

SAN LUIS OBISPO COUNTY

EMERGENCY READINESS

INTRODUCTION

The 2011 earthquake/tsunami/nuclear disaster that revealed weaknesses in Japan’s emergency preparedness inspired the 2011-2012 San Luis Obispo County Grand Jury to look at emergency preparedness in San Luis Obispo County. The Grand Jury initiated a study to assess San Luis Obispo County’s overall process for resolving emergencies that threaten the well-being of public and private interests in the county.*

AUTHORITY

Section 925 of the California Penal Code authorizes the Grand Jury to “investigate and report on the operations, accounts, and records of the officers, departments, or functions of the county...”

METHOD

The Grand Jury reviewed the emergency plans of county departments and prepared a list of questions for discussion with the department heads of the Office of Emergency Services (OES), Public Works, Public Health, and Cal Fire/SLO. The Grand Jury then interviewed these county officials. Each described their plans for dealing with emergencies.

The responses to the questions helped the Grand Jury to better understand their plans. The thoroughness of the county’s planning processes and the responses to the questions allayed many of the Grand Jury's initial concerns. After the interviews, the Grand Jury submitted additional

* A number of acronyms are found throughout this report. For the convenience of the reader, there is a list of acronyms at the end of the report.

questions in writing to those interviewed and the California Highway Patrol (CHP). Their responses are an integral part of this report. To supplement interviews with county officials, members of the Grand Jury toured the County Emergency Operations Center (EOC), which operates under the OES.

BACKGROUND

The county prepares for various levels of emergencies. The least serious and most common level is called an “incident.” Incidents occur daily and run the gamut from an automobile accident to a house fire. Resolving an incident generally requires few local resources. If an incident suddenly increases in its effect, it becomes a minor emergency requiring additional resources. For example, a brush fire may begin as a house fire and expand to surrounding areas. Major emergencies, on the other hand, are those that involve multiple, nearly simultaneous incidents and require application of much more significant resources. This study examines the county’s plans for dealing with and resolving incidents and both minor and major emergencies.

NARRATIVE

San Luis Obispo County Emergency Response System

When an incident occurs, the senior on-scene in-charge responder becomes the “incident commander.” Fortunately, few incidents cause problems beyond the local area in which they occur. If an incident requires additional resources, the incident commander first notifies his or her home agency. This action may, depending on its severity, prompt activation of a county Department Operations Center (DOC) or a city EOC for needed support.¹ Few incidents result in such activation.

¹All seven cities within the county have EOCs that serve as a center in which those responsible gather when an emergency occurs that necessitates supplying additional support to the incident commanders in the field.

The ten (of sixteen) most important county DOCs or their functional equivalents include:

- Public Health
- Public Works
- County Office of Education
- County Office of Emergency Services
- California Highway Patrol Dispatch Center
- CalFire Emergency Command Center (ECC)
- City Public Safety Answering Points (9-1-1 centers)
- Sheriff's Dispatch, and
- University Police at Cal Poly

In the event of a more serious incident that requires resources unavailable to the incident commander's home city EOC or county DOC, the county OES may be asked for help. It then coordinates the acquisition and deployment of the additional resources to the county DOC or city EOC that requested the support.

The Grand Jury learned from county EOC management that it contacts the city EOCs and county DOCs monthly to assess their readiness to function in concert with the county EOC. A checklist is used to verify *static* readiness (equipment tested and functional, and facilities operational) and some *dynamic* readiness (ability to send and receive detailed information about the emergency when required).

Many county volunteer organizations with minimal functional equivalents of EOCs or DOCs are activated during emergencies. On activation, they make their presence known to the county EOC, indicating that they are ready to supply pre-defined support on request.

When a major emergency results in multiple, nearly simultaneous incidents, involving multiple jurisdictions or agencies, the EOC uses the Standardized Emergency Management System

(SEMS) protocols, which provide a set of basic emergency management principles, including the National Incident Management System (NIMS).²

Emergency personnel use NIMS to identify the implications of, and respond to, incidents and emergencies, regardless of the source. It requires the use of common terminology, structures, and operating principles. This approach is essential for reacting to and resolving emergencies requiring resources from or interactions with multiple institutions and organizations that are otherwise organizationally or functionally unrelated. The use of common processes ensures that all the sides working on resolving the emergency can communicate most effectively.

Unresolved incidents within the county EOCs and city EOCs may result in full activation of an Operational Area (OA), as mandated by the state when multiple municipalities or agencies are involved. Interagency coordination using the OA concept, coupled with prior established mutual aid agreements, was developed shortly after the terrorist attacks on September 11, 2001.³

Communication

The county EOC uses WebEOC, a software program that provides multiple users with common approaches of documenting, dealing with, and communicating about emergencies. It allows the county to acquire, send, and store data generated during emergencies and exercises. The county EOC routinely saves data acquired during emergency response/recovery⁴ operations and training exercises on three identical off-site data backup systems, to assure the data are always available when needed. This approach makes the county EOC less vulnerable to internal data accumulation and storage failures. This safety measure provides access to these data when reviewing processes to address and resolve specific incidents/emergencies.

The capabilities of WebEOC impressed the Grand Jury, especially its capacity for utilizing electronic display “boards” to document an incident and the recovery activities necessary to

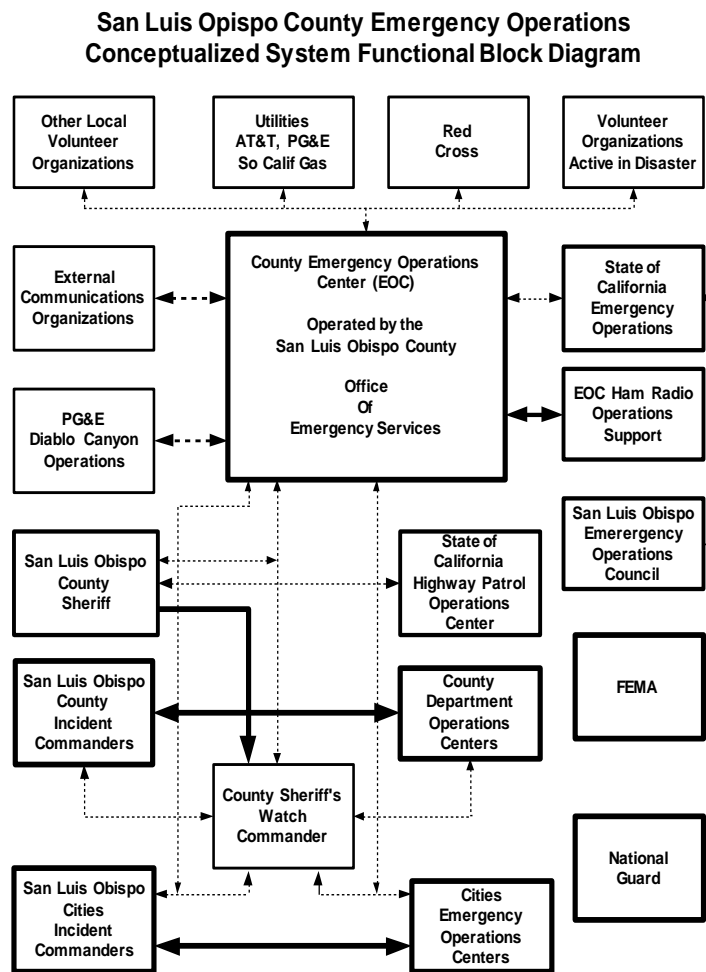
² The National Incident Management System (NIMS) was developed following the 9-11 attack on the United States.

³ *San Luis Obispo Emergency Operations Plan*, Part 1, Sections 5.4 through 5.6, Pages 50-55

⁴ Response/Recovery: This is the period between occurrence of an incident or an emergency and its closure.

resolve it. These boards are the electronic equivalent of the black and white boards formerly used to document problem status (now called an incident).

The figure below is a conceptualized System Function Block Diagram of the San Luis Obispo Emergency Operations communication process. Dashed lines indicate communication channels, line weight indicates relative interaction intensity, and solid lines indicate control responsibility. Communication intensity increases if incidents grow in effect.



CalFire is currently evaluating a pre-release version of the next-generation National Incident Command System (NICS) software. The Defense Advanced Research Projects Agency (DARPA) developed this software for Homeland Security. It allows those working to resolve incidents or operating in EOCs and DOCs to use the internet to see real-time incident mapping updates. If it proves to be more effective than WebEOC, its eventual broader use within the county may provide more interactive data exchange than is currently available from WebEOC.

The county EOC has several communication backup systems. In the event of the loss of web-based services crucial to the use of WebEOC, the county will use radio transceivers and ham radio operators to communicate, as was done in prior years. In addition, the county EOC has a satellite phone system that facilitates communication with agencies outside of the emergency area. These communication channels are regularly tested and maintained to ensure the emergency response system remains functional.

Education and Training

County EOC personnel provide education and training to others in the use of WebEOC software. The County OES is developing an expanded education and training process for all WebEOC users. Data are accumulated during education and training exercises, which are then included in an EOC "after action" file, supplemented by action meetings and accompanying documentation. After-action debriefings help document lessons learned from the exercise. The EOC staff takes similar action after actual events that required EOC activation.

For example, after the March 11, 2011 Japanese tsunami, multiple local agencies met as a training exercise to review the data acquired. An additional training exercise followed with other involved agencies and jurisdictions. The purpose of this after-action documentation process is to ensure that any problems experienced in the response process are rectified and documented to preclude their reoccurrence.

During the county EOC tour, the Grand Jury learned that training exercises had clearly demonstrated an ability to quickly staff the county EOC in an emergency. For example, the 2003

San Simeon earthquake resulted in a fully-staffed county EOC within 29 minutes. More recently, an early morning Diablo Canyon nuclear power plant (Diablo Canyon) alert in March 2011 produced similar results. However, because there was no county infrastructure structure damage that might have precluded such rapid EOC staffing, it is not clear that, during a real emergency, such rapid EOC staffing will be possible.

Senior personnel should be involved in pre-emergency education and training. Fortunately, the County Administrative Officer is heavily involved in training and takes his role as the County's Emergency Services Director seriously. Other senior county managers understand the importance of their participation in emergency training exercises and function accordingly. Senior county management has been involved in multiple training exercises and during events such as the March 11, 2011 tsunami alert.

County Emergency Operations Center

During the Grand Jury tour of the county EOC, the focus was on the EOC's internal functions, as well as its capacity to communicate with multiple internal and external organizations and agencies. Of special interest to the Grand Jury was the EOC's ability to react to and coordinate the county's response to multiple emergency scenarios. Such scenarios range from the least probable, e.g., a system malfunction at Diablo Canyon that stimulates either a site area or general emergency⁵ to more probable emergencies such as flooding due to extended rainfall.

The building in which the county EOC is based is located only one-half mile beyond the ten-mile Protective Action Zone (PAZ) for Diablo Canyon. The PAZ is recommended by the Nuclear Regulatory Commission (NRC). The county EOC and the Sheriff's Watch Commander (SWC) are located on the first floor of the facility and PG&E⁶ emergency response personnel occupy the second floor.

⁵ Site area and general emergencies are two of four PG&E emergency categories.

⁶ PG&E owns the building in which EOC is located.

The county has identified alternate EOC facilities in Paso Robles and Atascadero, if an emergency should make the county facility unusable. EOC management has surveyed these facilities and understands their strengths and weaknesses. Because of the limited space at these alternate sites, it may be necessary to use two online WebEOC-connected sites. Since EOC data is stored on the county's computers, access from these alternate EOC locations is simplified.

The county also has inter-agency agreements with adjoining counties for moving its officials outside of the county, if a major emergency causing very severe damage makes this evacuation process essential. In that event, the EOC is required to notify California Emergency Operations of the change of location.

To ensure the EOC can function if an emergency affects its primary electrical power source, the EOC has backup power capability sufficient for six days of operation. Public Works, Cal Fire, Public Health, the Office of Emergency Services (OES), and the County Office of Education all have similar capabilities. In addition, two state Homeland Security grant-funded mobile communication units are available to serve as virtual EOCs, backup dispatch centers or DOCs. The volunteer ham radio operators⁷ that support the county EOC also have backup power.

The Grand Jurors who toured the county EOC found management and emergency coordinators competent, with a clear understanding of their roles and responsibilities. The tour also demonstrated the county EOC's capacity to accommodate the large number of people involved in reacting to a major emergency.

Emergency Evacuation

The county EOC, the County Sheriff, and the CHP have detailed, complementary evacuation plans outlining the processes used to move people from the site(s) of an emergency to safe areas. The plans address differing emergency scenarios, ranging from earthquakes to hazardous material spills. The public agencies involved have access to these plans and, during any serious

⁷ San Luis Obispo County Emergency Communications Council (SLECC) is the logistic support organization for amateur radio emergency communications in San Luis Obispo County. <http://www.slocounty.ca.gov/it/sloecc.htm>.

emergency involving evacuation, the CHP plans to have liaison officers at each activated city EOC.

If a problem at Diablo Canyon warrants evacuation, the CHP and County Sheriff have detailed evacuation plans down to the level of the personnel required, timing, and the traffic control points necessary to evacuate each PAZ. The CHP also has plans to prevent traffic from entering the county during such an emergency and has identified useable detour routes.

In a 2002 study sponsored by PG&E, the county EOC developed detailed estimates of the time required to evacuate specific PAZ areas. These data will be extrapolated to assess non-Diablo Canyon emergency evacuations. In 2011, the EOC conducted a telephone survey, data from which will be compared to data from the original survey. The EOC will use this updated information on evacuation times to validate and update the previously acquired information. The county EOC is the evacuation coordinating entity. The CHP and the County Sheriff both operate from the EOC when it is activated during a major emergency. They act in unison to ensure that evacuation is carefully planned and coordinated. EOC-based emergency personnel also interact with the Caltrans Traffic Management Center, related agencies, and CHP dispatch. These agencies, in turn, coordinate evacuation and traffic control.

During a declared mandatory evacuation involving defined PAZ areas, the county will provide public transportation to people without transportation or who have special needs. The county OES maintains a special list of individuals who require such assistance. The county annually mails cards to all addressees in the Diablo Canyon PAZ to identify their needs.

Residents in other areas of the county with special needs can notify their local fire department to be added to the list. This information allows county Public Health to identify who they are and what support they might need when resources are available. In addition, major emergencies that involve large-scale evacuations will prompt county activation of a specific phone number for their use to request help. The media will notify the public of this information and the phone number to call at the time of the evacuation.

The Red Cross works closely with the county and other agencies to open, staff, and equip evacuation shelters. The Red Cross has action teams on standby for emergencies that range from a single house fire to major emergencies. It also has plans to provide the shelters necessary to support the needs of evacuees.

For example, in March 2011, the Red Cross, reacting to the tsunami warning, established and staffed six evacuation centers with provisions to accommodate large numbers of evacuees. The Red Cross also opened an evacuation shelter during the December 2010 storms to meet evacuee needs.

Local government agencies and the Red Cross, coupled with the Volunteer Organizations Active in Disaster (VOAD)⁸ organization, have a long-established working relationship; evacuees have utilized these resources many times. VOAD has over 40 organizations working together to promote communication, cooperation, coordination, and collaboration among community organizations, faith-based groups, private companies, and government agencies to streamline service delivery to people affected by disasters, while eliminating duplication of effort.

The strain placed on County Sheriff and CHP personnel by a major evacuation process may limit their ability to protect public and private property. In that event, the Sheriff and the CHP would call on other counties, using pre-negotiated mutual aid agreements, to help in this capacity. Obtaining this support is only a solution if those counties are not similarly affected by the emergency. If that were the case, local authorities would have to request that the governor call out the California National Guard.

The ten relatively autonomous school districts in the county have slightly over 34,000 students. The County Office of Education is the interface between these districts and the California Department of Education. Each district has an evacuation plan, ranging from shelter-in-place to the transportation of students to pre-designated, off-campus assembly sites. During the first week of school each year, students' families receive information with details of the plan. As a result, parents will know where their children will be kept or taken in the event of an emergency.

⁸ VOAD: www.slovoad.org

To reduce potential mix-ups, the school buses have radio transceivers that allow the drivers to communicate among themselves and with their home district. The missing link in this communication chain is a radio transceiver connection between the districts and their buses and the County Office of Education, and hence to the county EOC. The County Office of Education, in coordination with the county EOC, is pursuing potential sources of funds to acquire these radio transceivers. County Office of Education communication to and from school buses was the subject of a finding and recommendation by a previous Grand Jury.⁹

One issue not discussed in any county emergency planning literature is the potential need for management and care of evacuees entering the county due to major emergencies in contiguous areas. One possible scenario is a rupture along the San Andreas fault that might create an influx of people from the affected areas in a magnitude nearly equivalent to a major county emergency.

Citizen Involvement and Education

It is the Grand Jury's understanding that most citizens have little knowledge or awareness of how public officials plan to deal with emergencies. Without an understanding of the plans made by the professionals, citizens may inadvertently thwart the efforts of the emergency planners. If they understood that public officials have detailed plans, and a workforce educated and trained to deal with such emergencies, they might be less prone to react inappropriately. Knowledge will not necessarily prevent panic, but may reduce its impact. At the April 4, 2011 Board of Supervisors meeting, an emergency planner from Diablo Canyon strongly echoed this sentiment.

This county is fortunate to have many entities that provide emergency education and training, such as the Red Cross, local cities, and others. Training for residents of the county is available through the Community Emergency Response Team (CERT) training program, which provides training in preparedness and team response. The San Luis Obispo County Fire Chiefs Association and the Sheriff's Advisory Council sponsor the program.

⁹ The 2009-2010 Grand Jury recommended that all county school buses and the headquarters of the County Superintendent of Schools be equipped with two-way radios to ensure their ability to communicate internally with and with the EOC.

The goals of CERT are:

- To prepare your family and home to survive all types of disasters.
- To protect yourself first so that you will be able to help others.
- To assist family and neighbors during the time of a disaster.
- To work, if you so desire, as part of an emergency response team in the community.

The CERT training program is a 20-hour course, consisting of five evening classes and covers:

- Earthquake/Disaster Awareness
- Preparation/Emergency Supplies
- Hazard Awareness/Mitigation
- Disaster Medicine
- Disaster Psychology
- Light Search and Rescue Techniques

Some communities are currently offering this course to their citizens. There is a charge to cover the cost of materials distributed to the trainees.

If the public spent time online reviewing the county's emergency plans, it would be better informed. However, one plan has over 500 pages and the other has over 160 pages. More concise plans or summaries thereof would provide a more effective communication vehicle for the general public.

Some, but not all, phone books list nuclear and other emergency information. The information includes:

- emergency and siren activation information
- diagrams of the PAZ
- a list of public school and assigned relocation sites
- descriptions of emergency planning zones
- collection points for those without other transportation
- suggested family evacuation plans and checklists
- suggestions for use of potassium iodine, and
- phone numbers to call for information and help during a major emergency.

Each year the county OES and PG&E provide an emergency preparedness calendar with extensive emergency and safety information regarding the Diablo Canyon nuclear power plant. The Nuclear Regulatory Commission and the Federal Emergency Management Agency require and regulate this information.¹⁰

Pacific Gas & Electric Activities

Last year, PG&E sponsored ten “First Responder Workshops,” including one in San Luis Obispo. At these workshops, PG&E included, for the first time, the utility’s gas transmission system map. PG&E’s plans outlined how they would manage emergency scenarios ranging from gas pipeline and electrical equipment incidents to power line damage by metallic¹¹ balloons. It also defined who should receive emergency training and its frequency. PG&E provides resources to 38 public service organizations in San Luis Obispo County to ensure that county organizations participate in its planning process.

Additionally, PG&E funds 4.25 out of 5.00 positions in the county OES. PG&E also provides the building in which the EOC is located. Furthermore, the county OES regularly coordinates training with PG&E on-site and off-site emergency responders.

PG&E officials want to ensure that its projections of worst-case emergency scenarios are valid. They also want residents to understand this and have confidence in the safety aspects of the nuclear power plant operations. To respond to concerns about earthquake or tsunami effects on the Diablo Canyon nuclear power plant, PG&E is planning to make extensive three-dimensional (3-D) measurements of the Hosgri and Shoreline faults which bracket the plant. Once available, these measurement data will be compared to data compiled prior to plant construction. These measurements will provide new information to reevaluate plant design and safety margin. Furthermore, PG&E will provide the resulting analysis to the NRC for its independent review.

¹⁰www.slocounty.ca.gov/OES/oesinfo.htm

¹¹ Metallic balloons have an external metal coating that often creates power line short circuits.

Emergency Recovery Operations

The county's emergency recovery plan provides detail on the processes required to acquire state and federal funds. It lists funding sources and types of facilities that would consider funding. It also lists the estimated cost (as of the date the plan was prepared) of replacing county infrastructure. The county will likely seek Stafford Act¹² support to recover from a major presidential-declared disaster. Depending on the scope of the emergency, the county will seek recovery funding from multiple state and federal agencies.

Obtaining state and federal recovery funds is time-consuming. Quick formation of teams to define and document infrastructure damage is important following the onset of an emergency, in order to expedite the process. This approach could avoid or mitigate potentially negative post-recovery audits by the federal government.

A belated audit of two recent local cases involving government disaster recovery funds resulted in findings of misapplied funds by the cities involved. The federal government is now seeking to recover the funds. Careful documentation of damage and close adherence to regulations will diminish the likelihood of subsequent government demands for the recovery of similar emergency-related funds.

¹²Robert T. Stafford Disaster Relief and Emergency Assistance Act, PL 100-707, signed into law November 23, 1988; amended the Disaster Relief Act of 1974, PL 93-288. This Act constitutes the statutory authority for most Federal disaster response activities, especially as they pertain to FEMA and FEMA programs.

CONCLUSION

Throughout San Luis Obispo County, the Grand Jury found a high level of readiness in emergency planning. The OES, other relevant government agencies, PG&E, and volunteer organizations have plans and tools to promote public safety in the event of emergency. However, members of the public should also take steps to prepare themselves for emergencies.

This study could be used as the basis for other more detailed and focused reports on:

- how multiple, county-wide volunteer groups provide support during emergencies
- communication links between those working on incidents in the field and their home DOCs and EOCs
- evacuation plans and approaches
- education and training of emergency responders
- education and training available to the public, and
- communication among multiple public agencies and the public

COMMENDATION

The Grand Jury generated this report in close cooperation with the management of the County Office of Emergency Services. The almost continuous interaction over many months helped the Grand Jury understand the details and thoroughness of the county's readiness for dealing with a wide range of emergencies. The Grand Jury applauds the county's efforts in emergency preparedness, in both planning and training.

This is an informational report that does not require a response.

LIST OF ACRONYMS

CERT – Community Emergency Response Team
CHP – California Highway Patrol
DARPA – Defense Advanced Research Projects Agency
DOC – Department Operations Center
ECC –Emergency Communication Center– Cal Fire
EOC – Emergency Operations Center
NIMS – National Incident Management System
OA – Operational Area
OES – Office of Emergency Services
PAZ – Protective Action Zone
SEMS – Standardized Emergency Management System
SWC – Sheriff’s Watch Command
VOAD – Community Emergency Response Team