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Developing an Implementation Plan for Program Success: SJSU Campus Community Emergency Response Team (C-CERT)

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Developing an Implementation Plan for Program Success: SJSU Campus Community
Emergency Response Team (C-CERT)

by
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A Thesis Quality Research Project
Submitted in Partial Fulfillment of the
Requirements for the
Masters of
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INTRODUCTION

Campus Community Emergency Response Team (C-CERT) is a volunteer program composed of students, faculty, and staff that support university first responders in the event of an emergency. The emergency can be any large event that necessitates the activation of the emergency operations center or the evacuation of a building. That type of emergency will potentially place a strain on San José State University's (SJSU) limited staff of law enforcement personnel, and having access to a group with first aid and disaster preparedness knowledge would be beneficial (A. Acevedo, personal communication, October 12, 2016; Z. Espinosa, personal communication, November 28, 2017).

Trained C-CERT is a group of individuals who have received training and practiced exercises in personal preparedness, fire suppression, disaster first aid, light search and rescue, emergency operations procedures, and even disaster psychology (FEMA, 2016b). CERT volunteers are auxiliary, and not primary responders--this fact is emphasized in training. They are not substitutes for professional responders such as paramedics, search-and-rescue, or law enforcement. The purpose of the training program is to empower individuals with the ability to care for themselves, their friends or colleagues during a disaster. With the presence of CERT volunteers, first responders will be able to allocate resources better and focus on more urgent needs (FEMA, 2016b).

The Los Angeles City Fire Department (LAFD) originally developed CERT in 1985, when a group of LAFD officials visited Japan to learn about earthquake preparedness. During that visit, the officials experienced an earthquake and witnessed an organized community trained in fire suppression, light search, rescue, first aid, and evacuation. That same year, an earthquake occurred in Mexico City where first responders witnessed how untrained volunteers, helping

with search and rescue, contributed to their own injuries and, in some cases, death (LAFD, n.d.). The 1987 Whittier Narrows earthquake (which occurred in Los Angeles County) further reinforced the need for trained community members when volunteers who presented themselves, eager to help, were not properly qualified or equipped to conduct search and rescue. The idea of community preparedness soon developed into a Community Response Team Unit, trained by the Disaster Preparedness Unit, as part of the Los Angeles City Fire Department (Borden, 1991).

The training program drew the attention of the Federal Emergency Management Agency (FEMA) after seeing how it empowered everyday citizens. The Emergency Management Institute and the National Fire Academy further developed the program to be used not just in case of an earthquake, but in all types of emergencies and disasters. By 1993, CERT training was made available nationwide through FEMA. The program further expanded, with FEMA offering information and training materials developed for different types of communities, such as Workplace CERT, Teen CERT and C-CERT (FEMA, 2016a).

During the Northridge earthquake on January 17, 1994, local CERT was activated (Blue Tavern Media, 2016). The first train-the-trainer event was also coincidentally scheduled that same day and attended by 60 emergency management professionals. The group saw for themselves how CERT could be a valuable resource. The earthquake and training event in tandem increased interest in the CERT program and shed further light on the community benefit of such a program (Simpson, 2001).

Since 2002, CERT has been administered federally by FEMA but is in direct partnership with Citizen Corps, under the umbrella of the Department of Homeland Security (DHS). Along with other partners such as Medical Reserve Corps and Fire Corps that have a shared spirit of

volunteerism, Citizen Corps and CERT share the same mission and values (FEMA, 2016a). The shared mission and values will be discussed in this research.

CERT training curriculum, regardless of audience or community type, includes the following topic components (FEMA, 2016a):

- Basic disaster preparedness
- Fire safety (including how to operate a fire suppression device)
- Hazardous materials and terrorist incidents (including active-shooter situations)
- Disaster medical operations (including disaster psychology)
- Light search and rescue

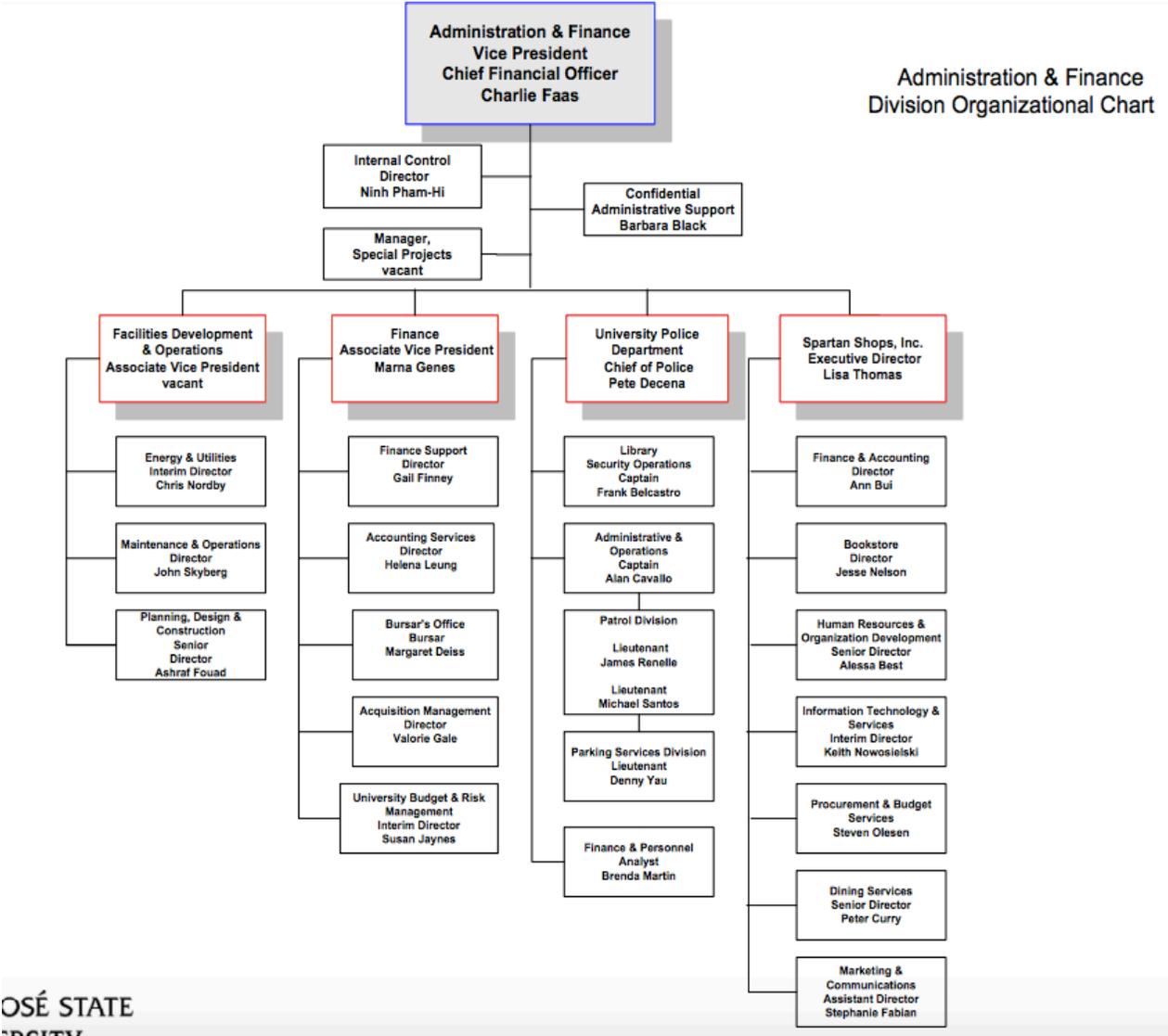
Each institution may also include additional topics related to its specific needs and risks, such as crowd control and community outreach. For example, University of California Santa Barbara (UCSB) C-CERT includes tsunami preparedness in their training curriculum (J. Caesar, personal communication, April 12, 2017; FEMA, 2010).

C-CERT can also be activated for planned events. For example, the University of California, San Francisco (UCSF) C-CERT participated in the annual Great California Shakeout to allow team members to practice and demonstrate “drop, cover and hold on.” The event and demonstration became an opportunity to emphasize the need to develop disaster skills (Cole & Jones, 2012).

San José State University (SJSU) is part of the 23-campus California State University system, geographically located in the City of San José. According to the SJSU Emergency Operations Plan (EOP), the campus has an all-hazards approach to emergency management as a policy (UPD, 2014). The emergency management function is housed within San José State

University Police Department (UPD). The UPD is within SJSU’s Administration and Finance Division:
 Division:

Figure 1: Administration and Finance Division Organization Chart.

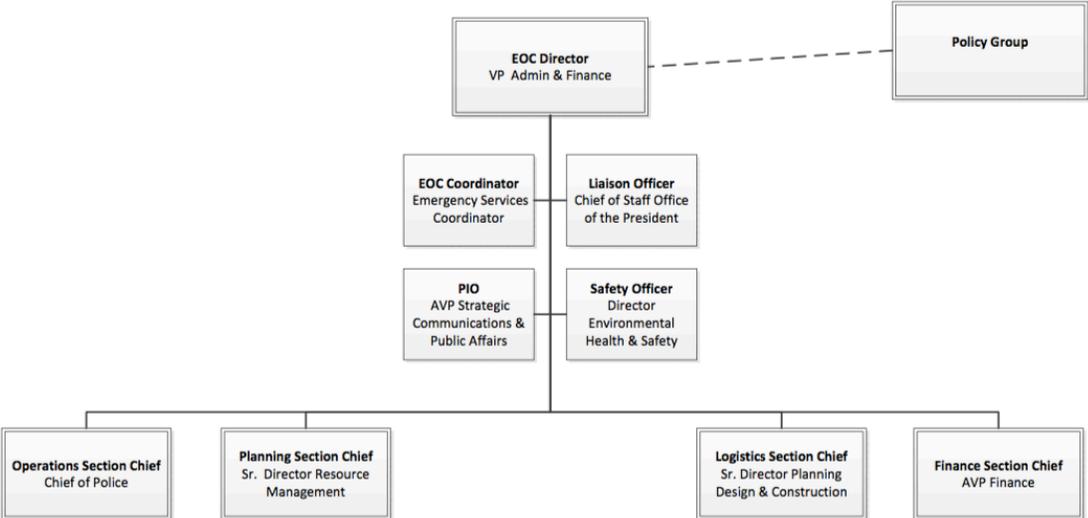


Source: San José State University Administration and Finance Division (2017)

The UPD’s Operations Bureau takes the lead on emergency preparedness, with an emergency management coordinator on staff responsible for developing campus emergency plans (A. Acevedo, personal communication, October 12, 2016). The university’s Emergency

Operations Center (EOC) sits in the offices of UPD, and when activated, the vice president of Administration and Finance assumes the role of the EOC director. UPD, led by the chief of police, is the operations section.

Figure 2: EOC Organization Chart



Source: SJSU Police Department, 2017.

Most SJSU community members -- students, faculty, and staff--do not have disaster preparedness knowledge due to the lack of available training. With the high risk of natural disasters, such as an earthquake on campus, and no program in place to fill this knowledge gap, this is a challenge that needs to be addressed. The presence of first responders on staff, and the emergency management plan alone are inadequate to address a campus-wide emergency. While help will be deployed, the low ratio of professional responders to the community members they serve means that professional responders may be overcommitted. Community members need the ability to help themselves in an emergency situation (Simpson, 2001).

SJSU had C-CERT training available as recently as the 2008-2009 academic year (Z. Espinosa, personal communication, November 28, 2017). The training stopped being offered when the previous emergency coordinator left SJSU employment (A. Acevedo, personal communication, October 12, 2016). The current coordinator is interested in restarting the C-CERT program, but lacks the funding and the manpower to do so. The only C-CERT related resource the coordinator has from its previous offering is a potentially outdated list of past C-CERT training attendees. It is unknown to the coordinator whether these past C-CERT participants are still employed at SJSU. C-CERT as a functional unit lost its momentum when it lost the leadership of the previous emergency management coordinator and when the C-CERT training schedule stopped. C-CERT has become inactive since then (A. Acevedo, personal communication, October 12, 2016).

SJSU would benefit from the implementation of C-CERT, a program that many higher education institutions use to train community members in disaster preparedness. With a C-CERT program, trained people are empowered to know how to conduct themselves during an emergency, and learn how to keep themselves, their friends and colleagues safe. This research surveyed and interviewed emergency management professionals in other higher education institutions to determine best practices for C-CERT implementation. The goal of this research was to analyze other higher education institutions' C-CERT success, identify what characteristics make their C-CERT successful, and assess whether the information could apply to SJSU. The goal is to include these best practices when building the SJSU C-CERT implementation plan. Research also sought the FEMA guideline documents on how to start up C-CERT and evaluate which are the most suitable templates for SJSU's needs. The gap in campus disaster response knowledge should be addressed by C-CERT, and implementation efforts should be based on

relevant information from other higher education sources, giving SJSU the best chance for success. Government documents offer useful guidelines and templates to begin the program, and other Institutions of Higher Education (IHEs) offer their experience and insight regarding C-CERT. All of these elements offer SJSU a fully informed platform to start up and continue the program.

Research gleaned whether the best practices could also provide ideas to support a more enduring presence of C-CERT on campus.

LITERATURE REVIEW

Re-establishing a C-CERT is a challenging endeavor at best, but opting out of it entirely is setting aside a valuable resource that a community could benefit from. A variety of authors present the benefits of C-CERT programs, as well as the risks of ignoring those benefits. By adding supplemental considerations (e.g., spontaneous volunteers and potential technologies), this literature review presents an overview of what is already known to support C-CERT restart efforts. The overview will discuss the most relevant and practical articles on restarting the program and will keep in line with the purpose of C-CERT. Individual self-sufficiency during a disaster is what C-CERT promises to bring and what will be in short supply in its absence (Simpson, 1991).

There are many types of CERT, and when most disaster research literature references CERT, it typically refers to traditional CERT, hosted and administered by municipalities and counties. However, a fair amount of resources cite C-CERT, either as an example or as a mode of delivery for the base CERT program. FEMA documents focus on the basics, such as start-up guidelines, templates for pitching the idea, and details on how to organize the resources. Journal articles discuss how C-CERT benefits higher education institutions, as well as students and staff. Some articles take it a step further and provide information on technologies that can make C-CERT be more useful. Others introduce supplemental topics that an implementation team would find helpful, but are traditionally not covered in the C-CERT curriculum or guidelines.

Why C-CERT

Some higher education institutions are the size of small towns. Municipal CERT may already be in place locally, but there are merits (such as public good) and advantageous reasons for providing the college community with preparedness knowledge like C-CERT. The disaster

preparedness program not only increases self-sufficiency after an incident but also offers the training benefits to individuals beyond the campus. C-CERT student members can use their training beyond graduation, and employees can help their families and local communities beyond campus (Katims, 2013). The American College Health Association (2011), believes that having access to C-CERT supports the all-hazards approach in emergency management plans across various institutions.

An inactive SJSU C-CERT, and a campus faced with a 72% probability of a 6.7 magnitude or greater earthquake in the next 30 years requires some creative thinking, careful planning, and smart decisions about how to facilitate the re-implementation of the group (A. Acevedo, personal communication, October 12, 2016); (Prado, 2016). The risks the campus faces are known and addressed by existing emergency plans. However, taking it a step further--empowering students, faculty, and staff, will not only be advantageous but also a responsibility the institution should undertake. Colleges and universities must not only meet their students' academic needs but assure their "safety and welfare," and C-CERT meets this need (Connolly, 2012a). Lovekamp and McMahon (2011) concur that limited disaster experience and a relatively limited level of preparedness of college students put them at risk of death and injury. Thus universities and colleges may, out of necessity, take on a "parental" role in addressing this vulnerability.

Any institution's all-hazards philosophy reflects a continued exploration of additional and alternative efforts beyond policy directives to create a safer campus community. Connolly (2012a & 2012b) highlights the increased risks that institutions and community members face when left unprepared. Connolly (2012a & 2012b) also emphasizes how supplementing emergency management policy with C-CERT can make the campus community safer. Moreover,

Katims (2013) reports on how C-CERT has been activated in various universities and colleges, and helped in a variety of situations beyond common emergencies. C-CERT could follow the model of municipal CERT in Florida, which tasks their team with answering phones to address requests for resources (Metcalf, 2003). C-CERT can be used for planned campus events, such as how the University of California San Francisco (UCSF) used their program for their earthquake drill (Cole & Jones, 2012). The University of California, Santa Barbara (UCSB) uses their team for community outreach during campus events, as well as post-emergency events (J. Caesar, personal communication, April 12, 2017). Additionally, FEMA CERT documents list crowd control during concerts, sporting events, and graduation as possible planned event uses of C-CERT (FEMA, 2016b).

CERT and the Culture of Preparedness

There are many ways to address preparedness in the campus community, and C-CERT is just one of them. Kapucu and Khosa (2013) consider a culture of preparedness to “guard the campus community against threats” (Kapucu & Khosa, 2013, p 1). This research is filled with examples and accounts of CERT’s potential usefulness, and also how people and communities have different views about preparedness overall. Many communities are already aware of the value of preparedness in advance of an emergency, but it is not a lack of awareness that is the problem, it is being stuck at the intention of preparedness (McKay, 2014). McKay’s article focuses on how to create a culture of preparedness. The article discusses how preparedness is more than just educating people; it is more about shifting “intention into action” (McKay, 2014). McKay (2014) interviewed Mary Schoenfeldt, a public education coordinator for the Office of Emergency Management in Everett, Washington, who suggested “to look at what motivates people... what motivates people are responsibility, accountability and peer pressure” (McKay, 2014). Also,

another author writing about the culture of preparedness as a mindset, McKenna (2009), interviewed and quoted Lt. Gen. Russel Honore, commander of the Joint Task Force Katrina, who declared “creating a culture of preparedness is the best hope for disaster mitigation” (McKenna, 2009). When discussing CERT, disaster authors consistently use certain words: preparedness, responsibility, and knowledge (Borden, 1991; California Volunteers, n.d.; Carr & Jensen, 2015; FEMA, 2010; FEMA, 2016a; FEMA 2016b); LAFD, n.d.). It should be noted that the words for C-CERT and the words for preparedness are either synonymous or nearly identical, implying C-CERT does not have the corner on the market for preparedness. C-CERT is not the sole source of community preparedness information, and others existed before FEMA administered and promoted the LA Fire version of CERT (Simpson, 2001). In any case, what was written about the culture of preparedness may have intrinsic value regarding how to best communicate C-CERT as a topic. The implementation team can optimize its C-CERT restart strategy based on what it could learn from literature in overcoming disinclinations to preparedness.

C-CERT and Spontaneous Volunteers

Some literature has suggested C-CERT as a potential pre-disaster solution that addresses a common disaster concern--the occurrence of spontaneous volunteers. Spontaneous volunteers are altruistic, unsanctioned and wholly untrained individuals who offer aid after a disaster (Sauer, Catlett, Tosatto & Kirsch, 2014). Disaster researchers, when reviewing past incidents like earthquakes, hurricanes and even terrorist attacks like September 11, 2001, observed the presence of these volunteers. Sauer, Catlett, Tosatto and Kirsch, (2014) call their constant presence, “ubiquitous”, Points of Light & Volunteer Center National Network calls it “inevitable,” and Whittaker, McLennan and Handmer, (2015) found them referred to as a

“nuisance or liability” (Sauer, et al., 2014; Points of Light & Volunteer Center National Network, n.d.; Whittaker et al., 2015). These volunteers, though potentially useful, tend to have a higher likelihood of injuring themselves or others during their efforts (Sauer, et al., 2014). During the 1985 Mexico City earthquake, volunteers successfully conducted haphazard search and rescue, but several got hurt or lost their lives (Borden, 1991). The presence of these untrained volunteers and the danger they pose is one of the influencing factors that led to the creation of CERT (Simpson, 2001).

Spontaneous volunteers were a large enough concern that an agency-sponsored template has been created as part of disaster planning. The California State Citizen Corps (2004) offers a Spontaneous Volunteer Management Plan to address this need and offers a tool to manage a group of untrained volunteers. Having a training program like C-CERT in place before a major disaster is more desirable, and it increases the number of individuals with disaster preparedness skills (Carr & Jensen, 2015). Agencies or trained personnel are not necessarily equipped to manage these altruistic individuals who have received little or no preparation before a disaster (Sauer, et al., 2014). The presence of untrained volunteers can also be a hindrance or "problematic" (Points of Light Foundation & Volunteer Center National Network, n.d., p2). The *spontaneous volunteer management plan* can be a stopgap solution in these challenging situations. (California State Citizen Corp, 2004). Sauer’s survey emphasizes why C-CERT is important, and describes the advantages of a volunteer having absolute basic training as preferable to, and safer than, relying on an untrained person (Sauer, et al., 2014). The literature expounds upon the risk of spontaneous volunteers, but it also fuels the argument to develop a team of trained volunteers like C-CERT.

C-CERT and New Technology

CERT has been around since 1985, and the training principles have been mainly the same (FEMA, 2016a; Simpson, 2001). However, some adjustments and improvements have occurred since its conception. For example, the program has evolved, with the addition of non-disaster roles for CERT members, and adapting the program to address different audience types, such as college campuses, teens, Spanish speakers, and even persons with disabilities (FEMA, 2016a; FEMA, 2016b; FEMA-EMI, 2017). Literature includes information about technology as another aspect of CERT that can introduce new ideas for CERT. In May 2013, Kumar Pandya developed CERTify, a public safety mobile application that allows CERT coordinators to communicate with its members, and allows CERT members to update their profiles, update new training and share their assignment status (Heaton, 2013). Another CERT mobile app was developed in 2015, this time by a group of three seventh-graders from Texas while competing in the US Army's 13th annual eCybermission STEM competition (Eliseev, 2015). The app is called CERTPRO, and it allows the user to track CERT volunteer hours, as well as maintain a database of members with unique skills (Eliseev, 2015). A third technology application, though not explicitly developed for CERT, was used almost exclusively by deployed CERT members during a post-disaster assignment. The software was called Windshield Assessment Survey (McKenna, 2010). Typically, the fire department performs damage assessments after a disaster; but by using the software, CERT volunteers can perform the task for them, demonstrating how the technology can make CERT more useful to professional responders and the general community (McKenna, 2010). These examples of technological applications show the possibilities for CERT program growth. Just as the base program of CERT has expanded to include C-CERT, these software applications have the potential to develop the use of C-CERT in different ways.

METHODOLOGY

C-CERT was established with the premise of training individuals to help both themselves and their community during a disaster. Disaster workers and first responders at many universities are a limited resource, and during an emergency it would be impossible to help everyone at once. C-CERT-trained individuals know basic first aid and disaster psychology, and can even manage a panicked crowd (FEMA, 2016b). More importantly, these individuals with seemingly basic skills can ultimately be helpful to a group of overwhelmed emergency responders. This research is based on the questions, “What information can SJSU gather, learn from and use to reinstate C-CERT effectively and efficiently? How will such data and information be analyzed not only to re-establish a useful tool in any campus's emergency management strategy but also to fortify it to thrive?”

Sylvia and Sylvia (2012) say it best: the purpose of research is to solve a problem, by deconstructing the parts of the problem and identifying small changes along the way to work towards a solution. “Comprehensive planning should be utilized to solve recurring problems, or when the decision is mission critical, or a question of organization destiny. This approach assumes that most problems require minor shifts of emphasis to resolve” (Sylvia & Sylvia, 2012).

C-CERT has been discontinued at SJSU but could be an essential resource on the SJSU campus to provide emergency preparedness knowledge to a campus community that is mostly inexperienced in disaster preparedness. To ascertain the best practices of higher education institutions, data was collected from the following sources: (1) Semi-structured interviews with the emergency manager for West Valley-Mission Community College District and the University of California Santa Barbara emergency manager, (2) Surveys of California State

University (CSU) emergency management professionals and Disaster Resistant University (DRU) listserv members, (3) FEMA guidelines on how to start CERT, including templates and even pitch scripts. The goal of this research was to adapt the data and guidelines to SJSU's unique specifications.

In order to be considered a best practice higher education institution, the research focused on campuses having trained C-CERT as a continuing presence on campus, C-CERT with a large headcount (50 or more) that can be activated, and lastly, a campus with not only a high member count but also with a campus community that is willing to fill up a session when a training opportunity is announced. If a campus was characterized by the previously listed elements, then the research analyzed these college C-CERT programs based on their practices and looked at whether these practices can be applied to SJSU's restart efforts.

The FEMA documents are guidelines of the federal agency that is an authority on preparedness. The guidelines can be used to customize existing documents, and was mentioned by participants as an important resource to consider.

Key Elements of Successful C-CERT Programs

The survey of California State University emergency managers/coordinators and DRU listserv members provided benchmarking and identified key elements that SJSU can use in planning. The response rates are smaller than anticipated; however, the information provided is valuable aggregated data that can contribute to SJSU's C-CERT planning. Data was used to garner ideas, and not to build statistical significance. Respondents are a very small representation of all those surveyed, but provide insight into how institutions address their threats. Their shared experience provides a valuable resource, offering context on how ideas are executed. Both the CSU and DRU survey respondents represent emergency management in higher education institutions; the

former shares similar administrative authority in California and the latter is a group of emergency management professionals and enthusiasts from various North American higher education institutions with different hazard priorities and perspectives.

C-CERT Restart Plan Description

To facilitate this research and to find a means to describe what the C-CERT restart plan should look like, a methodology was selected from *Program Planning and Evaluation for the Public Manager* (Sylvia & Sylvia, 2012). The selected program planning logic model lists the steps as defining the mission, conducting a needs assessment, forecasting the future, determining program goals, and implementing the plan as the essential functions of planning.

Figure 3: Program Planning Logic Model



Source: Sylvia & Sylvia, 2012

Documenting the plan using this methodology will contribute to a more organized restart effort. The mission has the power to provide participants a sense of purpose. The needs assessment will provide an impactful reminder to decision-makers of threat possibilities, linking it with the advantages of having C-CERT as an additional resource on campus. The forecasting provides a realistic evaluation of existing situations and resources, as well as considering its use and value. The program goals offer milestones to define progress and make possible an opportunity to recalibrate strategy, if necessary. Implementation lies beyond the scope of this research and will not be discussed further.

FINDINGS

Interviews

In an effort to gather data as comprehensive as possible, the research sought the experience of higher education emergency professionals from different locations, institution types, and institution demographics. The interview summaries in the following paragraphs reflect the results of that intention. The first emergency manager is employed by West Valley-Mission Community College District, a community college institution located in the San Francisco Bay Area. The second emergency manager is from University of California Santa Barbara (UCSB), a comprehensive university located in the California Central Coast. Using the same set of questions, the goal of the interview was to learn from their C-CERT experiences, while taking into full consideration how similar and different their respective institutions are from SJSU.

Marsha Hovey, (West Valley-Mission Community College District) Interview Summary

Marsha Hovey is the emergency management professional for the West Valley-Mission Community College District. The district has two campuses: West Valley Community College is located in Saratoga, California and Mission College in Santa Clara, California. There are approximately 10,000 students at West Valley, 12,000 at Mission and a combined total of approximately 1,000 employees at both colleges.

Hovey was hired to update the district's emergency management plan. In addition to her current position, she built up her emergency management experience at the City of Cupertino and is credited with starting the CERT at the City of Los Altos.

The C-CERT team at West Valley-Mission is currently inactive, but has trained approximately 20 members, with four students, two faculty members and the rest being staff.

The motivation to join CERT for some staff members was to earn service hours, while others joined merely for the knowledge and experience. When it was active, the members completed 21 hours of training and were encouraged to attend monthly one-hour meetings to do site surveys and identify potential hazards. Alternatively, they could take the time to address emerging safety questions or concerns in detail to share with the rest of the group. Overall, the goal was for individual members to be trained and equipped to deal with emergencies at school and at home. Even if a member moved on from the district, their skills and knowledge would benefit their new communities. According to Hovey, former members who had left returned to commend the C-CERT program and the value the experience had brought them. That sentiment reinforced the emergency manager's personal belief that "the more people train, the more people are safe" (M. Hovey, personal communication, March 1, 2017).

Promoting the training program included flyer distribution throughout the campus and through social media. Working with the associated student body has supported West-Valley Mission C-CERT, as well as emphasizing the fun and interactive aspect of the program, something that would make the training attractive and exciting.

Typically, evaluation occurred after training, and feedback was provided after class/session, opening it up to more technical questions. As such, these were addressed during monthly meetings if the information was determined to have value, so it could be shared with everyone. A more thorough annual evaluation occurred to improve the program.

Continuing the program proved to be challenging, and the group is now inactive. Any new inquiries about training have been referred to community CERT. Nevertheless, efforts to jump-start CERT will be considered carefully with thoughtful planning. Hovey would like to see membership rosters reach 50. Since training is time-consuming, program delivery would

require some re-configuring. To jump-start the program, Hovey would pursue the idea to offer three-hour (albeit abbreviated) preparedness training. In her point of view, the shorter time commitment is more attractive and at the same time would open an opportunity to recruit for the traditional CERT training. Another model she would attempt in the future would be to deliver the CERT topic components individually instead of as multi-component all-day sessions.

James Caesar, (University of California Santa Barbara) Interview Summary

James Caesar is the emergency manager for the University of California, Santa Barbara (UCSB) campus located on the central California coast. The campus is comprised of approximately 24,000 students and 10,000 faculty and staff members. As the leader for preparedness education on campus, the C-CERT program in UC Santa Barbara lists nearly 800 CERT-trained members since 2010, which includes UCSB students, community members and Teen CERT in partnership with the Isla Vista YMCA. As a C-CERT subject-matter-expert, Caesar is a frequent conference speaker on the topic. He has served as part of the California CERT Workgroup and the 2016 planning team. His presentations and classes include information about the CERT response to the 2015 Santa Barbara Oil Spill and "CERT tools for Leadership Success." At UCSB, Caesar and his team spearheaded the CERT Train-the-Trainer program that is targeted to UCSB students, enabling C-CERT trainees to become CERT instructors.

When asked to describe the UCSB C-CERT, Caesar identified the four audience groups of the program. Calling them phases, he leads training for UCSB faculty and staff, then UCSB students--including a CERT "train the trainer" aspect--empowering students to become CERT teachers. The campus also works in partnership with the Isla Vista YMCA to provide Teen

CERT training. The last phase is teaching CERT to Spanish speakers—including a Spanish CERT train-the-trainer session.

C-CERT training is held once per quarter with approximately 20 - 25 participants from the UCSB community and it takes three Sundays to complete the training.

With supportive management, campus partners and an eager community, the program can sustain traditional C-CERT and take a few steps further. The UCSB C-CERT was instrumental in developing Teen CERT in collaboration with the local YMCA, Spanish CERT for the local community and CERT for persons with disabilities.

The UCSB emergency management unit delivers C-CERT training and holds a monthly three-hour C-CERT disaster training program to continue professional development for the existing C-CERT members. The topics build upon basic C-CERT training, with new material such as psychological first aid, emergency transportation assistance, and spontaneous volunteer training. These are not necessarily covered in regular CERT classes but provide an excellent opportunity to refresh and expand basic CERT skills.

The UCSB C-CERT has been activated for a few critical incidents. These include during the 2014 meningitis outbreak, after the May 2014 shooting of UCSB students at nearby Isla Vista to provide community outreach, and after the Santa Barbara oil spill of 2015. During the oil spill beach cleanup, C-CERT volunteers helped along with spontaneous volunteers who received a brief orientation before their work.

According to Caesar, recruiting is simple and straightforward. Each UCSB department has a mandated safety representative who in turn recommends a colleague to attend training. Recruitment efforts and training resource management are a matter of tapping into and combining a variety of campus and local community resources. Student volunteers are recruited

through campaign flyers as well as during campus events, where CERT trainers host a booth or table. UCSB has had great success with recruiting by announcing training event dates via Facebook, as well as posts on UCSB campus pages (A. McKenna, personal communications, April 24, 2017). Posts can be shared through Facebook announcements, moderators of Facebook pages of student groups and campus departments thereby expanding the audience reach. Additionally, the presence of the American Red Cross Club (a student organization) provides a steady stream of interested students. Caesar conducts training in collaboration with the fire department and other local agencies. The UCSB Associated Students offer funds via grants for student organizations to pay the cost of CERT bags and supplies for students. Evaluation is accomplished through observation after training and after-action reports post activation. (J. Caesar, personal communication, April 12, 2017)

Surveys

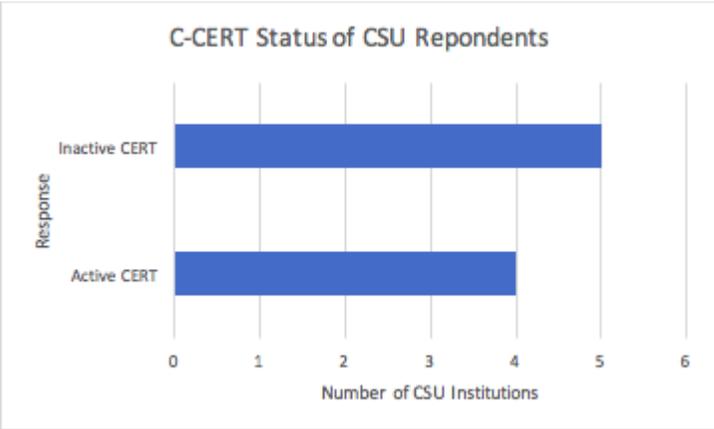
In addition to interviews with subject matter experts, the Findings were developed using a survey instrument to collect information from emergency management coordinators on California State University campuses, and nationally through members of the Disaster Resistant University (DRU) professional organization of campus emergency management coordinators. The survey findings are displayed below.

California State University (CSU) Emergency Manager/Coordinator Survey

Out of the 23 California State University (CSU) campuses, nine (40% response rate) responded to the survey. Appendix D lists the universities whose respective emergency management professionals filled out the survey. The survey (Appendix A) inquired about the status of C-CERT on campus, membership composition, membership counts, recruitment efforts and

volunteer practices. Qualitative data was collected from the survey whether questions were answered completely or incompletely.

Figure 4: C-CERT Status of CSU Respondents



Out of the nine respondents, five institutions reported having inactive C-CERT, and four had an active C-CERT (Figure 4). Additionally, when asked if working with a local community CERT is an option they use, three out of nine institutions reported yes.

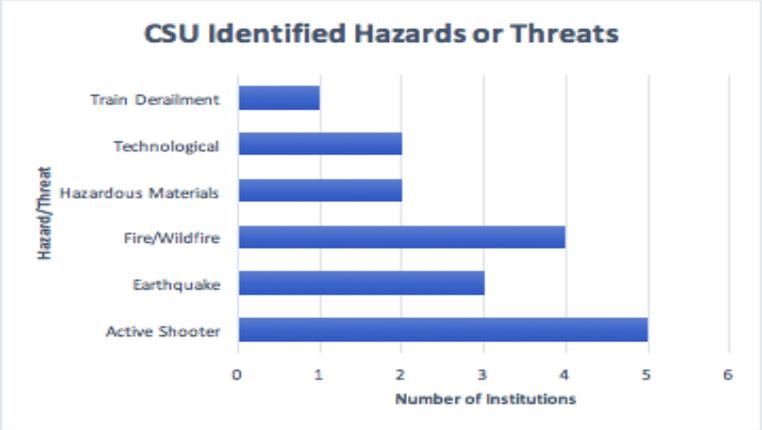
For CSU institutions without C-CERT, the institutions' respective emergency management professionals identified the following alternative resources that they use in place of C-CERT:

- Building Marshals or Floor Marshal Program
- Neighborhood Emergency Response Team
- University Police

Out of the five CSU institutions with an inactive CERT, only two expressed a desire to re-establish C-CERT. Collectively, the limited number of emergency management staff, time and other resources are the identified challenges that limit the ability to plan, implement and maintain the program. The phrases "limited bandwidth," "stretched too thin" and "lack of resources" were used to describe the difficulty.

All higher education institutions face a variety of potential hazards or threats on their campus. When the question about the top three campus hazards was posed to institutions with and without an active CERT, two respondents out of nine offered no response. The remaining seven listed the high priority threats as active shooter, earthquakes, fire and wildfire, hazardous materials, technological threats and a train derailment. See Figure 5 below.

Figure 5: CSU-Identified Hazards or Threats



For two CSU institutions with an active C-CERT, the membership numbers range from one to 30 members, while a third, CSU Northridge, lists their number at 141 and a fourth left no response. Two active C-CERTs are composed of faculty, staff, and students. A third institution is comprised of only staff and faculty. All responding active C-CERTs would like to increase their numbers, with the desired quantities ranging from 30% to 70% more than the numbers reflected in their rosters. The amount of commitment required after training varies. For one group, the members complete training only, while two others attend events and meetings a year or more beyond training.

Institutions with C-CERT were asked if they recruit based on affiliation, whether they recruit students via student organizations or according to their degree, as well as whether the faculty/staff are from certain departments. For student recruitment, one institution reported

recruiting by degree/major. For example, students working on nursing, emergency management, emergency medical technician (EMT) and public health degrees are ideal for their institution. Two other institutions report direct recruiting efforts towards student organizations and list the public health, geography and American Red Cross student organizations as appropriate sources. Regarding staff and faculty recruitment, one institution reports directing efforts towards departments or units, but adds that efforts vary depending on the university department.

When questioned about how recruitment efforts are accomplished, the respondents provided the following quoted responses:

- “We use social media, flyers on campus, signage on campus and emails to reach students, staff, and faculty. We also promote the program during campus events (e.g., welcome back/clubs org showcase) and C-CERT presentations to different groups on campus. I do recommend this strategy; we use as many approaches as we can.”
- “I mainly recruit through our campus building marshals (we have approximately 250 marshals). They helped spread the word throughout their departments. I also promote via internal communications (campus publications, social media, e-newsletters, etc.) Lastly, I send targeted recruitment emails to specific departments (e.g., emergency management master’s program).”
- “Word of mouth; no one reads campus announcements; some folks attend info sessions, and social media has been quite successful.”

Regarding the frequency of training, three active C-CERT respondents offer training once or twice a year or when budget allows.

When asked about overall challenges, evaluation and volunteer management strategy even with a C-CERT in place, university emergency management professionals provided the following direct quotes:

- “Difficulty in spending the time in organizing refresher training and regular meetings for members—I have been working on a monthly meeting model and trying to get the group to take more initiative for their efforts rather than waiting for me to coordinate everything.”
- “The biggest challenge is engaging them since they hardly ever have an opportunity to ‘activate.’ Many folks feel like they have this great training and walk away excited about the program but then nothing tangible comes of it.”
- “Funding, recruitment, training, administrative support: addressed primarily through the support of University Police Department (UPD) and Environmental Health and Safety (EHS).”

Evaluations are in the form of casual observation at different points in the training. Four CSU institutions expressed the following:

- “We don’t have an evaluation system in place. When we hold drills, we just evaluate on-site that same time.”
- “If campus and the police are happy with our efforts, then we are doing well.”
- “Determining who is active with Neighborhood Emergency Response Team (NERT), and coordinating with [city police] for follow-on training.”

In response to questions regarding volunteer management strategies, five institutions reported that maintaining interest is an ongoing challenge and shared a few ideas that worked for their team:

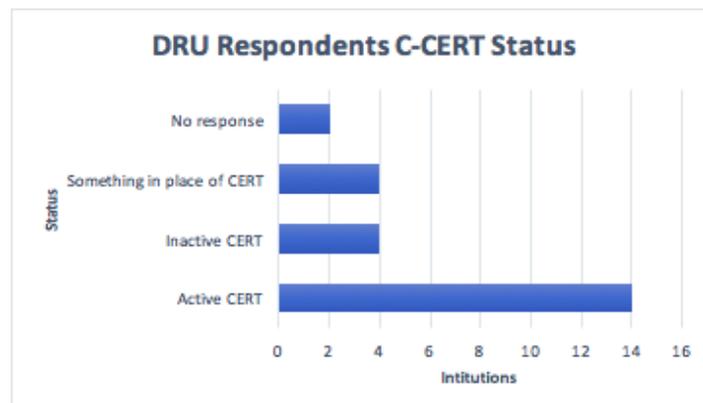
- “I think assigning roles and getting people to take on leadership opportunities is important.”
- “We’ve only had this program for less than a year, so we are still struggling to find ways to engage the volunteers after being trained even when there are no real incidents (no activation).”
- “We need to find ways to keep the CERT team engaged, connected and active in between disasters. Not quite sure how to do that once the team gets re-established, but I think we need to get that strategy in place before we rebuild the CERT team, or it will risk suffering the same fate and just falling off the radar.”

Disaster-Resistant University (DRU) Member Survey

The survey (Appendix C) was launched and distributed to Institutions of Higher Education (IHE) emergency management professionals and others with emergency management interests who joined the DRU listserv. Twenty-two submitted their responses, and appendix E lists the participating DRU member institutions.

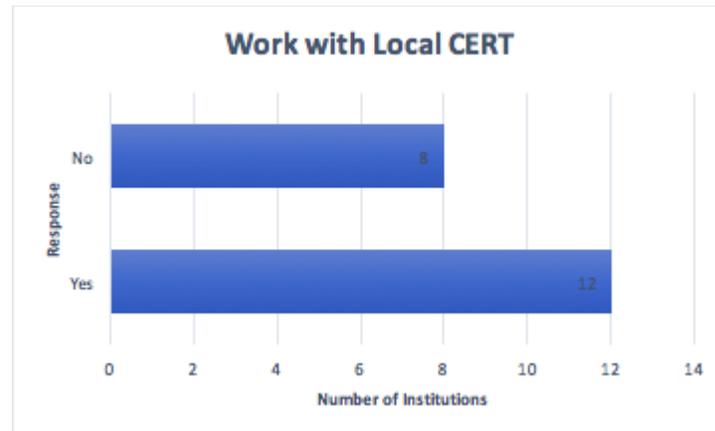
When asked about the C-CERT status (Figure 6), 14 respondents indicated having an active group.

Figure 6: DRU Respondents C-CERT Status



When all respondents were asked about working with local CERT, 12 institutions (55%) confirmed they do.

Figure 7: Work with Local CERT



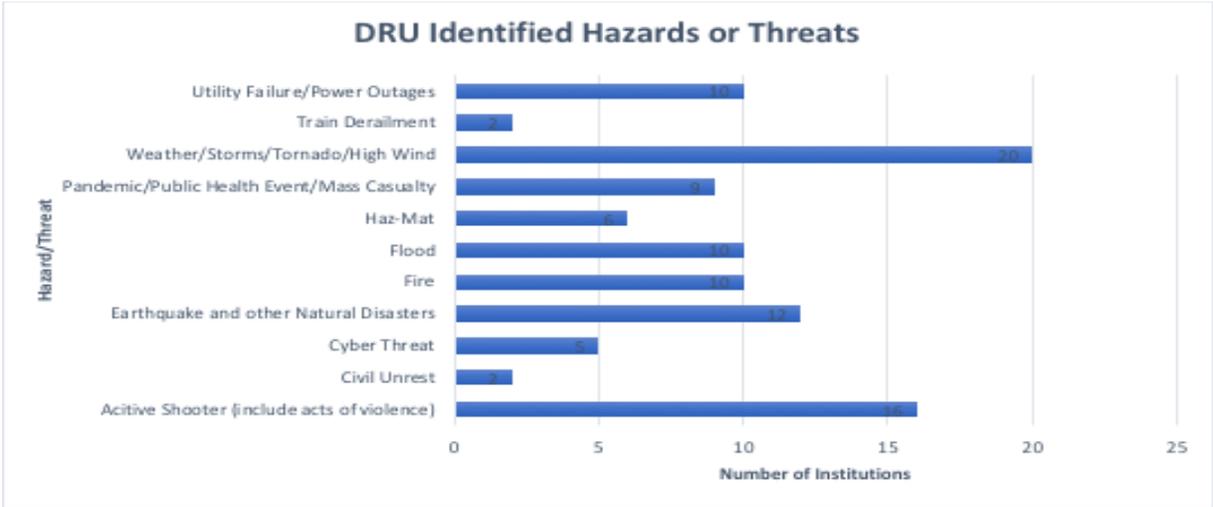
For institutions with an inactive C-CERT or something else in place of a C-CERT, the following alternative options were listed:

- Regional CERT Teams from surrounding cities
- Community CERT
- Local and state FEMA services
- County CERT and the university provides funds for a handful of students to participate as members of that team
- Facilities/maintenance staff conduct CERT-type activities, other staff (Emergency Response Team) assist with evacuation and crowd control
- Law enforcement and first responders

The responding institutions, regardless of their C-CERT status, listed their campus's top five threats and hazards that their campus is at risk for. Figure 8 illustrates the variety of natural disasters in North America that campuses prepare for, as well as man-made disasters, including

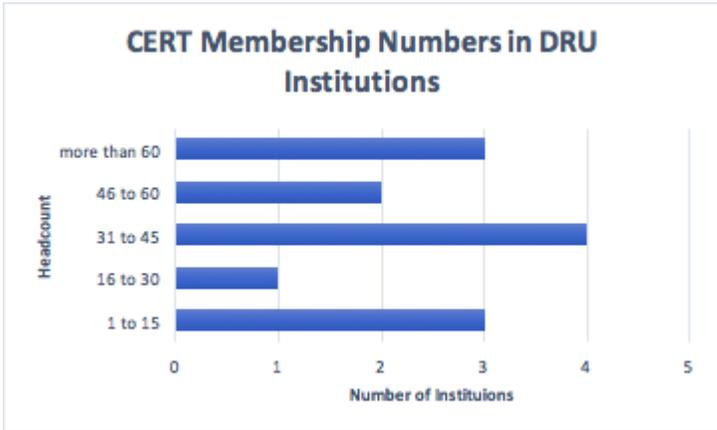
the increasingly more common active-shooter scenario. (Note: these surveys were conducted before the 2017 Las Vegas shooting.)

Figure 8: DRU-Identified Hazards or Threats



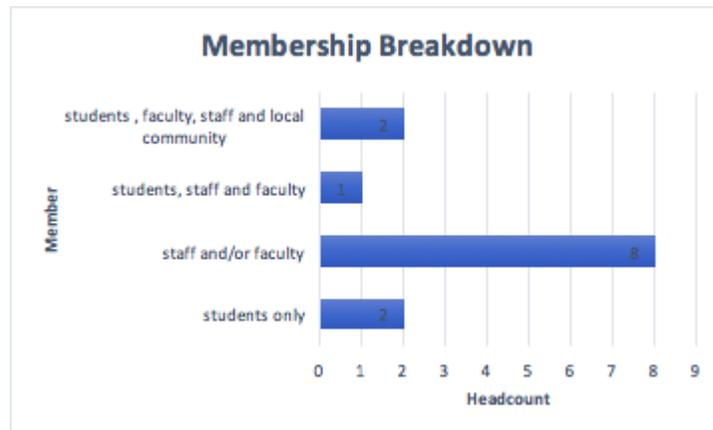
C-CERT institutions that provided the current headcounts of their team (Figure 9) and expressed their ideal headcounts would range from 15% to more than 200% more capacity than they had. In general, most institutions would like to have more volunteers than what they now have on their rosters.

Figure 9: C-CERT Membership Numbers in DRU Institutions



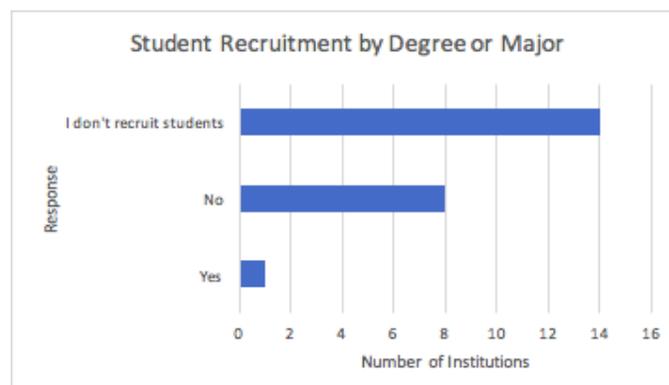
C-CERT may be comprised of any of the following groups: students, faculty, staff and local community members, or a combination of these groups. Figure 10 illustrates the membership breakdown of C-CERT of the 13 institutions.

Figure 10: Membership Breakdown



Regarding student recruitment and whether they recruit by degree or major, eight institutions stated that degree choice is neither required nor a factor (Figure 11). One institution indicated that they do not limit membership by the degree major, but invite students working on nursing and law enforcement degrees. Fourteen institutions (64%) stated that they do not recruit students for training. However, five of those 14 institutions use resources other than C-CERT and the rest comprise their teams exclusively of faculty and staff.

Figure 11: Student Recruitment by Degree or Major

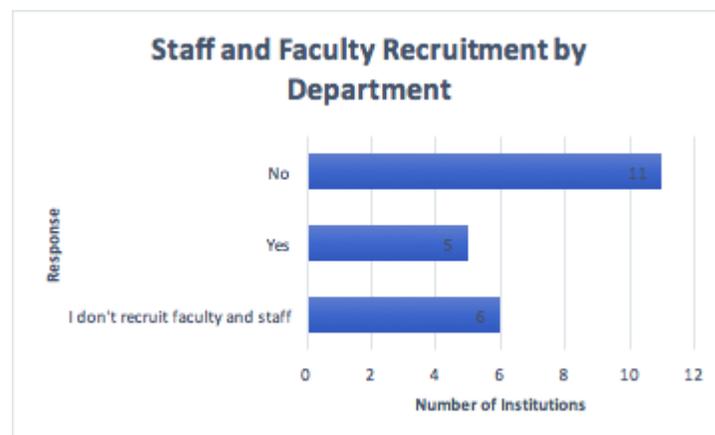


When asked about student recruitment via student organization affiliations, five institutions responded yes, and provided the following quotes:

- “We make all school announcements. It is a class [that] students can sign up to take and get credit for.”
- “Nursing and law enforcement”
- “We have a first-year seminar group focused on emergency preparedness that is a good recruiting base for our group.”
- “UCSB Red Cross Club”
- “Student Union; varying school of medicine programs (including global health), nursing, pharmacy, dental, and physical therapy”

Being affiliated with a university department or unit is not a limiting factor when recruiting faculty and staff into C-CERT. Figure 12 illustrates 11 institutions that recruit faculty and staff but not necessarily by department or unit.

Figure 12: Staff and Faculty Recruitment by Department



When respondents with active C-CERTs were asked how they acquire their volunteers, they shared their experience, including ideas and efforts they have tried in their institutions:

- “Recruit via word of mouth, email, newspaper articles, preparedness fairs and

neighborhood meetings.”

- “Announce the training and have people attend when they can.”
- “Targeting departments became a little too overwhelming as we received pushback from directors.”
- “Recruitment seems to be just by word of mouth. On campus, we are hard-pressed to get students, faculty, or staff to volunteer for many things. CERT needs to be shown to add value at the personal, campus, and community level, and that has been the hard sell.”
- “We target sophomores for recruitment since freshmen are still transitioning into college life. And by choosing sophomores, we hope to get at least three years of volunteer work out of them (this gives us the biggest return on our training investment).”
- “We use a catch and release approach, mostly. We train those who are interested and do some minor advertising on campus.”
- “Focused on staff and faculty exclusively, the lack of training opportunities has seen a decrease in the level of volunteer participation over the past few years.”
- “We do an annual e-mail to all faculty/staff recruiting new members. C-CERT members are present at some university events and promote the program there. Additionally, C-CERT is covered in new employee orientation.”
- “Currently trying to recruit for a CERT Academy.”
- “Posted in annual educational calendar, email notices, police department website, social media.”
- “We just fly it to the university via email and have interested parties sign up via our learning management system.”
- “I don't have a major recruiting process. I usually check buildings, see who is involved.”

- “I check with department heads and see whom they might recommend or word of mouth from current members.”
- “We recruit campus-wide for whoever would like to be part of our CERT group. Years ago this strategy worked well; however we don't have a lot of participation anymore. At our last CERT class, we only had six people attend. I believe staff/faculty have too many other responsibilities at work and home and don't want to take on added task. Currently, our strategy is not working well. They are considering to disband.”
- “Promote on website, training calendar, flyers on campus, word of mouth from campus groups to participants. Personal preparedness presentations are also a tool to recruit.”
- “I solicit interest using current members, placards and announcements in electronic daily newsletters.”

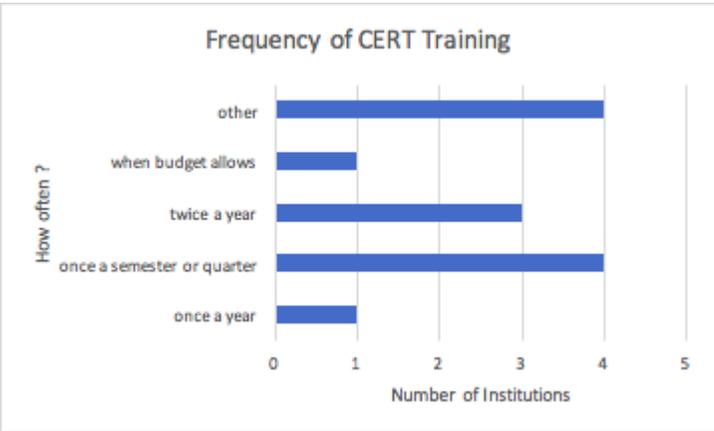
Of the members who commit to the program beyond the first cycle of training, according to members who responded to the survey, 62% of members would stay more than a year (Figure 13). Activities can be meetings, drills, refresher training or events relevant to C-CERT.

Figure 13: Length of Commitment to C-CERT



When asked how frequently C-CERT training is offered, four institutions (30%) offer it once a quarter or semester (Figure 14). An equal number of institutions selected the response “other” and offer training in addition to monthly in-service or perishable skills training and drills or exercises.

Figure 14: Frequency of C-CERT Training



When asked about hosting activities after training, ten institutions (77%) said they hold meetings, drills, and exercises on campus.

Figure 15: Meeting or Events Post-Training



Maintaining C-CERT on campus is an ongoing challenge, and respondents provided the following quotes, ranging from brief phrases to detailed narratives about their specific challenges and experiences:

- “Staff turnover”
- “Maintaining separation from the local EMA’s team was a challenge. We used them as a resource to start the team but then it became clear they viewed us as an offshoot of their team instead of a separate team.”
- “Community-based training opportunities are typically held outside of our employees' normal working hours which creates challenges with schedule adjustments and overtime (which we cannot afford). The lack of training opportunities has become a significant barrier to recruiting and retaining CERT volunteers. There are now two CERT trainers on staff that can provide refresher training, but the educational opportunities offered by the community resources (the fire department) are still superior.”
- “Having supervisors recognize C-CERT activities as sanctioned university activities and providing members with the time needed to take part in activities. For example, some C-CERT members volunteer to assist with fire drills that are conducted on residential facilities at night, those C-CERT members should be able to flex or otherwise account for that time but not all supervisors do that. We're working w/our HR department on this issue.”
- “If you create one, keep them engaged in activities of differing emphasis. Get them involved in activities that will help them learn the Campus in a physical and functional way.”

- “The full turnover of the team every four years is an ongoing challenge and maintaining interest among members is also difficult. Our CERT program is comprised and run entirely by students. They have two staff advisors and fall under our volunteer services center.”
- “Campus CERT is a volunteer-driven program. Departments affording time/backfill for staff to attend training and subsequent follow-up monthly follow-up meetings (perishable skills training) is the biggest challenge, as the program is well-funded otherwise. An example is the 20-hour initial training--devising ways to best balance staff interest and department needs is the biggest challenge. Teachable moments include annual campus drill day and demonstrating the capability and value Campus CERT brings to the table is best, especially when leadership has their eyes on it.”
- “We have not encountered any problems in recruiting and retaining volunteers. We now offer the training twice per year with 30 students in each cohort. We have a waiting list every time we market it. I believe the word has just gotten out that it's valuable training.”
- “We train them and then host a large annual meeting per year with them. We do recruit them to play as actors in our exercises and request them for certain assignments but other than that we don't do a whole lot more with them. As with any volunteer org I think is the inherent challenge that while we have trained over 400 we never really know how many are still available and interested in helping the university out if there were a major event; maybe 100, maybe 50.”
- “My only challenge has been getting all my CERT together. I train monthly on various topics and usually have 20-30 to show up but have approximately 60 total CERT members. It is a campus volunteer program so cannot make it mandatory attendance.

Besides exercise practice, we do fire extinguisher training, drug trends, poison control, and other training related to campus emergencies.”

- “We are currently challenged with keeping our group active. We used to have approximately 20 people attend our meetings, drills, exercises but currently only average about six people. Also, the VA Department of Emergency Management no longer supports any CERT programs in Virginia. We have to depend on FEMA for any support.”
- “Maintaining the team has been challenging only because they are not activated often enough for real-world events. So we schedule business meetings that include skill drills, guest speakers, and new training.”

When active C-CERT leaders were asked how they evaluate their programs, many skipped the question, but the few who answered, provided the following phrases:

- “Annual training classes and monthly meeting value assessment”
- “How exercises are completed and accomplishing proper exiting, proper evacuation area and time limits”
- “Discussion including exercises and after-action reports”

Respondents provided the following phrases when asked about volunteer management strategy. Some strategies were repeated and condensed to avoid repetition:

- “Regular, monthly training opportunities”
- “Hold quarterly meetings on campus and then try to provide a yearly refresher with other institutions in the area”
- “Opportunities to practice what was learned and or exercises”
- “Make people feel like they are an important part of the team”

- “Invite interesting speakers at our monthly meetings and involve C-CERT in more planned events on campus”
- “Keep them engaged on a routine basis. We typically just ask the CERT to help with commencement and Halloween. It is not enough and they have expressed boredom.”
- “Provide regular updates and context--include in monthly meeting forum for perishable skills.”
- “We conduct a CPR class annually; incorporated our CERT members into as many communities and university drills and exercises as possible.”

ANALYSIS

The Sylvia and Sylvia planning evaluation methodology was used to analyze the data collected through interviews and surveys. This consists of four elements (Figure 3) that are used in this research: defining the mission, conducting a needs assessment, forecasting the future, and determining the program goals (Sylvia & Sylvia, 2012).

Defining the Mission Statement

The mission of CERT is to expand preparedness knowledge and equip people with the skills to make themselves and their respective communities safer. As one of the volunteer groups reorganized within Citizen Corps in 2002, CERT addresses this need and aims at addressing disasters, both natural and man-made, through its shared mission. “The mission is to harness the power of every individual through education, training, and volunteer service to make communities safer, stronger, and better prepared to respond to the threats of terrorism, crime, public health issues, and disasters of all kinds” (Citizen Corps, n.d.).

The mission of C-CERT at San José State University would be to prepare the campus community for safe behavior during emergency response, to provide a service learning opportunity for students, and to assist with campus-wide drills and the statewide Great Shakeout.

Report of the Needs Assessment

A needs assessment for the San José State University campus was conducted using a variety of locally available documents and via national guidance. The documents include the City of San José’s Emergency Operations Plan, SJSU’s Emergency Operations Plan and the Department of Homeland Security's (DHS) Planning and Response to an Active Shooter: An Interagency Security Committee Policy and Best Practices Guide. The information in these documents helped

to identify the various hazards and threats that the SJSU campus may face. The City of San José lists the following hazards and threats that create risk in the community:

- Dam failure
- Earthquake, including landslides and liquefaction
- Flood
- Hazardous materials accident
- Insect pest infestation
- Power failure, including brownout
- Prolonged heat wave
- Transportation accident, including roadway, rail, and air
- Weapons of mass destruction-chemical, biological, radiological, nuclear, and explosive
- Terrorism
- Wildland/Urban Interface Fires
- Winter storm, including freeze and high-water conditions

San José State University campus, due to its location, is naturally exposed to the previously stated hazards. However, the university as a state enclave is a "city within a city," and has its emergency operations plan that includes a list of identified campus threats or hazards, including a few in common with the City of San José. The Emergency Operations Plan identifies the following preparedness concerns:

- Civil Disorder
- Earthquake
- Fire
- Hazardous materials accident

- Terrorism (includes active-shooter situations)

The DHS document provides guidelines on how to prepare for active shooter situations. A summary of active-shooter occurrences between the years 2000 and 2013 emphasized the urgency for this threat-specific preparedness plan. Based on a research collaboration between Texas State University and the Federal Bureau of Investigation (FBI), the DHS document focused on the threat that active-shooter situations pose. The following pieces of data are most relevant to higher education institutions:

- 160 active shooter events occurred between 2000 and 2013
- Incidents occurred in 40 out of 50 states and in Washington, DC
- Incidents ended with 1,043 casualties (death and injuries), not including the shooter
- 24% of the incidents occur in educational environments

Forecasting the Future

Using the Sylvia and Sylvia (2012) planning model, the authors listed the five steps of forecasting as: (1) describe the organization and its current environment, (2) project changes in technology that affect the agency, (3) forecast changes in agency clientele, (4) identify future opportunities and obstacles and (5) make all program-relevant forecasts.

The responsibility of re-establishing, eventual maintenance and future planning of C-CERT falls on the shoulders of the SJSU emergency manager. The C-CERT function will be housed within the University Police Department (UPD), but the emergency manager is essentially a sole entity until the program is established. When there is a staffing need, the emergency manager has the option to request colleagues' assistance within the department unit and division. When the emergency manager ran an earthquake drill at the Student Union in 2017, he obtained the support of UPD's parking enforcement staff, as well as the Student Union-based

employee ad hoc volunteers (A. Acevedo, personal communication, October 12, 2016). With no active C-CERT volunteers, the emergency manager has no access to C-CERT dedicated personnel. The option to request assistance from department colleagues is an example of collegiality and not necessarily an indication of official job functions.

The emergency manager maintains campus emergency plans, documentation of emergency management resources and lists of personnel, as well as other departmental responsibilities not included in the scope of this research. When asked about the urgency of re-establishing the program, C-CERT is identified as a priority project but merely one of many priorities (A. Acevedo, personal communication, October 12, 2016).

The University Police Department (UPD) is organizationally located under the SJSU Administration and Finance Division (SJSU-AFD). Though it is UPD that takes the lead on emergency management and law enforcement, it is SJSU-AFD that details a campus safety plan that lists both personnel and technological resources available to the department, including UPD. These technological and personnel resources are used by the division in the service of the SJSU campus community. Managed and accessed by division staff, these resources may also be a potential resource during a C-CERT re-start. Campus-wide mass audio alert systems, active shooter training videos, Rave Guardian public safety smartphone app, and blue light phones are a few examples of these resources (SJSU-AFD, 2017). How C-CERT can make use of these technologies can be explored and negotiated when implementation begins.

The C-CERT program needs to attract and recruit from the SJSU community, so it is critical to understand the university's demographics. According to SJSU's Institutional Effectiveness and Analytics 2012 data, nearly half of the faculty and staff (2,284 out of 5,018) are under the age of 35 (SJSU-IEA, 2015). C-CERT re-implementation efforts need to invest

time in finding ways to attract this program's clientele age group. The University of California Santa Barbara has had great successes in reaching out to this demographic through social media and other electronic media tools. The ability to reach a generation that is known to frequently use social media is a path that should be explored. SJSU, as well as many individual academic and administrative departments within it, have social media icons on their respective web pages, indicating a social media presence. These are appropriate avenues to communicate important information and events. For example, UCSB uses Facebook as an event management tool to obtain RSVPs and provide reminders and updates (A. McKenna, personal communication, April 24, 2017).

The interviews and survey responses of emergency professionals provide a list of program opportunities to pursue and obstacles to avoid. These professionals provide ideas that had proved successful in their home institutions and may offer potential opportunities for C-CERT program development at SJSU. Furthermore, the identified obstacles from other institutions may encourage cautious program development, and a rationale to plan for potential challenges during implementation planning. An example of an impediment not unique to SJSU is the challenge of continuity. The last active C-CERT at SJSU lost momentum when the emergency manager on staff left the university. This lack of leadership may have led to the program's inactive status.

Research has found that other universities have a possible solution to this problem. Though without an active C-CERT, according to the survey responses, San Francisco State University is supported by their neighborhood CERT. Though UC Santa Barbara has one of the highest numbers of C-CERT participants in this research, they too have built a relationship with their municipal CERT. The takeaway message from these two institutions is that SJSU should

not dismiss the idea of reaching out and working with the local CERT. Both example universities work with their municipal counterparts in a manner that best suits their unique environment and situation.

Determining Program Goals

The more successful C-CERT programs encountered in this research are characterized by the following: higher membership numbers, event and drill attendance after training, collaboration with local CERT and other agencies, management support, a multiplatform recruitment campaign and a primary recruitment target of university staff. These are program goals or benchmark criteria that SJSU can use in the implementation of C-CERT. Some of these successes include narrative details, and these key elements can be developed into workable program objectives.

The goals for a C-CERT at SJSU would include an outreach campaign to the entire campus community, a collaboration with Housing to give members opportunities for practical activities, and a connection to the community CERTs in Santa Clara County for training and exercise resources. Involvement of paid staff and faculty in C-CERT training and teamwork would require union involvement and support, but recent regulations regarding the provision of a safe working environment might create new pathways for developing positive relationships across professions. C-CERT could be a service learning resource for students, as well as a community service opportunity for faculty and staff.

Key Elements of Successful C-CERT Programs

The most successful C-CERT programs in this research are characterized by the following elements: (1) a persistent emergency professional, (2) supportive leadership providing access to department resources and funding, (3) regular training intervals, (4) a pool of university

employees trained in C-CERT, (5) the ability to incentivize participation and post-training participation, and (6) the ability to connect with local CERT and other relevant agencies such as the fire department. Every higher educational institution is different, but for this research, success is defined as having one of the following: a small number of trained C-CERT, a longstanding C-CERT presence on campus regardless of size, a larger than the typical number of participants or increased demand for C-CERT training.

All the respondents in this research are emergency management professionals, but not all have C-CERT on their campus. Each CSU campus has an emergency management professional on staff tasked with creating or updating the emergency operations plan, maintaining the EOC in a state of readiness, keeping the EOC personnel roster up-to-date, and managing any emergency-related supplies. If C-CERT is on campus, the emergency management professional is involved. C-CERT is a volunteer-driven program and not a required entity in any institution. Without an emergency management professional taking the lead and being persistent enough to assume additional responsibilities, C-CERT will not happen. CSU institutions follow the same policies relating to emergency management and have similar administrative practices. Though each CSU is required to have an emergency management professional on staff, only four reported having C-CERT in place. It is possible to re-establish C-CERT, if the emergency manager/coordinator can face the challenge of balancing current responsibilities with the additional challenge of leading C-CERT. The small number of C-CERT programs within the CSU demonstrate, that even though it is not easy to start and maintain C-CERT, it is possible.

Another characteristic that institutions with a successful C-CERT have in common is the presence of supportive leadership, one that is willing to commit funds and resources to C-CERT training. Without supportive leadership, there will be no C-CERT. With or without C-CERT, the

campus will be able to follow state requirements if they have an assigned emergency management professional on staff to fulfill them. But, to provide C-CERT training, the emergency management professional will need support personnel and supplies—all of which requires funds that only a leader with the decision-making authority can provide. C-CERT at its startup stage has no other source of funding. According to Acevedo, unlike municipal CERT, there are no grants available for C-CERT, and therefore this endeavor is entirely dependent on department funding (A. Acevedo, personal communication, October 12, 2016).

Successful C-CERTs surveyed in this research offer C-CERT training at varying frequencies, for example once or twice a year, once or twice a semester, once or twice a quarter, or even more frequently. The common denominator is that the training is scheduled at regular intervals. The consistent schedule, however infrequent, seems to allow C-CERT to continue on campus. If the pattern of regularity stops, it is possible that the C-CERT interest will wane, and ultimately cease to exist. This element of consistency or pattern is evident in institutions with C-CERT.

The research also discovered that what campuses with C-CERT also have in common, is that they have staff and faculty on their participant rosters. Some may include students, but college/university employees should have a constant presence. If the survey response is yes to having C-CERT, the research showed that the institution would have employees on the roster.

Campuses with a more substantial number of participants were able to incentivize training participation and offer C-CERT relevant activities after training. Hovey was able to negotiate service time for participating employees for the West-Valley Mission Community College District (M. Hovey, personal communication, March 1, 2017). UC Santa Barbara was able to portray the C-CERT as a career-relevant skill for specific degree majors, promoting the

train-the-trainer participation as leadership development, and as an interesting social activity for others (J. Caesar, personal communication, April 12, 2017). C-CERT became more than just preparedness training; it became skill development and a type of community activity. The higher level of interest allowed UCSB C-CERT to be able to go beyond the campus and extend the training to their surrounding community. UCSB students qualified to train others, and lead members of their community in C-CERT, thereby providing a public service. This exact formula or technique may not apply to SJSU C-CERT efforts, but the idea of making C-CERT more appealing to participants may be useful. Both the West Valley-Mission College Community College District and UCSB were able to provide an added value to C-CERT training by generating interest and thereby increasing their participation numbers.

C-CERT is designed for higher education institutions, but successful C-CERTs in this research developed working relationships with their local counterparts. Whether to share resources like trainers or training space, the higher education emergency managers effectively increased their own resources by reaching out beyond campus. UCSB worked not only with the local fire department but also with municipal CERT. The UCSB C-CERT trained its college students to become CERT trainers, who in turn taught local community members like teens and Spanish speakers. In the case of another higher education institution, the use of local or neighborhood CERT has benefited San Francisco State University, a campus without C-CERT. Through connections with their local community—the campus still has access to trained CERT members. It would be beneficial for the SJSU C-CERT to build a working partnership with the local CERT, as it could increase resources, and could be a backup option if C-CERT is not on campus.

The research was able to identify common characteristics of institutions with C-CERT. These common elements include a resourceful emergency manager/coordinator, the financial backing of a supportive leader, a preset training schedule, the constancy of university staff, and a strategy to make training more appealing, all of which are best practices that should be included in the SJSU C-CERT restart plan.

FEMA CERT Templates

The following templates from the *Campus CERT Starter Guide* are most applicable to the SJSU campus culture and would ease implementation (FEMA, 2016b):

- *Meeting planning tool* is the template to use to prepare to pitch to executive leadership, it contains the most relevant leading topics to address concerns regarding risk, benefits, target audience, funding sources and related narratives from other universities
- *Sample Twitter and Facebook posts* are valuable to allow non-social media savvy administrators a functional overview of the relatively new media
- *Phone and email scripts* can be used as recommended and repurposed into copy for a blog, department newsletter or newspaper articles
- *Application and waiver forms* can be used after a review by the university's risk management division

C-CERT Restart Plan Description

First and foremost, the C-CERT restart plan would best be documented by a written plan using the Sylvia & Sylvia planning methodology, composed of the program mission, needs assessment, short and longer-term program goals which would form a sound foundation. The mission is more than just words on a document written down to be then filed away. It is the part of the plan that can have a dual function: the language can be used to promote the program, and later to provide

participants with a sense of purpose to keep them motivated. An emergency professional also can use the mission statement to educate individuals as to why preparedness is essential. Next, the collective knowledge provided by the emergency operations plans of the City of San José and SJSU, as well as DHS's active shooter guidelines, provide a needs assessment for SJSU. The hazards identified by the three documents are the most urgent threats the campus must prepare to address. Strategically, when the mission statement is used in tandem with the needs assessment, it can be a compelling argument to promote the usefulness of C-CERT.

The program goals are a way that the restart plan can assess progress. Distinguishing goals into short and long term will allow a more careful approach to building the program. Since research has found some best practices of note, the restart efforts could incorporate them into goals. Short-term goals can be items that would support the early stages of the restart efforts and the long-term goals can help the program endure. Using the best practices as a starting point, short-term goals can be any of the following:

- Propose frequency of training of twice a year
- Propose a cohort of 15 for each training group, increasing the number every year
- Prioritize faculty and staff as the initial target audience
- Encourage the practice of referring a colleague after completing a training

When the program has been successfully re-started, the long-term goals can focus on making the program sustainable, and continue its presence on campus:

- Propose increasing frequency of training to four times a year.
- Plan to host post-training activities and supplemental training sessions
- Propose reaching out to student participants beginning with degrees that other universities found relevant, such as nursing and other health-related degrees

- Explore the idea of working with a local CERT or fire department

If the plan is prepared using the Sylvia & Sylvia methodology, the plan is in a better position to authoritatively inform the rationale for the logical processes of a C-CERT restart in a comprehensive data-based manner.

CONCLUSION

SJSU Can Benefit From C-CERT

Documents made by emergency professionals in the City of San José, SJSU, and FEMA, listed the natural and manmade hazards that exist within the geographic reach of SJSU. The combined hazards and threats identified by the City of San José and the SJSU emergency operations plans, and the DHS findings of active shooter incidents, provide compelling reasons to pursue a program that increases preparedness knowledge in the campus community. Though UPD has a group of professional responders, an emergency management professional and support staff who knows what to do in an emergency, SJSU will increase the number of individuals with preparedness skills outside of the police department by establishing an additional resource like C-CERT. One trained, C-CERT member can be a source of knowledge and calm in one classroom or one administrative office. That could mean that is one classroom or one office less that professional responders will have to allocate some of their limited resources to.

Anyone familiar with the concept of emergency preparedness knows that in an emergency, outside help from any official entity or government agency will not come as briskly as needed, nor in a manner one would hope. Self-sufficiency in an emergency situation will be a necessary skill, especially in a large community like the SJSU campus. That self-sufficiency can be learned through a program like C-CERT. The professional responders on campus are a minuscule contingent compared to the number of people in the campus community, largely unskilled in preparedness of any kind. Having C-CERT can be instrumental in increasing the number of SJSU community members with preparedness skills, who could be supportive to professional responders and empower individuals to make safe choices in an emergency.

Likelihood of Resource Allocation

C-CERT at SJSU is not possible without the commitment of an emergency management professional willing to extend beyond typical work commitments and solicit leadership support and funding. Even if the SJSU emergency management professional takes on the challenge and responsibility of restarting C-CERT, the program will not last very long if resources are not wholly provided.

The likelihood of resources being provided in the form of funding and support cannot be determined by this research alone. However, the collective value of threat assessment documents from different official sources, the best practices of higher education institutions near and far, solutions to challenges already faced by institutions similar and dissimilar to SJSU, build up a strong case supporting the idea of C-CERT reinstatement. The data and the value it brings can comprehensively inform the decision maker why C-CERT at SJSU is a must; the knowledge the research delivered can indirectly influence the likelihood but certainly not determine it.

Restarting the Campus Community Emergency Response Team (C-CERT) at San José State can be a daunting challenge. With careful planning, learning from the best practices of other higher education institutions and leadership support, it can be a challenge that can be faced well prepared.

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APPENDICES

Appendix A

California State University (CSU) Emergency Manager/Coordinator Survey

Select your university.

- California State University, Bakersfield
- California State University, Channel Islands
- California State University, Chico
- California State University, Dominguez Hills
- California State University, East Bay
- California State University, Fresno
- California State University, Fullerton
- Humboldt State University
- California State University, Long Beach
- California State University, Los Angeles
- California State University, Maritime Academy
- California State University, Monterey Bay
- California State University, Northridge
- California State Polytechnic University, Pomona
- California State University, Sacramento
- California State University, San Bernardino
- San Diego State University
- San Francisco State University
- San José State University
- California Polytechnic State University, San Luis Obispo
- California State University, San Marcos
- Sonoma State University
- California State University, Stanislaus

Do you have an active or inactive (CERT) Campus Community Emergency Response Team?

- My campus has an ACTIVE Campus CERT
- My campus has an INACTIVE Campus CERT

What alternative resources do you use in place of CERT? Please describe in detail.

Would you like to re-establish campus CERT?

- Definitely yes
- Probably yes
- Might or might not
- Probably not
- Definitely not

Please describe challenges that hindered your efforts to establish CERT. Any teachable moments that you can share?

If you have an ACTIVE campus CERT, your team is composed of (select all the apply)

- Staff
- Faculty
- Student
- Local Community Members

How many members do you have?

- 1 to 15
- 16 to 30
- 31 to 45
- 46 to 60
- more than 60, I have (fill in the number) _____

What do you consider as the optimal number of members? (click and slide to select)

What is the typical length of commitment do your members provide?

- attends training only
- one to three months
- three to six months
- six to nine months
- 10 to 12 months
- more than a year

Please describe challenges that hindered your efforts to maintain CERT. How did you address them?

How often do you provide CERT training?

- once a year
- once a semester or quarter
- twice a year
- when budget allows
- other : (fill in) _____

What are your top three potential disasters that your campus prepares for the most?

- Active Shooter
- Chemical /Biological
- Contaminated Water
- Dam/Levee Break
- Earthquake
- Explosion
- Extreme Temperature
- Fire
- Flooding
- Mudslide/Landslide
- Radiation Leak
- Straight-Line Wind
- Technological
- Terrorism
- Virus Threat
- Wildfire
- Winter Storm

When recruiting students, do you recruit by degree or major?

- Yes
- No

If yes, which are your go-to majors/degrees, please list them.

Do you recruit from student organizations?

- Yes
- No

Please identify student organizations that you have successfully recruited from.

When recruiting staff or faculty, do you recruit by college or department?

- Yes
- No

Which college, department or unit?

How do you evaluate your campus CERT program or CERT-alternative?

Do you work with community CERT?

- Definitely yes
- Probably yes
- Might or might not
- Probably not
- Definitely not

Please share your volunteer recruitment strategy and provide details about the pros and cons. Would you recommend your strategy?

What about volunteer management? Please share strategies or basic activities to motivate and maintain your volunteer team.

Would you be willing to answer a few additional questions? If yes, please provide your email address

Thank you. Your completion of the survey indicates your willingness to participate

Appendix B

1. What are the basic demographics of your campus?
2. What is the membership size and level of commitment?
 - a. How many students, staff and faculty members do you have?
 - b. What is the average length of commitment the members provide?
 - c. What do you consider is an optimal size and length of commitment?
3. Do you consider your program successful? Why?
4. What are your tried and favored recruitment strategies?
5. Do you have a favored list of majors or student organizations to recruit from?
6. Who are your top supporters or “champions” for the program?
7. What are your favored and tested volunteer management activities?
8. How do you evaluate your program? How often do you evaluate the program?

Appendix C

Disaster-Resistant University (DRU) Member Survey

The survey will collect the best practices in Campus Community Emergency Response Team (C-CERT). Your time and insights are greatly appreciated. Thank you.

What is the complete name of your university?

What are the top five threats to your campus?

Threat 1 _____

Threat 2 _____

Threat 3 _____

Threat 4 _____

Threat 5 _____

Do you have an active or inactive (CERT) Campus Community Emergency Response Team? Or a team similar to CERT that is trained to support first-responders during a campus emergency?

- My campus has an ACTIVE Campus CERT
- My campus has an INACTIVE Campus CERT
- My campus has something else in place of CERT

What alternative resources do you use in place of CERT? Please describe in detail.

Please describe challenges that hindered your efforts to establish/ maintain C-CERT or a similar program. Any teachable moments that you can share?

If you have an active campus CERT or CERT-alternative, your team is composed of (select all the apply)

- Staff
- Faculty
- Student
- Local Community Members

How many members do you have?

- 1 to 15
- 16 to 30
- 31 to 45
- 46 to 60
- more than 60, I have (fill in the number) _____

Ideally, how many members would you like have? (click and slide to select)

_____ SLIDE to select number

What is the typical length of commitment that your members provide?

- attends training only
- one to three months
- three to six months
- six to nine months
- 10 to 12 months
- more than a year

How often do you provide CERT or CERT-like training?

- once a year
- once a semester or quarter
- twice a year
- when budget allows
- other : (fill in) _____

Do you hold meetings or special events following the completion of training?

- Yes
- Maybe
- No

What other potential disasters does your campus also prepare for?

- Active Shooter
- Chemical/Biological
- Civil Unrest
- Coastal Storm
- Contaminated Water
- Dam/Levee Break
- Drought
- Earthquake
- Epidemic
- Explosion
- Extreme Temperature
- Fire
- Flooding
- Hurricane/Tropical Storm
- Mudslide/Landslide
- Radiation Leak
- Severe Storms
- Snowstorm
- Straight-Line Wind
- Technological
- Terrorism
- Tsunami
- Virus Threat
- Volcano
- Wildfire
- Winter Storm
- Other _____

When recruiting student volunteers, do you recruit by degree or major?

- Yes
- No
- I don't recruit students

If yes, which are your go-to majors/degrees, please list them.

Do you recruit from student organizations?

- Yes
- No

Please identify student organizations that you have successfully recruited from.

When recruiting volunteer staff or faculty, do you recruit by college or department?

- Yes
- No
- I don't recruit faculty or staff

Which college, department or unit?

How do you evaluate your campus CERT program or CERT-alternative?

Do you work with community CERT?

- Yes
- No

Please share your volunteer recruitment strategy and provide details about the pros and cons.
Would you recommend your strategy?

What about volunteer management? Please share strategies or basic activities to motivate and maintain your volunteer team.

If you are willing to answer follow up questions, please provide your email address.

Appendix D

Respondents of the CSU Emergency Manager/Coordinator survey

California State University, Chico

Humboldt State University

California State University, Long Beach

California State University, Northridge

California State University, San Bernardino

San Francisco State University

San José State University

California State University, San Marcos

California State University, Stanislaus

Appendix E

Respondents of the Disaster-Resistant University (DRU) Member Survey

Binghamton University

California State University Monterey Bay

California State University, Chico

Clark College

Dallas County Community College District-Richland College Campus

High Point University

Humboldt State University

James Madison University

Kennesaw State University

Lincoln County School District

Neosho County Community College

Oregon Institute of Technology

Reed College

St. Edward's University

UC Irvine

University of Alaska Anchorage

University of California San Francisco

University of California, Santa Barbara

University of Central Oklahoma

University of Miami

University of Tennessee at Chattanooga

Virginia Western Community College

West Valley-Mission Community College District