A DISASTER WAITING TO HAPPEN! April 25, 2005

Summary

The earthquake of April 18, 1906, although known as the earthquake of San Francisco, reduced downtown Santa Rosa to rubble. The greatest loss of life occurred in the hotels and rooming houses of the 52-year old community. A fire immediately followed the quake, killing those who were trapped in the wreckage.



Santa Rosa after the Earthquake and Fire, April 18, 1906 Courtesy of the Sonoma Valley Historical Society

Practically every building was destroyed or badly damaged. The brick and stone business blocks, together with the public buildings, collapsed. The Court House, Hall of Records, the Occidental and Santa Rosa Hotels, the Athenaeum Theatre, the new Masonic Temple, Odd Fellows' Block, all the banks, everything went. In the city, not one brick or stone building was left, except the California Northwestern Depot. The list of damage continues:

• In the residential portion of the city, foundations receded from under the houses, badly wrecking about twenty of the largest and damaging every one, more or less. Here, as in San Francisco, flames followed the earthquake, breaking out in a dozen different places at once and completing the work of devastation. The total of dead and injured was close to a hundred.

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¹ Details of the destruction in the Santa Rosa area are taken from web site http://users.ap.net/~chenae/socoquake.html

- The same earthquake inflicted considerable damage upon the business section of Healdsburg, with the large brick structures suffering the most.
- Many fine homes in the Geyserville vicinity were considerably damaged. In the Alexander Valley, the quarter mile long bridge over the Russian River was wrecked.
- Windsor suffered considerably from the earthquake, many of its finest new buildings being entirely destroyed. The Masonic building, which was being constructed of stone and brick, was reduced to debris.
- Sebastopol, which was just recovering from its last big fire, fared badly and was once more a pile of ruins, especially in the business section.

Some may draw comfort from *that was then, this is now,* and building codes are significantly more sophisticated than was the case in 1906. However, a major earthquake in Sonoma County would cause significant destruction. Lessons learned from the Northridge Earthquake, were that even the most modern designs do not prevent a surprising level of damage. Additionally, building codes have been updated in the last few years, and while public buildings in Sonoma County were *built to code*, the majority of structures do not reflect these recent changes.

The historic records speak to the most likely disaster to occur in Sonoma County, namely a large earthquake. But WAIT! What of other disasters that could befall the county? History also shows that floods and landslides are likely events. Hazards analyses completed by emergency planning staff in the county and its cities also identified chemical spills, Weapons of Mass Destruction (WMD), terrorist activities (given increased emphasis in the wake of September 11, 2001), major epidemics such as flu, and even tsunamis.

In 1995, Sonoma County formally adopted the **Standard Emergency Management System (SEMS)** to promote consistent and effective management of major emergencies and disasters in the county. SEMS had been used in planning prior to 1995, but was first used in earnest during the 1995 winter and spring floods.

The 2004-2005 grand jury decided to examine the effectiveness of the SEMS-based planning in Sonoma County, the preparedness of the key organizations that need to respond to the plan in the event of an emergency, and public awareness of the plans. A key part of the examination would be to check for consistency between the county and city plans.

Reason for Investigation

Since the Oklahoma City bombing, and the events of September 11, 2001, there is increased public awareness of the impact of major disasters. The US Geological Society and others conclude that an earthquake of at least a 6.7 magnitude will probably occur in the San Francisco Bay Area before 2030. Major fires, floods and landslides, as seen in the last two years elsewhere in the state, serve to remind residents of Sonoma County that these too are potential disasters in "God's country." The 2004-2005 grand jury determined that an investigation of the county's preparedness for such disasters was more than timely.

The grand jury noted that since the investigation began in January 2005, there has been a marked increase in plan re-examination and modification. This confirmed the validity of the investigation.

The grand jury observed that minimal effort had been exerted to inform the public as to its expectations prior to a major event. Similarly, there were minimal plans in place to educate the

public at the time of a major event. Therefore, the grand jury recommends that considerably more effort be applied to meeting this key challenge.

Background

The SEMS methodology for consistent management of major disasters received impetus in California following the Oakland fire in 1991. Sonoma County formally adopted SEMS as its emergency and disaster management methodology during the floods of early 1995.

SEMS incorporates the use of the following entities:

- Emergency Operations Center (EOC)
- Incident Command System (ICS)
- Master Mutual Aid Agreement
- Existing mutual aid systems
- The operational area concept
- Multi-agency or inter-agency coordination.

Local governments must use SEMS to be eligible for funding of disaster-related costs under state and federal disaster assistance programs. Adoption of SEMS is now a prerequisite for premitigation funding.

Given these financial incentives, all counties in California are committed to SEMS, as is the state itself. Most other counties and states within the United States of America are following the same lead. Within two years, there will be a Federal (National) Incident Management System, NIMS, which will interface with the state and county systems, almost certainly calling for some rewriting of existing plans. The concept of all local governments using the same disaster recovery methodology as the state and federal agencies is encouraging and timely. It is a major step forward, but only if the county and city plans are complete and in synchronization.

In recent years in Sonoma County, a SEMS-based approach has been used in the following disasters:

- 1995 January and March rainstorms and floods
- 1997 New Year floods
- 1998 Rio Nido landslides.

Notwithstanding these examples, the grand jury believes that in the ten years since its formal adoption, SEMS in Sonoma County is relatively untested in real disaster situations. With no wish to minimize the personal and economic effects of the identified emergencies, it can be noted that a flood disaster is different from most others since there is usually a period of advance notice, albeit a handful of days. In the last ten years, Sonoma County has not suffered a major county-wide emergency, a major earthquake (such as in 1906 and 1969), or a terrorist-related disaster. The Oklahoma City bombing in 1995, the terrorist activities of September 11, 2001, the tsunami catastrophe of December 2004, and the Indonesian Earthquake of March 2005, are fresh reminders of the enormity and chaos of a major disaster.

The grand jury recognizes that the written plan itself, the **Sonoma County/Operational Area Emergency Operations Plan**, is a major advance on its predecessor. The previous plan comprised two volumes, (each 2" thick), "hopelessly verbose and indigestible." A number of the people the grand jury interviewed referred to the previous plan as a *door-stopper*, because of its

size. In contrast, the new plan is succinct, focused on the early hours and days of an emergency, with a clear priority given to the safety and wellbeing of people. The overall plan itself is light on the recovery processes, although in some individual agency plans, the grand jury did see good examples of recovery procedures. The grand jury recommends that all major agencies and departments be required to detail their recovery plans, including the longer-term requirements.

The SEMS-based plan for the county is managed by the County Department of Emergency Services, and was last published in November 2000 with a minor update in May 2002. In the evolving world of SEMS, Sonoma County is part of the Coastal Region, from which mutual aid may be drawn if necessary. The state requires that an Emergency Council be formed and meet twice per year. There is a Sonoma County Operational Area Emergency Council that complies with this requirement. The state also requires that the SEMS-based plan be tested at least every two years. An actual critical incident may qualify as a sufficient "test" of the emergency responses, thus relieving the need for a periodic test.

The organization required by SEMS, in the event of a major disaster, is shown in Exhibit B at the end of this report. Exhibit C shows the way Sonoma County has allocated the key responsibilities.

In the event of a disaster, the key participants meet in a prepared operations room (the EOC room), to begin and manage the disaster management processes, and to call on such additional agencies as the disaster warrants.

The grand jury found widespread inconsistent approaches to emergency and disaster planning. Some county employees embraced the process of planning with enthusiasm, while others, typically senior management and elected officials, were non-enthusiastic, relying instead on "people will know what to do." The grand jury does not doubt that in all emergencies and disasters there have always been, and will continue to be, outstanding examples of heroism and remarkable feats. The grand jury also recognizes that a disaster is not managed by everyone running around with "the plan" in their hands. However, after-action reports of major disasters all emphasize the need for pre-planning and pre-written checklists. Planning provides a means of communication and collective thinking before the event, ideally producing checklists for key players to follow during the event. There is a well-worn adage in planning disciplines that "the journey is far more important than the destination," namely that the very process of producing a plan is as valuable as the plan itself. This is especially appropriate to disaster planning.

After-action reports provide excellent lessons to be learned in planning ahead for extended power outages (maybe weeks), or for major telephone system overloads. Sonoma County is especially vulnerable to power outages. A strong wind can do it, or a car hitting a power pole on the Windsor 101 cloverleaf. So what might a major disaster do?

Investigative Procedures

The investigation included interviews with staff, departmental/agency management, and elected officials all of whom have a stake in the production of effective plans for emergency management.

In addition to interviews, the investigation also included examination of relevant county and city emergency management manuals and related procedures.

The investigation also examined a number of public domain after-action reports from major disasters of the last few years, including the events of September 11, 2001.

Details of all these investigated areas are listed in Exhibit A at the end of this report.

Findings

An extract from the State of California SEMS Guidelines defines SEMS thus:

"SEMS was established to provide an effective response to multi-agency and multi-jurisdictional emergencies in California. By standardizing key elements of the emergency management system, SEMS was intended to:

- Facilitate the flow of information within and between levels of system
- Facilitate coordination among all responding agencies."

The grand jury found that the top-level county plan is well written and reflects recent thinking in this arena. It is championed by a small group in Emergency Services. The plans below the top level are **not** consistently well written, and in some cases do not exist in written, teachable and reproducible format. Examination of the plan publication dates, county and city, shows a wide span of dates, 1987 to 2002. Most plans have dates prior to the calamitous event of September 2001. So does the State of California SEMS website!

The grand jury examined, in some detail, the use of SEMS by cities within the county and found many inconsistencies. Some cities relied entirely on the county-based system to drive their disaster recoveries, even if the disaster was quite local to the city. While some cities had well-developed plans, other cities had absolutely minimal plans and frighteningly false expectations. Use of checklists was spasmodic.

Detailed findings are as follows:

- F1. Sonoma County has embraced SEMS as the standard and consistent methodology to manage major emergencies and disasters effectively (as has the State of California).
- F2. SEMS is designed to standardize emergency responses, and immediate recovery processes, not mid or long-term recovery processes.
- F3. Written plans and checklists are not consistent among county, cities, agencies, and departments, and in some cases are non-existent.
- F4. Where plans and checklists do exist, they are not always stored in multiple safe places for guaranteed access in the event of a disaster. The most common place is "the office," notwithstanding that a disaster does not limit itself to regular work hours, and office buildings may not be accessible!
- F5. Recovery processes, especially long power and water outages, are not consistently broken down by time periods, e.g. first 2 hours, first 24 hours, first 3 days, first 3 months.
- F6. The county radio system schematic shows sufficient built-in redundancy to withstand an interruption, unless specific "switch-able" radio towers are out of action (there is a study to extend the redundancy).

- F7. The county telephone system and 911 phone line system schematic shows sufficient redundancy built in to withstand any interruption, short of a complete loss of the main SBC building in Santa Rosa.
- F8. There is an agreement with the county fuel supplier that provides for priority fuel supplies for generators in the event of prolonged losses of power. While it is not guaranteed, there is an assumption that "government" will get the highest priority. Even so, among most departments and agencies, there is complacency about the total availability of generators and fuel supplies. This leads to assumptions that the generators themselves would survive the disaster, or that there would be a sufficient amount and duration of power for all purposes and all county buildings.
- F9. All county employees are listed as disaster recovery resources, as indeed are members of the grand jury, but there is no clear plan on how they will report in for duty, or how they will be used.
- F10. The city plans are not consistent in scope and detail. The City of Santa Rosa has a well-structured but dated plan, Cotati's plan is literally a copy of the county plan, Cloverdale is still using the 1989 two volume *door-stopper* plan that existed before the adoption of SEMS, and Healdsburg's plan is dated 1987. See Exhibit D for a table comparing the format and date of the county and city plans.
- F11. Of the plans that exist, almost all of them have dates prior to the events of September 11, 2001.
- F12. There are no consistent plans to inform the public ahead of time of what information will be available at the time of a disaster, nor is there a consistent plan to make use of media, or the City Watch system in the event of a disaster. (The City Watch system is a software program that allows for sending informational or alert messages to a given geography of telephone subscribers).
- F13. There is an agreement dated 1997, between the cities and the county, promising help from the county for the construction of, training in, and testing of city-based disaster plans. This assistance is not provided, nor sought on a continually consistent basis, despite the payment of a \$2000 annual fee by the cities.
- F14. There are no consistent disaster response checklists for law enforcement and public safety personnel, the two major agencies involved in every disaster. While law enforcement acknowledges SEMS, it relies on its normal critical incident skills to sustain its disaster response efficacy. There is too much reliance on a disaster being just another critical incident, basically "all in a day's work." As a result, there are no written policies and/or procedures that describe the responsibilities of the Sheriff's Department as part of the County Emergency Operations Plan.
- F15. The County Mobile Communications Vehicle, funded by Homeland Security, is parked within 200 feet of the County Dispatch Center for which it is the backup.
- F16. The Sonoma County Law Enforcement Consortium (SCLEC) system comprises Computer Aided Dispatch (CAD), Records Management System (RMS) and Mobile Data Computer (MDC). All of the Sonoma County law enforcement agencies, except Healdsburg and Sebastopol, use SCLEC for dispatching, tracking, and communicating with mobile units.

The SCLEC computer system is housed in one county building with no backup if the building were destroyed.

F17. There is little in the county and city plans to indicate how long term losses of infrastructure will be managed, e.g. roads, freeways, and bridges.

Conclusions

The County has adopted the SEMS approach to developing disaster recovery plans. The County signed an agreement in 1997 to assist all of the principal cities with their SEMS-based plans. The plans as assembled are inconsistent in content and with each other. Some of the plans are seriously out of date, and in none of the plans is there evidence of post "9/11" updating. It is difficult to believe that the events of September 11, 2001 did not cause significant reviews of disaster plans. It is even more difficult to believe plan revisions would not have been indicated as a result of such reviews.

The smaller cities have the least complete and (typically) the oldest plans, and are relying far too much on the County EOC to "rescue" them in the event of a disaster within their own boundaries. Consider the heavy dependency in the county on a minimal number of North/South, East/West access roads, and it is not difficult to imagine the central EOC having major problems in assisting a disaster in for example, Cloverdale or Sonoma.

The small cadre of mid-level staffers involved in the design and drafting of the plans demonstrated a good deal of understanding and enthusiasm; the same could not be said for their managers and supervisors. Some of that may just be the way such plans are developed. The grand jury's fear is that in the event of a major disaster too much recovery dependency will be placed on these staffers. Most of the senior management and elected officials interviewed were well distanced from, and in some cases ignorant of, salient pieces of the plans.

In almost every case, procedures from law enforcement, as they related to their role in an emergency, or a disaster within their own infrastructure, were provided to the grand jury as a secondary offering, in some cases not a direct match to the question the grand jury had asked. The jury is left with a very real impression that law enforcement is relying too much on a disaster simply being just another (maybe larger) critical incident, for which their personnel are trained. Too often law enforcement quoted street disturbances, or Russian River floods, as examples of their emergency-handling prowess. The jury does not believe that either of these examples is a good basis for a major (unexpected) disaster plan.

The grand jury has no expectation that all of the personnel involved in a disaster recovery will actually work from the plan manual. However, the spasmodic, in some cases zero, use of checklists misses a great opportunity to put effective planning into action at times of great personal stress and confusion. SEMS certainly encourages use of checklists. After-action reports from major disasters elsewhere also stress the value of checklists.

The senior management commitment to the various disaster plans, at the Board of Supervisors level, County Administrator, the city council level, the city manager level, and the public safety level, is demonstrably inconsistent and does not bode well should the county experience a major disaster.

Commendations

The jury commends the Department of Emergency Services for a well-written, digestible County Emergency Operations Plan, so much better than its predecessor. Its focus on people safety is especially commendable, as is the dedication of the staff group that produced it.

Both the Sonoma County Water Agency and the City of Santa Rosa developed well-constructed plans and in particular, made good use of checklists. Both plans had dates that are not recent; in both cases the jury understands updates are in progress.

The grand jury would like to thank all of the people who gave valuable time for interviews and willingly provided many examples of written material.

Recommendations

No disaster recovery plan is perfect. It is always possible to find some aspect that needs revision, based on testing or real events.

Given the widespread commitment to SEMS in Sonoma County, and the availability of lessons learned from events such as "9/11", the Loma Prieta and the Northridge earthquakes, and the Oklahoma City bombing, the grand jury expects to see at least the following, for all organizations:

- Disaster plans consistent in date, content and mutual aid expectations, for the county, its cities and major agencies/departments
- Improved use of checklists, including a notebook-style suitable for automobile visors or glove boxes, similar to that used by the City of Santa Rosa
- Comprehensive analyses of realistic responses to prolonged multi-week power outages, and telephone system overloads.

Detailed recommendations are:

- R1. The County Department of Emergency Services, working with each city in the county, should:
 - Assist in producing updated disaster plans, based on SEMS, consistent in content, in use and style of checklists. The plans should be completed by December 2005, in support of the 2006-2007 budget cycle
 - Make clear how the revised city plans relate to the county plan
 - Propose, by October 2005, new communication methods and media outreach strategies aimed at providing the public with information on what plans and procedures are designed and in place to manage major disasters.
 - Provide employee guidelines on storing disaster recovery documentation away from the work place, for example, at home, in an employee's car. The guidelines should be complete by October 2005.

R2. The Board of Supervisors should:

- Initiate an annual review of the County Emergency Plan. Since this may lead to budgetary outcomes, the event should be included as a part of the budget cycle, starting with 2006-2007. The review should include the following tasks as a minimum:
 - Examine status of the actions from the previous year's review.
 - Review any tests completed during the year and any plan changes required as a result of the tests ("no change" is an unlikely outcome).
 - Require evidence of detailed changes to the plan occasioned by known state, national or world emergencies that occurred during the year.
 - Require evidence of detail changes to the plan required by directives from the Department of Homeland Security (with due regard to any security and secrecy requirements).
 - Concur, by a vote, that the review has been completed successfully.

R3. Each city council should:

- Initiate an annual review of its disaster plan, coincident with the budget cycle, starting with the 2006-2007 cycle. These reviews should include the following tasks as a minimum:
 - Examine status of the actions from the previous year's review.
 - Review any tests during the year and any plan changes required as a result of the tests ("no change" is an unlikely outcome).
 - Request detail of any changes to the plan occasioned by known state, national or world emergencies that occurred in the review year.
 - Request detail of any changes to the plan required by directives from the Department of Homeland Security (with due regard to any security and secrecy requirements).
 - Concur, by vote, that the review has been completed successfully.

R4. The Sonoma County Sheriff should:

- Clarify and document, by year-end 2005, the common procedure for invoking the City Watch alert system.
- Institute, by year-end 2005, a periodic public test of the system, similar to the periodic testing of the TV and radio emergency alert system.
- Relocate the County Mobile Communications Vehicle to be at least five miles from the Dispatch Center/Sheriff's Office. This should be done by October 2005.
- Provide, by October 2005, a written procedure detailing how county law enforcement expects to meet its commitment as a primary resource agency to EOC in the event of a major disaster.

- R5. The Board of Supervisors, and each city council, should:
 - Demand that plans be put in place to ensure that all existing employees have been or will be trained in SEMS and the Emergency Recovery Plan for the county, and/or their city. The training should be completed by year-end 2005.
 - Document the reporting steps employees must take as support individuals in the event of a disaster.
 - Endorse that the most effective use of most employees is to focus on business resumption.
- R6. The County Dispatch Center manager, working with radio, telephone and data processing management in the Information Systems Department, and with the major vendors, should, by October 2005:
 - Provide a detailed design showing how all forms of critical communications are duplicated, backed up and/or capable of re-routing, in the event of a disaster.
 - Explore the use of simple mathematical queuing models to show how quickly the County Dispatch Center telephone set-up becomes overloaded in the event of a major disaster.
 - Identify the remedial equipment and procedural changes that alleviate overload problems determined by the overload analysis.
- R7. The Director of County Information Services, working with the Sonoma County Law Enforcement Consortium (SCLEC), should:
 - Propose, by October 2005, a plan to provide immediate backup to the Sonoma County Law Enforcement Computer System, presently a single point of failure.
- R8. The County Director of General Services should:
 - Produce, by year-end 2005, a detailed document showing the location, earthquake
 preparedness and fuel capacity of all the generators the county and cities expect to
 commission in the event of a major disaster. The document should include
 communication with the Board of Supervisors, the County Administrative Officer, and
 all departments and agencies, as to the amount of power they can reasonably expect
 to have following a disaster.
- R9. The County Director of Public Works should:
 - Produce, by year-end 2005, a document outlining the realistic alternatives in the event that major sections of North/South and East/West roadways are disrupted.

Required responses to Findings

Director – County Department of Emergency Services –F2, F3, F4, F5, F9, F10, F11, F12, F13, F14

County Administrative Officer – F3, F9, F12, F14

City Managers – F3, F4, F9, F10, F13

Sonoma County Sheriff - F12, F14, F15, F16

Director of County Information Systems Department – F6, F7, F16

Board of Supervisors – F9, F11, F13, F15

Each City Council – F10

County Director of General Services – F8, F17

County Director of Public Works - F17

Requested responses to Recommendations

None are requested.

Required responses to Recommendations

Board of Supervisors – R2, R5

Each City Council - R3, R5

Director, County Department of Emergency Services - R1

Sonoma County Sheriff - R4

Sonoma County Dispatch Manager - R6

Director of County Information Systems Department – R7

Sonoma County Director of General Services – R8

Sonoma County Director of Public Works – R9

Exhibit A – Conduct of the Investigation

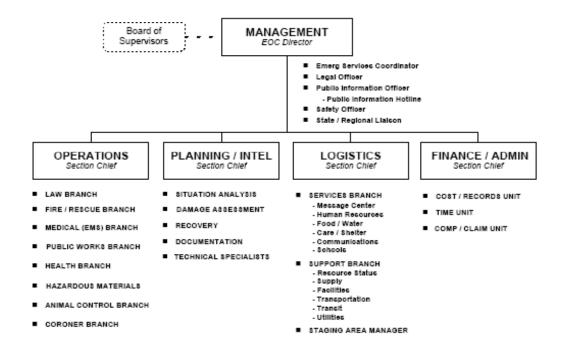
- 1. The following people were interviewed:
 - Board of Supervisors
 - Chairman of Board of Supervisors
 - County Administration
 - County Administrative Officer
 - County Emergency Services
 - Director of Emergency Services
 - Emergency Services Coordinator
 - Sheriff's Organization
 - Sheriff and Coroner
 - Assistant Sheriff
 - Captain Detention Division
 - Captain Patrol Bureau
 - Captain Administration Bureau
 - Lieutenant (2) Patrol Bureau
 - Dispatch Manager
 - Information Systems Department
 - Director
 - Division Director
 - Assistant Manager Radio and Communications
 - Assistant Manager Telephone Systems
 - Sonoma County Water Agency
 - General Manager
 - Safety Officer
 - County General Services
 - Director of General Services
 - City of Santa Rosa
 - City Manager
 - Divisional Fire Commander
 - General Services Manager
 - City of Cloverdale
 - City Manager
 - Sonoma County Office of Education
 - Superintendent of Schools
 - County Tax Collection Department
 - Tax Collector
- 2. The following Emergency and Disaster plan manuals were examined:
 - Sonoma County
 - City of Santa Rosa
 - City of Petaluma
 - City of Sonoma
 - City of Cotati
 - City of Sebastopol

- City of Rohnert Park
- City of Windsor draft
- City of Healdsburg
- City of Cloverdale
- Sonoma County Water Agency
- 3. In some cases partial plans, or procedural extracts, were made available and were examined, as follows:
 - Sheriff's Organization
 - Jail Evacuation Plans
 - Dispatch Center Evacuation Plan
 - Weapon of Mass Destruction Summary of Resources and Information
 - Order for TD 280 Switch to switch County 911 lines to Santa Rosa Police Department
 - Procedure managing outside access to Sheriff's Radio Frequency
 - Sonoma County Law Enforcement Chiefs- Urgent Interagency Assistance Protocol
 - Transfer List Police Agency Phone List
 - Review/Update Scratch Pad
 - Vesta's Auto Dial Phone List
 - Sheriff Procedure 358 Major Incident Notification
 - Sheriff Procedure Rules and Regulation on Conduct
 - Sheriff Memorandum of Understanding with Santa Rosa Police Department for mutual aid
 - County Dispatch Center Disaster Response and Recovery Plan (written during this investigation)
 - County Emergency Services
 - Maximizing Volunteers as a resource during Disaster
 - Overview of County EOP
 - Sonoma County Operation: Smallpox II Tabletop Exercise after-action report
 - Operation "Shop 'til you Drop" Control Staff Instructions
 - Operation "Shop 'til you Drop" Exercise Plan
 - "Shop 'til you Drop" after-action report and evaluation
 - County Information Services Department (ISD)
 - Sonoma County Telecommunications Network
 - County of Sonoma Radio Relay Network
 - Sonoma County Office of Education (SCOE)
 - SCOE Trainings on Safe School Plans and School Crisis Response
 - SCOE Emergency Preparedness Plan for the Skylane Facility
 - Academic Aftershocks a video featuring the impact of the Northridge Earthquake on California State University - Northridge
 - Practical Information for Crisis Planning A Guide for Schools and Communities
 - City of Cloverdale
 - Agreement for Emergency Services (between County, Cities and Sonoma State University), dated 1997

- County Public Works Department
 - La Plaza Building Office Emergency Plan
 - Hazardous Materials Incident Response Plan –August 2000
 - Road Maintenance Department Standby procedures
 - Standby procedures EOC Operations and Checklists
- 4. The following After-Action or Response Agency reports were read on the Internet:
 - City of Oakland Loma Prieta 1989
 - (www.sfmuseum.net/oakquake/1.0.html)
 - The Oklahoma City Bombing 1995
 - (www.mipt.org/pdf/MIPT-OKC7-Book_And_Appc.pdf)
 - The Arlington County Pentagon Disaster September 2001
 - (www.911investigations.net/document793.html)
 - The Northridge Earthquake 1994
- (www.lafire.com/famous-fires/fires.htm)

Exhibit B - Sonoma Op Area Emergency Management Organization Chart

Sonoma Op Area Emergency Management Organization Chart



November 2000

EXHIBIT C - The Sonoma County Emergency Operations Center (EOC) core team

This team comprises:

- EOC Director County Administrative Officer
- Emergency Services Coordinator Department of Emergency Services, Emergency Services Coordinator
- Operations Section Chief –Sheriff's Watch Commander or designee
- Planning/Intel Section Chief Director of Permit Resource Management Department
- Logistics Section Chief Director of General Services and Deputy Director
- Finance/Admin Section Chief County Auditor and/or designated staff
- Legal Officer County Counsel Director and/or designated staff
- Safety Officer Mental Health Staff
- Public Information Officer (PIO) various people from Voter Registration, County Administration analysts, and other county departments

EXHIBIT D – A table of County/City Plan comparisons

Plan Owner	Date of Plan	Relationship To County Plan	Commitment to SEMS in plan	Calls for Checklists	Actual Checklists
County	Nov – 00	Full	Total	Yes	Yes
Santa Rosa	Some 99	Separate Plan	Strong	Yes	Yes
Sonoma	Nov -01	Clone of SR	Strong	Yes	Some
Petaluma	Nov – 00	Clone of County	Strong	Some	Some
Cotati	Nov – 00	Literally a copy Of County Plan	Strong	Some	Some, dated 2 -01
Windsor	Draft Xmas 2002	Makes some reference to County Plan, not in same format	Some	Some	No
Healdsburg	1987	Separate Plan	None	Some	Some
Cloverdale	89-92	None	None	No	No
Sebastopol	1996	Clone of a South Bay County!	None	Yes	Yes-1995