

Response to Grand Jury Report Form

Report Title: "Will there be water after an earthquake?"

Report Date: June 19, 2019

Response by: Grant Davis Title: General Manager

Agency/Department Name: Sonoma County Water Agency

FINDINGS:

I (we) agree with the findings numbered: F1 – F3, F5 – F7, F11 (see attached response letter)

I (we) disagree wholly or partially with the findings numbered: F4, F9, F10

(see attached response letter)

(Attach a statement specifying any portions of the findings that are disputed with an explanation of the reasons.)

RECOMMENDATIONS:

Recommendations numbered: _____

have been implemented.

(Attach a summary describing the implemented actions.)

Recommendations numbered: R1 – R4, R6 (see attached response letter)

have not yet been implemented, but will be implemented in the future.

(Attach a timeframe for the implementation.)

Recommendations numbered: _____

require further analysis.

(Attach an explanation and the scope and parameters of an analysis or study, and a timeframe for the matter to be prepared for discussion by the officer or director of the agency or department being investigated or reviewed, including the governing body of the public agency when applicable. This timeframe shall not exceed six months from the date of publication of the Grand Jury report.)


Recommendations numbered: -

will not be implemented because they are not warranted or are not reasonable.

(Attach an explanation.)

Date: 8/12/2019 Signed: 

Number of pages attached: 13

READ AND CONSIDERED
DATE 8/21/19 BY 



**Sonoma
Water**

CF/0-0-1 Grand Jury (ID 33)

August 12, 2019

Hand-Deliver

The Honorable Gary Nadler
Presiding Superior Court Judge
Hall of Justice
600 Administration Drive
Santa Rosa, CA 95403

READ AND CONSIDERED
DATE 8/21/19 BY GW

RE: Sonoma County Water Agency Response to Sonoma County Civil Grand Jury 2018-2019 Final Report

Dear Honorable Judge Nadler,

The Sonoma County Water Agency (Sonoma Water) respectfully submits the following responses regarding recommendations and findings in the 2018-2019 Sonoma County Civil Grand Jury Final Report ("Report"). Please also find attached the completed Response to Grand Jury Report Form. We appreciate the diligent work of the Grand Jury to understand and advise on issues critical to our local communities, such as this year's review of Sonoma Water's readiness to continue providing water if faced with a major earthquake. Sonoma Water also appreciates the Grand Jury's recognition of the significant resources Sonoma Water and its water contractors have invested in strengthening the water transmission system to mitigate the potential effects of a major earthquake, as well as other potential natural hazards.

As recognized in the Report, and as stated below, Sonoma Water and its water contractors have invested substantially in efforts to protect Sonoma Water's water supply infrastructure against natural disaster events, including a severe earthquake. Following an extensive four-year vulnerability assessment and development of its first Local Hazard Mitigation Plan in 2008, Sonoma Water established its eligibility to receive federal hazard mitigation funding and has since successfully secured over \$12 million in grant funds with additional funding of nearly an equal amount that is pending approval. Of this nearly \$24 million in grant funding, approximately \$13 million is specifically designated to protect the water transmission system against the risks of an earthquake. Implementation of risk reduction projects is being actively pursued as funds are available, including to-date, the completion of some of our highest priority seismic mitigation projects and continuing progress on several additional high priority projects. A locally funded, Regional Water Supply Resiliency Study is also underway that will assist Sonoma Water and its water contractors to identify potential opportunities to mitigate system vulnerabilities, including associated seismic risks, through the shared resources of these regional water supply partners across Sonoma Water's service area. Sonoma Water is committed to make its water supply infrastructure increasingly resilient in the face of multiple natural hazard threats.

Sonoma Water's responses below address findings F1-F7 and F9-F11, as well as recommendations R1-R4 and R6 of the portion of the Report entitled, "Will There Be Water After An Earthquake?" Please note that responses to finding F8 and recommendation R5 are not included from Sonoma Water, as those responses are to be provided by Sonoma Water's contractors.

FINDINGS

FINDING F1:

Sonoma County relies primarily on the Russian River for drinking water which may be disrupted in the event of a major earthquake.

Response: Sonoma Water agrees with this finding.

The Russian River is the primary source of drinking water for much of Sonoma County, including the predominant portion of the most urbanized areas of the County. There are multiple public water systems whose water supply is reliant on the Russian River, and in the event of a major earthquake, temporary service disruptions could occur. The public should anticipate the possibility of service disruptions and make appropriate preparations in advance. To assist the public in this regard, Sonoma Water will be collaborating with the water contractors and appropriate emergency management entities to develop and make available consistent guidance.

As a point of clarification, it should be noted also that a significant segment of the County population is not reliant on the Russian River for its drinking water supply and instead relies upon groundwater sources, for which the susceptibility to the effects of a major earthquake could vary. Non-Russian River water users are generally those users who: (1) are not located along the Russian River corridor, or (2) do not receive water from Sonoma Water or its water contractors.

FINDING F2:

Sonoma County relies primarily on a single wholesale provider for its water. Sonoma Water, which delivers water under contract to cities and water districts in Sonoma County and northern Marin County, may be without sufficient resources to meet all emergency needs.

Response: Sonoma Water agrees with this finding.

Sonoma Water provides wholesale drinking water from the Russian River to approximately 600,000 customers and businesses in Sonoma and Marin Counties. Sonoma Water's service area generally covers much of the urbanized portions of these counties and provides a significant portion of the water supply for the predominant majority of the resident population. The water supply for customers who receive their drinking water from the cities of Santa Rosa, Rohnert Park, Cotati, Petaluma, Sonoma, Town of Windsor as well as Valley of the Moon,

North Marin, and Marin Municipal Water Districts, and a limited number of other surplus customers, is wholly or partially reliant on Sonoma Water's infrastructure for water delivery.

Though Sonoma Water is implementing measures to protect its infrastructure to ensure continued water service, temporary service disruptions could occur following a major earthquake. Not all risk can be feasibly eliminated, but Sonoma Water is well prepared to make repairs and restore service in a timely manner for an array of potential damage incidents. For a severe earthquake event, the extent of damage could however exceed Sonoma Water's capacity and available resources to make timely repairs. Under these circumstances, Sonoma Water is prepared to draw upon external resources to assist in the restoration of water service to minimize the duration and potential for extended service disruptions. Vendor resources and/or resources provided by other governmental entities and associations, such as California Water/Wastewater Agency Response Network (CalWARN), California Utility Emergency Association, and through California's Master Mutual Aid Act are some of the external resources Sonoma Water would engage to accelerate the restoration of water service.

In addition, Sonoma Water is currently engaged with the water contractors in evaluating natural hazard vulnerabilities and associated risk mitigation at a regional scale. The Regional Water Supply Resiliency Study, currently underway, will seek to identify potential opportunities to coordinate water supply operations and share water resources with and among the water contractors as part of disaster response. The ability to optimize the management of regional resources to benefit local communities will only decrease reliance on the other aforementioned third party resources for restoring water service following a major earthquake.

FINDING F3:

In the event of a major earthquake, water supplies are likely to be significantly disrupted for extended periods of days or weeks, although reduced water supplies may be provided through alternative means. Full recovery of systems could take longer.

Response: Sonoma Water agrees with this finding.

A massive seismic event will likely result in significant damage and thus service interruptions for any water system (or any infrastructure for that matter). While the timing of occurrence, location and duration of such events and resulting extended service disruptions cannot be forecasted or predicted, we agree there is potential for extended outages and/or periods of impaired water supply following a major earthquake. The risk of extended service disruption is not anticipated for less severe earthquakes. For catastrophic circumstances resulting from severe earthquakes, Sonoma Water would rely not only on its internal and regional resources, but also state, federal and potentially international mutual aid resources for interim emergency health and safety water supply until the necessary system repairs can be made.

FINDING F4:

Measures implemented by Sonoma Water to reduce the risk of critical water shortages following a major earthquake have relied heavily upon state and federal grant funds, but implementation has fallen behind the

schedules proposed in the LHMP. A more rapid reduction of risks could be achieved through water rate adjustments.

Response: Sonoma Water disagrees partially with this finding.

Sonoma Water's implementation of seismic hazard mitigation projects identified in our Local Hazard Mitigation Plan has since 2008 predominantly relied upon grant funding provided by the Federal Emergency Management Agency (FEMA), administered through the California Office of Emergency Services (California OES). The availability of funds is not always certain and can vary depending on a number of factors. When funds are available, grants are awarded on a competitive basis. Sonoma Water has been highly successful in securing grant funds to implement multiple seismic hazard mitigation projects. However, the schedule of funding availability, the selection of candidate projects, and the completion of federal environmental compliance documentation by FEMA are just some of the factors that increase the uncertainty of implementation schedules for projects that rely on this funding. Water rate adjustments is one approach that may provide opportunity to implement seismic risk reduction measures more rapidly by reducing the uncertainty of funding availability and timing. However, funding uncertainty is not the only factor that can affect implementation of seismic mitigation measures. Many of these projects are often reliant on other processes that can contribute to delays, such as the need to secure and comply with multiple permits, comply with the requirements of the California Environmental Quality Act (CEQA), acquire right-of-way, and prioritize among numerous other important risk mitigation projects (e.g. regulatory, climate, aging infrastructure, etc.)

FINDING F5:

Consistent with FEMA recommendations, residents need to maintain their own emergency source of water to meet their personal needs for more than the three days frequently stated by officials.

Response: Sonoma Water agrees with this finding.

Currently, FEMA emergency preparedness websites such as www.ready.gov and federal publications on disaster readiness still recommend to individuals and families a minimum of three days of food and water in their personal disaster kits. Sonoma Water agrees consistent public outreach and education is needed to help our community prepare for longer than 72 hours.

FINDING F6:

More public outreach is needed to educate water users to their risks and individual responsibility for earthquake preparedness.

Response: Sonoma Water agrees with this finding.

Public outreach and education on individual and family disaster preparedness is an area identified by the County of Sonoma for improvement. Sonoma Water agrees that more can be done to coordinate and share those messages with the public and the importance of adequately preparing family disaster kits based on the local risk of earthquakes and other natural hazards. Sonoma Water is committed to supporting this area of improvement.

FINDING F7:

Coordination between Sonoma Water and its contractors needs to improve by increasing training exercises, mutual aid training, and systems information exchange.

Response: Sonoma Water agrees with this finding.

Sonoma Water is committed to supporting local and regional communities and partnering agencies during emergency response to disasters. Sonoma Water's commitment to building emergency capabilities during emergencies is reflected in our partnerships, trainings, exercises, and mutual aid deployments. Trainings hosted by Sonoma Water are open to other local governments and invitations to participate are sent to the water contractors.

Sonoma Water has provided mutual aid staff and equipment resources during the 2015 Valley Wildfire in Lake County, the 2018 Mendocino Complex wildfires, and during the 2017 October Complex Wildfires Sonoma Water provided mutual aid staff and equipment resources to County of Sonoma emergency operations and to the City of Santa Rosa Water Department during response and recovery. Mutual aid and requests for assistance are facilitated under the terms of various Sonoma Water emergency mutual aid agreements and associations including California Utility Emergency Association, California Water and Wastewater Agency Response Network, Regional Flood Control mutual aid agreement, and the California Master Mutual Aid Agreement. Increasing Sonoma Water's local knowledge of water and wastewater mutual aid options and processes may be a desirable area of joint trainings with water contractors.

Sonoma Water and the water contractors routinely coordinate on issues related to water supply. Joint efforts with the water contractors, such as the current Regional Water Supply Resiliency Study, is one example of our mutual collaboration. This multi-phase study will enhance the understanding of Sonoma Water and each retailer's system in regards to emergency response operations and resilience to natural hazard events. In particular, the study will identify associated opportunities for risk mitigation at a regional scale, through shared resources and coordinated operations following a disaster event.

FINDING F9:

Sonoma Water's planning for earthquake response, supplies, repairs, and restoration of water depends significantly on institutional repair knowledge concentrated in a few long-term employees, but lacks adequate documentation such as manuals for standard operating procedures.

Response: Sonoma Water disagrees partially with this finding.

The operational and maintenance staff at Sonoma Water are highly skilled and licensed professionals in the water and wastewater industry standards. Under an existing and unique training program, field staff are rotated and cross-trained intentionally to support all the operational, maintenance, and repair needs of both the water and wastewater systems. This cross-training significantly enhances Sonoma Water's flexibility and capability to respond to a disaster event. There is a certain dependency however on managers with long term institutional knowledge to plan, coordinate, and manage repairs to the water system. Those processes may lack sufficient documentation and Sonoma Water recognizes this as an opportunity for improvement.

FINDING F10:

Sonoma Water's estimate of three days to return to service following an earthquake is conditional on the availability of suitable repair parts, aqueduct pipe, joints, pumps and valves. The Grand Jury found the inventory of emergency supplies is sparse and the inventory list is incomplete and out-of-date.

Response: Sonoma Water disagrees partially with this finding.

Sonoma Water's Earthquake Response Plan estimates between three days and up to two weeks for some repairs depending on the earthquake location and severity. Due to the size, scale, high cost, and general impracticality of maintaining some parts and equipment, like certain pumps, Sonoma Water may not purchase and store long-term some components of its system. In a disaster, expedited emergency procurement using vendors, contracts, and mutual aid resources is a strategy for acquiring the additional resources to complete emergency repairs that may take longer than three days to complete. The coordination of these emergency procurement deliveries would be assisted by the California Utility Emergency Association for which Sonoma Water is an active member. During the repairs and restoration process, Sonoma Water would collaborate with the water contractors to continue water deliveries using system redundancies, alternate water supplies, and various operational strategies.

Existing inventory lists of parts and equipment needed for repairs are individually managed by Sonoma Water's W. A. Coordinators. This individualized basis of management lacks consistency. An updated assessment of current stockpiles and a consistent inventory management system are recognized areas of improvement for Sonoma Water.

FINDING F11:

Sonoma Water and its contractors maintain a well-designed system and have made significant progress in mitigating earthquake risks. On-going efforts are needed to reduce remaining risks.

Response: Sonoma Water agrees with this finding.

While it is of course impossible to eliminate all water supply related risks associated with natural hazards, such as a major earthquake, Sonoma Water remains committed to continuing efforts to further enhance the resilience of its water supply and transmission system and collaborating with the water contractors in their pursuits to do

the same. In addition to the on-going implementation of risk mitigation projects, the aforementioned Regional Water Supply Resiliency Study, a collaborative effort between Sonoma Water and the water contractors, is a recent example of continuing coordinated efforts being pursued to further reduce earthquake risks to the local water supply.

RECOMMENDATIONS

RECOMMENDATION R1:

Sonoma Water review and establish viable options for accelerating how rapidly the highest-priority mitigation measures are being funded and implemented, by December 31, 2019.

Response: The recommendation has not yet been implemented, but will be implemented in the future.

Sonoma Water fully supports efforts to implement seismic hazard mitigation measures, including acceleration of the highest-priority measures identified in its Local Hazard Mitigation Plan (LHMP). Since 2003, Sonoma Water has diligently pursued identification of its water supply system's potential vulnerabilities to major earthquakes, as well as flood, wildfire, drought, and a range of other natural hazards. Sonoma Water and its water contractors have made substantial investment in both assessing these vulnerabilities and implementing measures to reduce the risk of service outages. In 2007, Sonoma Water completed an exhaustive science-based Natural Hazard Reliability Assessment of its water transmission system, identifying numerous mitigation measures to address potential vulnerabilities, including measures to address ten (10) of the highest priority vulnerabilities that posed the greatest risk to the ability to provide continuous wholesale water supply service during and after a major earthquake. These highest seismic risk priority measures were included in Sonoma Water's 2008 LHMP. This comprehensive assessment was conducted in coordination with Sonoma Water's contractors. As discussed further below, Sonoma Water engaged the water contractors in a long-term financial planning process to discuss the priorities for various projects associated with: (1) addressing risk from natural hazards (seismic and flooding), (2) maintenance, (3) compliance with the 2008 Biological Opinion for water supply operations on the Russian River, issued by the National Marine Fisheries Service ("Biological Opinion"), and other regulatory requirements, and (4) meeting future water demand. While not all risk can be feasibly eliminated, to date, Sonoma Water has expended significant funding to complete or initiate several of the highest priority projects as described below:

- In 2013, Sonoma Water completed construction of the Santa Rosa Aqueduct Crossing at Rodgers Creek Fault – the single highest priority project identified in the LHMP. This project was designed to reduce the risk of pipeline rupture at the one location where Sonoma Water's transmission system is traversed by the Rodgers Creek Fault.
- In 2014, Sonoma Water completed ground improvements for the River Diversion System (RDS) to protect against the damaging effects of seismically-induced liquefaction in the vicinity of the production pumping facilities along the Russian River.

- In 2017, Sonoma Water completed construction of the isolation valves project, whereby Sonoma Water has enhanced the resiliency of the water transmission system and lowered the potential for uncontrolled releases of water by increasing the points of isolation in the system – allowing greater opportunity to isolate damaged portions of the system more rapidly, reducing damage, and restoring service in timely fashion following an earthquake.
- Several other of these highest priority projects are in progress. Designs and environmental compliance work have been completed to a 90% stage for two (2) Russian River-Cotati Intertie mitigation projects for aqueduct crossings at the Russian River and Mark West Creek to reduce the risk of liquefaction induced damage to this aqueduct. The design of the Santa Rosa Creek crossing project has also recently commenced this year. All three of these high priority seismic mitigation projects are scheduled to complete construction by 2021.
- Measures have also been initiated with the implementation of the Advanced Metering Infrastructure (AMI) project to enhance Sonoma Water’s real-time flow monitoring capabilities at selected service turnouts along the transmission system. Improved flow monitoring at key turnouts will ultimately allow Sonoma Water to more rapidly assess where earthquake damage may be more prevalent within its service area and thus better inform operational decisions and priorities following an earthquake event.
- Initial planning efforts to address liquefaction related vulnerabilities to three identified collector well facilities (Collectors 3, 5, and 6) have been conducted, revealing that no feasible options are readily identifiable and additional alternatives need to be evaluated. Sonoma Water, in coordination with the water contractors, is currently initiating a broader regional water supply reliability study that will consider how this and other natural hazard vulnerabilities may be mitigated across Sonoma Water’s service area.
- In addition to these highest priority projects, other efforts have also been implemented or are currently proceeding to further protect Sonoma Water’s ability to reliably supply water following a major natural hazard event. Seismic retrofits at Sonoma Booster Pump Station #1 and Ralphine Tanks, installation of a standby power generator at Sonoma Water’s administrative building, and electrical resiliency upgrades at the Ely Booster Pump Station are some of these additional measures currently being pursued.

As previously mentioned, many of these highest priority seismic mitigation projects have advanced with substantial funding support from federal hazard mitigation grants administered through FEMA. Since the development of the first LHMP in 2008, Sonoma Water has successfully competed to secure over \$12 million in FEMA grant funds to implement natural hazard mitigation projects. Another \$5.76 million has been conditionally awarded pending completion of federal environmental compliance regulations, and an additional \$5.8 million has received California OES recommendations for FEMA funding, and is currently pending FEMA approval. Of this nearly \$24 million in hazard mitigation grant funding, more than half (approx. \$13 million) specifically addresses improvements to the water supply system to mitigate the risk of damage resulting from a major earthquake. Additional local funding, derived from the sale of water, is used to complement the grant funds. FEMA typically requires this local “match” funding to be no less than 25% of the grant amount.

Prior to commencing any of the hazard mitigation measures identified in the original LHMP, Sonoma Water and the water contractors weighed options for funding the implementation of seismic hazard mitigation projects in

conjunction with other necessary programs. Funding options regarding seismic hazard mitigation projects were considered and discussed with the water contractors through the Water Advisory Committee (WAC) and the consensus amongst Sonoma Water and the water contractors was to pursue grant funding as the primary basis for funding. This approach balanced the need for seismic mitigation projects with the need for other projects, such as regulatory required projects to comply with the Biological Opinion, as well as other operational needs affecting water rates. Sonoma Water appreciates the Grand Jury's acknowledgment of the successes of this program and the benefits it has provided toward helping to reduce seismic related risks to our region's water supply.

Sonoma Water also acknowledges that while the program has made significant strides toward seismic risk reduction for the highest priority projects, progress has not kept pace with the initial implementation schedule identified in the LHMP. The technical complexities and increased costs of these projects, combined with the uncertainties of grant funding schedules have added to the schedule challenges. Notwithstanding these challenges, Sonoma Water supports the Grand Jury's recommendation to review options for accelerating the funding and implementation of the seismic mitigation projects. In addition, Sonoma Water is nearing completion of a Climate Adaptation Plan which, similar to the aforementioned Natural Hazard Reliability Assessment, will result in the identification of the highest priority climate-risk vulnerabilities (i.e., wildfires, drought, flood, and sea-level rise) and corresponding mitigation projects to reduce these risks. Sonoma Water believes that these mitigation projects should also be included in updating overall project priorities assessment.

As most options for increasing funding are likely to rely to some degree upon more significant water rate increases into the future, close coordination with the water contractors is essential to establish feasibility. In support of the Grand Jury's recommendation, Sonoma Water will present options for accelerating the highest priority seismic risks hazard mitigation projects to the WAC's Technical Advisory Committee (TAC) during preparation of the Fiscal Year 20/21 budget. Additional time beyond the Grand Jury's recommended date is required based on the annual budget schedule for the water transmission system. To be completed by June 30, 2020.

RECOMMENDATION R2:

Sonoma Water maintain inventory lists with current goals for items, quantities, locations, and sourcing; and improve stockpiling accordingly, by December 31, 2019. (F10)

Response: The recommendation has not yet been implemented, but will be implemented in the future.

Under Sonoma Water's current practice, it has procured and maintained an inventory of emergency equipment and supplies needed to ensure rapid response to emergency repairs of the water supply systems and recently demonstrated this capability in 2014 during an emergency repair of the Cotati Aqueduct that was damaged by a contractor. The emergency supplies are procured and individually managed by Sonoma Water's W.A. Coordinators. Knowledge, inventory maintenance, sourcing, and documentation currently varies by coordinator. To improve inventory management, Sonoma Water will select, implement, and train staff on a consistent inventory management system by December 31, 2019 that includes: item description and use, quantities, location, sourcing, tracking, maintenance, and primary point of contact.

In addition to the inventory management system improvements, Sonoma Water will review existing vulnerabilities and likely emergency repair sites against current emergency inventory. Any identified gaps of available supplies or equipment that are required to meet anticipated repairs will be procured, budgeted, or specific operational procedures will be developed to identify the means by which such supplies and equipment are to be procured in the event of an emergency. Sonoma Water will develop and implement a system that will be used to evaluate our existing emergency inventory against our system vulnerabilities by December 31, 2019.

RECOMMENDATION R3:

Sonoma Water and water contractors derive and publicize more realistic outage periods and provide updated information to the public, by December 31, 2019. (F5, F6)

Response: The recommendation has not yet been implemented, but will be implemented in the future.

Following the October 2017 Sonoma Complex Wildfires, the County of Sonoma created a new Department of Emergency Management and hired several new positions. During County Operational Area coordination meetings and working groups, consistent public messaging, warnings, alerts, etc. have been identified as an area of improvement before, during and after disasters. Sonoma Water, the County of Sonoma, public safety agencies, and water contractors are all committed to these goals.

In support of those efforts, Sonoma Water will collaborate with the Sonoma County Department of Emergency Management, the County Health Department, Cities (“Operational Area Partners”) and water contractors on local risks and water outages that may be longer than 72 hours. Specifically, Sonoma Water will:

1. Develop, in partnership with Operational Area Partners and water contractors, consistent public information and recommendations for emergency water supplies. To be completed by December 31, 2019
2. Expand Sonoma Water’s public website to include education information on water outages and public emergency water storage recommendations consistent with Operational Area Partners and water contractors by December 31, 2019.

RECOMMENDATION R4:

Sonoma Water improve coordination with water contractors, including field exercises, by December 31, 2019. (F7)

Response: The recommendation has not yet been implemented, but will be implemented in the future.

Sonoma Water and the water contractors routinely coordinate on issues related to water supply. The WAC and TAC meetings are two of the key forums through which this coordination occurs, but other avenues of collaboration and information exchange, such as the regular Operations Coordination meetings with representation from each water contractor, are also utilized. Joint efforts such as the Regional Water Supply

Resiliency Study that is currently underway is another example of mutual collaboration. This multi-phase study will enhance the understanding of Sonoma Water and each retailer's systems in regards to natural hazard resilience and identify potential opportunities for risk mitigation at a regional scale through shared operational information and resources.

Collaboration between Sonoma Water and the water contractors is also demonstrated during the implementation of certain capital improvement and maintenance repair projects. During the planning and execution phases of these projects, Sonoma Water staff engage with the affected water contractors to ensure coordination among the agencies, activation of alternate water supplies, and preparation of contingency plans. These planned events and the operational coordination simulate the field level coordination that would occur during emergency response.

Sonoma Water also participates in regional and county-wide joint training and exercises, such as the Urban Shield Regional exercises, water-sector specific trainings, and emergency operations center position training. In addition to participating in joint training, Sonoma Water has pursued training funds and hosted numerous FEMA approved training courses since 2013. The majority of these trainings were regional and included invitations to the water contractors and other local government agencies. Some of the most notable joint trainings include:

- Elected Official Training Course
- Emergency Operations Center (EOC) Section Training Course - earthquake scenario
- Incident Command System (ICS) 100, 200, 700 & 800 Combined Course
- ICS 300 Course, specific to Water and Wastewater Agencies
- EOC Water Sector Unit Leader Training Course, hosted by Petaluma water contractor

Emergency preparedness training and exercises specific to local systems and with the water contractors are listed as priorities in the Sonoma Water Strategic Plan and Water Supply Strategies Action Plan. To support the joint training and exercises with the water contractors, Sonoma Water will continue to pursue funding opportunities for collective emergency response training and exercises. Sonoma Water will partner with the water contractors to incorporate our existing planned water system shut downs and operational collaborations as joint field training and exercise opportunities in the plan described below. These additional efforts will improve emergency response and coordination among the agencies.

Sonoma Water, in partnership with the water contractors, will initiate the development of an emergency training and coordination plan to describe the additional joint training, exercises, field exercises, and funding sources needed to increase readiness, collaboration, and emergency response capabilities. Draft plan to be completed by December 31, 2019.

RECOMMENDATION R6:

Sonoma Water prepare and maintain one or more SOPs (Standard Operating Procedures) for the restoration of water deliveries specifically for an earthquake; SOPs should be updated annually or whenever there are changes to procedures, by December 31, 2019. (F9)

Response: The recommendation has not yet been implemented, but will be implemented in the future.

Sonoma Water has developed over thirty emergency response plans and procedures that guide emergency response and recovery efforts. Some guide response to a specific facility or type of disaster while others are

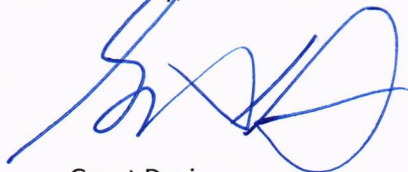
broad in nature and intended to apply to all hazards, as recommended by FEMA and California OES. These plans guide response to localized emergencies at Sonoma Water, as well as, Sonoma Water's response to larger, less frequent disasters impacting the county or region. The importance of these emergency plans and their continuous improvement is reflected in Sonoma Water's culture, strategic plans, budgeting, and dedicated staffing resources. The cross training of field staff described in our Finding F9 response is an acknowledgement that cross training of staff is critical to ensure continuity in the absence of some staff following a significant disaster. The Grand Jury review did highlight an area of dependency on the knowledge of some long term managers and Sonoma Water agrees that some additional documentation and training will support improvements in response and recovery capabilities when using alternate staffing.

As part of the continuous efforts for improvement, Sonoma Water utilizes past disaster examples to help shape and inform its emergency response protocols. Unfortunately, there have been numerous disasters in northern California over the last seven years. Following the 2014 Napa Earthquake, Sonoma Water, the water contractors, and water utilities across the state attended presentations and heard lessons learned from both the County of Napa emergency management and the City of Napa's water department. During a presentation at the WAC/TAC for Sonoma Water and its water contractors, one of those lessons learned was the successful use of mutual aid resources to assist with the rapid repair and restoration of their water distribution systems. While Sonoma Water was already well prepared to request and receive mutual aid resources through existing agreements and emergency organizations, the unique field coordination of personnel, mutual aid, and equipment contractors Napa described was identified by Sonoma Water for review and inclusion in its response strategies. Sonoma Water continues its commitment to reviewing and improving emergency response plans and procedures.

In response to the Grand Jury's recommendation, Sonoma Water staff will review and identify the decisions, processes, and actions needed for restoration of water deliveries following an earthquake and where SOPs may be missing to ensure timely restoration. Sonoma Water will develop one or more SOPs needed to facilitate the restoration of water deliveries following an earthquake, including the coordination and use of outside resources from government agencies, mutual aid associations, or general contractors. To be completed by June 30, 2020. Additional time beyond the Grand Jury's recommended date is needed to ensure adequate review and coordination with water contractors or other external entities, depending on the measures identified in the SOP(s) to be developed.

Sonoma Water appreciates this opportunity to consider opportunities to further protect the local water supply in the event of a major earthquake and looks forward to implementing the measures described herein. If you should need further clarification or have additional questions, please contact me at 547-1911.

Sincerely,



Grant Davis
General Manager

CC: Ronald Chestnut, Foreperson
Sonoma County Civil Grand Jury

Sonoma County Water Agency Board of Directors
David Rabbitt, Chairman
Susan Gorin
Shirlee Zane
James Gore
Lynda Hopkins

Sheryl Bratton
Sonoma County Administrator

Deva Marie Proto
Sonoma County Clerk

TAC Members
Drew McIntyre, North Marin Water District
Jennifer Burke, City of Santa Rosa
Craig Scott, City of Cotati
Kent Carothers, City of Petaluma
Mary Grace Pawson, City of Rohnert Park
Colleen Ferguson, City of Sonoma
Toni Bertolero, Town of Windsor
Alan Gardner, Valley of the Moon Water District
Michael Ban, Marin Municipal Water District