income households represented 220 of the renter households that were paying more than 50 percent of their income for housing.

*Overpayment Among Lower-Income Owners*

A total of 981 lower-income owners in the unincorporated area paid more than 30 percent of their income for housing. Of these, 621 paid more than 50 percent of their income for housing.

Extremely low-income households represented 300 of the owner households that were paying more than 30 percent of their income for housing, and extremely low-income households represented 250 of the owner households that were paying more than 50 percent of their income for housing.

Overall, overpaying for housing is more prevalent among lower-income renters than among lower-income owners.

**Table 6: Percentages of Napa City Homeowners Who Pay Over 35% of their Income for Housing**

Income	#	% overpaying
< \$10,000	232	88%
\$10,000-\$19,999	328	95%
\$20,000-\$34,999	1,298	60%
\$35,000-\$49,999	1,434	50%
\$50,000-\$74,999	2,520	28%
\$75,000-\$99,999	2,522	31%
\$100,000-\$149,999	3,760	19%
\$150,000 or more	2,616	2%

Source - US Census Bureau, 2013 American Community Survey

**Table 7: Household Cost Burden, Unincorporated Napa County, 2006-2010**

Number of Owner Households	Extremely Low-Income	Very Low-Income	Low-Income	All Lower Income
With 30% to 50% Housing Cost Burden	50	150	160	<b>360</b>
With 50% or Greater Housing Cost Burden	250	195	176	<b>621</b>
<b>Total with Excessive Cost Burden</b>	<b>300</b>	<b>345</b>	<b>336</b>	<b>981</b>

2014 Napa Earthquake IA Supplemental Information

Number of Renter Households	Extremely Low-Income	Very Low-Income	Low-Income	All Lower Income
With 30% to 50% Housing Cost Burden	10	80	180	270
With 50% or Greater Housing Cost Burden	220	195	65	480
<b>Total with Excessive Cost Burden</b>	<b>230</b>	<b>275</b>	<b>245</b>	<b>750</b>

All Households Overpaying	Extremely Low-Income	Very Low-Income	Low-Income	All Lower Income
With 30% to 50% Housing Cost Burden	60	230	340	630
With 50% or Greater Housing Cost Burden	470	390	241	1,101
<b>Total Households</b>		<b>530</b>	<b>620</b>	<b>715</b>

Figure 7: Building Restrictions



## VOLUNTEER AGENCY ASSISTANCE

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Napa County is a relatively small community with few volunteer organizations and resources. The volunteer organizations that are operating are battling increased demand with few means.

Based on outreach to youth and families participating in various programs there are varying levels of needs ranging from immediate needs (i.e. food, water, cleaning supplies, sleeping bags, etc.) to higher level items such as household appliances, furniture, glassware, clothes etc. Some clients' needs help with minor repairs and/or temporary or permanent relocation costs (i.e. hotel vouchers, security deposits, etc.) and ultimately finding alternative living arrangements. Non-profits and volunteer organizations are awaiting federal assistance to support the community's mounting needs.

Impacted non-profits include:

- Disability and Legal Services - Yellow tagged and are unable to see clients in person. Providing assistance by phone.
- Family Services of Napa Valley - Yellow tagged and are unable to see clients. Staff is working from alternate locations
- Legal Aid - Building is red tagged. Providing assistance by phone.
- Salvation Army - Building was damaged and initially red tagged. Five canteens initially dispersed over 1000 meals in the 5 days after the earthquake.
- Cope - Seeing needs for housing as owners are not repairing rental units. Providing some food replacement and contents. Families are doubling up but this isn't sustainable. They expect rents to go up for all working class families. Families are beginning to move out of the County.
- Fair Housing Napa Valley - Will have more than 100 households displaced but doesn't include the migrant labor population.
- Season of Sharing - A normal week may see \$3,000-\$5,000 in grant approvals. Since the earthquake, almost \$28,000 in grants have been awarded. Season of Sharing is limited to \$3,000 per family once every five years. It will not pay for most car repairs and will not pay contractors - numerous requests for both which have had to be denied. As the recovery period lingers, needs are going to increase. People are being resourceful right now but will soon run out of the ability to stay with friends and make do otherwise.
- Napa County Food Bank - Operating at 125% capacity despite their facilities being red-tagged two weeks after the initial earthquake. There are concerns about their ability sustain these efforts with volunteer labor and the increased demand for donations.



Opened on September 9<sup>th</sup>, the joint City/County Local Assistance Center (LAC) has been averaging 180 residents a day seeking assistance from local and state agencies and non-profits.

## INSURANCE

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Standard homeowner's insurance policies do not include protection for earthquake damage to a home or belongings. In order to insure against such damage the homeowner must purchase extra earthquake coverage in addition to standard homeowner's insurance. This extra coverage for earthquake is expensive and also comes with high deductibles compared to other types of insurance.

Nationally the proportion of Americans with earthquake coverage has been falling. Research reveals about 7% of Americans with homeowner's policies also purchase earthquake coverage. That same research reveals that the percent of homeowner's policies with earthquake coverage is lower from previous years. Interest in coverage rises after a significant earthquake. The last significant earthquake with reportable damage prior to the August 24, 2014 earthquake was 14 years ago.

According to the California Earthquake Authority (CEA) about 10% of California residents have an earthquake policy, just 6% carry earthquake coverage in Napa County.

In order to quantify that estimate locally to a more reliable number for Napa County relative to the recent earthquake, data was solicited from two (2) of the largest insurance agents representing the "big box" insurers (State Farm and Farmers) and the largest independent insurance agency in the Napa Valley.

The agents representing the "big box" insurers reported that 1.0 – 2.0% of their homeowner insurance policy holders also purchased earthquake coverage. The independent agent reported that 6.4% of its clients purchased earthquake coverage, but importantly noted, the local agency generally writes homes with more value and equity to protect than the direct writers.

**In summary, the estimate that 6% of all homeowners in Napa County have earthquake insurance is overstated and is more likely in the range of 4% overall.**

One other very important point about earthquake coverage to consider that was mentioned earlier, earthquake coverage comes with higher deductibles than other insurance – typically 10 -15%. So, in order to be indemnified for damage the amount of damage must exceed the deductible.

So, to put some context to these numbers, the City of Napa has approximately 30,000 single family dwellings. 4% of those, or 1,200, are likely to have Earthquake coverage. Further, with the average home value in the City of Napa currently at \$5 - 600,000 and with an Earthquake deductible of 10 - 15% on Total Insured Value (TIV), a home owner would have to have damage exceeding \$50 - 90,000 to enjoy any benefit of that coverage. In other words, it is very unlikely that even that small percentage of homeowners with earthquake coverage benefited from the coverage unless, of course, the damage to their residence was catastrophic. Of the 2,000 homes damaged only a handful of owners may see any insurance benefit.

## CONCLUSION

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Receiving Individual assistance from FEMA is paramount for the recovery of Napa County from the 2014 South Napa Earthquake. The community does not have the breadth of volunteer organizations and resources to manage the recovery effort. The community faces the following challenges:

- Estimated \$110 million in losses to the local business
- Thousands of homes with major damage
- Thousands of businesses with major damage
- Interrupted healthcare services to vulnerable populations
- Temporary and permanent closure to vital downtown businesses
- Lack of affordable housing to vulnerable populations
- Lack of housing in rural areas
- Interruption to critical government services

The Napa Valley Community Disaster Relief Fund is managed by Napa Valley Community Foundation and was created with a \$10 million lead gift from Napa Valley Vintners following the 2014 Napa Earthquake.

The Fund will focus on recovery needs; rebuilding efforts; and resiliency as follows:

- In the recovery phase, the Fund will make grants to trusted nonprofit agencies providing short-term assistance to the most-disadvantaged individuals and families affected by the earthquake who are in immediate need of assistance with services such as medical care, counseling, temporary housing, food security, clothing and legal aid (\$1-2 million).
- In the rebuilding phase, the Fund will make grants available to homeowners and renters with uninsured quake losses in a way that compliments, but does not duplicate, resources which may become available from FEMA or SBA. Loss verification means testing and an application process that expressly requires disclosure of other benefits received (from the government or elsewhere) will be required to determine eligibility. The goal: to help those who need assistance in closing the gap between what FEMA and SBA may offer (i.e., loans or grants to restore a home to a safe, sanitary and functional living situation) and where residents were before the earthquake, understanding that nobody can be made whole. Special considerations in Napa County: large numbers of undocumented immigrants are likely to be reluctant to seek government funding; many low-income residents rent, and lack sufficient cash reserves to replace essential household items lost or damaged in the quake, or to pay for security deposits on new rentals. Grants and loans to small businesses are also being contemplated in the rebuilding phase, and would likewise address uninsured losses without duplication of benefits. (\$6-7 million)
- In the resiliency phase, the Napa Valley Community Foundation will make grants available to nonprofit organizations and other community agencies to offer technical assistance to help such groups be better prepared for the next disaster. (0.5 to \$1 million).

This fund is certainly helping to alleviate some of the immediate needs of the community but it is not a long term solution to support long term recovery efforts for the whole community. Napa County will continue to reach out for donations and funding from non-profit organizations but the need for individual assistance is critical to the recovery of the Napa County community.

It is critical for Napa County to receive eligibility for Individual Assistance in order to address the growing need from residents, businesses and vulnerable populations. Volunteer, local and state resources have been exhausted. Napa County needs federal assistance to manage the continued recovery effort.

# APPENDIX H: PRESS RELEASES

The following table lists the press releases developed and disseminated following the earthquake.

Date	Title	Department
August 24, 2014	Updated: Napa County Buildings Closed to Public and Employees Updated to include Partial Closure of HHSA Campus on Old Sonoma Road and Elm Street	County Executive Office (CEO)
August 24, 2014	Local Road Closure Information	CEO
August 24, 2014	Napa County Buildings Closed to Public and Employees	CEO
August 24, 2014	Local Emergency Declared for Napa County	CEO
August 25, 2014	Napa County Service and Public Building Access for Tuesday, August 26th	CEO
August 25, 2014	Earthquake Response Continues	CEO
August 26, 2014	Napa County Hall of Justice and Jail Remain in Service with Restricted Use	CEO
August 26, 2014	Napa Certificates of Participation	CEO
August 26, 2014	Congressman Mike Thompson to Visit County Emergency Operations Center	CEO
August 26, 2014	Napa County Child Support Services Office Closed	CEO
August 27, 2014	Napa County to Request a Federal Emergency Declaration	CEO
August 27, 2014	Locations of Napa County Services and Google Translate on County Website	CEO
August 28, 2014	Opportunity for Disaster Grants and Temporary Earthquake Cleanup Work	CEO
August 28, 2014	Federal Emergency Request and Initial Damage Estimates	CEO
August 29, 2014	Important Chimney Safety Information Following South Napa Earthquake	CEO
August 29, 2014	Beware of Contractor Scams and Unlicensed Contractors	CEO
September 2, 2014	Red Tagged and Yellow Tagged Buildings in the Unincorporated County	CEO
September 8, 2014	New Wine Industry Earthquake Damage Estimate is \$80 million Pushes Countywide Estimate over \$400 million	CEO



# South Napa Earthquake

September 9, 2014	Earthquake Related Death	Sheriff
September 10, 2014	Door-to-Door Survey to Assess Impact of Earthquake on Community Members	Health and Human Services Agency
September 11, 2014	Napa County to Transfer Some Inmates to Solano County	Corrections
September 22, 2014	New Hours of Operation for Napa Local Assistance Center Starting September 22	Napa Local Assistance Center (LAC)
September 26, 2014	County and City of Napa Submit Individual Assistance Supplemental Information to FEMA	CEO
September 29, 2014	LAC Workshops Week of 9/29/2014	Napa LAC
October 2, 2014	Napa Valley Community Foundation Announces Additional Location for Emergency Earthquake Relief	Napa Valley Community Foundation
October 3, 2014	Napa County Board of Supervisors and Planning Commission Meetings Relocated	CEO
October 6, 2014	LAC Workshops Week of 10/6/2014	Napa LAC
October 10, 2014	Revised Saturday Hours and Napa Valley Community Foundation Applications at the LAC	Napa LAC
October 17, 2014	LAC Workshops Week of 10/20/2014	Napa LAC
October 20, 2014	Child Support Services Opens Temporary Customer Service Center	CEO
October 28, 2014	Federal Assistance for Earthquake Victims Approved	Napa LAC
October 29, 2014	FEMA and Small Business Administration at the Napa LAC	
November 20, 2014	Closure of Patrick Road for Bailey Bridge Installation	Roads
November 26, 2014	LAC Thanksgiving Hours	Napa LAC



# APPENDIX I: DECLARATIONS AND PROCLAMATIONS

The following documents can be found in this appendix:

- Federal Disaster Declaration Request
- Small Business Administration Notification Letters



# South Napa Earthquake



CAPITOL OFFICE  
STATE CAPITOL  
SACRAMENTO, CA 95814  
TEL (916) 651-4003  
FAX (916) 651-4903

DISTRICT OFFICES  
1040 MAIN STREET  
SUITE 101  
NAPA, CA 94559  
TEL (707) 224-1990  
FAX (707) 224-1992

555 MASON STREET  
SUITE 275  
VACAVILLE, CA 95688  
TEL (707) 454-3808  
FAX (707) 454-3811

985 WALNUT AVENUE  
VALLEJO, CA 94591  
TEL (707) 551-2389  
FAX (707) 551-2390

1350 TREAT BLVD.  
SUITE 240  
WALNUT CREEK, CA 94597  
TEL (925) 926-6148

SENATOR.WOLK@SENATE.CA.GOV

WWW.SEN.CA.GOV/WOLK

# California State Senate

SENATOR  
LOIS WOLK

THIRD SENATE DISTRICT



CHAIR  
GOVERNANCE & FINANCE

#### COMMITTEES

AGRICULTURE  
ENERGY, UTILITIES & COMMUNICATIONS  
HEALTH  
NATURAL RESOURCES & WATER

#### SUBCOMMITTEES

INVASIVE SPECIES  
OLIVE OIL PRODUCTION &  
EMERGING PRODUCTS

#### SELECT COMMITTEES

AUTISM & RELATED DISORDERS  
CALIFORNIA'S WINE INDUSTRY

EMERGING TECHNOLOGY:  
BIOTECHNOLOGY &  
GREEN ENERGY JOBS

EXCELLENCE, INNOVATION &  
ACCOUNTABILITY IN  
STATE GOVERNMENT

MENTAL HEALTH

THE SACRAMENTO-  
SAN JOAQUIN DELTA

#### JOINT COMMITTEES

FAIRS, ALLOCATION & CLASSIFICATION  
LEGISLATIVE BUDGET

September 4, 2014

The President  
The White House  
Washington, DC 20500

## Re: Federal Disaster Declaration Request for the County of Napa

Dear Mr. President:

As the State Legislative Delegation representing the County of Napa, we join with our Federal congressional delegation to respectfully request that you declare a federal disaster area for the County of Napa. Governor Brown submitted a similar request to you on September 2, 2014. Napa County and the surrounding area suffered an earthquake on Sunday, August 24, 2014, which caused widespread physical and economic damage to the region.

Over the last eight days, the County and its cities have declared over one hundred buildings – businesses and homes alike - as uninhabitable due to the severe damage sustained; the economic devastation to the biggest industries in Napa is likely to reach into the hundreds of millions of dollars.

The Federal Emergency Management Agency (FEMA) and the California Office of Emergency Services (CEOS) have completed preliminary damage estimates and those total nearly \$400 million in direct damage. The work ahead to repair and restore these damaged communities is daunting. The cost of recovery is beyond the capability of State and local resources. Napa County firmly believes that federal assistance is required in order to make a full recovery.

For these reasons, we urge you to use the powers of your office to declare a federal disaster as soon as possible, so that significant additional federal dollars will be made available to our districts in the wake of this disaster.

Sincerely,

Handwritten signature of Senator Lois Wolk in blue ink.

Senator Lois Wolk

Handwritten signature of Senator Noreen Evans in blue ink.

Senator Noreen Evans

Handwritten signature of Assemblymember Mariko Yamada in blue ink.

Assemblymember Mariko Yamada

CC: Governor Edmund G. Brown  
Napa County Board of Supervisors





September 16, 2014

Mr. Marc Luce, Chairperson  
Napa County Board of Supervisors  
1195 Third Street, Room 310  
Napa, California 94559-3001

Dear Chairperson Luce:

Pursuant to President Obama's major disaster declaration of September 11, 2014, for *Public Assistance Only* (FEMA-4193-DR-CA), the U.S. Small Business Administration has declared the primary counties of **Napa** and **Solano** a disaster area. This declaration is a result of damages caused by an earthquake that occurred August 24 – September 7, 2014. Private, nonprofit organizations that provide an "essential governmental service" and are a "critical facility" as defined by law are eligible to apply for both Physical and Economic Injury Disaster Loans.

The California Governor's Office of Emergency Services (Cal OES) is providing the enclosed information regarding this declaration and request that you distribute as appropriate. Please note that this declaration is limited to private non-profit organizations that provide essential services of governmental nature.

Sincerely,

A handwritten signature in blue ink that reads "Karma Hackney". The signature is fluid and cursive.

KARMA HACKNEY  
Individual Assistance Officer

Enclosure

c: Napa County Office of Emergency Services  
Cal OES Regional Administrator  
Cal OES Individual Assistance Division



September 16, 2014

Ms. Linda Seifert, Chairperson  
Solano County Board of Supervisors  
675 Texas Street, Suite 6500  
Fairfield, California 94533

Dear Chairperson Seifert:

Pursuant to President Obama's major disaster declaration of September 11, 2014, for *Public Assistance Only* (FEMA-4193-DR-CA), the U.S. Small Business Administration has declared the primary counties of **Napa** and **Solano** a disaster area. This declaration is a result of damages caused by an earthquake that occurred August 24 – September 7, 2014. Private, nonprofit organizations that provide an "essential governmental service" and are a "critical facility" as defined by law are eligible to apply for both Physical and Economic Injury Disaster Loans.

The California Governor's Office of Emergency Services (Cal OES) is providing the enclosed information regarding this declaration and request that you distribute as appropriate. Please note that this declaration is limited to private non-profit organizations that provide essential services of governmental nature.

Sincerely,

A handwritten signature in blue ink that reads "Karma Hackney". The signature is written in a cursive style.

KARMA HACKNEY  
Individual Assistance Officer

Enclosure

c: Solano County Office of Emergency Services  
Cal OES Regional Administrator  
Cal OES Individual Assistance Division

# U.S. Small Business Administration (SBA) Declaration SBA #14118- Earthquake

**Declaration  
Information**

The following table illustrates the declaration information.

<b>Eligible Primary County(s):</b>	<b>Napa and Solano</b>
<b>Event:</b>	Pursuant to President Obama's September 11, 2014, major disaster declaration for <i>Public Assistance Only</i> (FEMA-4193-DR-CA) as a result of an earthquake that occurred August 24 – September 7, 2014.
<b>Assistance made available by declaration:</b>	SBA Physical and Economic Injury Disaster Loans
<b>Who may apply:</b>	<b>Private, nonprofit organizations that provide essential services of a governmental nature.</b>
<b>Application deadline for property damage:</b>	<b>November 10, 2014</b>
<b>Application deadline for business economic injury:</b>	<b>June 11, 2015</b>
<b>How to apply:</b>	Contact SBA at <b>1-800-659-2955</b> . Hearing impaired individuals may call 1-800-877-8339. You may also visit SBA's website at: <a href="http://www.sba.gov/services/disasterassistance">www.sba.gov/services/disasterassistance</a>

# APPENDIX J: ACRONYMS

Acronym	Term
AAR	After Action Report
CA	California
Cal OES	California Governor's Office of Emergency Services
COOP	Continuity of Operations
DOC	Department Operations Center
DSW	Disaster Service Worker
EOC	Emergency Operations Center
EVC	Emergency Volunteer Center
FEMA	Federal Emergency Management Agency
GIS	Geospatial Information Systems
HHSA	Health and Human Services Agency
IA	Individual Assistance
ICS	Incident Command System
IDE	Initial Damage Estimate
IT	Information Technology
JIC	Joint Information Center
LAC	Local Assistance Center
OA	Operational Area
OES	Office of Emergency Services
PA	Public Assistance
PDA	Preliminary Damage Assessment
PG&E	Pacific Gas and Electric
PIO	Public Information Officer
ROC	Recovery Operations Center
SAP	Safety Assessment Program
SOG	Standard Operating Guide
USGS	United States Geological Survey



# South Napa Earthquake



# MAPS

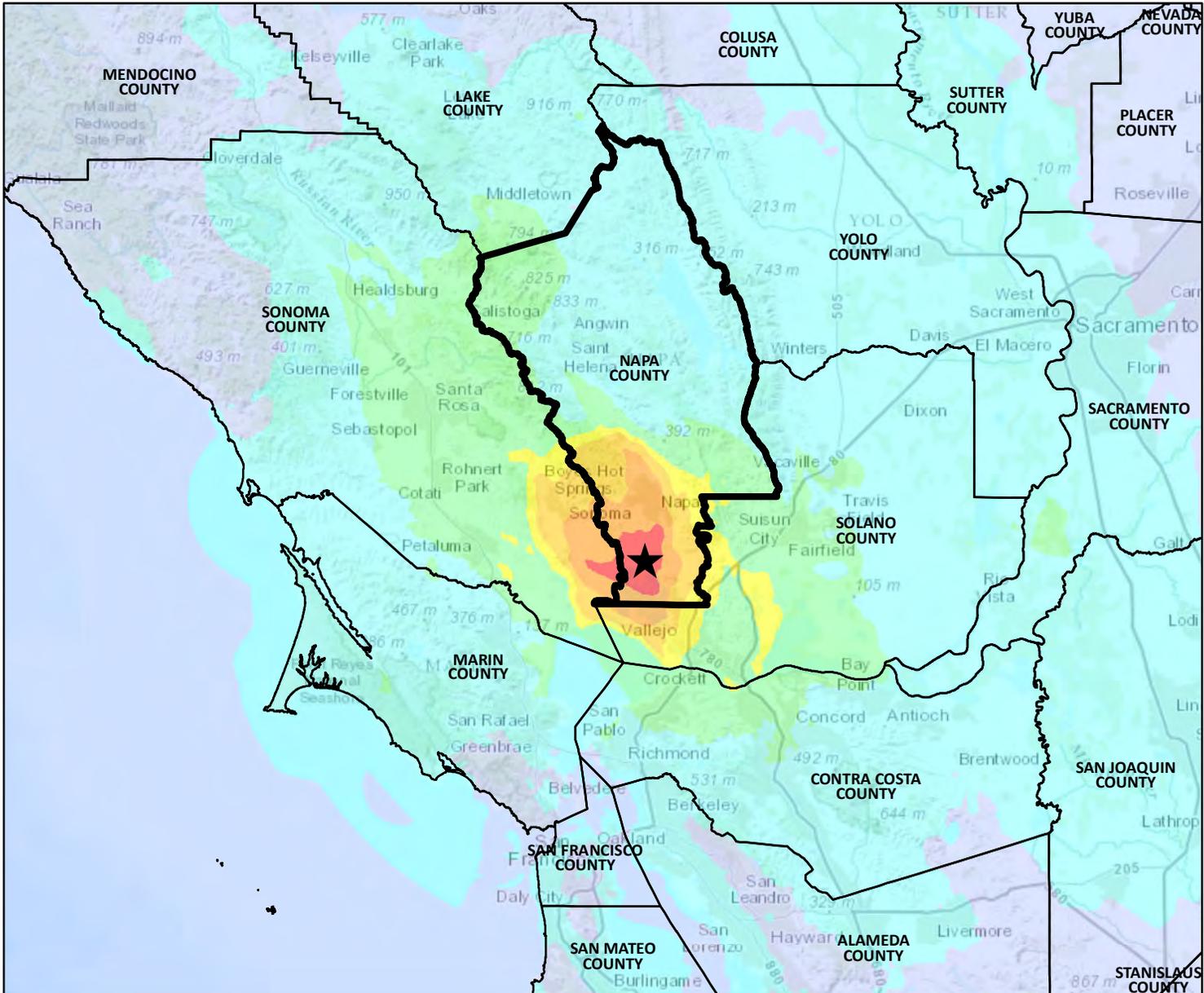
The following maps are included:

1. Bay Area Location
2. Peak Ground Velocity
3. Damage Inspection
4. Damage Inspections for Residential Buildings
5. Damage Inspections for Commercial Buildings
6. Road and Bridge Damages
7. Water Leaks
8. Winery Locations
9. Tagged Structures Within 100-year Flood Zone
10. Earthquake Intensity by Ethnicity
11. Earthquake Intensity by Median Household Income
12. Earthquake and Aftershock



# South Napa Earthquake





LEGEND

★ Epicenter, South Napa Quake

□ County Boundaries

<b>Peak Ground Velocity (ShakeMap)</b>	Strong (8.1 - 16 cm/s)
Not Felt (<.1 cm/s)	Very Strong (16 - 31 cm/s)
Weak (.1 - 1.1 cm/s)	Severe (31 - 60 cm/s)
Light (1.1 - 3.4 cm/s)	Violent (60 - 116 cm/s)
Moderate (3.4 - 8.1 cm/s)	Extreme (>116 cm/s)

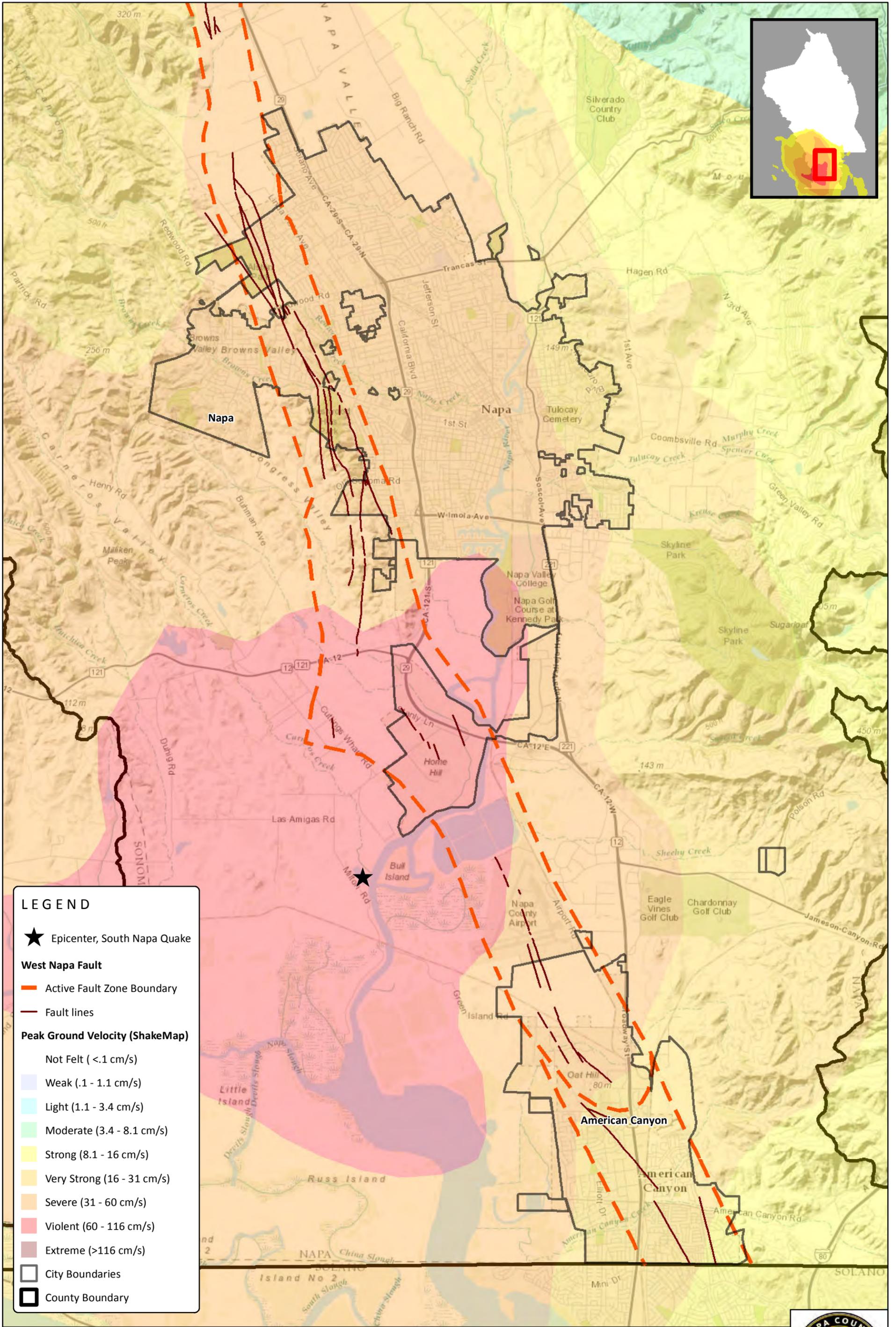


BAY AREA LOCATION MAP

South Napa Quake | Date: 2014.09.17



Disclaimer: This map was prepared for informational purposes only. No liability is assumed for the accuracy of the data delineated hereon.



# PEAK GROUND VELOCITY MAP

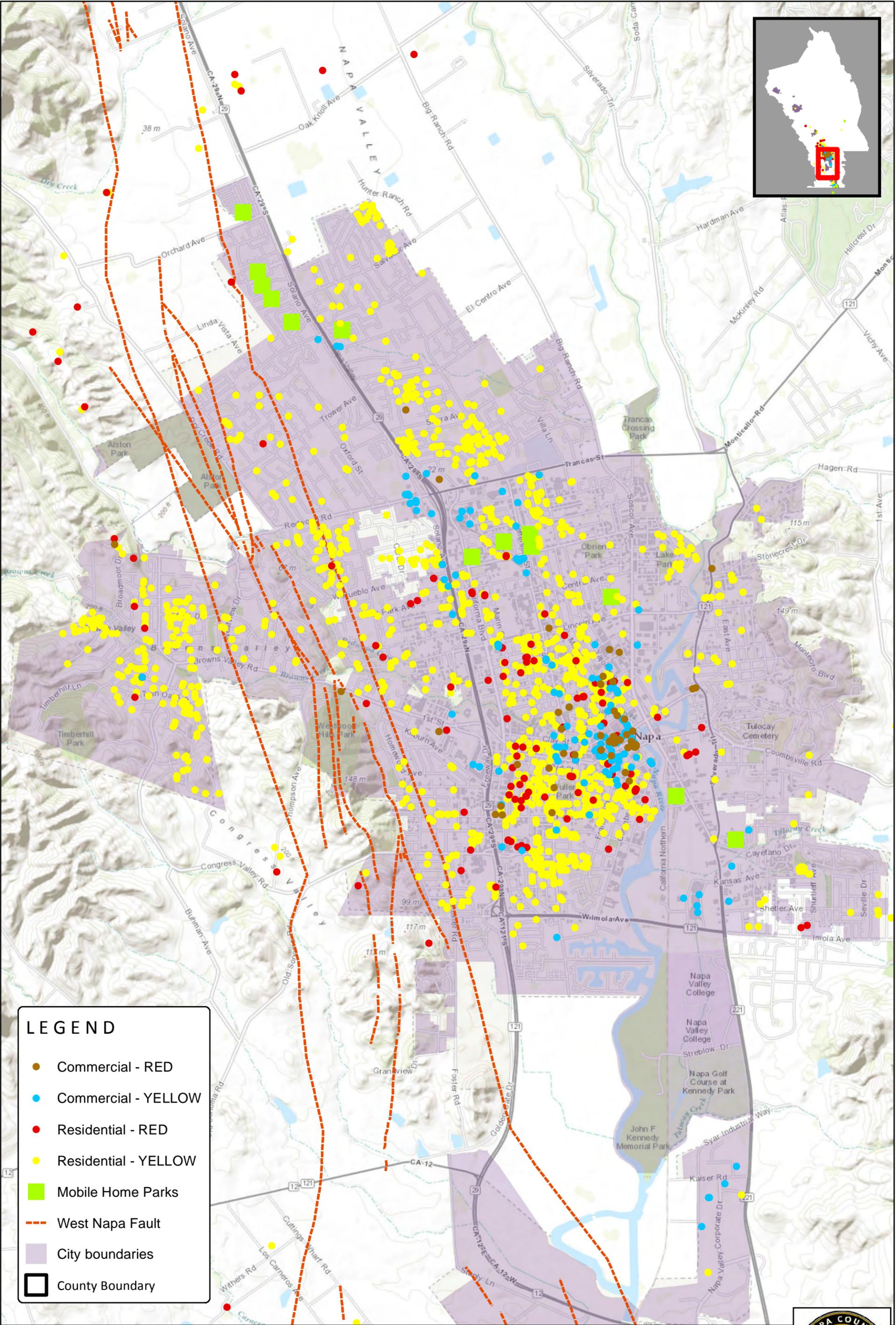
South Napa Quake | Date: 2014.09.18



0 0.5 1 2 Miles



Disclaimer: This map was prepared for informational purposes only. No liability is assumed for the accuracy of the data delineated herein.



**LEGEND**

- Commercial - RED
- Commercial - YELLOW
- Residential - RED
- Residential - YELLOW
- Mobile Home Parks
- West Napa Fault
- City boundaries
- County Boundary

**DAMAGE INSPECTION MAP**

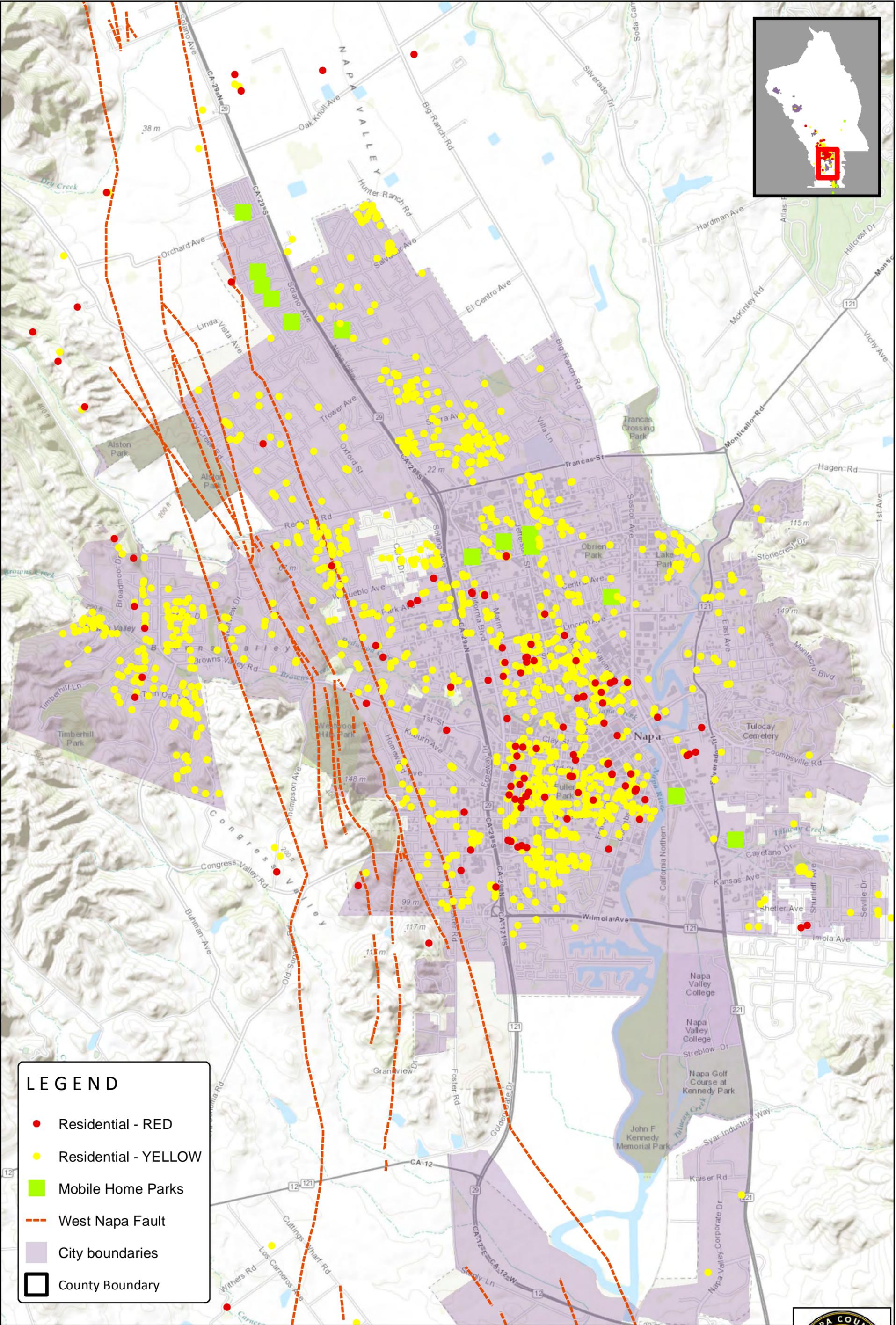
South Napa Quake | Date: 2014.09.18



0 0.25 0.5 1 Miles



Disclaimer: This map was prepared for informational purposes only. No liability is assumed for the accuracy of the data delineated hereon.



**LEGEND**

- Residential - RED
- Residential - YELLOW
- Mobile Home Parks
- West Napa Fault
- City boundaries
- County Boundary

**DAMAGE INSPECTIONS FOR RESIDENTIAL BUILDINGS**

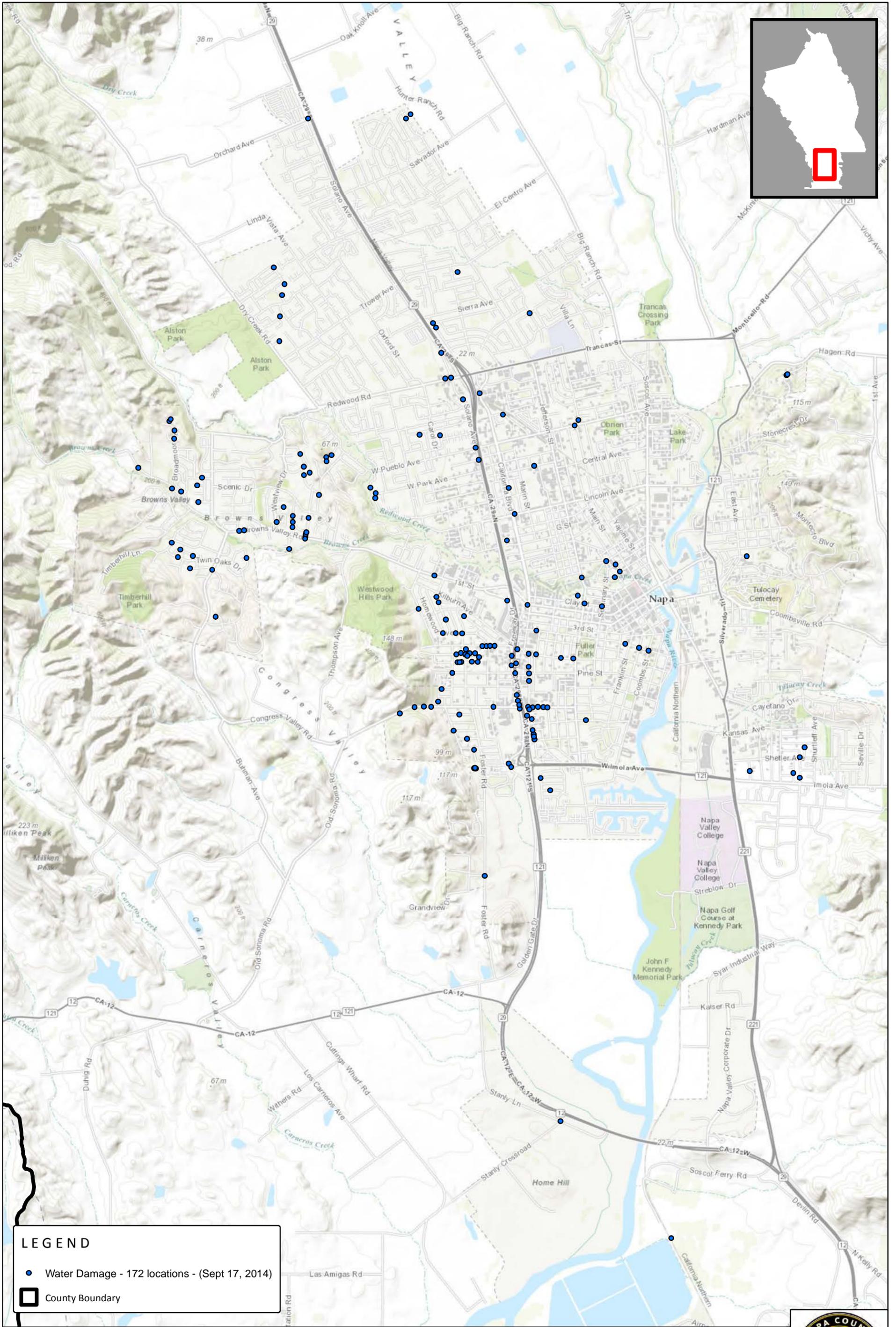
South Napa Quake | Date: 2014.09.18



0 0.25 0.5 1 Miles



*Disclaimer: This map was prepared for informational purposes only. No liability is assumed for the accuracy of the data delineated hereon.*



**LEGEND**

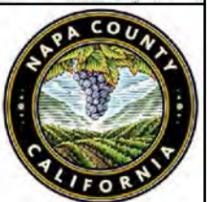
- Water Damage - 172 locations - (Sept 17, 2014)
- County Boundary

**WATER LEAK MAP**

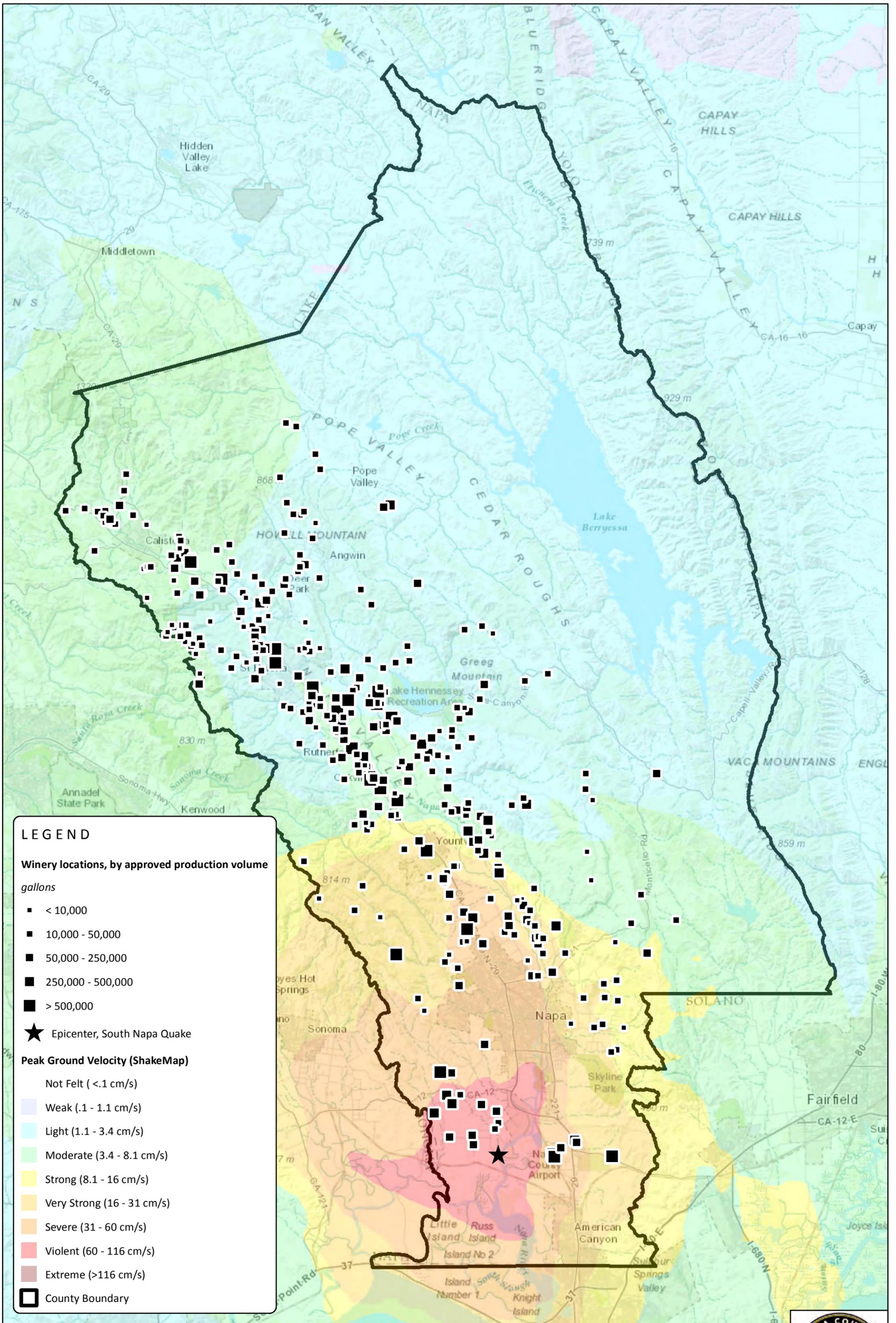
South Napa Quake | Date: 2014.09.18



0 0.25 0.5 1 Miles



*Disclaimer: This map was prepared for informational purposes only. No liability is assumed for the accuracy of the data delineated hereon.*

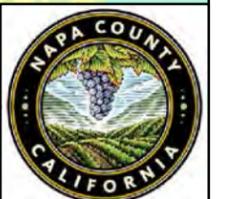


# WINERY LOCATIONS

South Napa Quake | Date: 2014.09.17



0 0.5 1 2 Miles



Disclaimer: This map was prepared for informational purposes only. No liability is assumed for the accuracy of the data delineated hereon.



**LEGEND**

- ★ Epicenter, South Napa Quake

**Predominant Population**

**African American majority**

- Predominant (gap > 50%)
- Sizeable (gap 10% – 50%)
- Slim (gap < 10%)

**Asian majority**

- Predominant (gap > 50%)
- Sizeable (gap 10% – 50%)
- Slim (gap < 10%)

**Hispanic majority**

- Predominant (gap > 50%)
- Sizeable (gap 10% – 50%)
- Slim (gap < 10%)

**Native American majority**

- Predominant (gap > 50%)
- Sizeable (gap 10% – 50%)
- Slim (gap < 10%)

**Pacific Islander majority**

- Predominant (gap > 50%)
- Sizeable (gap 10% – 50%)
- Slim (gap < 10%)

**White majority**

- Predominant (gap > 50%)
- Sizeable (gap 10% – 50%)
- Slim (gap < 10%)

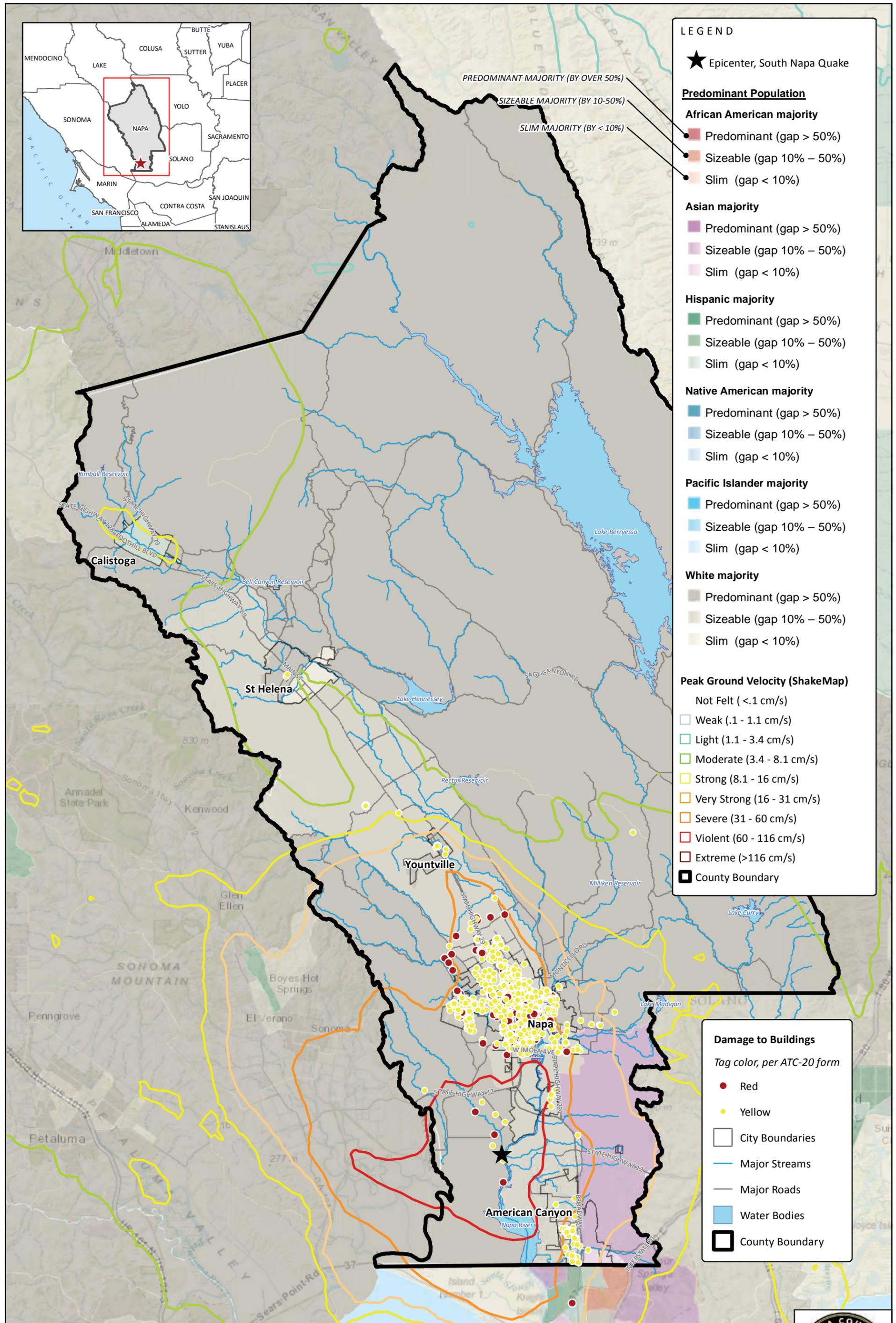
**Peak Ground Velocity (ShakeMap)**

- Not Felt (<.1 cm/s)
- Weak (.1 - 1.1 cm/s)
- Light (1.1 - 3.4 cm/s)
- Moderate (3.4 - 8.1 cm/s)
- Strong (8.1 - 16 cm/s)
- Very Strong (16 - 31 cm/s)
- Severe (31 - 60 cm/s)
- Violent (60 - 116 cm/s)
- Extreme (>116 cm/s)
- County Boundary

**Damage to Buildings**

Tag color, per ATC-20 form

- Red
- Yellow
- City Boundaries
- Major Streams
- Major Roads
- Water Bodies
- County Boundary

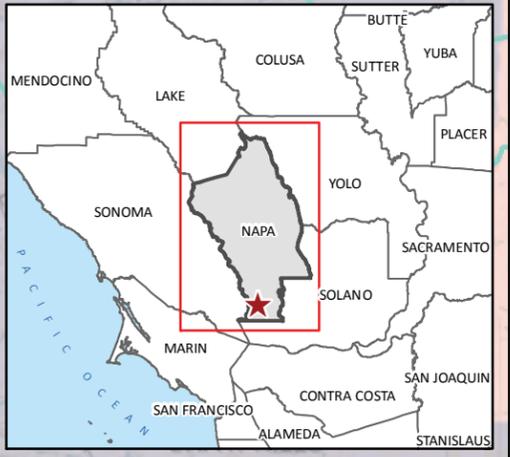
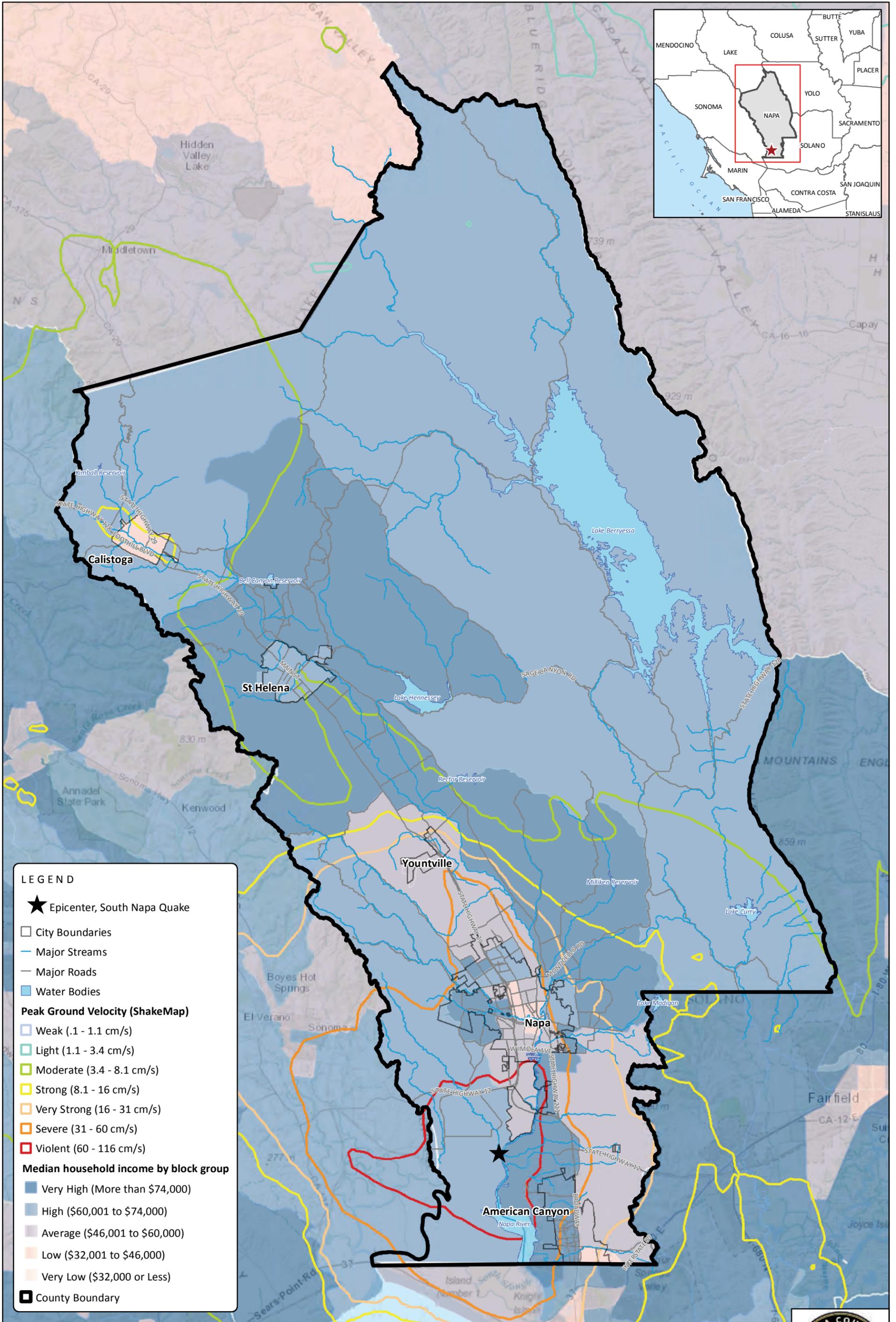


# EARTHQUAKE INTENSITY BY ETHNICITY

South Napa Quake | Date: 2014.09.18



Disclaimer: This map was prepared for informational purposes only. No liability is assumed for the accuracy of the data delineated hereon.



# EARTHQUAKE INTENSITY BY MEDIAN HOUSEHOLD INCOME

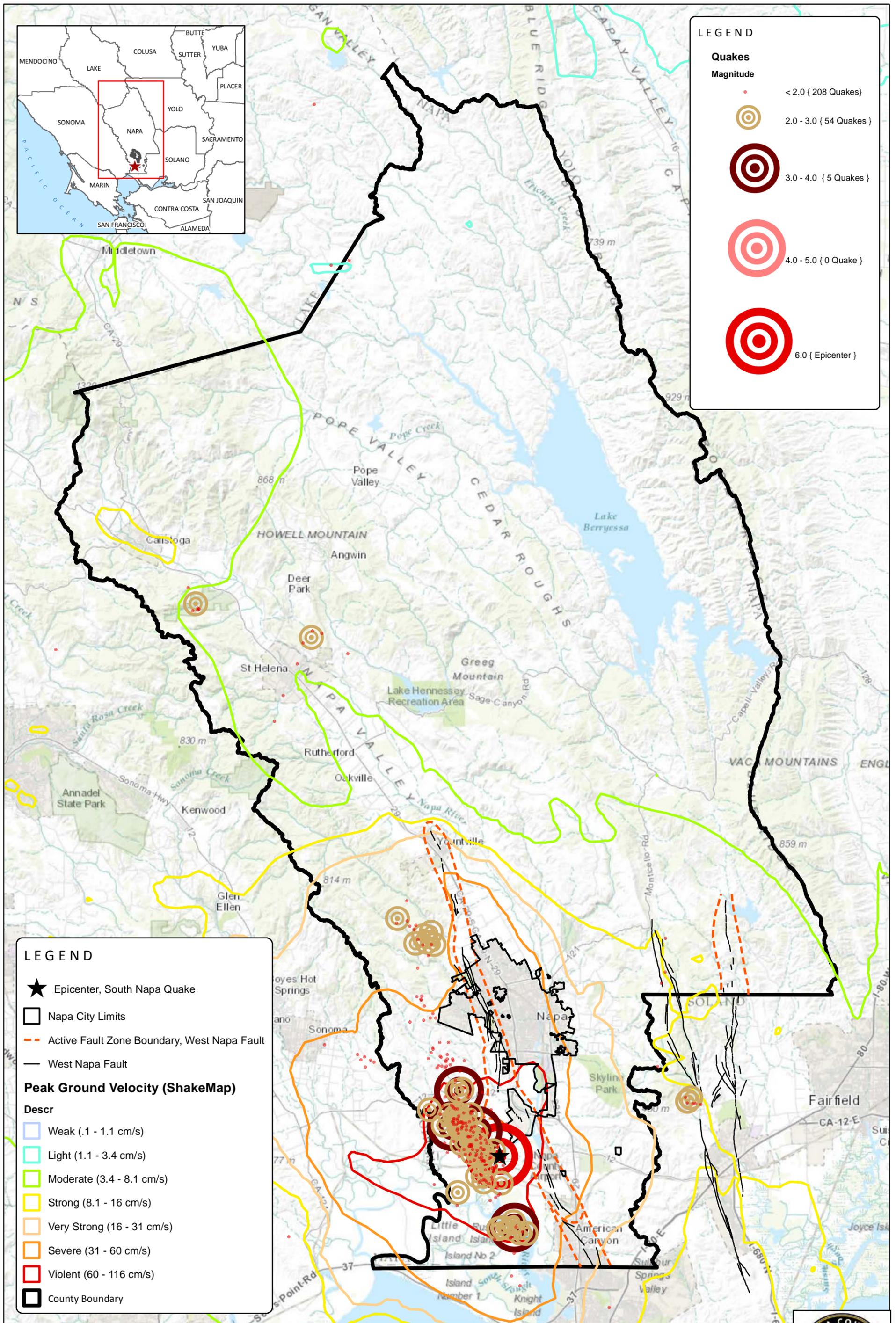
South Napa Quake | Date: 2014.09.18



0 0.5 1 2 Miles



Disclaimer: This map was prepared for informational purposes only. No liability is assumed for the accuracy of the data delineated hereon.



**LEGEND**

**Quakes**

**Magnitude**

- < 2.0 { 208 Quakes }
- ◎ 2.0 - 3.0 { 54 Quakes }
- ◎ 3.0 - 4.0 { 5 Quakes }
- ◎ 4.0 - 5.0 { 0 Quake }
- ◎ 6.0 { Epicenter }

**LEGEND**

- ★ Epicenter, South Napa Quake
- Napa City Limits
- - - Active Fault Zone Boundary, West Napa Fault
- West Napa Fault

**Peak Ground Velocity (ShakeMap)**

**Descr**

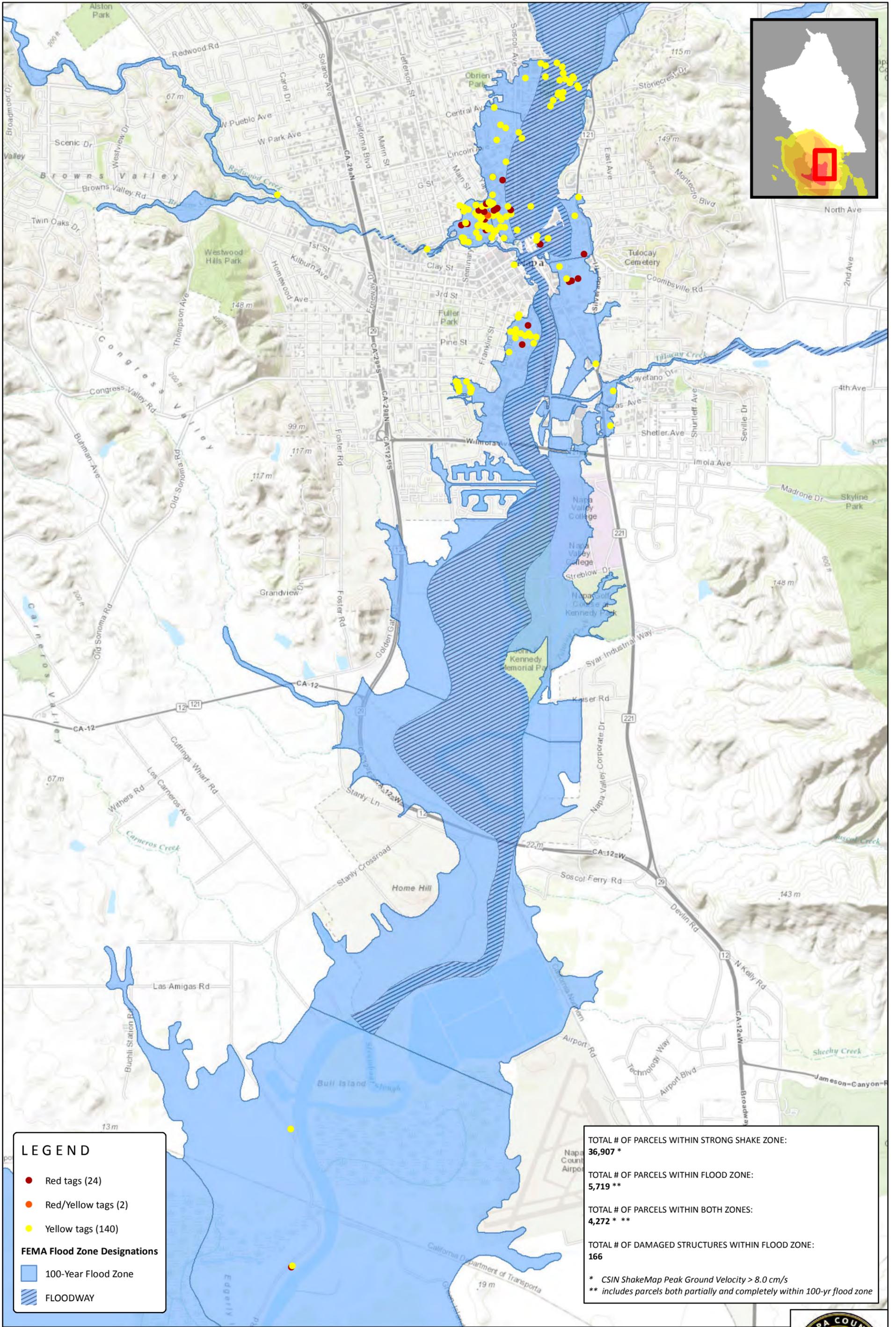
- Weak (.1 - 1.1 cm/s)
- Light (1.1 - 3.4 cm/s)
- Moderate (3.4 - 8.1 cm/s)
- Strong (8.1 - 16 cm/s)
- Very Strong (16 - 31 cm/s)
- Severe (31 - 60 cm/s)
- Violent (60 - 116 cm/s)
- County Boundary

# EARTHQUAKE AND AFTERSHOCK

South Napa Quake | Date: 2014.09.18 | Quakes from 2014.08.24 to 2014.09.07



Disclaimer: This map was prepared for informational purposes only. No liability is assumed for the accuracy of the data delineated hereon.



**LEGEND**

- Red tags (24)
  - Red/Yellow tags (2)
  - Yellow tags (140)
- FEMA Flood Zone Designations**
- 100-Year Flood Zone
  - FLOODWAY

**TOTAL # OF PARCELS WITHIN STRONG SHAKE ZONE:**  
**36,907 \***

**TOTAL # OF PARCELS WITHIN FLOOD ZONE:**  
**5,719 \*\***

**TOTAL # OF PARCELS WITHIN BOTH ZONES:**  
**4,272 \*\*\***

**TOTAL # OF DAMAGED STRUCTURES WITHIN FLOOD ZONE:**  
**166**

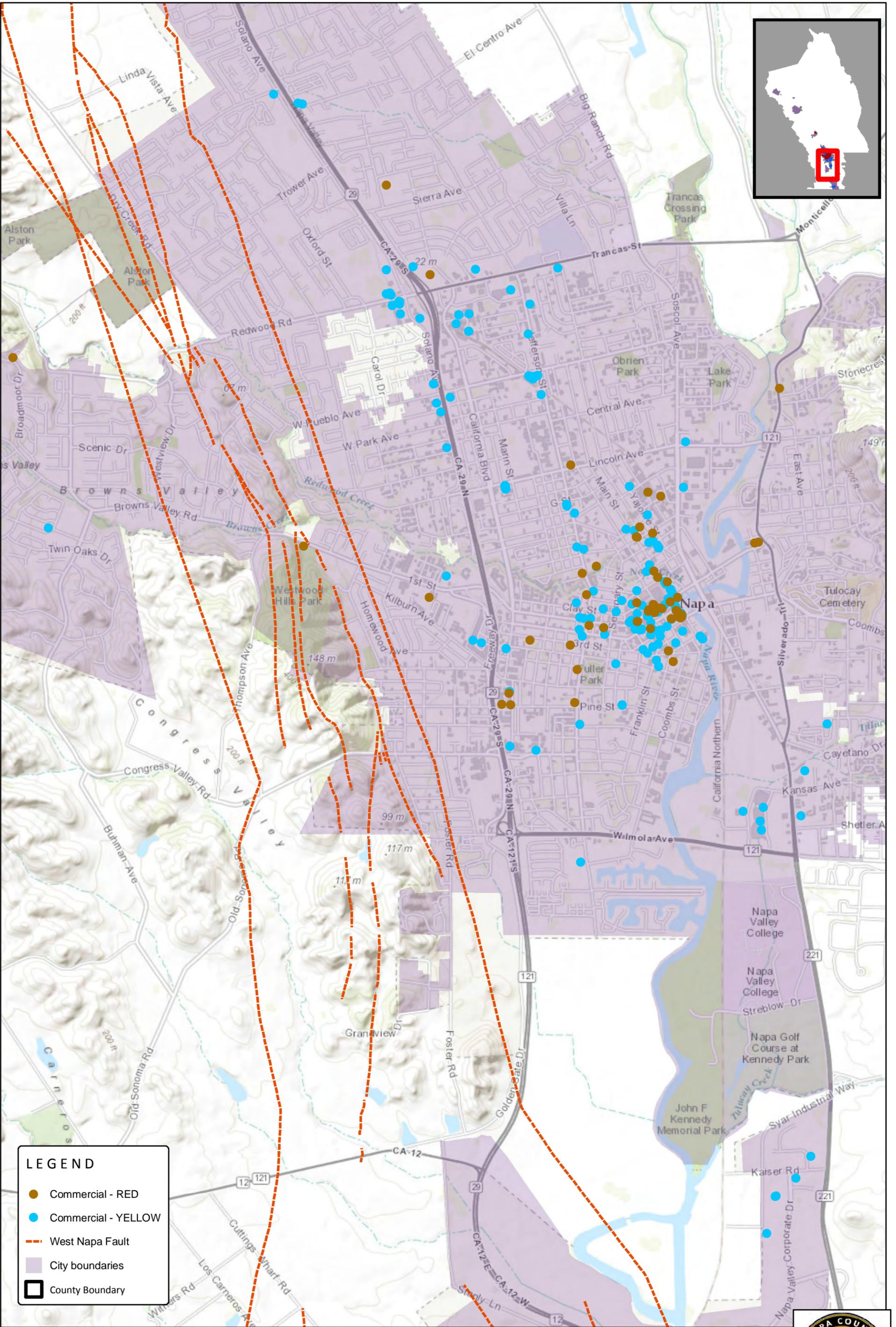
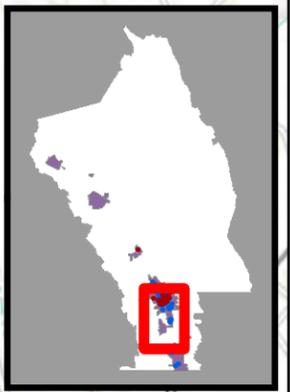
\* CSIN ShakeMap Peak Ground Velocity > 8.0 cm/s  
 \*\* includes parcels both partially and completely within 100-yr flood zone

**TAGGED STRUCTURES WITHIN 100-YR FLOOD ZONE**

South Napa Quake | Date: 2014.09.17



Disclaimer: This map was prepared for informational purposes only. No liability is assumed for the accuracy of the data delineated hereon.



**LEGEND**

- Commercial - RED
- Commercial - YELLOW
- - - West Napa Fault
- City boundaries
- County Boundary

# DAMAGE INSPECTIONS FOR COMMERCIAL BUILDINGS

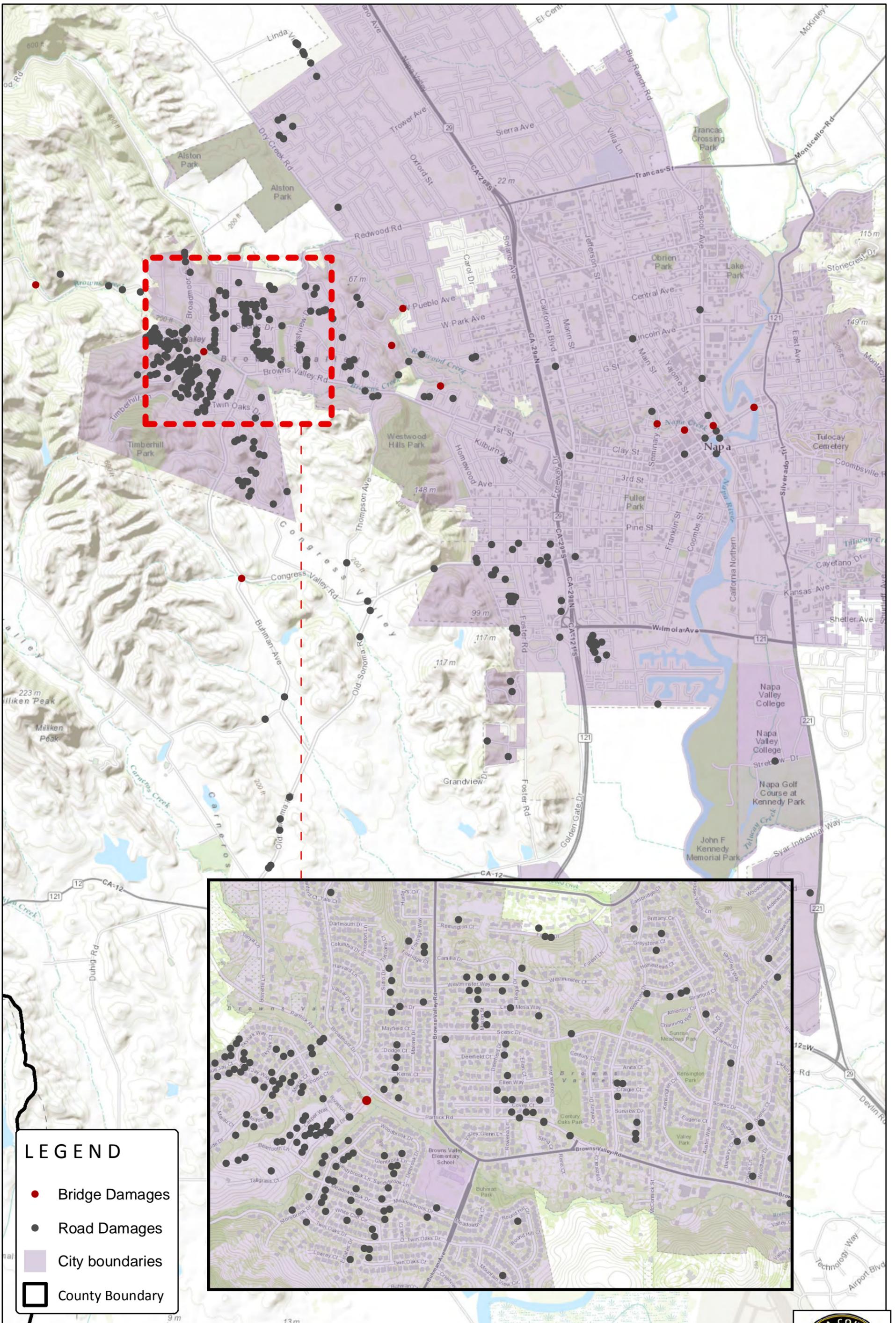
South Napa Quake | Date: 2014.09.18



0 0.25 0.5 1 Miles

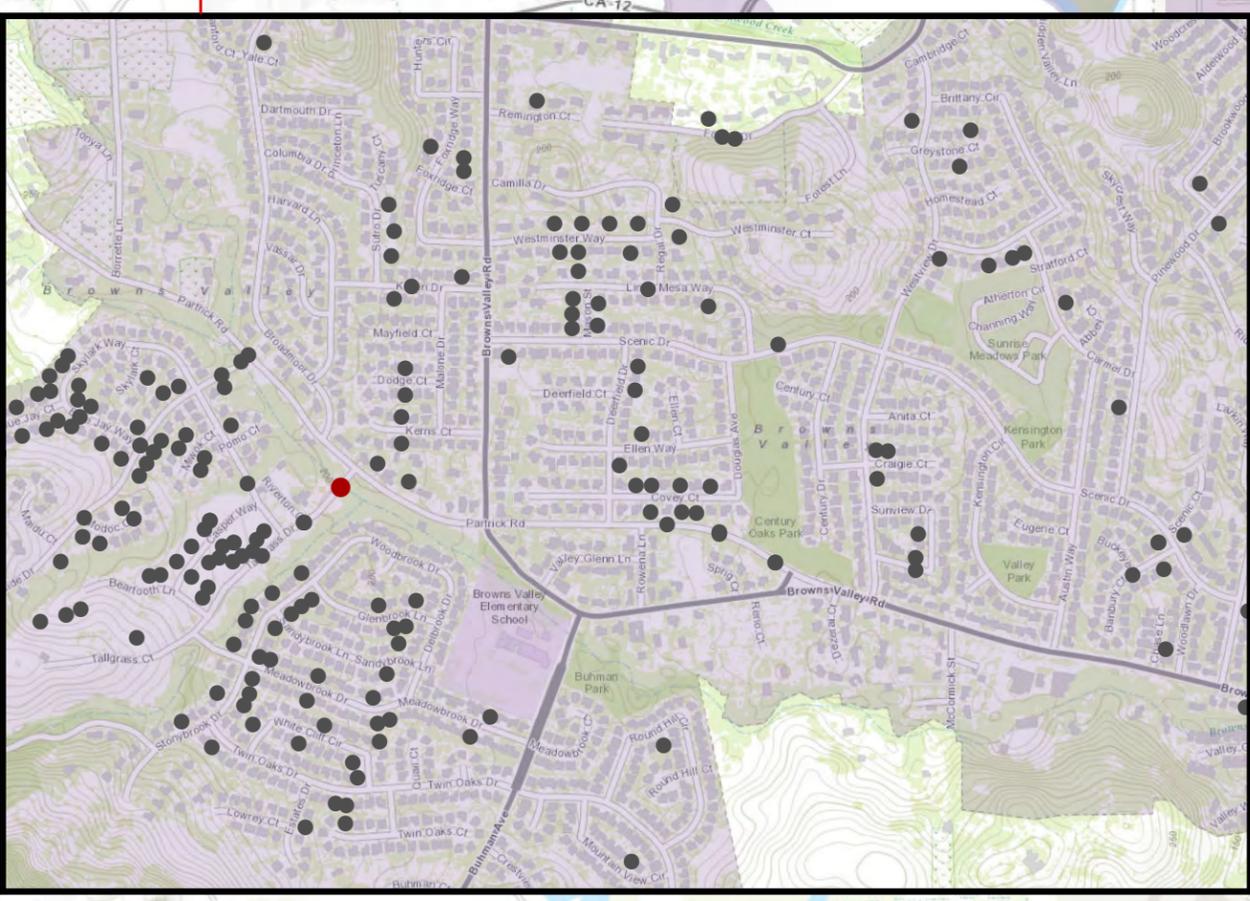


Disclaimer: This map was prepared for informational purposes only. No liability is assumed for the accuracy of the data delineated hereon.



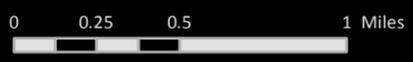
**LEGEND**

- Bridge Damages
- Road Damages
- City boundaries
- County Boundary



# ROAD AND BRIDGE DAMAGE MAP

South Napa Quake | Date: 2014.09.18



Disclaimer: This map was prepared for informational purposes only. No liability is assumed for the accuracy of the data delineated hereon.