

DomPrep Journal

Stay Prepared

- Earthquake Plans
- Remote Emergency Exercises
- EMS Continuity of Operations
- The Epitome of Failure

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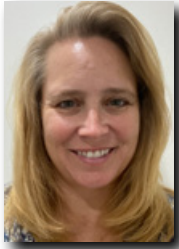
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Staying Prepared in a Changing World

By Catherine L. Feinman



Many professions are steeped in tradition, including those in emergency preparedness and response organizations. In these well-established environments, when asked to make a change to traditional practices, the response is sometimes simply, “No, this is how we’ve always done it.” Such thinking can leave communities underprepared for new, emerging, or evolving threats. What worked well 5, 10, or 20 years ago may have lost its effectiveness as times and conditions have changed or there may simply be more options available that have not been considered because of tradition.

For example, [earthquakes](#) are certainly not a new threat, but professionals in that area of expertise are finding new ways to prepare all members of their communities, both young and old. Emergency plans must evolve as frequency and severity of events change or as new legislation is created to dictate change. Maintaining the status quo in disaster response may hinder progressive actions and forward thinking. Each year, plans need to be reviewed, exercised, and updated as needed.

By exercising a plan, organizations can identify gaps that need to be addressed. However, when meeting in large groups is not an option or travel is restricted, backup plans for exercising should include a [remote option](#). Similar to the challenges that schools now face with opening in the Fall, being able to exercise emergency plans remotely has various hurdles to overcome. In some cases, the opportunities of remote exercises during a pandemic may far outweigh these challenges. For example, relationships among key stakeholders still need to be cultivated and maintained even when in-person interaction is not possible.

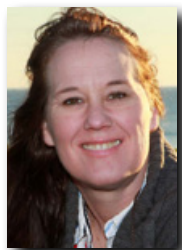
Overlooking interdependencies between agencies and organizations adds more risk into the disaster preparedness cycle. When these interdependencies involve [critical lifelines](#), the risks are even higher. A thorough planning, reviewing, and exercising process helps stakeholders understand their roles and the roles of others for mitigating threats and maintaining operations. How well critical lifelines are managed is a determining factor in the level of success or [failure](#) that communities will experience following a disaster.

This edition of the *DomPrep Journal* emphasizes the need to stay prepared even when significant changes affect how these preparedness efforts will be conducted. Whether it involves creating new strategies to reach certain demographics or developing new techniques for overcoming barriers, preparedness is an ongoing process that requires a continuous cycle of cultivation and reevaluation.

A New Way of Looking at Earthquake Plans

By Frances Duniway

With the inevitability of earthquakes in California, disaster preparedness and evacuation focused on the safety of lives is of utmost importance. The health, welfare, and safety of children are of paramount importance, as children are left in the protection of school district officials. In 2005, California Legislature passed [Assembly Bill 103](#) requiring that each school district have a safety disaster plan in place and charged the U.S. Department of Education to coordinate with Office of Emergency Preparedness to keep these materials current and updated (AB 103, Section 1).



In 1989, the [United Nations Convention on the Rights of the Child](#), stated every child “capable of forming his or her own views the right to express those views freely in all matters affecting the child.” In January 2014, the National Advisory Committee on Children and Disasters ([NACCD](#)) was developed to provide advice and consultation on the planning, preparation, response, and recovery for the medical and public health needs of children during disasters. According to the National Center for Educational Statistics, about 56.6 million students were enrolled in 2019.

Literature has well documented that children and adolescents [react differently](#) in disasters than adults. However, missing from the literature are the voices of the children and the students’ perception about readiness in preparation for disasters.

Simulating a Common Threat

Southern California contains several earthquake fault lines, which could generate a [large earthquake](#). Given these multiple faults, it is likely that a strong earthquake could strike during school hours. Natural disasters such as earthquakes occur with little warning, with ground movement seldom the direct cause of injury or death. [Most injuries](#) in the 1994 Northridge, California earthquake occurred as a result of people falling, being hit by debris, or stepping on broken glass while leaving buildings. Therefore, schools are encouraged to practice evacuation drills. A typical drill is pre-announced and completed at a designated time and day. Students and teachers practice the “duck and cover and hold on” as directed. After the announcement, “The shaking has stopped,” students are assembled by faculty and evacuated to a “safe” area for attendance, then resume a normal class schedule. Considering potential debris in classrooms, an unexpected earthquake while students are present could lead to chaos and numerous injuries. As currently practiced, earthquake drills suggest children may be ill-prepared for real events. Despite annual drills, there remains minimal data to ascertain the experiences and feelings of students about earthquake readiness.

Simulation is a powerful educational tool but has not been widely used to assess earthquake preparedness with school-aged children. Virtual training tools offer educators the advantage of teaching risky behaviors without the risk of injury. [Game-based virtual reality](#) (VR) programs have been developed to teach [fire safety](#), practice timely physical evacuation, and effectively demonstrate child skills of [pedestrian safety](#) in a fun, training environment.

A statewide earthquake drill, the [Great California ShakeOut](#), is conducted annually. However, the School Site Council of a combined middle and high school was still concerned about earthquake safety. Despite annual shake-out participation, the majority of students:

- Could not describe what to do in the event of an earthquake;
- Would call 911; and
- Had no disaster planning at home.

An in-class earthquake simulation addition to the Great ShakeOut drill was conceived to increase realism, enhance student learning, assess earthquake preparation, and determine the adequacy of the schools' response to a disaster. This simulation was approved by administration and all human protections reviewed by Institutional Review Board. Gathering and articulating student knowledge using earthquake simulation and surveys would enable increased understanding of reactions during an actual event and allow for realistic planning.

A Different Kind of ShakeOut

In May 2015, a school assembly introduced the earthquake simulation project to 185 students. Topics of preparedness, planning, and dangers at home and school were reviewed. Discussion revealed student knowledge about earthquake drills: the drill is announced, students get under the desks or tables, hold on until told, then line up with the teacher for attendance. Per faculty, a typical drill took 60 minutes and did not disrupt school. An electronic poll during the assembly revealed that 96 students did not have or were unsure about a family disaster plan, 89 did not feel ready for a disaster, and 96 reflected they knew what to do in a disaster.

Despite annual drills, most students: could not describe what to do in the event of an earthquake; would not call 911; and had no disaster planning at home.

The 2015 drill was planned to be different. A 15-item survey was developed and validated to evaluate actions of classmates and self, perceptions of safety, and earthquake preparation at school and home. Mixed methodology data were analyzed by SPSS and NVIVO as secondary data. An all faculty/staff meeting preceded the simulation drill, which included the principal reviewing the school disaster plan, explaining the purpose, goal, and importance of data gathering from the children's perspective by survey completion and collection by faculty.

The Great Shake-Out Drill was scheduled on 15 October 2015 at 10:15 a.m. The high school Community Service Club (CSC) was recruited to help with the earthquake simulation, meeting with project leaders to plan the simulation. CSC members made "debris" using cardboard, Styrofoam sheets, and foam blocks to simulate earthquake damage like boulders, falling objects, and ceiling tiles. Painted clothing and red duct tape simulated bleeding injuries with ping pong balls, foam peanuts, and erasers representing broken glass. Gauze wrappings and trauma dressings were also splattered with fake blood for the simulation of more serious injuries. Details about the use of props was made known only to the principal. The purpose of the project was to assess the effectiveness of disaster preparation for the

students by creating an atmosphere of realistic possibilities during a familiar and previously practiced earthquake drill. The goal of the survey evaluations was to examine:

- Student responses to the disaster simulation;
- Student perceptions of safety and disaster readiness of their campus; and
- Student disaster readiness at home.

Anonymous surveys were completed by 427 students after the 2015 drill and collected by faculty. However, not all students answered every question. After the drill, of the 427 who answered the questions, 58 represented the high school group, 49 felt they were not ready for a disaster, and 378 felt they were ready for a disaster. Despite earthquake reminders, 43



respondents stated they forgot to drop, 60 forgot to cover, and 93 forgot to hold on. Regarding classmates, 15 did not see classmates duck, 49 did not see classmates cover, and 101 did not see classmates hold on. NVIVO results demonstrated that some students who were outdoors at the time of the shaking, ran into or toward the buildings to find shelter. Regarding disaster planning, 30.6% respondents reported they did not have a plan at home and 38% had a home plan.

Faculty observations questioned elements of the disaster plan, such as placement of triage and morgue. The chaos demonstrated difficulty in tracking the whereabouts for students, as the “injured” or “incapacitated” teachers and students reported to the health aide or sheltered in place. By not evacuating to the blacktop, they were not included in the attendance. No one knew where they were or where they went. Previous earthquake drills had not included chaos, simulated injuries, or deceased disaster victims.

Research Insights & Limitations

Valuable insights were gained by adding simulation to the Great Shakeout drill, which tested the school’s disaster plan. Students and school personnel all felt that the simulation dramatically increased the impact of the drill.

Pew Research Center data from 2013, estimates that [30-50% students](#) in middle school have cellphones, and up to [three-quarters of teens have access to a smartphone](#). With 26% of the children on the surveys collected reporting they would dial 911, this statistic indicates that, in less than 15 seconds, potentially 250,000 calls to 911 would be made if 5th-12th grade children make the call. Presented to school authorities, a conversation ensued regarding

how to notify parents/guardians without using the phone line system. One solution might be to design a district-wide emergency number system, where parents/guardians and students have access *without* using the phone system. This pre-set text system could be widely distributed and like the 911 system, the number would be easy to remember. Using technology, a student could access this number, provide a personal identifier, and enable parents/guardians to locate their child(ren).

Within 15 miles of one of several major fault zones and despite prediction of a major earthquake ([Earthquake Country Alliance-California Earthquake Authority](#)), a surprising 252 of the students reported they had never practiced a disaster drill at home. Additionally, 122 of students reported they do not have a plan. Southern California lies between several earthquake fault lines and experts predict a disaster disrupting school, community, and county is only a matter of time. This simulation demonstrated that much more preparedness efforts are needed.

The limitations of this research are the assumption that the students completed the surveys with accuracy. Also, the non-injurious debris thrown by the CSC members allowed for laughter and play, with some students not taking the drill serious. This was revealed as an observation by NVIVO responses with several students asking that this drill be repeated annually “until we get it right.”

Implications for School Disaster Plans

Students reported that the in-class simulation dramatically increased the realism of the drill and provided insights and suggestions about disaster preparedness improvement for school and homes. Simulation revealed weaknesses in the school disaster planning, calling for immediate changes, such as the evacuation route not walking past the morgue. The disaster plan instructed any person injured to report to the health aide. However, it was immediately clear that the overwhelming number of injured persons for one health aid necessitated a redesign of the plan. Finally, lacking accountability of the students not getting to the designated evacuation site was alarming when trying to keep track of the students.

Simulation added to the 2015 Great ShakeOut earthquake drill provided students with a realistic experience that increased understanding of disaster response and provided suggestions for future disaster preparedness. This simulation can be replicated and varied for individual schools and districts to test their own disaster plans.

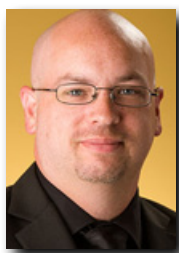
Note: The name and specifics of the school site were kept hidden per the request of district officials.

Frances Dunniway, DNP, APRN-BC, CNS, is a family nurse practitioner, currently employed at VA Central California in Fresno, California. She has been a member of the San Bernardino County Disaster Medical Assistance Team since 1998, with deployments to Kosovo Refugees in 1998, WTC 2001, Hurricane Harvey 2018, Hurricane Florence 2019, as well as presidential inaugurations and funerals. She is dedicated to a lifetime of continuing education with interests in disaster preparedness and response, critical care, emergency, and family practice topics. She maintains various professional memberships and, for several years, volunteered in a homeless winter shelter providing free medical services. She currently participates on her community disaster planning committee. She earned a M.S.N. from Azusa Pacific University in 2002 as a Clinical Nurse Specialist, then completed a Family Nurse Practitioner post-masters credential in 2003. She completed her Doctorate of Nursing Practice (DNP) in 2012 from Western University of Health Sciences and post-doctoral research fellowship at University of Phoenix in 2014.

Do Not Stop Exercising – Go Remote!

By Andrew Altizer & James Westbrook

An important aspect of emergency preparedness is a robust exercise program designed with the vital purpose of identifying gaps, updating plans, and strengthening emergency response. Exercises bring together key stakeholders to help build collaborative relationships that pay huge dividends when the real emergency arises. Simply understanding other agency protocols and operational capabilities are valuable lessons learned from most exercises. However, exercises go beyond the checklists, plans, and policies. They offer the opportunity to get to know other people and solidify teams.



C OVID-19 may have temporarily disrupted the way exercises have been conducted in the past. With a little ingenuity, though, these disruptions should not stop exercises from occurring. The January 2020 *Homeland Security Exercise and Evaluation Program (HSEEP)* guide describes exercises as:

A low-risk environment to familiarize personnel with roles and responsibilities; foster meaningful interaction and communication across jurisdictions/organizations; assess and validate plans, policies, procedures, and capabilities; and identify strengths and areas for improvement. Exercises bring together and strengthen the whole community to prevent, protect against, mitigate, respond to, and recover from all hazards.

Since the ability to social distance while conducting valuable exercises is limited in many physical settings, a viable solution is simply to go remote. Remote seminars, functional exercises, and tabletop exercises present challenges, but also some unique opportunities.

Challenges

1. The remote format – The format of remote meetings itself can be an obstacle. Familiarity with these systems is similar to other technological solutions. They take time and practice. Many virtual meetings are plagued by poor audio or video quality, unmuted comments, and confusion over whose turn it is to speak. These issues can slow or even derail the success of an exercise.
2. Gauging the room – Another challenge is the inability to gauge the room during remote exercises. The body language of others and visual cues are almost completely missing from remote exercises. It becomes nearly impossible for the facilitator of an exercise to utilize these clues to determine which problems

to push and how others are reacting to the scenarios, identified procedures, and solutions. It also makes it very difficult to determine who is paying attention and engaged in the exercise until they actually speak.

3. Delivery of information – The virtual exercise format can also severely limit how to deliver information to participants. PowerPoint presentations almost become a necessity as videos, audio recordings, and white board scribbling lose viability or effect in the virtual environment. Some element of “surprise” for the participants may be lost when read-ahead documents and information need to be sent to exercise participants that would normally be handed out in person at the exercise.
4. Relationships – Although remote exercises still offer opportunities to get to know other people, they will never replace face-to-face engagements for building relationships and teamwork.



Opportunities

1. Expanding participation – One issue with in-person exercises is the limit on who can participate. This is even more of an issue during the COVID-19 pandemic as social distancing requirements would increasingly limit the number of people who could occupy a space for an exercise. By using a virtual platform, these issues can be alleviated. Additional personnel can participate in exercises, including those who would otherwise have to travel from longer distances to the exercise location – for example, a federal or state partner. By expanding who can participate in the discussion, the remote format could give a voice to someone who may not have been willing to speak up in a crowded room. Some organizations may even choose to record the exercise to easily share with others after the exercise.

2. More exercises and increasing awareness – One of the biggest advantages of remote exercises is the ability to have more of them. During the pandemic, many people have to work from home and may have a little more “free time” on their hands. An emergency preparedness exercise is a great way for organizations to help fill some of that time. Taking advantage of the additional downtime of key stakeholders would facilitate progress on outstanding problems and projects through the use of exercises.

3. Fostering new relationships – Building relationships is a key aspect of emergency preparedness, and exercises are a great way to accomplish that.

By expanding participation and holding more exercises, new relationships can be fostered and older relationships can be strengthened in a collaborative setting.

Since the ability to social distance while conducting valuable exercises is limited in many settings, a viable alternative solution is simply to go remote.

4. Time saving – Attending an hourlong tabletop exercise often takes more time getting to the

exercise than the exercise itself. Saving a couple hours during an unprecedented public health emergency is a huge advantage, not to mention some cost savings associated with travel.

Adapting to COVID-19 requires problem solving, adaptability, and perhaps a little creativity. Exercises continue to be critically important. Using a remote format for exercises ensures that organizations do not miss important opportunities to increase preparedness, even if such opportunities would not have arisen during normal operations.

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James Westbrook is the assistant director of emergency management at Kennesaw State University. He previously served as safety and security coordinator at Kennesaw State before the creation of the Office of Emergency Management in 2015. Before coming to KSU, he worked as an area school safety coordinator for the Georgia Emergency Management Agency/Homeland Security. He also has over 10 years of experience in fire services and 911 communications. He has a Master of Science degree in Emergency Management from Jacksonville State University and a Bachelor of Arts degree in Sociology from the University of Georgia.

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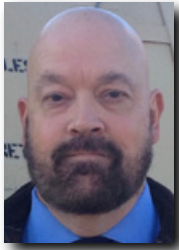
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EMS Continuity of Operations Plan: A Critical Lifeline Component

By Ron Cain

“A lifeline enables the continuous operation of critical government and business functions and is essential to human health and safety or economic security.” The Federal Emergency Management Agency (FEMA) developed the Community Lifelines construct after the 2017 and 2018 hurricane seasons. The framework of Community Lifelines allows the whole community to assess the status of and impact to each of the seven lifelines so that the optimal and correct essential action can be executed to support those lifelines not operating at full capacity during a disaster or emergency event.



FEMA has identified seven Community Lifelines: Safety and Security; Food, Water, and Sheltering; Health and Medical; Energy (Power and Fuel); Communications; Transportation; and Hazardous Materials. Emergency medical services (EMS) fall under the Health and Medical lifeline and in the specific category of patient movement. County EMS systems generally move patients with illnesses or injuries to hospitals. Private sector EMS systems usually provide inter-hospital transport, nursing home transports, and hospital evacuations during disaster events.

Despite the critical importance of patient movement as identified by FEMA in its Health and Medical Community Lifeline, not enough effort has been made to address the sustainment (continuity) of this component at the state and federal levels.

EMS Interdependence on All Other Community Lifelines

With the criticality of EMS to the Healthcare and Medical Lifeline, EMS continuity planners must also understand their interdependence on all of the Community Lifelines and how the strengths or vulnerabilities of the lifelines in their communities will benefit or impact EMS continuity of operations during a disaster or emergency. The following examples show this interdependence:

- EMS crews depend on other agencies to provide safety and security in dangerous scenes like active shooter incidents. If the Safety and Security Lifeline is broken, EMS responders may delay patient care or transport due to high safety risks.
- EMS responders depend on the Food, Water, and Sheltering Lifeline in the same way as normal citizens.
- If major impacts to the Health and Medical Lifeline occur such as hospital destruction or closure, EMS agencies will face longer transport times to other areas.
- EMS systems require a steady supply of fuel and power to maintain operations. Any impact on the Fuel and Power lifeline can potentially affect operations.

- Without a strong Communications Lifeline, 911 calls from citizens may be lost. EMS agencies may lose their ability to navigate to incident locations as well as lose their communication with hospitals and other agencies. EMS patient care documentation and record keeping could be negatively affected.
- EMS systems rely on a strong community Transportation Lifeline to maintain supply chains medical and oxygen supply deliveries and ensure a reliable network of roads and bridges for responding to and transporting patients.
- When responding to hazardous materials incidents, EMS organizations must understand their community's Hazardous Materials Lifeline and the risks they may encounter.

Clearly, EMS systems must understand their roles and relationships in all identified Community Lifelines to better develop an effective continuity of operations planning process as well as improve overall organizational resilience.



Fig. 1. FEMA Community Lifelines graphic: The Argument that EMS Systems Already have Built In Continuity Components.

When routine daily tactical activities (e.g., maintenance, supply, equipment, and communications checks; thorough documentation) are practiced as required, they promote continuity of operations (COOP) for EMS. Although these activities are critical to each ambulance and crew, this is only a small portion of the full potential of a COOP program. It is dangerous to assume that, if EMS responders perform a checklist of pre- and post-shift requirements, that the whole EMS system is resilient and a worst-case scenario COOP plan is not needed.

The fact that EMS systems operate 24 hours a day and seven days a week does not make them less vulnerable to a disaster or emergency event that could suddenly or gradually impact their service to the community. Various disruptions must be accounted for:

- EMS responders not coming to work or not running calls;
- Communications systems going down;
- Navigation aids and documentation technology failing;
- Oxygen and medical supply chains being disrupted;
- Fuel supply to department and community being interrupted;
- EMS stations being rendered hazardous or destroyed;
- EMS stations being cut off due to flooding or debris blocking response routes;
- and
- Hospitals being impacted or reaching surge capacity.

Although “checking ambulances” each shift has demonstrated positive outcomes for keeping EMS units and crews in a mission ready status, it is not nearly enough to assume that it covers an all-hazards COOP plan.

Examples of Existing EMS COOP

Although EMS COOP planning is not a novel concept, open source material on the subject is limited. Following are examples of COOP planning from selected organizations around the United States.

On 24 March 2020, [Pettis County Ambulance District](#) in Missouri made a public announcement that it was proactively implementing its COOP plan in response to the COVID-19 pandemic. Pettis County described key details on how they would continue to provide Community Lifeline service despite the hazards from a global pandemic. In the press release, Pettis County EMS announced specific changes to their normal operations that included:

- Screening questions from 911 communications operators to callers;
- Requests for patients to be close to an exit to limit exposures when EMS arrives;
and
- EMS buildings closing to visitors and public.

Pettis County did not wait until the pandemic began to overwhelm them before considering what to do next.

Don't assume that pre- and post-shift checklists are a replacement for EMS system resilience and worst-case scenario COOP planning.

Northern California Emergency Medical Services ([Nor-Cal](#)) already had an established COOP plan. Although developed before COVID-19, Nor-Cal EMS also addressed the possibility of pandemic influenza events (i.e., in its [Class 3 Scenario: Pandemic Influenza/Infectious Outbreak](#)), which shows the proactive nature of Nor-Cal EMS at a time when many organizations

were unprepared for the current pandemic. By understanding that threats and hazards continually evolve, Nor-Cal EMS established plans to adjust as their critical functions change during a disaster or emergency incident.

Two other examples are presentations specific to EMS COOP. First, Linda Reissman, who is a health care emergency management and COOP planner presented “[Continuity of Operations \(COOP\) for EMS Agencies: When the disaster hits home](#)” in 2011 to the New York State Volunteer Ambulance & Rescue Association Inc. at the annual Pulse Check Conference. Reissman’s informal presentation provides an overview of continuity planning specifically for EMS organizations. During her presentation, she posed the following questions:

- What would your community do without you?
- Are your members impacted too?

- What happens if call volume dramatically increases and is prolonged?
- Will limited service & mutual aid really be enough if the entire region is impacted?
- Are you relying on federal resources for timely & prolonged assistance?

These are the types of questions requiring answers before the next disaster or emergency event threatens EMS's ability to continue critical essential functions.

Second, in 2013, Raphael M. Barishansky, the deputy secretary for Health Preparedness and Community Protection at the Pennsylvania Department of Health, developed: "[Continuity of Operations Planning for EMS Agencies](#)" for his presentation at the EMS EXPO conference. He included the following "Essential Steps" toward building an EMS COOP program in his presentation:

- Create a plan and procedures that address all-hazards assumptions
- Develop a statement of purpose
- Identify risks/hazards
- Plan objectives
- Identify critical functions and services
- Identify key personnel and orders of succession
- Delegate authority
- Identify communications systems and emergency lists
- Identify alternate facilities
- Create comprehensive emergency contact lists

Barishansky and Reissman's presentations serve as guides to develop similar but specific EMS COOP information for any EMS organization.

Action Plan: The Path Forward

The challenges of implementing a COOP program for EMS organizations can be classified into the following three categories:

- Intentionally insular and not receptive to COOP planning;
- In "survival mode" and overwhelmed daily with usual response and already limited resources; and
- Have an interest in COOP but are financially limited in ways to fund an effective COOP program.

Addressing these categories is ultimately the responsibility of individual EMS organizations. For the insular and non-receptive organization, it may be prudent to confirm if they are even familiar with COOP to begin with. Even some of those who have experienced disasters or major emergency events have not yet formed action plans based on their lessons learned. In response to a social media post by the author 8 March 2020 (in reference to the COVID-19 pandemic), a Pee Dee Region EMS lieutenant responded:

We don't have isolation protocols for the influenza. We didn't in case of bird flu or Zeka virus or mad cow disease or etc. It's pretty simple to wash your hands and maintain a clean unit. Let's not create a panic unjustly by alarming every county EMS that there is a pandemic when we don't have one.

Most agencies would agree that EMS is a critical lifeline, and those who serve are dedicated to saving lives. These assertions, though, are not always enough to create proactive plans to keep this lifeline functioning should it become impacted by a disaster.

Available Online Training & Education

COOP training is available in several forms. One of the most convenient ways to build a foundation in COOP basics is through the FEMA Emergency Management Institute's Individual Study Program, which is free of charge:

- [IS-1300](#): Introduction to Continuity of Operations
- [IS-520](#): Introduction to Continuity of Operations Planning for Pandemic Influenzas
- [IS-522](#): Exercising Continuity Plans for Pandemics
- [IS-545](#): Reconstitution Planning

Reconstitution typically begins when the disaster or emergency incident that triggered the COOP event is over and the crisis mentality of the organization coming out of a COOP phase has been relieved. The IS-545 course promotes prioritizing toward a return to complete normal operations. The reconstitution phase is also a time to initiate an after-action report and capture data for corrective action or an organizational improvement plan.

Exercises and testing of a COOP plan during normal times is a vital component to evaluate COOP plans and capture plan improvement data. During an actual pandemic is not the time to be addressing problems with an organization's COOP plan.

FEMA Training Beyond Independent Study Courses

L0550: Continuity of Operations Planner's Course is a 16-hour, two-day program for improving the functionality of COOP plans and programs. L0550 would be an ideal course to help build continuity planning capabilities in EMS organizations. E0548: Continuity of Operations Program Manager Course is another two-day class (15 hours) FEMA offers for current or future COOP program managers.

Both courses are free of charge, but the two-day course conducted in a classroom may create scheduling, travel, and, funding issues for some potential participants. For this reason, state emergency management agencies may consider hosting these courses to minimize participation hurdles.

Ron Cain has over 25 years in a combination of private, local government, and military EMS systems. He has served as a flight paramedic, EMS special operations coordinator, and U.S. Department of Homeland Security Weapons of Mass Destruction Instructor. He is a graduate of the National Fire Academy's EMS Special Operations Course, Advanced Life Support for Hazardous Materials Response, and Chemistry of Emergency Response Courses. He is a regional hospital emergency manager and continues to work full time in emergency management during the COVID-19 pandemic. He has a special interest in "the crossroads of EMS and emergency management." He has an undergraduate degree and a master's degree in emergency management.

The Epitome of Failure – Part 3

By William H. Austin

At the beginning of a 28 May 2020 court hearing, U.S. District Court Judge William Alsup made the following opening statement, “If there ever was a corporation that deserved to go to prison, it is PG&E for the number of people it has killed in California.” Pacific Gas and Electric’s (PG&E) survival for the last decade has been described in some detail in Parts 1 and 2 of this three-part article. The vox populi of the courts, regulators, fellow utilities, businesses, and customers has most of the time fallen on deaf ears with the leadership of PG&E. The facts that create this type of environment are extremely complicated.



The settlement of PG&E’s tumultuous past is, as always, the beginning of the next adventure. How PG&E’s corporate face may look in ten years or whether it will even exist depends on the legal settlements resolved and their ability to change the corporation’s culture. Part 3 begins with an explanation of the various settlements required.

Settlements

The settlements involved in emerging from bankruptcy and setting the course for the future involve multiple segments of PG&E’s legal, financial, corporate, and customer environments. The settlements also control the starting point for PG&E’s new future and the hoped-for aftermath of success. The key elements are highlighted below:

- PG&E’s emergence from bankruptcy with a \$58 billion restructuring plan – the plan is approved by both the California Public Utility Commission (CPUC) and the Federal District Bankruptcy Court.
- The payment of \$13.5 billion to the victims of multiple fires during the 2017 and 2018 fire season for property damage, physical injuries, and emotional distress.
- The payment of \$5.4 billion into the newly created Wildfire Trust Fund for future victims of wildfires.
- The payment of \$3.5 billion in state fines for deadly wildfires, \$500,000 to cover investigative costs, and \$15 million for a water delivery system in the Town of Paradise, California.
- Agreement with California Governor Gavin Newsome and the CPUC on a reorganization plan covering vegetation management, regional focus of service, replacement of most of the board of directors, and appointment of a new chief executive officer. A noteworthy item about the board is that Craig Fugate, former Federal Emergency Management Agency (FEMA) administrator, has been appointed to the PG&E Board.

The Plan

PG&E supplies electricity and natural gas to 16 million customers, which is about 1 in 20 Americans. It also tends to support the claim that PG&E is too large to handle its customer

service needs efficiently. There is no indication that the public is going to forgive or forget the criminal negligence that has caused death and destruction in San Bruno or Paradise, or any other of the communities affected by the company's flawed policies involving vegetation management or infrastructure replacement. This predicament tends to indicate a Sisyphean task about re-organization that may never change the company's public image. However, in all fairness, here are the key highlights of [the plan](#):

- Rebuild the boards of directors of PG&E Corporation and the Pacific Gas and Electric Company.
- Regionalize the company's operations to focus on local customers.
- Appoint an independent safety advisor after the term of the court-appointed federal monitor expires.
- Establish a new chief safety officer and a new expanded role of chief risk officer, who reports directly to the chief executive officer.
- Form an independent safety oversight committee (ISOC) with non-PG&E employees to provide review of the company's operations.
- Commit to enhanced safety metrics and stricter oversight.
- Reform executive compensation focused on safety performance.
- Pay value in excess of \$25 billion to wildfire victims through settlements.

Political Impact

The political atmosphere in California appears close to overload status. Beginning with Governor Newsome's efforts to solve the service delivery problem and backed by the outcry of the public, it could be assumed that PG&E is getting one last chance to deliver on its promise of safe electric and natural gas service. Both the governor's and CPUC's demands were met after the [threat](#) of a government takeover subsided. Consultants and politicians spoke openly about different types of organizational structure for trimming PG&E down in size. PG&E's response

was regionalization of service. At the same time, the state created a fund to help utilities deal with wildfire costs throughout the state. The governor's insistence that PG&E's board be replaced and that six appointees to the board would be named by the governor is another example. The governor even insisted that a new chief executive officer be appointed at PG&E.



PG&E faces a backlash of citizen anger over their vegetation management program designed to help decrease the fire load problem. However, every day citizens complain that “You can’t cut my [trees](#)”!

CPUC approved the Public Safety Power Shutoff program for the state several years ago. Now, CPUC records show that broken poles, clamps, and connectors caused more than half of the equipment fires in the state from 2014 to 2016. Pressure increases daily for more maintenance and safety funding. But even the CPUC has to weigh conflicting imperatives – boost spending for safety or hold the electricity rates as low as possible.

The public is unlikely to forgive or forget PG&E’s criminal negligence related to flawed policies for vegetation management or infrastructure replacement.

In addition, PG&E counters most complaints with promises that data analytics will allow it to improve maintenance concerns.

Customers are not buying this logic either because PG&E has a past history of providing high dividends to company investors, while transferring or not spending allotted maintenance and vegetation management funds.

The Future

At this time, it is too early to really tell if PG&E leadership has seen the light and will change into a highly respected corporate citizen in the future or if they are just shuffling the chairs on the deck, as it is commonly referred to. The truth of the matter is that PG&E’s future is clouded by its unshakeable [image](#). Its image could be called “antipathy,” but it certainly is highly negative. The good news is that PG&E readily recognizes that perception. The company has had many opportunities in the past, but this could be its last. Here are some PG&E programs aimed directly at the reimagining effort:

- PG&E is moving its [headquarters](#) and all operations from San Francisco to Oakland in 2022. This is a welcomed addition to Oakland and gives PG&E that new start and new enthusiasm. The move will add significant property, payroll, and other tax revenue for the City of Oakland. PG&E is already called an A+ addition to Oakland.
- PG&E has increased customer outreach for planning and preparing for the Public Safety Power Shutoff ([PSPS](#)) program.
- The company has committed to increased vegetation management and infrastructure replacement and maintenance.
- Safety is more than just a slogan at PG&E. It is now enforced more vigorously and practically every employee’s job is now safety oriented.

- The PSPS program has been used and leaders have a better understanding of reaction time requirements and warning notifications. Usage should increase effectiveness within a reasonable time forecast.
- PG&E continues to increase its knowledge on the warming impact of [climate](#) change. This knowledge is playing a more prominent role in response and recovery operations by the company.

It has been said when speaking about PG&E that the more things change, the more they stay the same. So, it was no surprise to any Californian that William Johnson, the CEO of PG&E was terminated on 30 June 2020. It was just four days after the Federal Bankruptcy Court approved the plan to emerge from bankruptcy. Johnson received a \$3 million bonus when he was hired just last year and he will also receive a pro-rated portion of his \$2.5 million annual salary.

Back to Paradise

This story may be closing down for now, but the amorphous nature of PG&E's future leads one to believe that it is not over yet. Here are three learning points:

- The culture of any organization is difficult to change.
- Seeing the danger in any situation often escapes the most highly trained preparedness official.
- Citizens live their lives subconsciously accepting a certain degree of danger.

The same spirit of freedom that challenges citizens every day is still here. It is what causes someone to rebuild a beach house every time a hurricane washes it away or to live in a flood zone and refuse to evacuate. It is what causes citizens – who could not wait to leave – to return to Paradise, California, where 85 citizens died and 14,000 buildings burned down. In about 20 years, Paradise will likely be back to normal. History is known to repeat itself and especially so if there is no hazard analysis, emergency plan, or preparedness. History is not one's fault, some would call it life – besides, everyone wants to live in Paradise.

This article is Part 3 of a three-part series on the failure of Pacific Gas and Electric's (PG&E) emergency preparedness and response efforts:

- [The Epitome of Failure – Part 1](#)
- [The Epitome of Failure – Part 2](#)
- [The Epitome of Failure – Part 3](#)

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