Application of Science and Technology to National City’s Disaster Preparedness and Response

Professor Eric Frost, Viz Center Manager Justin Freiler
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Sage Project Director and Staff

Jessica Barlow, Program Director
Piper Whalen, Graphic Design Intern
About The Sage Project

The Sage Project is a partnership between San Diego State University (SDSU) and a city or government entity in the San Diego region. The mission of the program is to engage students from across the University in assisting a local government with projects that address their smart growth, quality of life, and sustainability goals. In the Sage Project, students have the opportunity to engage in meaningful real-world projects and make positive contributions to a community in SDSU’s service area. The program’s vision is to connect SDSU students and faculty with high-priority, high-need community projects, thereby generating interest and fresh ideas that create momentum and provide real service to the community. The Sage Project embodies the University’s commitment to serving local students, engaging alumni, and contributing to the public good by focusing thousands of hours of course-based student involvement with high-impact activities. The program is based on the highly successful and award-winning Sustainable City Year Program (SCYP) at the University of Oregon and is a part of the SCYP network. National City, California, is the Sage Project’s 2013-2015 partner city. Participating courses come from the following disciplines: Anthropology; Audiology; City Planning; Civil Engineering; Communication; Geography; Graphic Design; Homeland Security; International Security And Conflict Resolution; Marketing; Political Science; Public Administration; Public Health; And Speech, Language, and Hearing Sciences.

About National City

National City is a highly urban community of about 60,000 residents in south San Diego County. It is the second oldest city in the county and boasts a rich history, a diverse community, and is known as one of the most walkable cities in San Diego County. Located just south of downtown San Diego and just north of the US-Mexico border, the city is flanked by freeways and is home to large-scale industries. National City is a mid-size city that faces big city challenges, and, like many municipalities, the city is challenged to meet community needs and new demands of sustainability. By providing new ideas and human capacity, this partnership with the Sage Project will help National City implement sustainability concepts and practices into projects that will improve livability.
Course Participants

Instructors

Dr. Eric Frost, professor for the Homeland Security 602 (Science and Technology in Homeland Security) class which focused on National City for one of the semester projects

Justin Freiler, volunteer Teaching Assistant

Students

Ahmed Al Robae Sobhy Agha
Edgar Alder James Bjornstad
Victoria Bramhill Dan Brightman
Ashley Calleros Joshua Camp
Spencer Cash Freddy Chavez
Philipp Dembicki Michael Ferguson
Burke Fisher Jesse Fukawa
Marco Gonzalez Ashley Greenfeather
Alec Hendry Kai Hill
Marisa Hultgren Virginia Iacobelli
Anastasiya Irkhin Sarah Jacob
Joshua Jemelka Brianna Johnson
James Jones Drew Knight
Dietrick Lamade Nick Lesourd
Ryan Loomis Kelly Madden
Daniela Malqui Jazmin Martinez
Gary Neiman Jake Noonan
Howard Ou Natalie Rangel
Charlie Roeschlein Zohal Sayar
Janetta Scates Monica Soto
Randy Steadman Eileen Tardagula
David Tarr Filmon Tesfai
Scott Thieke Jonathan Volden
Lee Wakefield Chad Young
Teri White Christina Wong
Noe Zapata Olga Zhukovska

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Executive Summary

National City is a microcosm of the San Diego region with a long history and an uncertain economic and future development. Homeland Security of the city and its occupants focuses on traditional aspects of Public Safety and security including working with groups like the Fire Department, Police Department, and City Development group as clearly security and economic development go together. The perception of safety and security often seem to have a clear impact on the interest of people in investing money in a region or of visiting the area for shopping, as with the highly advertised National City “Mile of Cars.”

By working with officials from National City, the Homeland Security Graduate Program embarked on an effort to use the city as a semester project in which the application of Science and Technology in Homeland Security (HSEC 602) could be used to provide a test bed for similar efforts in other cities. Much of what was done was simply to try to study the challenges and provide appropriate solutions that could be helpful and immediately done with available resources. To this end, much of what was suggested and constructed recognizes the professionalism of National City’s emergency management personnel like firefighters and police, but also the community nature of the city with its focus on schools, churches, and neighborhoods.

Geospatially overlaying basic data about the city highlighted both the setting and the opportunities for the city. With its critical location hosting both Interstate 5 and Interstate 805 just north of an international border, billions of dollars of trade move through National City every month. Disruption of this trade as well as the millions of people traveling from Mexico, Chula Vista, and other cities to San Diego and other cities means that National City is a major thoroughfare of critical importance. With the trolley crossing through the city and also military bases adjacent to the city, National City has a potential vibrancy and commercial value of major proportions unlike many cities that are not located on such busy thoroughfares. “Location, location, location” is a phrase often used for business; National City has a key location, which is indicative of its history as the second city established in the region, just after San Diego.

Location also indicates geographic identity such as for potential liquefaction and disruption of the infrastructure. This translates into potential outside funding for National City, but clearly presents dangers to the well-being of the city from disruption of water pipelines, gas pipelines, roads, and most other infrastructure. Fires that firefighters are unable to reach may be one of the worst dangers.

Other dangers and opportunities, such as simple crime prevention in open areas like the central park, Kimball Park, and potential ways to utilize cameras and information to attract visitors are additional examples of turning a challenge to a blessing. Also understanding how this central setting might provide a solution for distributing medicines in the case of a major disaster or of gathering volunteers together to assist the community, or of using as an evacuation center are all things studied in this effort.
Overall, the major insight from the study is that much can be done to assist National City by recognizing its unique location near the US-Mexico border and its role as a family community linking two countries. By building the Emergency Response capabilities around the community identity of Spanish-speaking and English-speaking people focused on families, schools, and churches, it is possible for National City to be much more prepared for disasters and other Homeland Security events than most cities. Using the same tools to also build up the city including social media, internet perception, collaboration and training with other cities (e.g., focusing on liquefaction and potential disruption of firefighting capabilities) are all solutions suggested by the graduate class. National City is a remarkable partner in finding solutions and is able to quickly evaluate and utilize solutions for its citizens.
Introduction

This effort by the Homeland Security Graduate Program focused on working with the officials of National City under the guidance of the Sage Project. The intent was a mutual benefit that was focused for National City in gaining insight and design expertise in aspects of Homeland Security for the city. For the graduate students, the benefit was focused on doing a project that was real and allowed the students to learn how to do things and also be motivated by public service. The focus of the effort was on the perceived needs of National City and the overlap with the skill sets of the graduate students. Because many of the students in the program are part of local or federal law enforcement, they brought a significant expertise in experience and maturity to this endeavor. Because many of the other students are multi-lingual and multi-cultural, they also brought a significant understanding of what a community like National City could do to enhance the quality of life for their residents, most of whom speak English as a second language.

National City is an unusual community for the region in having residents who have long lived there and want to continue to live there; obviously it has a significant draw despite its challenges. The deep roots of relationships to schools, churches, and neighborhoods have made National City a place focused on families much more than most communities in San Diego. The focus on schools and identity (“I went to Kimball School” as an identity that is forever preserved, “I am a Lion” http://nsd.us/schools/kimball/) is a very precious and powerful part of the community. How the graduate students in homeland security could assist this vibrant, multi-cultural community is very much emblematic of how these students would positively impact many jurisdictions for which they might go to work. So the effort with National City was very much like a professional practice where people could discover problems, seek appropriate solutions, and present appropriate deliverables to assist the city officials.

The groups of projects chosen as one part of the homeland security class in science and technology also had a very different deliverable in having students explore and address many technological solutions to problems that are either in the future or too expensive to be considered for National City. Many aspects of the student research were thus on the range of possible solutions, with only solutions deemed appropriate to National City and its current modest homeland security funding to achieve. The student learning outcomes were thus much more involved in learning how science and technology impacts homeland security and the many ways in which they might be applied in settings other than National City.

How the different projects fit together and how the groups worked as teams and as parts of solutions were also major student learning outcomes. Because homeland security is a team effort, many of the learning goals and outcomes were around group dynamics and deliverables. Similarly, many of the learning goals and outcomes surrounded dealing with the reality of real risk and real solutions; thus, working with National City...
presented major opportunities to work on real places, with real people, with real goals, and with real limitations of resources. Solutions therefore involved seeking ways of solving problems, ways of sustaining solutions, and ways of appropriately protecting and ensuring public privacy and feelings of security for the community.

Main Projects Addressed by Students for National City

The major projects addressed by the students in the Homeland Security Graduate Program focused around the overlap of challenges to National City often measured as “risk” and the potential solutions that could be accomplished by the class. In the homeland security world, nearly all actions are termed as “risk-based” so that people work on and respond to risk, not simple desire or perception. If there is no risk to an area, there is then an absence of homeland security effort or funding. In order to attract funding to help solve problems, risk has to be demonstrated in specific and logical means.

The effort of the students was therefore focused on using the Department of Homeland Security risk assessment protocols and solutions. Because these students are training and educating to go into homeland security positions largely as managers or officials, much of their effort was on trying to duplicate what is needed as managers and practitioners to actually get things done. Instead of writing about risk, their efforts were focused on actually trying to quantitatively define it and seek solutions. However, because risk calculations are also exposing the dangers of the potential jurisdiction, the risk assessments were all kept private and only shared with appropriate personnel and not placed in these reports. Solutions and descriptions are the appropriate content of these reports, so the reports represent only a portion of what was done by the students. For areas of particular concern or even danger, the reports were simply not recorded or reported on in this summary report.

As an example, National City has struggled with human trafficking and prostitution for decades because of the proximity of the military and the setting on areas like the National City “Blade.” Concerns like this were purposefully not studied in this report as several of the students are working on this challenge as part of thesis projects. Similarly, efforts with businesses such as the owners of the National City “Mile of Cars” (http://mileofcars.com/) were also not addressed as these extremely influential people are best engaged with by the city, not graduate students. The city officials would be the wiser group to deal with business owners about community safety, business disruption, natural disasters and dangers, and other concerns for homeland security. The students sought to be a positive influence and build up the community rather than scaring it or disrupting it, as they were learning how to accomplish efforts and be professional rather than sensational and distressing.
The following projects were the focus of the class and this report:

- GIS and National City, A Starting Point for Decisions
- The Internet Perception of National City
- Enhancements to the National City Emergency Operations Plan
- National City Surveillance and Security Assessment
- Spontaneous Volunteer Reception Center Operations Plan

Each of these projects is summarized below. Full reports for each are provided in the Appendix.

**GIS and National City**

National City is a unique area of San Diego County that has was once the highly sought out area to live, as it was the second city established in the region in 1887, so was more attractive to live in because of its location than nearly anywhere else. This location is still the same where a river with fresh water comes to the ocean and where ships from the ocean can interact with land commerce. In addition, major freeways and the nearby international border put National City in a remarkable place for trade, interaction, and involvement in the regional community. In addition, because of San Diego’s strategic location for the US military, especially the Navy, National City is deeply involved in Navy affairs because of its location.

Location and its relevance to nearly everything in life is generally mapped and linked in databases by using Geographic Information Systems (GIS) where data layers can be overlain on each other to show relationships and manage resources. Major data layers and databases for National City are available from public sources such as SanGIS (http://www.sangis.org/), which is the public repository for the official data layers used in managing the city and region. SanGIS is a Joint Powers Authority (JPA) between the City of San Diego and San Diego County, and thus provides the official datasets used by both groups as well as providing the data to the public. SanGIS has an interactive map capability that allows one to build maps, but they also provide the original data for download and processing, which was done in this case.

As can be seen in Figure 1, National City has unique boundaries in including areas along the waterfront, but also complex areas away from the water and interfaces with adjacent cities like Chula Vista to the south. These boundaries record stories of ownership, development, and also taxes and schools (Appendix A). Similarly, the boundaries extend around the military base and therefore present a direct connection with the military. Even more remarkably, the boundary extends out into San Diego Bay, which can be a major opportunity in a host of ways for future interactions. The stories behind how each line was determined and the implications that they have in relationship to transportation corri-
dors like Interstates 5 and 805 and Highway 54 become extremely important in the context of Homeland Security, response, and demographics of people versus commercial districts versus military installations. Ownership such as Federal ownership brings both positive and negative implications for both taxes and grant resources; therefore, understanding land ownership and control, opportunities for funding, and possible partnerships with different agencies becomes very apparent on maps showing boundaries and identity of land ownership.

Normal attributes of a GIS are the city boundaries, roads, schools, hospitals, police stations, fire stations, and military bases, as well as nearly every other aspect of a region as mapped in individual layers (Appendix A). Clearly developing maps that show the public infrastructure and roadways provides insight into both relationships, such as fire stations to people, but also insight into the international trade potential with roads and infrastructure leading to and from the border and further into the US. The major freeways that go through National City are a major contribution to the trade that is exported and imported to and from the US, serving as a thoroughfare of commerce and potential linkages of National City to billions of dollars of cargo traversing through the city. Stopping this trade represents a major concern; because of this, a major opportunity for National City is to apply for grants to protect this and other aspects of Critical Infrastructure Key Resources (CIKR), as freeways and transportation routes are. Because some of the materials carried on these freeways, major roads, railroad, and other transportation systems in the area (ship, air, rail, and trolley) are hazardous in their identity, these transportation systems also represent a risk to the people of National City. Such risk can be turned into resources from agencies like the Department of Homeland Security or Department of Transportation or CalTrans if they can be appropriately analyzed, couched in terms of risks, and appropriate funding applied for to help protect the citizens of National City. GIS mapping and relationships help in this analysis and protection in major ways, and are therefore worth developing so as to allow for consideration of risks and what can be done to mitigate them.

As an example, one unique aspect of National City is that it is located on the interface of a river with fresh water emptying into the ocean with salt water. This translates into mud being dumped into the ocean, which normally results in the deposition of the mud into mudflats. Over many years, these mudflats or delta from the river have become the flat area on which the historical National City was constructed and on which Interstate 5 and the military bases are constructed. Such mud layers are composed of clay platelets stacked up like a house-of-cards with water molecules in between them near the surface. This gives rise to a susceptibility to liquefaction, where earthquake shaking turns the ground into liquid with the consequent failure of infrastructure like roads and buildings sitting on this liquefied ground. National City is officially mapped with liquefaction potential in many areas, one of the most obvious linkages of GIS of geology and infrastructure. While it is highly unlikely that anything will happen to National City, as there has been significant shaking in the past, as with the April 4th, 2010, earthquake, the zoning as liquefaction presents an opportunity and also a legitimate public safety
concern. Mapping liquefaction and realizing the seismic risk of National City and the San Diego area are recent developments, so that the city was sited and built long before anyone thought about faults, liquefaction, or the consequences of a major shaking event. Using the geological data of different key resources and danger zones can provide insight to the issues that can arise from a major event as well as suggest the opportunities for applying for funding to mitigate the dangers. The presence of liquefaction was a key focus during this project and the impact that it would have on the city, its infrastructure, its transportation resources, and its military bases and capabilities.
When (not if) an earthquake occurs in the region, not just in National City, the ground shaking could cause liquefaction to occur. The damage could be potentially devastating to the roads, gas pipelines, and fiber optics that traverse the area. The fact that the roads, public buildings and schools, and freeways were built before the liquefaction or seismic risks were recognized means that there is a potential for major damage. However, this also represents an opportunity for acquiring resources and renovation for National City if the risk can be demonstrated for both public safety and international trade and security with the Interstate 5 and 805 pathways through National City. Similarly, mapping and measuring the liquefaction potential can help demonstrate the need for military bases and operational stability for the military to guarantee their ability to survive a devastating shaking event or to assist in relocating the bases to other areas.

Probably the most likely occurrence if major liquefaction resulted from a seismic shaking event would be the breaking of gas pipelines, as they are rigid lines beneath the surface that will be suddenly dramatically shaken and impacted by variable liquefaction. Breaking of the gas lines and starting of fires then produces an extreme need for firefighters and trucks; but if the liquefaction has destroyed the ability of trucks to traverse the roads, the fire trucks designed for city streets, not off-road trucks, will be nearly useless. Understanding where roads might be, how alternative routes might be constructed, how alter-
native trucks might be used, and how alternative portable pipelines might be constructed would enable firefighters to still act without the trucks in the normal proximity to the fires. Likely most of the fire hydrants and water infrastructure for fighting fires would be inoperable---but a firefighter will likely find ways to put out the fire even without a truck or water or access. How this can be done can help bring significant resources to National City within the context of earthquake-related firefighting, CIKR protection, and training for other jurisdictions and international areas with the same challenges. This understanding of stand-off firefighting could also become a blessing to National City as a place to train for this setting, including the impact of hazardous materials such as chlorine moving on the freeways, so that funding requests can be made around the real risks facing National City. In other words, the risks appropriately dealt with and mitigated can be a blessing to the City. The risks that are ignored after they are articulated become a potential major liability for civic responsibility. How the risks can be evaluated, buildings re-built or roads regarded, or pipelines re-laid are all potential significant outcomes of mapping the liquefaction potential of National City.

Similar relationships of geospatial location of opportunities like the circulation patterns in the bay, the wind patterns blowing from downtown to National City (pathway is from downtown as from Petco Park as the largest concentration of people (equal target as deemed by DHS) to National City, so attacks in downtown San Diego produce impacts downwind in National City), transportation corridors, noise corridors, and host of other things including energy, sustainability, and resilience of the region all represent geospatial opportunities for National City. Another major one is the massive flooding that could potentially occur in the Tijuana River and its crossing into the US near the San Ysidro Port-of-Entry. The Tijuana River once dumped into the southern San Diego Bay rather than the manmade turn to the ocean that the river currently occupies. If such a flood occurred, San Diego Bay and harbor would likely be choked with debris making passage for Navy ships extremely difficult. How National City might help with alerting the river system, linking to the Navy, and warning people along the shores of the harbor are all things that could be addressed with similar mitigation resource funding that is highlighted with GIS, animations, and sensor networks going into National City emergency management infrastructure like the Fire Department.

The Internet Perception of National City

National City, like all cities, has a wealth of Internet data about it that is freely available to anyone. Because many people actively explore new areas such as places to live, or where to buy a home, or where to do business via internet resources, this student group explored the “internet perception” of National City in several standard ways. Their focus was also on what might be done to improve the perception and to use homeland security in a positive way to build the “internet reputation” and hopefully the reality of National City.
The focus for this project was the use of technologies freely available to people to view National City from either home computers or smartphones as they walked around the city. Before the widespread use of technology about locations, people would drive around different areas to identify the types of neighborhoods that they would like to live or work (Appendix B). They would also go to different schools or churches and talk to other parents about the best schools for their children to attend or the price of housing or crime rates. This direct person-to-person insight likely provided fairly valid information as it originated from someone who actually lived or worked in an area. Because National City is a very family- and school-centered community, this direct contact was probably much to the benefit of National City.

With technology in the palm of one’s hand and everything being available on the internet, however, many people who might be interested in places to rent, live, buy, or work would likely “visit” National City electronically as they would also do in homeland security events if something occurred in National City (Appendix B). Because it has become very normal for people to try to find everything out about schools, neighborhoods, crime, and property details from electronic searches, this group walked in the shoes of people seeking information about National City. In the project the students used the internet to document the view of what National City is like to anyone using standard search tools such as Google.com, Yelp.com, Crimemapping.com, Zillow.com, Craigslist.com, Greatschools.com, and CityRating.com among many others. A family can get a good idea of the price they would like to pay for a home, the schools that the children can go to, and the crime rate in the area. For the research that was done National City, the internet perception is that National City has a significant crime rate, homes are between $179,000 to $370,000, and there are some really top-rated schools that could be a wonderful benefit for the children. How the perception equals reality and how the perception might be finessed, such as having the City website talk about population density and its relationship to crime and to adjacent areas, where the crime rate per person can indicate a different sense of what is the reality than simple numbers (Appendix B). How the schools and churches form the focus of the community and how the bi-lingual and bi-cultural richness of the community makes it attractive as a place for living and doing business also become easily lost in the typical internet perception of a city. The homeland security perception for safety, proximity to appropriate resources and transportation, and opportunities for positively impacting natural or manmade disasters are generally completely absent from any internet perception that would be easily discovered.

The overall point of this study is that National City could significantly improve its internet perception as it also works to improve its physical appearance and outreach to increase business, tourism, and business development. It appears from the research the each part of National City is improving in many ways; how this can be conveyed and trends and appropriate comparisons to other similar communities could be of value to National City as a part of its overall effort to both build itself up and prepare for potential disasters and manmade events. Using homeland security as a tool to build the community via its
internet perception offers a positive means for improving the City’s reputation and its value to its residents and the City itself. Helping to point out the challenges can also bring resources to the City in the homeland security context where all resources are awarded on a risk basis. Risk equals the potential for funding, no risk equals no potential for funding. Helping to build the right perception and also the perception focused on bringing in funding for the City is something that a homeland security focus could assist with accomplishing.

National City CCTV Plan for Kimball Park

National City has a central park, Kimball Park, around which much of the community activity focuses, much like the centering of city offices that surround the park. Because many people in the community use this park and its facilities like the hub of the city wheel, it is a visual representation of the City of National City. Ensuring public safety and encouraging active community involvement are high priorities for National City officials. One means of helping to ensure the safety and appropriate use of the park is to install Closed-Circuit Television (CCTV) cameras to help monitor the activities there and assist officials in graciously encouraging the usage of the park for the right reasons. National
City officials thus requested insight from the Homeland Security Graduate Program as to the most appropriate placement of a limited number of cameras to best assist the National City Police in ensuring the public safety of the park, but also having the park be an asset in enhancing the overall attractiveness of the city. By trying to build up a very attractive and safe central park as a gem of National City as well as preparing it for use during disasters, the National City officials are trying to appropriately bring as much safety and value to the park as possible.

Kimball Park is the central identity of National City, as it is near where the city started and bears the name of the Kimball family who were instrumental in establishing the city in 1887. One means of cities helping to manage the public safety of their areas of responsibility has classically been CCTV or basically a private network of simple cameras that are monitored remotely rather than having people watching the park. In order to make the placement of these cameras most effective, National City officials asked for assistance in the design, placement, and appropriate monitoring of the CCTV cameras and system. They wanted to strategically place the cameras at sites that had the most coverage of specific areas of the park where crime has taken place in the past (Appendix C).

Figure 3: As required by law, this sign would be publicly displayed.
The Homeland Security graduate student group worked to observe and inspect Kimball Park during a range of times of day and days of the week to better understand its usage and challenges. By also using publicly available data such as Google Earth, the student group was able to identify and recommend what they determined to be the best vantage points to place cameras, given a small number of cameras. The areas of interest to the National City officials were the common area, the playground, and the basketball court (Appendix C). With the CCTV cameras placed in central areas around the park, it would be possible to provide continuous surveillance by feeding the CCTV information into appropriate City monitoring sites. The advantage of this monitoring is that it would create deter criminal acts as well as would provide forensic evidence in the event of a crime. The intent is that the cameras would enhance public safety in an appropriate and publically acceptable way. Kimball Park could then become a park that people perceive as safe and suitable for their children. With a reduction in criminal acts, National City and Kimball Park can become more of an attraction rather than a place of danger.

Figure 4: Right Photograph of the type of camera that could be used for CCTV.
Enhancements to the National City Emergency Operations Plan (EOP) Using Social Media, Technology, and Funding

Every city is required by law to have an Emergency Operations Plan (EOP) and National City has such a plan that meets all the requisite standards and appears to be very appropriate to the City. Enhancing this plan with tools and technology that have been developed since the Plan was constructed is the focus of this report which provides suggestions for how National City could improve its capabilities as well as document them in their EOP.

Technology is advancing at an astronomical rate. With such advancements it is difficult to keep up with the power and impact of technology. Today most people have smartphones that enable them to get social media feeds and news on their phones wherever they are located at any time. Facebook and Twitter are amongst the major social media sites that people are interacting with many times during the day and night. Capitalizing on such capabilities that already exist becomes an extraordinary opportunity for National City to build its disaster preparedness and community interaction. Using social media to push out notifications is a powerful way to broadcast information. Even more powerful is analyzing the information that people are posting to the Internet, which is commonly called “crowdsourcing.” This broadcast or “crowdfeeding” and crowdsourcing can be of major help during crisis events and/or disasters.
National City has a Twitter account and a Facebook page but there is not one for the National City EOC, so that the main City page likely functions in this capacity as it is likely the same people providing information for both. However, building separate Twitter and Facebook pages for National City disaster response would be one way that people can “like” or become friends or “follow” a social media page, thus building a relationship that can be used during a disaster. This would be a way to receive notifications when something occurs and to build the preparedness of the community. Having social media dedicated to specific areas such as National City EOC rather than the overall National City pages will help people prepare and be aware of what is going on in National City with respect disasters, rather than a ribbon cutting or something that involves community outreach. Social media can be helpful for the victims and can also be helpful for the first responders. Having the ability for citizens to post pictures and comment on areas of interest can help the first responders mitigate an incident, while first responders can use social media to keep citizens aware of what is going on before, during, and after an event or incident. The different applications that can be created can let people know what is going on and what to do (Appendix D). People can receive information about the closest shelters, points of distribution, hospitals, hot zones, cold zones, Red Cross units, road closures, gas, and sanitary facilities.

Another application that can be used is called CROWDMAP (Appendix D). This application gives real-time reporting that can be done through voice, text, and email, and each piece is tracked for location, date and time so that everything can be evaluated and verified. Technology can be very beneficial if used in ways that people feel as though they are helping during an event. Having dedicated key words can help categorize the data in a way that can be easier to sort through. Even though technology is advancing, so are the ways that people are using it and if the National City EOC can keep moving with the advancements in technology then they will have a community that is better prepared and they can respond more efficiently.
Since National City is a major Spanish-speaking population, social media can also cross language barriers and provide means by which people can anonymously assist the city if the pages are appropriately constructed. Helping people provide information in Spanish and providing information out to them in Spanish is likely one of the most significant things that National City leadership could do. Linking National City to cities in Baja, such as Tijuana and National City’s sister city, Tecate, could make a major difference in the linkage of National City to its neighbors. Because Tijuana and the Government of Mexico have such major internet resources and ongoing internet news feeds, linking to Tijuana in particular could help build the international collaboration, trade, cultural linkages, and business partnerships.
Spontaneous Volunteer Management Plan for National City

After most major disasters, people want to help and often functionally “come out of the woodwork” to assist officials charged with leading the response. These volunteers can often be incredible assets for the community response as they are generally actually part of the community and know the community in detail and have skills that could help government better respond to the disaster. How these volunteers can be appropriately organized, managed, and utilized for the benefit of the community needs to be considered prior to a disaster, as the appropriate preparations are generally impossible to make when the disaster occurs. This section of the homeland security graduate student work on National City focuses on the appropriate preparation for best utilizing spontaneous volunteers for the benefit of the community after a major disaster.

As described in the report, “This Spontaneous Volunteer Management Plan is designed for use by National City during the response and recovery phases of emergency management for all hazards (Appendix E). The jurisdiction may take complete responsibility for activating and implementing this plan or it can share responsibility with the volunteer center. The Spontaneous Volunteer Management Plan focuses on the mobilization, coordination and referral of spontaneous volunteers and service programs only and does not address other related issues, such as the recruitment and management of affiliated volunteers.”
Included in the response are the appropriate forms and guidelines needed to plan for and prepare for the appropriate use of spontaneous volunteers (Appendix E). Helping people understand how they can help can also profoundly help prepare people, as they are often more motivated to help others during a disaster when they can actually do something besides just donate money. How this can be best accomplished by National City form the focus of this report.

**Conclusion**

The Homeland Security Graduate Program partnered with officials from National City to address traditional needs in homeland security such as addressing the quality and value of the city’s Emergency Operations Plan, its plans for spontaneous volunteers such as occurs after most disasters, and its desire for installing cameras to enhance security in the city gem, Kimball Park. By partnering with the City officials including the fire department and economic development officials, the homeland security graduate students sought to both assist leaders in National City in seeing what could be accomplished with better preparation for disasters like earthquakes and fires, but also what the opportunities are for using these same tools for benefiting the quality of life for the city. Using geospatial location as a primary planning tool, the graduate class viewed the city boundaries, neighbors, and Critical Infrastructure Key Resources as guiding components to the potential solutions that could be suggested to National City officials.

Liquefaction of the downtown area is likely the most promising problem that can be turned into an opportunity, as the city was sited and built long before the realization of liquefaction and the seismic risk. Complete disruption of the roads, water infrastructure, gas-line infrastructure, and transportation infrastructure could occur during severe shaking events. This danger can be addressed in a many ways, such as with firefighting equipment that can transcend the ability of the trucks to actually get to the fire, alternative routes and means of mutual aid, and understanding the heterogeneity of the likely response depending on the age of the structures. In addition, these problems could be used as means to attract outside funding and to build National City as both a demonstration site and training facility for how to respond to such problems that occur in many cities in California but also far more internationally. For instance, there is the potential to develop an international training center with SDSU focused on the response to liquefaction and other disruption of critical infrastructure. If such a program were focused on Latin America, this might be a major contribution of National City and its sister city of Tecate, Baja California.
Similarly, the role of using the apparent challenge as a means of both finding solutions but also generating potential outside funding was a theme through the whole program. This can be done via the internet perception of National City, which could be dramatically improved, especially in the context of pointing out the family and school orientation of the city, its churches and businesses, and its strategic location and very pleasant climate. Building the National City of the future with ideas of energy sustainability and resilience especially linked to the international border and blending Mexican and US cultures could be major positives for National City. Specific applications of using social media to enhance emergency operations as well as to build up the reputation and business of the city are inexpensive and powerful ways of changing the city. Doing this in Spanish as well as building up the military impact and awareness are all things that could have dramatic influences on the city. Partnering with the city’s businesses and schools for linking security and trade as well as education is a gracious bridge to link different priorities, groups, and challenges to build a more robust, family-focused, and business-successful city. This in turn builds security and safety, which is a major goal of government and a major accomplishment for the Homeland Security graduate students.
Appendix A
Figure 15

Figure 16
Appendix B

The Internet Perception of National City
HSEC – 602
San Diego State University
December 2013
Freddy Chavez and Daniela Malqui
Introduction

This paper is an assignment for the HSEC-602 course, directed by Dr. Eric Frost, as a part of a Master’s Degree in Homeland Security in San Diego State University.

Nowadays, there are more things connected to the internet than there are people in the world; and people rely on the internet for nearly every task. Therefore, the assumption here is that every family who plans to move to a new place will first of all look online for recommendations, reviews, and general information. This data, even more than family and friends’ recommendations, is what will form the person’s first impressions and likely decision impressions of the place.

The paper’s main purpose is to present a general view of the internet’s perception of National City. To this purpose, this paper relied solely on online sources such as, Google, Zillow, YahooHomes, Crimemapping, etc. To the purpose of this paper, the assumptions on which the searches were made were based on the case of a family of four including the parents and two children of pre-school ages.

This paper is divided into five main sections. Each section addresses a different category that could concern a family who might be planning to move to a new area. The first section refers to general research, and answers the questions “What is it like to live in National City? ” Many of the overall responses carried a negative connotation, and were written by people who experience either working or living there for a while. The second section presents conclusions made regarding Real Estate, based on three websites: Zillow, Craigslist and YahooHomes. Section three addresses the educational aspect of National City, and highlights the facts about Ira Harbison School, the best-ranked preschool in National City. Section four relates to crime, which is another aspect that normally concerns families and has a huge impact on the overall perception of National City. This section is based on data collected from Crimemapping.com and Cityrating.com. The section gathered some of the most recent crime statistics that compare National City to the national and State averages. The last section addresses the employment category, in which the statistics are derived from Nationalcityca.gov and City-data.com. This section shows employment rates, types of employment, and unemployment rates for National City.

General Research

The internet today is a tool used for everything, and Google is still the most used search engine in the world, far outdistancing competitors. Google is used for a variety of reasons such as looking for a job, finding a specific website, and is also used as a resource to find answers to basic or complex questions.

For the purposes of this paper, we searched typical web resources like Google and Yelp to ask about National City. Many of the responses were negative, but these are also the typical things that people might say and would be recorded for others---not the things
that someone living there would say. Below are some of the responses to the question: “How is it to live in National City,” where Yelp only returns seven (7) results, most of which are not favorable. With only seven results, these results are repeatedly looked at over and over---and appear to be from a specific part of the population and not the full spectrum of society that might live in National City:

posted March, 2014:
“This very historical area has a beautiful view and is pretty amazing. Most of the homes here are very old and were built around 1920-1950. There is an explosion of jacaranda tree flowers during April-June. They have some of the best Filipino food here in National City as well as places to eat awesome Menudo. You should have a look around to find additional gems in this awesome place.”

posted on April, 2012:
“I do not live in National City. I am fortunate enough that I have to means to live in a wonderful neighborhood…but if I wasn’t so blessed, National City would be on my list of less expensive places to live in San Diego. I have worked in National City for more than 10 years and I feel as if I am part of the community. The people here are real and mostly hard working families that are doing their best to make a better life for their family”

another example from June, 2011:
“If I could give it 0 stars I would…I already hated this city, but what a wasteland of human filth! Not a single stretch of beach, 4 nice homes in the whole 91951…”

a review from August, 2009 states that:
“It ain’t nicknamed Nasty city for nothing”

a girl who answers to this same forum says:
“WOW…Nasty City….dunno how I grew up here and survived LOL great spots for photo shoots tho if you’re looking for a Mad Maxx or Apocolypse type of scene…. just uh…don’t go alone haha”
Many of these comments are obviously not a fair representation, but they highlighted that people are amused by their content, so that they stay and have an impact on many other people.

In addition, we searched in Google with the phrase "Is National City a safe place to live?", and the finding was also very generalized but also very negative toward National City.

The results without a doubt are not positive. If a family has options on the table, apparently after this review, National City will not be the chosen city. However, this is the view from the perspective of a non-Spanish speaking young person---with the focus on family, schools, churches, retirement homes, and history, National City actually fares better with searches focused in other ways. Yet most people casually looking at National City are likely turned away by the veneer of negativism without investigating the city further.
Real Estate

According to Coldwell Banker, of the 15,781 households in National City, 33.6% are owned, 58.7% are rented, and 8% are not currently occupied. The median age of homes in National City is 37 years and 26.0% of the homes have been occupied by the same residents for more than 5 years.

Three main sources were used to establish the real state situation in National City: Zillow, Craigslist and YahooHomes.

Figure 19

Figure 20

Figure 21: In comparison to other cities within San Diego, National City is considered cheap. As an example, National City is considered cheaper than La Jolla, Del Mar and East Chula Vista among others; and has similar prices to South Chula Vista.
According to Sperling’s, the median home cost in National City (zip 91950) is $195,900; and home appreciation the last year has been 1.94 percent. In a period of time between October 23rd and November 14th, the cheapest 3 bedrooms house was found in Zillow for $179,000 (Image 1); while the most expensive was found in YahooHomes for $370,000 (Image 2) In case the family wanted its kids to share the room, the cheapest 2 bedroom home offered was found in Zillow for $45,000.
Military:
7,683
Total: 28,743

Major Employers in National City:
(Selectory, 2009)

500 + Employees:
Naval Station San Diego
Paradise Valley Hospital Inc.
National School District

These are just some basic employment statistics as of 2008 and 2009 for National City. These numbers show total employment for the year of 2008, also how many were civilian and how many were military jobs. These stats also show the top three employers with the highest number of employees in National City as of 2009. I included these statistics to give a basic look at employment rates in National City.
Unemployment in July 2013:
National City: 15.1%
California: 9.3%

<table>
<thead>
<tr>
<th>Month/Year</th>
<th>National City, CA%</th>
<th>California%</th>
<th>National %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 / 2013</td>
<td>16.6%</td>
<td>10.4%</td>
<td>7.9%</td>
</tr>
<tr>
<td>2 / 2013</td>
<td>15.5%</td>
<td>9.7%</td>
<td>7.7%</td>
</tr>
<tr>
<td>3 / 2013</td>
<td>15.0%</td>
<td>9.4%</td>
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<td>4 / 2013</td>
<td>13.7%</td>
<td>8.5%</td>
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<td>5 / 2013</td>
<td>13.3%</td>
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<td>6 / 2013</td>
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<td>7 / 2013</td>
<td>15.2%</td>
<td>9.3%</td>
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<td>8 / 2013</td>
<td>14.5%</td>
<td>8.8%</td>
<td>7.3%</td>
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</tbody>
</table>

This data shows that National City’s unemployment rate is about 5-6% higher than the California average and about 7-9% higher than the National average. Once again in this section, the data shows that National City has higher levels but it also shows a trend of improving.
Conclusion

At first glance the internet’s perception of National City appears to be rather negative and is not likely to draw people to the city to either live or do business. It also does not really use the negatives to help build positives such as how the city might benefit the region or how opportunities might enhance the city. A deeper analysis of data and statistics, however, show that a particular factor is missing: the improvement National City has made from the 1990’s to the present.

As shown in the first section, while people asked about living in National City and about National City’s safety responded in a very unfavorable way, statistics showed that the while the range of crime in National City was higher than California and the national averages, it has consistently been improving over the last many years. In a major way, the data shows that the crime rate is not nearly as extreme as people think, so that perceptions of National City and crime are not the same as the reality.

As far as employment and unemployment data we found on the internet, it seems that National City is a bit higher than average when compared to the state and the U.S. However, it is difficult to easily measure the employment and economic health of National City via the internet, so more of a neutral perception is cast. In part this is likely due to the number of people who are self-employed and informally employed, so their statistics would be very difficult to include in comparisons with other cities that are largely commercial firms.

The main lesson taken from this project is much more attention needs to be paid to the Internet Campaign of National City, understanding that internet is the most important source of information nowadays. The city must be aware of its internet reputation, because it may cause real day-to-day damage. A successful internet campaign can completely change the perception people have of a city. “Branding” is the common name used by many companies—so the Branding of National City in an electronic sense is a particular opportunity that is obviously present. Further Branding to help present a positive view of the City and also a city with opportunities including ones to contribute to the local safety and Homeland Security are wonderful chances for people to make contributions to the City. As an example, the Fire Department is a remarkable and could be a model for the region, including in its sister city of Tecate. How the City appears to people who the City would like living there—likely with Spanish as the first language, really leaves much as opportunities for improvement and making a significant impact on the City and its people.

For example, can be a campaign which will tell successful stories about people who grew up in National City, or successful businesses in the area. Another idea can be finding a positive concept of National City such as of being a “family area or a worker community”, explore it in its different directions, and making it. A slogan can be used by real
estate companies or social media. An example might be “National City – A Family Place, Mi Casa Es Su Casa.” Such a slogan could recognize the strong linkage with Mexico and help build ties such as International Trade, education, and training including with the military.

A different campaign can be made just for business, and social media is the perfect way to do it. Special deals for terrains under the condition of hiring National City employees, or organizing “giving back” programs.

 Beautification projects can be done by the population in the area throughout community service, in schools, or by non-profit organizations around the city. Everything must be documented and promoted on the internet, because that way people will start to comprehend that changes in the City are taking place.

For beautifications and community involvement, the city can choose four specific walls or places in the City which need to be fixed, and invite country-wide famous artists to repair and paint the place by doing graffiti or any other style. If material is needed, the City can ask for donations from brands such as Home Depot or Costco. After that, each place will be posted in social media such as Instagram, Twitter, Facebook and the one which received the most “likes”, will win a recognition form the City.

Whether we like it or not, nowadays the doing is as important as the showing; and even though some people know the efforts many workers and organizations put in trying to improve National City, the common opinion is not aware of that. A successful internet campaign across multiple facets of social media must be employed to spread the word on the positive changes National City is making.

A Prezi Presentation on the topic is available online under the name of The Internet Perception of National City: http://prezi.com/pzgpkr9vciai/the-internet-perception-of/
Appendix C

National City Surveillance and Security Assessment
Homeland Security Program
San Diego State University
12 December 2013
Overview

- Introduction and Intent – Michael
- Assessment – James
- Recommendations – Drew
- Cambridge Anecdote – Lee
- Grants – Filmon
- Summary – Chad

Project Intent

- Improve security of Kimball park and surrounding area through sustained surveillance
- Engage residents to foster awareness of heightened public safety features
- Offer recommendations for future refinement of security posture
- Desired end state: a notable decrease in crime and increase in curb appeal in the Kimball Park area
Assessment

- Evaluation of Kimball Park
- Conceptualization of security plan
- Open-source resources allow us to get an overall view of the park
- Able to use these resources to illustrate the best vantage points

Figure 24
Recommendations

Install CCTV cameras in a central location to provide continuous surveillance the areas of concern.

- Serves as deterrence
- Provides evidence in the event of crime
- Enhances public safety
Benefits and Characteristics (Cambridge Example)

- CCTV system operates 138 cameras
- All the cameras are linked to the CCTV Control Room via encrypted radio Wi-Fi links.
- Provides safety, deters and detects crime
- Maintain and enhance the commercial viability of the city
  

![Figure 26](image-url)
Using the Cambridge CCTV Experience to Benefit National City

- Protecting areas and premises used by the public
- Deterring and detecting crime
- Assisting in the identification of offenders leading to their arrest and successful prosecution
- Reducing anti-social behavior and aggressive begging
- Reducing fear of crime
- Encouraging better use of city facilities and attractions and increasing commercial viability

Figure 27
Figure 28
Figure 29
Conclusion

- Mission: Provide Kimball Park with a means of security in the form of continuous surveillance.

- Developed installation plan for CCTV cameras in Kimball Park
  - Focused on high-risk areas
  - Install cameras at best vantage points
  - Use and maintain appropriate equipment

- Offer additional recommendations (potential grants) for future refinement of security solutions and contribution to safety and economy of city

Ultimate Goal for National City

- Model city for the utilization of CCTV camera systems
  - Much like Cambridge, England

- Success of future CCTV system in Kimball Park will positively impact the community
  - Expanded to other problem areas for the city
  - Prototype for surrounding cities in San Diego County
Appendix D

National City EOP- Social Media, Technology, and Funding Enhancements

HSEC 602
28 December 2013
Sobhya Agha, Ashley Calleros, Philipp Dembicki
Ashley Greenfeather, Kai Hill, Jake Noonan, Dietrick Lamade
Introduction

Group 1 found the National City Emergency Operations Plan to be comprehensive, detailed, and aligned with Federal and State guidelines and linked in regionally. Consequently, we expanded our view toward identifying elements to stimulate creative ways of optimizing emergency services rather than to focus on small details of the EOP document.

We looked at social media, technology, and funding sources, and discovered that all three are available for augmenting the plan and stimulating creative alternatives toward optimizing emergency management services for the citizens of National City.

A robust social medial program would leverage existing tools applicable to emergencies including preparation, response, and recovery. Furthermore, social media is applicable to steady-state governance such as encouraging broader participation of citizens in public policy discussions.

Crowdsourcing is one example of the multidimensional aspect of social media. It is used for social activism and public accountability, serving as a model for what has been coined as "activist mapping"—the combination of social activism, citizen journalism and geospatial information. Ushahidi offers products that enable local observers to submit reports using their mobile phones or the Internet, while simultaneously creating a temporal and geospatial archive of events.

In the classic use of the term, problems are broadcast to an unknown group of solvers in the form of an open call for solutions. Users—also known as the crowd—submit solutions that are then owned by the entity, crowdsourcer that broadcast the problem. In some cases, the contributor of the solution is compensated monetarily, with prizes, or with recognition. In other cases, the only rewards may be kudos or intellectual satisfaction. Crowdsourcing may produce solutions from amateurs or volunteers, working in their spare time, or from experts or small businesses, which were unknown to the initiating organization.

Crowdsourcers are primarily motivated by its benefits. One of these includes the ability to gather large numbers of solutions and information at a relatively inexpensive cost. Users are motivated to contribute to crowd sourced tasks by both intrinsic motivations, such as social contact, intellectual stimulation, and passing time, and by extrinsic motivations, such as financial gain.

The Team also combined social media with GIS to demonstrate how first responders can use real-time information about specific areas. For example, a tracking system enabling authorities to direct the right mix of resources to a particular emergency is achieved by real-time crowd sourcing. The same capability can be used to enhance steady-state governance. Empowering citizens to report problems as they arise within the community enables faster resolution and promotes citizen engagement within the community.
Emerging technologies represent new and creative future possibilities for improving both Emergency Management and steady-state governance. For example, access to off-grid power sources during lose-of-power emergencies mitigates the risk such a circumstance would entail. Energy storage is an emerging technology that has broad application during emergencies as well as for steady-state governance.

Finally, limited financial resources may be the single most challenging impediment toward acquiring robust emergency management capabilities. The scope of the need always is greater than required funding. However, the Team found that considerable funding exists in the form of grants if risks and their mitigation strategies are identified.

**Social Media**

The first issue I considered was how to get the public more involved in preparing for disasters, so with the proliferation of social media, I decided to look at was how widespread social media was in National City. What I found was that approximately less than 10% of National City residents connect to their city through social media. I could not find a National City Emergency Operations Center page on Facebook or Twitter and the only National City pages I did find were in English only.

So, one simple and inexpensive solution that I propose is creating Emergency Operations pages on Facebook and Twitter, in English and Spanish (at least to start out with), similar to the Orange County EOC page. The page would put out information on how to prepare your family for a disaster and how to establish a plan of action if a disaster does occur. With a little marketing in the community I think we could get quite a few followers to these sites.

The second issue I considered was how National City could respond to a disaster. One piece of technology I found is called EverBridge. This technology is used for interactive and mass communication. It has the ability to send out notifications to those in a specific geographic location, where a disaster may have occurred. You can also send notifications across various organizations from a single account. You can connect to EverBridge through any device, including mobile, and it also has multi-lingual capabilities. So, I believe that this has a real potential to be of great help regarding communications before, during, and after a disaster occurs.

**Social Media and GIS: Interactive Mapping Solution**

In a time where man-made incidents and natural disaster appear to happen more frequently, the effective and efficient implementation of an appropriate emergency management is ineluctable. While many individuals possess a profound expertise in managing such events, today’s technological shaped society allows the utilization of computer-based resources that help to exploit the full potential of capabilities in an effort of disaster relief. One of those is the digital platform “Ushahidi”, a crisis-mapping device
based on the principle of crowdsourcing. Ushahidi provides user, no matter if emergency management officials or by a disaster affected civilians, the opportunity to map their findings via Twitter, SMS and web forms and incorporate the latest news coverage in order to digitally map such information. In connection with social accountability it can be used as an interactive crisis-mapping device for the purpose of information collection and distribution as well as for their visualization. There are barely any limits regarding the scope of information that can be mapped. The following are only a few examples: points of medical help, volunteer bases, vaccine distribution centers, blocked roads, fires, flooding, service locations for food and water and many more. Since Ushahidi is an open-source platform it is not only free, but widely accessible and individually adjustable in terms of its functionalities, which include among others the opportunity to categorize and label areas within a certain territory (e.g. city, campus etc.) and subsequently not only involve the civilian population in any kind of disaster management endeavors, but keep them and first responders (e.g. National Guard, Law Enforcement, Fire Department, Red Cross etc.) perpetually updated.

In an effort to enhance and improve National City’s Emergency Operations Plan it appears reasonable to introduce such modern technology in form of social media and multifunctional mapping options. While social media has never been as controversial as it is in today’s society due to its potential for negligent malpractice and faulty information, it offers a tremendous capability in helping officials and authorities in any kind of emergency to reach a given population.

It was our approach to develop a proposal for a system that enables National City’s officials to address their citizens and third parties via open-source software that focuses on information collection and distribution, visualization as well as interactive mapping. Ushahidi, Inc. will serve as the basis and orientation for this objective. As a platform for crisis mapping it is widely recognized and offers a great variety of reaching out to people. The following examples will elucidate its application possibilities.
For their jurisdiction National City officials would be able to mark certain areas within their city limits and categorize them in order to inform citizens. Based on a mapping system such as Google Maps or OpenStreetMap it allows setting up certain categories. These categories may include, but are not limited to:

- Areas severely affected by natural catastrophes such as earthquakes
- Red Cross units
- Fires
- Flooding
- Mapping of blocked roads
- “Map of help” for voluntary workers
- Mapping of service locations: food, water, sanitary facilities, gas, ATMs, & medical care

Figure 38
At the same time Ushahidi offers the opportunity to provide and read detailed reports in order to get more information about a certain incident/subject as well as the option of an interactive exchange in form of incident submissions by the citizens and people directly involved. In addition users of the application are enabled to receive notifications ("Get Alerts") about the most recent and most important developments. An interactive mapping system like that would not only serve the purpose to keep the own population updated, but helpers (e.g. National Guard, Law Enforcement, Fire Fighters, Red Cross etc.) from outside as well.

The importance of an interactive mapping device is self-evident. While different factors can be the cause of a disaster, they can be managed in many different ways. However, with the help of modern science and digital technology such disaster can be approached on a different level. Even though a system like Ushahidi cannot prevent or predict an incident from happening, it can alleviate its already severe coordination.

**Social Media and Crowd-Sourcing**

**National City Emergency Tracking System (NCTS)**

A Real-time Crowd source Mapping and Reporting Tool: Demo Version

As part of ‘National City Operations Plan’ assigned to Group #1, I propose to develop a real-time, crowd-sourced interactive-mapping, reporting, analyzing and data collection tool for emergency and disaster incidents in National City. The proposed system will use Open-source tools, such as Ushahidi Platform, SwiftRiver Platform and Crowdmap. These platforms have been used to implement numerous crowd-source mapping website around the world. I have selected them due to their completeness of features, their low-cost of implementation and versatility. To demonstrate the feasibility of this project I have implemented a very simple demo of a National City Emergency Tracking System (NCETS) on an online server Crowdmap.com.
NCETS Features

• Reports of incidents, emergency and disaster can be reported and display in real-time on Interactive map of National City.

• Reports can be submitted through web site, text message, voice message, email, RSS and twitter.

• Submitted reports can be analyzed time and location wise

• Reports can be submitted from Public (Open) or assigned agents

• Submitted data can be filtered

Software and Hardware Requirements

NTSC System will use the Free and Open Source Platforms Ushahidi and SwiftRiver as software component. While for Hardware it need full Linux Servers.

Software

The key features Ushahidi Platform are:

• Free and Open Source

• Interactive Mapping to visualize information and reports

• Dynamic Timeline to filter the submitted reports by time and location

• Multiple Data Streams: reports are collected via text messages, email, twitter and web-forms.

The key features and capabilities of SwiftRiver Platform are:

• Filter & Verify Real-Time Data from all channels like Twitter, SMS, Email and RSS feeds.

• Analysis & Insight to discover nascent relationships and trends in data sets that may appear to be unrelated.

• Brand Monitoring to setup search for mentions of your brand or product online and manage social media campaigns (e.g. Twitter, SMS, email) from one dashboard.

• Add Context to Contents using semantic analysis. Auto-categorize and classify email, twitter, text messages or reports based on keywords.
Hardware
Though Ushahidi based systems can work on open-source web servers provided by many volunteers around the globe but for National City it recommended be appropriate to buy our own servers. Here are the requirements of Linux Servers:

Linux Servers needs following systems to be installed. All the following components are also free and open-source.

- PHP
- MySQL
- Apache Web Server
- Lighttpd
- Microsoft Internet Information Server (MS IIS)
- Nginx
- Unicode support in the operating system
Server must have at least 16 GB RAM, Ethernet Ports, Wireless Ports, 4TB Hard Drive, and 4TB extra backup drive.

Demo Version on CrowdMap.com

To show the feasibility of the system, a prototype National City Emergency Tracking System (NCETS) has been developed on an online Server provided by Crowdmap.com.

In this system I tried and tested to submit a few reports and our group members also submitted reports through web and txt messages.

System is very slow and rudimentary and is not good of real world applications but gives a glimpse in to the working of the proposed system. Following is the snapshot of this demo version. The demo version is located at:

https://crowdmap.com/map/ncets/

A snapshot of the Demo system is shown below:

Figure 39
SDSU Collaboration with National City

SDSU is best suited to collaborate with National City on implementing such a system. SDSU VizCenter has capabilities and hardware to develop, design an Interactive Mapping tool specified here. This projects fit into the motto of the description of the Viz Center i.e. “physical space but one that largely represents relationships between people and organizations collectively attempting to positively impact the worlds of Humanitarian Assistance Disaster Relief, Community Resilience, Search and Rescue, and aid to operational Emergency Responders and Homeland Security.”

Activities

National City and SDSU jointly come up:

- System Features and Specifications (public, report formats, scalability, etc.)
- Schedule for implementation
- Testing of the System
- Launching of the System

Cost of the System

- Software is Free
- Hardware (Internet Bandwidth, Linux Servers)
- Engineering Implementation Cost
- Monthly Maintenance Cost (Bandwidth, Backups, Updates, Enhancements etc.)

Summary

A Crowd-source Interactive Mapping and Reporting System for National City Disasters and Emergency incidents will enable National City to prepare for emergencies and make decision on response, mitigate the damage and maintain inventory and predict risks.

The proposed system fits well with the Group #1 other projects proposals of Emergency Preparation for National City with collaboration of SDSU.
Emerging Technology

A limited power supply during disasters is a risk during the emergency period (response) and post-emergency period (recovery). National City is vulnerable to this risk due to the instability of the ground and the EOP-identified most significant threat: Earthquakes.

Electric power outages are a major concern for public facilities such as hospitals. Typically, power outages result in activation of emergency generators that provide power to equipment such as HVAC, computers, communications, refrigeration, etc. Air conditioning is critical to data centers and fuel supply for gas/diesel emergency vehicles is often overlooked when a disaster is especially widespread.

In addition, the proximity of U.S. Navy vessels and commands compounds the vulnerability of the electrical power grid to terrorist and cyber attacks as well as natural disasters. Prior to 9/11, grid operators focused on reliability. The system was compartmentalized so that long-term outages were thought to be unlikely. After 9/11, it became clear that the grid system was becoming more vulnerable as technology developed. The advances enabling smart grid technology exposed the electric power network to entry points that previously did not exist. This recognition led to the designation of energy, including a component, electric power, as critical infrastructure and key resource (CIKR).

The conventional response to loss of power during emergencies is to use off-grid power such as portable battery-powered generators. They are off grid, scalable, and easy-to-use. However, the batteries are powered by solar and wind and these resources are intermittent by their nature and as a result create energy-source gaps. The duration of available generator power is limited because the batteries hold their charge for so little time.

However, these gaps in power sources can be mitigated with emerging technology known as energy storage. Energy storage is a gap technology that will simplify response and recovery. Energy storage batteries can generate power for a given duration to replace lost commercial power.

Electric vehicles are the most visible industrial strength energy storage technology, but the cost is significant. Currently, the price per kilowatt-hour for a Ford EV is between $500 and $600, but on-going research in liquid metal battery technology suggests a breakthrough is at hand for inexpensive, accessible, and long-lasting off-grid power supply.

Metal battery technology is accomplished by mimicking the production of aluminum; high heat sufficient to liquefy the electrodes and the electrolyte. Dr. Donald Sadoway of MIT discovered the technology. He reasoned that the chemistry present in the production of aluminum could be applied in the same way to create a battery. He selected two elements, magnesium and antimony, from the periodic table to serve as electrodes and combined them with an electrolyte of molten salt using high heat and produced electricity.
Low-density magnesium loses two electrons when a current is initiated through the electrolyte forming an alloy with high-density antimony. This process produces a current strong enough to charge power-using devices. The current is reversed to draw power from renewable energy sources that in turn restore the elements to their original state. The system, therefore, is self-renewing.

The initial battery was 1 inch in size and produced 1 Watt-hour. Subsequent batteries were larger and produced more power. The second was 3 inches in size and produced 20-Watt hours. The next was 6 inches in size and produced 200-Watt hours. Currently, work is being done to develop a 16-inch battery producing 1000 Watt-hours (1Kwh). Extrapolating this experience, the goal is to manufacture a battery producing sufficient power to sustain 200 households. Dr. Sadoway intends to build a 40-foot battery that would fit into a trailer and produce 2,000,000 watt-hours (2Mwh) of electrical power.

Extracting cost comparisons with current energy fuel production costs in kilo-watt-hour is:

- Gas: $12,000
- Li ion: $35
- Auto: $250 (target)
- Stationary energy storage: $50

The advantage of liquid-metal batteries will be low cost, high power, and long lifetime.
Summary

While it is difficult to justify the cost of risk mitigation to a threat that seems unlikely, the cost of a massive loss of power for an extended period of time would mean a loss of life. The advantage to doing nothing is no cost; the disadvantage is that technological progress, unapplied, and does nothing to slow the growth of risk. National City might consider exploring a number of emerging technologies with the intent of being an early adapter. This is feasible because so much of emerging technology is applicable to both emergencies as well as good governance.

Furthermore, the supporting strategy of developing an off-budget funding source through grants can be done at little cost. Another strategy would be to identify a developer of a promising technology who would be interested in demonstrating a proof-of-concept solution on a scale the size of National City. Partnering with interested students eager to gain real-world exposure to management of public enterprises offers a feasible avenue to pursue both strategies.

Applicable emerging technology abounds. For example, SolarCity in San Mateo is offering energy storage solutions commercially at no upfront costs in return for a long-term lease.

North American Development Bank (NADB) is shifting focus to solar and wind farms along the U.S. Mexican border. Complementary energy storage funding fits their umbrella criteria for infrastructure projects: Projects that improve human health, promote sustainable development and enhance the quality of life in the border region. National City could make a feasible case for NADB funding.

Leveraging emergency technology extends in interesting directions. Tijuana is purchasing drones to detect landslides, evaluate traffic accidents, and discover clandestine dumps. The drones suggest one example of how regional cooperation benefits all parties; drones in Tijuana offer proof-of-concept for their application in emergency services as well as routine governmental services. FAA regulations in the U.S. make the adoption of drones for services as quickly as is being done in Tijuana unlikely; but successful adoption in Tijuana will be useful in determining their feasibility. The expo, Innovadora 2014, extends this regional advantage. One million people interested and engaged in the latest manufacturing technology will attend this event. The event is designed to foster closer engagement within the region and consequently, it is a catalyst for the promotion of emerging technology. As the number of people knowledgeable about the application of technology in the CaliBaja region grows, the more likely it is that innovative applications of technology will emerge. National City is a natural beneficiary of this intellectual garden that is ripe for harvesting.

Emerging technology increasingly enables municipalities to leverage technologies for both optimizing “good government” and Emergency Management; a 2-mission capability for a 1-unit cost.
Grant Funding

One of many examples applicable grant opportunities is a Department of Commerce development program called Planning Program and Local Technical Assistance Program Economic Development Administration. It was posted on grants.gov on 8/3/12 and found by team members on 10/24/13. Proposals are solicited on a continuing basis and processed as received. It remains in effect until superseded by a future announcement and is intended to be awarded to 425 recipients for as much as $100,000. Eligible applicants are listed as:

- County governments
- Private institutions of higher education
- City or township governments
- Others (see text field entitled "Additional Information on Eligibility" for clarification)
- Native American tribal governments (Federally recognized)
- State governments
- Nonprofits having a 501(c)(3) status with the IRS, other than institutions of higher education
- Public and State controlled institutions of higher education
- Nonprofits that do not have a 501(c)(3) status with the IRS, other than institutions of higher education

The solicitation provides a description of what the grant funding is intended to support. For National City, the description includes investment planning that articulates and prioritizes strategic economic goals and projects such as feasibility analyses and impact studies. Emergency disaster response and recovery planning meet the threshold.
For example, an Emergency Operation Plan cell phone program might consist of the following operations:

**Ever bridge:**
Mass Communication-Residents would have easy communication access, input and output information system, emergency chat line or text messaging/real time responders, (ex. Respondents to a power outage or flooded areas.) a check in and Ask for help tab-let, and GPS locator.

Incident Management- Would mitigate issues before they become problems by providing a service desk for resolution. Communication would be linked to GIS mapping. (GIS locator will visibly show dangers and nearby residents).

e-Newsletters- Would give weather updates and city concerns

Neighborhood Watch- Especially applicable to high risks neighborhoods, bi-directional views of residents in their areas and a feature to enable comments and daily alerts/concerns to be sent

RESULT-National City residents would have text messaging by downloading an application; link to the city’s EOP in PDF format for smart phones, and safety checklists to ensure every local home has a quick safety procedure to follow in case of an emergency. The application is:

http://howmuchtomakeanapp.com: Universal iOS app, Custom interface to match brand, Email Login, Custom icon, at the idea stage = ESTIMATED COST: $13,500

An HSEC consulting team formed to write the grant proposal, and after award, plan the implementation of the Cell phone plan, merits consideration. While National City could hire specialists, graduate students whose careers are security-related would be a good fit for both budget-minded city officials and for opportunity-minded HSEC members.

This solicitation cited above is representative of ubiquitous funding available to entities like National City and also of Federal acknowledgement that the best emergency planning often is local. Local citizens know local needs better than bureaucrats.
Conclusion

Diligence and creative thinking about risk and mitigation opens the vault doors to Federal funding. The broad applicability of social media and emerging technology made available by public funding is important to National City in two ways: they leverage technologies for augmenting emergency management and for optimizing “good government”. The potential for exploring this mix of resources is a 2-mission capability for a 1-unit cost.

Finally, the HSEC program fosters real world application of emergency service enhancements by partnering with solution-seekers wrestling with schedule, cost, and political constraints. This paper represents a small taste of real-world solutions that could be more fully explored by the HSEC students who are pleased to have this opportunity.
Appendix E

National City
Spontaneous Volunteer
Management Plan
2013
Introduction

From generation to generation, people who live through terrifying disasters have a tendency to think that their disaster is cataclysmic, that their disaster, whether large or small is a one of a kind, earth-shattering event, something that could never happen again. The reality is quite the opposite, from Pompeii’s eruption to Mt. St. Helens’, from London’s great fire to Chicago’s, disasters will continue to strike, they will continue to devastate. Developing the ability to cope with disasters and learn from them is of utmost importance in effective emergency management.

The Federal Emergency Management Agency (FEMA) lists three necessities when it comes to disasters: plan, prepare, and mitigate. Not all disasters can be prevented, but they all can be planned for. There are many different facets to effective planning, and one facet that is often overlooked is dealing with and utilizing spontaneous volunteers. Just as disasters will continue to happen, in times of crisis spontaneous volunteers will continue to offer their services. These men and women can be a hindrance, or, with a plan, they can be a tremendous asset. National City is committed to effective disaster planning, and being prepared to use, or not use as the situation demands, all who offer assistance.

Figure 40: These men and women can be a hindrance, or, with a plan, they can be a tremendous asset. Harris Fire, 2007 (All Photos by Joshua Camp, unless specified as FEMA News Photo).
What are Spontaneous Volunteers?

Spontaneous volunteers are those not associated with any recognized disaster response agency, but who possess other training, skills and experience and appear on the scene or call to offer assistance. Management of this resource is a function of 211 San Diego.

Because many spontaneous volunteers lack the specific disaster training offered by the American Red Cross, The Salvation Army and others, there is understandable reluctance among emergency management professionals to consider these volunteers as a resource to be counted on in the event of a major disaster. It is logical for the traditional volunteer response organizations, as well, to be wary of well-intended but inexperienced volunteers whose efforts have sometimes hindered rather than helped response and recovery operations.

The key words in this dilemma are “major disaster.” When a community experiences a disaster of such magnitude that the capacity of local response organizations is severely challenged, volunteers will respond. Media coverage of such events brings graphic images of the victims and their damaged property into living rooms in neighboring counties and states. Such coverage evokes viewers’ compassion for the victims and gratitude that their own community has been spared. Hundreds or thousands will feel compelled and energized to take action.


Figure 41: Spontaneous does not mean unskilled! FEMA News Photo
This plan establishes an organizational structure and process by which National City can access and manage spontaneous volunteer and service program resources for community-wide disaster response, relief and recovery efforts. When managed appropriately, spontaneous volunteers and service programs provide valuable and cost-effective resources to the community.

**Goals**

The goals of this Spontaneous Volunteer Management Plan are:

- To augment, as a supporting plan, the jurisdiction’s emergency operations plan (EOP)
- To enhance resources available to the jurisdiction and the community-at-large for disaster response and recovery through the involvement of spontaneous volunteers and locally-based service programs
- To establish a means by which volunteers and service program members can contribute their time and talents following a disaster
- To encourage partnerships among governmental agencies and non-governmental organizations for the most effective community-wide approach to disaster volunteer coordination
- To ensure that implementation of the Spontaneous Volunteer Management Plan is in accordance with principles and practices as described in the state emergency plan and county emergency Plan
Figure 42: City Hall, National City
This Spontaneous Volunteer Management Plan is designed for use by National City during the response and recovery phases of emergency management for all hazard. The jurisdiction may take complete responsibility for activating and implementing this plan or it can share responsibility with the volunteer center. The Spontaneous Volunteer Management Plan focuses on the mobilization, coordination and referral of spontaneous volunteers and service programs only and does not address other related issues, such as the recruitment and management of affiliated volunteers.

For the purposes of this plan, the following definitions are used:

- A volunteer is someone who willingly provides his/her services without receiving financial compensation.

- A spontaneous volunteer is an individual who comes forward following a disaster to assist a governmental agency or non-governmental organization (NGO) with disaster-related activities during the response or recovery phase without pay or other consideration. By definition, spontaneous volunteers are not initially affiliated with a response or relief agency or pre-registered with an accredited disaster council. However, they may possess training, skills and experience that can be useful in the relief effort. Spontaneous volunteers may also be referred to as unaffiliated, spontaneous unaffiliated and convergent volunteers.

- An affiliated volunteer is one who is affiliated with either a governmental agency or NGO and who has been trained for a specific role or function in disaster relief or response during the preparedness phase. While spontaneous volunteers may bring needed skills and resources, affiliated volunteers will most likely be used first in a disaster. Examples of affiliated volunteer groups include Community Emergency Response Teams (CERT), Volunteer’s in Police Services (VIPS) program, Search and Rescue teams and American Red Cross Disaster Response volunteers. The category of affiliated volunteers may be further broken down as follows:

- Volunteers in ongoing programs. Such groups typically meet regularly and have other responsibilities in addition to their disaster response roles; for example, many are engaged in community disaster education, family preparedness and public safety efforts year-round. Many ongoing programs utilize Disaster Service Worker volunteers. Pre-disaster registered volunteers are typically utilized before spontaneous volunteers.
- Volunteers in reserve programs. These volunteers are called up at the time of a disaster. They may participate singly or in teams, depending on the program.

- An impressed volunteer includes any unregistered person impressed into service during a state of war emergency, a state of emergency, or a local emergency by a person having authority to command the aid of the citizens in the execution of his or her duties. This occurs very rarely and usually involves law enforcement or fire department personnel. This is implemented only in times of extreme peril.

- A Disaster Service Worker Volunteer (DSWV) is any person registered with an accredited Disaster Council, in accordance with prescribed legal procedures, for the purpose of engaging in disaster service without pay or other consideration.

- Service programs are national, state and locally administered programs that provide organized opportunities for both full- and part-time service. The term “service program” refers to a wide range of programs, including AmeriCorps and the Retired and Senior Volunteer Program (RSVP). In California, tens of thousands of individuals participate in service programs every year. For the purposes of this plan, participants in service programs will be referred to as members.

For the purposes of this plan, volunteers and service programs affiliated with a local government agency or NGO will be activated at the time of a disaster through the appropriate branch of the jurisdiction’s or NGO’s emergency response organization. (See Attachment L for a list of service programs and volunteer groups that are trained and affiliated with this jurisdiction.) Volunteers and members of service programs who are not affiliated with local government or an NGO will be treated as spontaneous volunteers.

It should be noted that not all volunteers, registered, affiliated or spontaneous, may be utilized during a particular disaster. Deployment of volunteers is based on the size and type of disaster as well as the skills needed by local officials to mount an effective response and recovery effort.
Situation and Assumptions

Situation
Volunteers represent a potential resource to a community affected by a disaster, whether of natural or man-made origin. However, volunteers who respond spontaneously and without appropriate training and qualifications can easily overwhelm the capabilities of local government and other agencies. With a system in place for receiving and referring spontaneous volunteers, local government agencies and relief organizations can capture this valuable resource and thus provide more efficient and cost-effective service to the community.

National service programs such as AmeriCorps and RSVP can be found throughout California. They are administered in local communities by a variety of nonprofit and government partners, so that program purposes, content and design vary widely. A number of these local affiliates are focused entirely on emergency preparedness and response and have members who are trained and available to be deployed on disaster assignments. Many others would welcome the opportunity to assist communities affected by a disaster. This plan identifies these resources and provides an organizational structure for accessing them for the benefit of government and the community-at-large.

Assumptions
• Volunteers and service program members that have pre-disaster training and are affiliated with a government agency or NGO such as the American Red Cross will report to their respective agency or organization at the time of a disaster as previously arranged.
• The first priority in an emergency or disaster is to utilize volunteers that are affiliated with this jurisdiction.
• All unaffiliated volunteers and unaffiliated service program members will be considered and processed as spontaneous volunteers.
• (Insert Info) is responsible for interviewing, screening, registering, training and the safe supervision for the volunteers it, and its affiliated organizations, provide.
• Likewise, NGOs and National Service Programs that involve volunteers in their own operations are responsible for interviewing, screening, registering, training and the safe supervision of those volunteers.
Standardized Emergency Management System (SEMS)
The Spontaneous Volunteer Management Plan is consistent with the state’s Standardized Emergency Management System (SEMS).

Figure 43
Risk Management

When an EVC refers a volunteer to an outside organization, the EVC limits its exposure to certain risks because the receiving organization assumes responsibility for the volunteer.

The EVC staff uses the Volunteer Intake Form to gather enough information to make an appropriate referral. The EVC does not verify the identity of or conduct background checks on a volunteer it refers to another organization; those tasks are the responsibility of the receiving organization.

Professional license verification and Department of Justice background checks may be necessary for some functions but will normally be the responsibility of the receiving agency.

Safety is an important component of risk management. Safety of all workers, volunteers and others at the EVC must be addressed. A Safety Officer must examine the facility to be used for the EVC for unsafe or unsanitary conditions and should address any that exist before the EVC is open to the public.

Security is another component of risk management. The level of security in the EVC may vary depending on the type of disaster and other factors. At a minimum, all entering the EVC should be asked to sign in and out. A safe place for EVC staff to store personal belongings should be made available. Security of equipment, supplies and other resources should also be addressed.

Due consideration must be given to the reduction and/or management of stress in the disaster work environment. Stress is an unavoidable component of disaster work. A plan that addresses staff work schedules, breaks, and accessibility to mental health services and Critical Incident Stress Debriefing should be implemented.
Figure 44: FEMA News Photo
Communications

Communications are critical to the successful activation and coordination of responsibilities for managing volunteers. Parties that must communicate include the following:

- Within the jurisdiction, there must be communications between the EVC and the Emergency Operations Center (EOC). Typically these will be located some distance apart.
- The EVC will need to communicate directly with other NGOs regarding their needs for volunteers and any related issues.
- There should be communication between the city, other affected cities and San Diego County in regard to coordination between EVCs activated in various jurisdictions.

In the event that direct communications via telephone is not possible, the EVC will employ other methods of communication, for example:

- Fax
- E-mail
- Digital and voice radios
- Amateur radio operators
- Other radio services
- Runners

FEMA News Photo / Pasty Lynch
Figure 45: FEMA News Photo / Pasty Lynch Consistent and effective communications are essential to all spontaneous volunteer operations!
Activation of Spontaneous Volunteer Management Plan

The Spontaneous Volunteer Management Plan will be activated by decision of the following:

- County Office of Emergency Services

Reasons for activating the Spontaneous Volunteer Management Plan may include but are not limited to the following:

- When the nature of the disaster and/or media coverage of it makes convergence of spontaneous volunteers likely
- When shortages of workers require augmentation of staffing support from outside resources
- When volunteers with particular skills and/or special knowledge of the affected community could enhance relief and recovery efforts

When the order to activate the plan is given, the Spontaneous Volunteer Unit Leader in the Care and Shelter Unit will notify as needed those agencies and organizations tasked with specific implementation roles. Those tasked are as follows:

- Necessary agencies included in established MOU’s.

The chief method for coordinating volunteers is the Emergency Volunteer Center (EVC). The EVC can be set up as a walk-in center, a phone bank, an online process, or a combination of two or more of these strategies.

Through the EVC, each prospective volunteer is referred, based on the volunteer’s qualifications and availability, to an appropriate volunteer opportunity.
Roles and Responsibilities

The primary agency responsible for the jurisdiction-wide mobilization and deployment of volunteers and service programs is National City.

Its roles include the following:

- Prepare and maintain this plan and all associated procedures
- Determine need to activate Spontaneous Volunteer Management Plan at the time of disaster
- Coordinate activation, implementation and demobilization of Spontaneous Volunteer Management Plan
- Coordinate with other agencies and organizations for maximum utilization of limited resources
- Coordinate spontaneous volunteers and service programs to assist the efforts of both governmental agencies and NGOs throughout the affected communities

Figure 46: National City Police Department
Disaster Service Worker Volunteer Program (DSWVP)

The Disaster Service Worker Volunteer Program (DSWVP) is a state funded program that provides workers’ compensation benefits and medical compensation to registered Disaster Service Worker (DSW) volunteers who are injured while performing disaster-related activities or participating in pre-approved training/exercises. It also provides limited immunity from liability to political subdivisions or political entities as well as the DSW volunteer if a civil suit results from an act of good faith while the DSW was providing disaster-related services. Eligibility for the DSWVP is based on a volunteer’s registration with an accredited Disaster Council in accordance with state law.

In order to establish eligibility for DSWVP benefits, the DSW must be registered prior to his or her deployment to participate in disaster-related activities, including pre-approved training. The only exception to the pre-registration requirement is an “impressed volunteer” who is directed/ordered to perform disaster-related duties by an authorized government employee. In addition to the pre-registration requirement, the DSW must be deployed/assigned disaster-related activities by the registering authority. Under no circumstances is a self-deployed volunteer eligible for DSWVP benefits.

The State’s laws and regulations governing the DSWVP specify the need to provide DSWs with adequate training and supervision. The registering authority is responsible for ensuring the disaster training is commensurate with the duties of the DSW. The registering authority may require the DSW volunteer to participate in training as a condition of remaining an active DSW volunteer. For more information on these and other rules and policies governing the DSWVP, see the Governor’s Office of Emergency Services’ publication entitled “Disaster Service Worker Volunteer Program (DSWVP) Guidance” (available at www.oes.ca.gov under Plans and Publications).
Public Information

Dissemination of information to the public near the onset of a disaster about volunteer opportunities and procedures is critical to successful management of volunteers. In the absence of such messages, people may converge at inappropriate sites and/or engage in activities that place themselves and others at risk. Public information messages may not entirely prevent such behavior but can provide an extremely useful service to those who wish to be helpful.

Once the EVC infrastructure is in place, a release should be distributed to the media in coordination with the Operational Area’s Joint Information Center. It is recommended that the EVC organizational infrastructure be in place before sending out the first release.
Demobilization

As the level of volunteer activity decreases, those in charge of the EVC should prepare to demobilize. An effort should be made to address all outstanding issues and transfer any unresolved issues to the appropriate staff or department within the jurisdiction. Lessons learned regarding volunteer management should be captured through debriefing of the EVC’s lead staff and preparation of an after-action report. The lessons learned should be reviewed and evaluated for possible revisions to the Spontaneous Volunteer Management Plan.

A plan for recognizing volunteers (at a minimum, those who rendered services to the jurisdiction but ideally, all who came forward to help the community) should be developed in advance and executed as part of the demobilization process.
Standardization

The procedures, materials and forms developed for this plan are based on tested plans and best practices from a variety of sources. Use of standardized methods and tools facilitates mutual aid. The local jurisdiction may adapt the plan elements to suit local conditions.

Finance

Those responsible for staffing the EVC must track all expenses. This is necessary in order to document costs and account for funds expended in order to maximize any reimbursement that may become available.

In the event the jurisdiction arranges for an outside agency to manage the EVC, the outside agency will track all expenses and provide the appropriate information to the jurisdiction during demobilization. Any reimbursement will depend on the nature of the agreement between the jurisdiction and the agency and the availability of resources.

Technology

The predominant use of technology within the EVC will be for computerized input and storage of information about spontaneous volunteers. There are several reasons for creating a volunteer database:

• A computerized system enables summaries to be created, for example, a daily count of volunteers interviewed and referred. These can be useful for final reports and also for keeping the media informed.

• A computerized system enables EVC staff to search the database for volunteers with particular skills or days/times of availability. For example, three days into the disaster, one could search for people who listed carpentry, building and related skills in order to identify potential candidates for damage assessment teams.

The database format should be designed in advance and should mirror the volunteer intake form that is being used. A separate database file should be established for each disaster at the time of the EVC activation. Confidentiality and privacy of information are important concerns when developing and using a database.

Highly efficient manual systems that serve the same purpose as computerized systems can and should be developed to allow for events where electricity is not readily available.
Staffing the EVC

In large-scale disasters, or disasters that attract a large number of volunteers, it may be necessary to increase the number of staff of the EVC. Ideally, individuals and groups would be assigned and trained in advance. But new staff can also be brought in at the time of the disaster, if necessary. The following are possible resources:

- volunteer managers
- those who work in Personnel/Human Resources
- those who, regardless of department, possess good customer service skills, interact regularly with the public, can make quick decisions and exercise good judgment, and are able to work well under stress and in fast-paced, changing environments
- Spontaneous volunteers who have contacted the EVC. Most people who have some basic skills can be taught to interview other volunteers or to take on other EVC tasks fairly quickly. EVC staff should look for volunteer managers, people with interviewing skills, those who work in the personnel/human resources field, social workers, teachers, trainers, etc.
- Unaffiliated service program groups. Some of their members may be available for 1-3 weeks or longer. Establishing a relationship with one or more service program groups in advance of the disaster would expedite the process.

New staff should be appropriately screened and will require orientation training for their specific tasks, and supervision. Where feasible, have new staff work side-by-side with experienced staff until they have gained proficiency and confidence in carrying out their assignment.

Policies should be established at the outset regarding hours of work, required breaks, shift schedules and other personnel-type issues for all workers in the EVC, both employees and volunteers. Establish some form of identification from the outset for EVC staff – vests, shirts, hats, identification badges, etc. – that will indicate to the public their role at the EVC.
Plan Maintenance

This Spontaneous Volunteer Management Plan is developed under the authority of National City. (insert info here) is responsible for developing, maintaining and drafting revisions to the plan consistent with the jurisdiction’s schedule for updating the Emergency Operations Plan. The plan may also be modified as needed after an incident, exercise or changes in procedures, law, rules or regulations pertaining to volunteer management.
Authorities and References

Authorities
California Emergency Services Act, §8657
Volunteer Protection Act of 1997, U.S. Public Law 105-19

References
San Diego County Office of Emergency Services, County of San Diego Spontaneous Volunteer Management Plan February 2002
Florida Commission on Community Service, Unaffiliated Volunteers in Response and Recovery
Spontaneous Volunteer Unit Leader
Reports to: Care and Shelter Coordinator, Operations Section, EOC

General Duties
• Establish and maintain communications with or relocate to EOC
• Establish and maintain communications with EVC Manager
• Relay requests for volunteers from jurisdiction’s departments to EVC
• Relay requests for resources from EVC to Logistics Section

Action Checklist
• Review the entire Action Checklist.
• Identify yourself as the Spontaneous Volunteer Unit Leader by putting on the appropriate vest with your title.
• Initiate an event log of activities, beginning with notification of the emergency.
• Obtain a status briefing from the Care and Shelter Coordinator. Determine if local emergency has been declared and what are anticipated needs for volunteers.
• Establish communication with Volunteer San Diego and brief on the situation.
• When EVC activation is needed, determine which EVC models is/are most appropriate (walk-in center, phone bank, online process).

• Determine from EVC Manager what resources are needed to initiate EVC operations and relay requests to Logistics Section.

• Determine needs of all EOC sections and branches for volunteers and relay requests to the EVC.

• Ensure that appropriate forms are being used in the EOC and the EVC.

• Monitor resource needs for sustaining EVC operations and relay requests to Logistics Section.

• Assist EVC Manager with demobilization process.

• Maintain all required records and documentation to support the history of the emergency.

**EVC Manager**

Reports to: Spontaneous Volunteer Unit Leader, Care and Shelter Unit, EOC

**General Duties**

• Secure and open the facility for the EVC

• Manage EVC set-up, operations and demobilization

• Request staffing and other resources for EVC operations

• Assign and supervise lead EVC staff and volunteers

• Coordinate press inquiries regarding volunteers with Volunteer San Diego’s PIO

• Maintain close communications with the EOC’s Volunteer Management Coordinator
Action Checklist – EVC Set-up

• Read the entire Action Checklist.

• Identify yourself as the EVC Manager by putting on the appropriate vest with your title.

• Initiate an event log of activities, beginning with notification of the emergency.

• Choose a site for the EVC; a large indoor room with tables and chairs is ideal.

• Verify that the structural integrity of the building has been determined by the EOC. Request a site inspection from the EOC if necessary.

• Determine if power, phone service, water, etc., are available.

• Request assistance from the EOC’s Safety Officer to ensure a safe, secure and sanitary site.

• Request needed resources from EOC, including food and water for staff, phone lines and/or electronic communications equipment, and assignment of amateur radio operator backup to EVC if phone lines are down.

• Obtain Emergency Volunteer Center Supply Kit (see Attachment G for a list of Supply Kit contents).

• Arrange room to allow for foot traffic; establish waiting area near Reception Station.

• Designate stations; clearly mark signs for each station.

• Post EVC signs in visible locations on the outside of the building.

• Designate a separate area or room for training and orientation, if possible.

• Establish mode of communication with the EOC. Utilize early volunteers as runners to deliver messages to the EOC, if necessary.

• Maintain all required records and documentation to support the history of the emergency.
EVC Manager (continued)

Action Checklist – EVC Management

• Read the entire Action Checklist.

• Determine staffing levels. If possible assign at least two people to each station and more if necessary. When assigning more than one person to a station, designate a lead staff to be in charge.

• Note that Safety Officer and Training Officer in most cases are not full-time jobs and can be assigned to other staff.

• Forecast personnel needs and request extra staff if needed.

• Assign early volunteers to provide refreshments and support in the waiting area near Reception Station.

• Determine hours of operation for the public.

• Set staffing shifts. The recommended maximum shift for any employee or volunteer is eight hours. Decisions regarding overtime work (beyond 8 hours a day or 40 hours per week) for jurisdiction employees should be coordinated with Personnel in the Logistics Section of the EOC.

• Plan breaks according to jurisdiction guidelines.

• Schedule brief meetings at beginning and end of day before/after opening the doors to the public to address operational issues and update staff on disaster situation.

• Overlap shifts to help with the transition of information and updates at each station.

• Frequently rotate staff through the most stressful positions, e.g., Receptionist

• If at all possible, designate a break/rest area away from the public to provide a resting area for staff, with water and healthy foods if possible.

• Encourage EVC staff to monitor stress levels, watch for burnout and promote breaks among one another whenever possible.
EVC Manager (continued)

Action Checklist – EVC Demobilization

• Read the entire Action Checklist.
• Start planning for demobilization when beginning EVC operations.
• Work with EOC’s Finance/Administration Section to make sure EVC staffing and operations cost tracking follow FEMA guidelines.
• Determine if and when to transition intake and placement activities to another entity.
• Set a day and time for demobilization and announce to all staff and volunteers.
• If needed, provide critical incident stress debriefing services from professional mental health counselors for EVC staff and volunteers.
• Prepare a brief report on intake and placement statistics for the EOC and your own records.
• Meet with Volunteer Management Liaison to coordinate transition to citywide operations, if applicable.
• Determine where to transition remaining volunteer activities within the jurisdiction (e.g., Volunteer Services, Human Resources).
• Resolve or refer outstanding issues.
• Working with designated PIO, notify local media, emergency services officials and community regarding the deactivation of the EVC.
• Thank volunteers who contributed to EVC operations and/or response efforts in the community. Consider also recognizing volunteers after the event (e.g., phone call, letter from the mayor, an article or ad publishing their names in a local newspaper, gift of commemorative item).
Receptionist
Reports to: EVC Manager

General Duties
• Establish and manage Reception Station
• Greet visitors and field inquiries
• Distribute forms to potential volunteers
• Direct people with non-volunteer related inquiries to the appropriate source
• Post urgent volunteer needs

Action Checklist
• Read the entire Action Checklist.
• Identify yourself as the Receptionist by putting on the nametag with your title.
• Create a Community Resources and Referral list for directing non-volunteer related inquiries, e.g., where to donate, where to get help. Update information daily or as new information becomes available.
• Determine where donations are going in your community; consult with your EOC or review jurisdiction’s policy on donations management.
• Systematically determine each person’s need as soon as they arrive at the EVC.
• Refer those with non-volunteer related inquiries to the appropriate agency or organization.
• Refer representatives of agencies or departments that need volunteers to the Volunteer Opportunities Desk.
• Give those who wish to volunteer, including spontaneous volunteers and unaffiliated service program members, a brief explanation of how the EVC works and a Disaster Volunteer Form to fill out in the waiting area.
• Once they have completed the Disaster Volunteer Intake Form, direct the potential volunteer to the Intake and Referral Station or back to the waiting area, as necessary.
• If there are large numbers of people in the waiting area, field questions regarding the status of their application. Stay in close contact with the EVC Manager to keep updated on the availability of positions.
Receptionist (continued)

- If there is a need to recruit for a particular skill, post signs in the waiting area or near the Reception Station, as directed by the EVC Manager.
- Supervise greeters and refreshment servers to make sure they are giving out accurate information to the public.
- During a large-scale activation, activity at this station can be intense and prone to causing staff burnout. Enforce breaks and rotate new staff into this station as frequently as possible.

Interviewer

Reports to: EVC Manager

General Duties

- Establish and manage the Intake and Referral Station
- Conduct a brief interview with each prospective volunteer
- Refer volunteer to an appropriate opportunity
- Confirm that volunteer has filled out all the required paperwork
- Register volunteers who are placed with the jurisdiction

Action Checklist

- Read the entire Action Checklist.
- Identify yourself as the Interviewer by putting on the nametag with your title.
- Initiate an event log of activities, beginning with notification of the emergency.
- Make sure the Disaster Volunteer Intake and Referral Form (Attachment A) is filled out correctly. Assist prospective volunteer, if necessary.
- Conduct a brief
- Review with volunteer:
  - priority skills and abilities
  - whether or not they are 18 years of age
  - physical limitations
  - language skills
  - availability
Interviewer (continued)

- Assess volunteer’s priority skills, review options and match volunteer with most appropriate opportunity.
- Briefly explain assignment to volunteer.
- Note referral(s) on Disaster Volunteer Intake and Referral Form (Attachment A).
- If possible, give volunteer a photocopy of Disaster Volunteer Intake Form. If not possible, retain original form.
- If volunteer is being referred to a position with the jurisdiction, send volunteer to the Government Registration Unit.
- If you have concerns during the interview, DO NOT place the volunteer. Inform volunteer you will get back to him or her and consult with the EVC Manager.
- Document any notes, questions or concerns you have about the volunteer in the Registration Station logbook.
- If unable to place volunteer at that time, explain situation and give them an idea of when you will call back or when they can check back with you.
- If volunteer is offering resources, determine resource availability and conditions of use.
- Refer volunteer resources to appropriate agency, organization or field site.

Registrar

Reports to: EVC Manager

General Duties

- Establish and manage the Volunteer Registration Station.

Action Checklist

- Obtain completed Disaster Volunteer Intake Forms from Intake and Referral Station.
- Confirm that the position within the jurisdiction to which the volunteer was referred is still available.
- Conduct a brief secondary interview of volunteer, utilizing the Volunteer Interview Guide (see Attachment H), with questions relevant to the position.
- If you have concerns during the interview, DO NOT place the volunteer. Inform volunteer you will get back to them and consult with the EVC Manager.
- Complete any other necessary paperwork required.
Registrar (continued)

- Instruct volunteer on next steps:
- Where and when to report for orientation and/or training
- Who within local jurisdiction will be their supervisor
- Give volunteer any necessary safety information, timecards, etc., pursuant to jurisdiction’s volunteer management policies and procedures
- Periodically notify Volunteer Data Coordinator of placements completed.

Volunteer Opportunities Coordinator

Reports to: EVC Manager

General Duties

- Establish and manage the Volunteer Opportunities Desk
- Serve as liaison to the jurisdiction’s departments and NGOs that need volunteers
- Relay volunteer requests to EVC Interviewers
- Supervise Data Coordinator
- Assist NGOs and departments with disaster volunteer management issues

Action Checklist

- Read the entire Action Checklist.
- Identify yourself as the Volunteer Opportunities Coordinator by putting on the nametag with your title.
- Ask the Reception Station to direct requests for volunteers from agencies to your station.
- Ensure that messages from the EOC regarding requests for volunteers from the jurisdiction reach you.
- Assist agency or department representatives with completion of Disaster Volunteer Request Forms (Attachment C) for volunteers.
- Number Disaster Volunteer Request Forms sequentially in the order received.
- Send information regarding volunteer requests to EVC Interview Station as soon as they have been received.
- Forward completed Disaster Volunteer Request Forms to the Data Coordinator.
Volunteer Opportunities Coordinator (continued)

- Alert EVC Interview Station if there is an urgent need for people with particular skills such as interpreters or nurses. Also notify EVC Manager so special recruitment procedures can be considered.

- Confirm that each outside agency understands that disaster volunteers must register with that agency for insurance and liability purposes.

- When notified by Data Coordinator than an opportunity appears to have been filled, notify requesting agency to determine whether enough volunteers have responded or whether the job should remain open.

- Inform Interviewers when a job has closed.

- Link agencies and departments that have disaster volunteer management needs with available resources (many agencies may not have developed procedures for working with disaster volunteers and may need some assistance and guidance).

- In the early stages of the disaster, contact agencies by any means possible to identify volunteer opportunities. Outreach to agencies can be conducted any time this station is not busy with immediate incoming requests. As communications become available, Volunteer Opportunities staff can utilize phone, fax, the Internet and runners with cellular phones to determine needs.

**Data Coordinator**

Reports to: Volunteer Opportunities Coordinator

**General Duties**

- Establish and manage Data Coordination Desk
- Enter/manage data on volunteers
- Enter/manage data on agency requests
- Establish and manage tracking process for volunteer needs and placements

**Action Checklist**

- Read the entire Action Checklist.
- Identify yourself as the Volunteer Data Coordinator by putting on the name tag with your title.
Data Coordinator (continued)

- Collect completed Disaster Volunteer Intake Forms (Attachment A) from Interviewers Station. Sort into piles, one for referred volunteers, one for pending. Return pending forms to Interviewers Station for follow-up.

- Devise a manual or computerized system for recording number of volunteers referred to each volunteer opportunity.

- If a manual system is utilized, hold this information for future database entry.

- If database capabilities exist, input all volunteer information from Disaster Volunteer Intake Forms.

- Inform Volunteer Opportunities Coordinator immediately when it appears enough volunteers have been referred to a particular job.

- Assist Volunteer Opportunities Coordinator by entering data on agency requests.

- Run daily report on number of volunteers processed, number of volunteer referred and to which agencies, and any other pertinent data.

- When EVC is demobilized, retain forms for the jurisdiction.

Figure 48: FEMA News Photo
FEMA News Photo

Training Officer Reports to EVC Manager

General Duties:

- Plan orientation and training for new staff
- Execute training as often as needed
- Maintain records on who was trained, when and on what Action Checklist
- Read the entire Action Checklist.
- Identify yourself as the Training Officer by putting on the nametag with your title.
- Coordinate orientation/training schedule with EVC Manager.
- Plan orientation and training for new EVC staff.
- Include safety information in curriculum.
- Update orientation and training curriculum as needs, policies or procedures change.
- Issue ID badges to new EVC staff.
- Create new file for each EVC staff volunteer.
- File volunteer’s pink copy of Disaster Volunteer Intake Form with training record.
- Assign new volunteers to a supervisor.
- Address re-training as needed.

Figure 49: FEMA News Photo
Attachments

Attachment A – Disaster Volunteer Intake and Referral Form: The initial document used to record volunteer skills, availability, etc., and the basis for referring volunteers to appropriate opportunities. It can be adapted for local use.

Attachment B – Disaster Service Worker Registration Form: State DSW form for use by local government in registering volunteers for disaster-related activities within the jurisdiction of the registering authority. The form can be adapted for local use and contains the loyalty oath required by the State of California to register Disaster Service Worker volunteers.

Attachment C – Disaster Volunteer Request Form: For use by agencies and/or internal departments to request volunteer assistance from the EVC. It identifies each volunteer opportunity by title, brief description, type of work, hours needed, and other pertinent details.

Attachment D – Sample Disaster Volunteer Position Description: Suggested format for internal use by any agency for designing and defining volunteer opportunities. It is beneficial to create as many of these as possible prior to a disaster.

Attachment E – Volunteer Time Sheet: To be utilized at the EVC for tracking staff volunteer hours. Can also be used at other locations where volunteers are working; designed for logging in multiple volunteers on a daily basis.

Attachment F – Emergency Volunteer Center Layout: A basic layout for setting up stations at the Emergency Volunteer Center (EVC). It can be adapted to accommodate room size, configuration and other constraints.

Attachment G – Emergency Volunteer Center Supply Kit: A list of suggested supplies for the Emergency Volunteer Center. It is recommended that a EVC Supply Kit be stocked and stored at each facility that could serve as a EVC for the jurisdiction in the event of a disaster.

Attachment H – Glossary: List and definitions of commonly used terms in disaster volunteer management.
Attachment I – Typical Jobs for Spontaneous Volunteers: A list and brief descriptions of activities that can be performed by volunteers with a minimum of training.

Attachment J – MOU between participating agencies and Volunteer Center: Illustrates possible relationship and understandings between a city and a volunteer center.

Attachment K – MOU between County and Volunteer Center: Illustrates possible relationship and understandings between a county and a volunteer center.

Attachment L – Trained and Affiliated Volunteer Groups: Lists all trained service programs and groups that are affiliated with the jurisdiction, the SEMS Section and Branch/Unit with which they are affiliated, and how they are activated.
Disaster Volunteer Registration Form

(Please print clearly. Submit at Volunteer Reception Center or email/fax see reverse)

Mr. __ Mrs. __ Ms. __ Name__________________________ Birth Date__________ Day Phone__________

E-mail address______________________________________________________________ Evening Phone__________

Home Address_________________________________________ City____________________ ST_____ Zip___________

Emergency Contact__________________________________ Relationship______________ Emergency Phone__________

Your Occupation____________________________________ Employer_______________________________________________

Business Address________________________________________ City____________________ ST______ Zip___________

Are you a year-round resident? ___Yes ___No Months you are available_______________________________

If you have any health limitations, please explain__________________________________________________________________

I am willing to volunteer in:    ____this county    ____a neighboring county    ____anywhere in the state    ____anywhere in the U.S.

Are you currently affiliated with a disaster relief agency?  If yes, name of agency:________________________________________

Special skills and/or vocational/disaster training:__________________________________________________________________

________________________________________________________________________________________________________

________________________________________________________________________________________________________

SKILLS: Please check all that apply.

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<td>___ Clerical – filing, copying</td>
<td>___ Car</td>
<td>___ Loading/shipping</td>
<td>___ Chainsaw</td>
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<td>___ Sorting/packing</td>
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<td>___ Services</td>
<td>___ ATV</td>
<td>___ Operate equipment –</td>
<td>___ Other:____________________</td>
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<td>___ Food</td>
<td>___ Own off-road veh/4wd</td>
<td>Types:_________________</td>
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<td>___ Assistance to elderly.</td>
<td>___ Own truck, description:</td>
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<td>___ Child care</td>
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Attachment A
Release of Liability Statement

I, for myself and my heirs, executors, administrators and assigns, hereby release, indemnify and hold harmless [Coordinating Agency, local governments, State of _________, the organizers, sponsors and supervisors of all disaster preparedness, response and recovery activities (check with local Risk Management and Emergency Management Departments re who should be included)] from all liability for any and all risk of damage or bodily injury or death that may occur to me (including any injury caused by negligence), in connection with any volunteer disaster effort in which I participate. I likewise hold harmless from liability any person transporting me to or from any disaster relief activity. In addition, disaster relief officials have permission to utilize any photographs or videos taken of me for publicity or training purposes. I will abide by all safety instructions and information provided to me during disaster relief efforts.

Further, I expressly agree that this release, waiver, and indemnity agreement is intended to be as broad and inclusive as permitted by the State of _________, and that if any portion thereof is held invalid, it is agreed that the balance shall, notwithstanding, continue in full legal force and effect.

I have no known physical or mental condition that would impair my capability to participate fully, as intended or expected of me.

I have carefully read the foregoing release and indemnification and understand the contents thereof and sign this release as my own free act.

Signature________________________________________________    Date______________
Guardian, if under 18______________________________________     Date______________

Volunteer’s credentials were recorded as presented. Verification of credentials and any background check required are the responsibility of the receiving agency.

This volunteer was referred to the following agencies:

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<th>Date</th>
<th>Need #</th>
<th>Agency</th>
<th>Contact Name</th>
<th>Contact’s phone #</th>
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Return this completed form to:

(Add Coordinating Agency name, address, email address and fax number here)

Notes:

_________________________________________________________________________________________________________
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Attachment A
DISASTER SERVICE WORKER REGISTRATION
LOCAL AND STATE INFORMATION

Loyalty Oath under Code of Civil Procedure §2015.5 & Title 19, Div.2, Chap.2, Sub-Chap.3, §2573.1

This block to be completed ONLY by government agency or jurisdiction

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<td>EXPIRATION DATE:*</td>
<td>DSW CARD ISSUED: NO YES #:</td>
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<td>PROCESSED BY:</td>
<td>DATE: TO CENTRAL FILES:</td>
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ATTACH PHOTOGRAPH HERE

TYPE OR PRINT IN INK (HIGHLIGHTED AREAS REQUIRED BY PROGRAM REGULATIONS)

NAME: LAST FIRST MI SSN:

ADDRESS: CITY: STATE ZIP:

COUNTY: HOME PHONE: WORK PHONE: PAGER: E-MAIL: DATE OF BIRTH: (optional)

DRIVER LICENSE NUMBER: (if applicable) DRIVER LICENSE CLASSIFICATION: A B C LICENSE EXPIRATION DATE:

PROFESSIONAL LICENSE: (if applicable) FCC LICENSE: (if applicable) LICENSE EXPIRATION DATE:

IN CASE OF EMERGENCY, CONTACT:

PHYSICAL IDENTIFICATION: HAIR: EYES: HEIGHT: WEIGHT: (optional) BLOOD TYPE: (optional)

COMMENTS:

Government Code §3108-§3109:

Every person who, while taking and subscribing to the oath or affirmation required by this chapter states as true any material matter which he knows to be false, is guilty of perjury, and is punishable by imprisonment in the state prison not less than one nor more than 14 years. Every person having taken and subscribed to the oath or affirmation required by this chapter, who, while in the employ of, or service with, the state or any county, city, city and county, state agency, public district, or disaster council or emergency organization advocates or becomes a member of any party or organization, political or otherwise, that advocates the overthrow of the government of the United States by force or violence or other unlawful means, is guilty of a felony and is punishable by imprisonment in the state prison.

LOYALTY OATH OR AFFIRMATION (GOVERNMENT CODE §3102)

I, _______________________________________________________, do solemnly swear (or affirm) that I will support and defend the Constitution of the United States and the Constitution of the State of California against all enemies, foreign and domestic; that I will bear true faith and allegiance to the Constitution of the United States and the Constitution of the State of California; that I take this obligation freely, without any mental reservations or purpose of evasion; that I will well and faithfully discharge the duties upon which I am about to enter. I certify under penalty of perjury that the foregoing is true and correct.

___________  __________________________________________________________ _____________________________________________________
DATE                                    SIGNATURE   IF UNDER 18 YEARS OLD, SIGNATURE OF PARENT/GUARDIAN

SIGNATURE OF OFFICIAL AUTHORIZED TO ADMINISTER LOYALTY OATH  TITLE

Registration for the active DSW volunteer is effective for the period the person remains a member with that organization; for a volunteer registering for an intermittent or a single event, the expiration date is set at the discretion of the accredited Disaster Council but not to exceed one year. (Govt. Code §3102)

OES 2000 Rev. 9/00 Entered into OES data base: Date: ___________

Attachment B
Request for Volunteers
(Complete one form for each job description.)

Event name/# ___________________ Today’s Date: ____________ Start Date: ____________ End Date: ____________

Title of Volunteer Position: _________________________________________________________________

Agency Name: ____________________________________ Agency Contact: ________________________
Agency Address: _________________________________________ Phone: _______________ Ext: ______

Duties: ________________________________________________________________________________
_______________________________________________________________________________________

Volunteers must be physically able to: _______________________________________________________

Number Needed: ____________ Dates/Hrs Needed:____________________________________________

For this position, volunteers must be at least ____ years of age.

Skills Needed

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Follow-up Contacts with Requesting Agency / Clarification of Need

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Volunteers Referred

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Request closed on ____/____/____ Completed ☐ No placements possible ☐ No longer needed ☐

Attachment C
San Diego County

Sample Disaster Volunteer Position Description

Volunteer Position Title: Sandbagging Assistant

Department: Public Works

Supervisor: Director of Public Works or as assigned

Site/Work Location: City Corporation Yard, or various as assigned

DSW Classification: Laborer

Time/Shift Commitment: 2-6 hours as assigned

Tasks/Duties: Assist Public Works staff with filling and loading sandbags for flood control efforts within the city.

Desired Skills/Qualifications: Must be able to lift 50 pounds Good physical health Ability to work in a team environment Able to follow specific instructions

Training Required: Procedural training for filling sandbags will be required for this position

Safety Training Conducted by: Public Works Staff
# VRC Coordinating Agency

**Employee** Sign-in / Sign-out Record

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Attachment E
### VRC Volunteer Sign-in / Sign-out Record

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Attachment E
Attachment F
**Emergency Volunteer Center Supply Kit**

These supplies are for activation of the Emergency Volunteer Center. Adapt as necessary to supplies already stocked in the jurisdiction (e.g., first aid, equipment).

**Forms, Maps, Signs, etc:**
- EVC plan
- Disaster Volunteer Intake and Referral Forms
- Disaster Service Worker Registration Forms
- Disaster Volunteer Request Forms
- Disaster Volunteer Time Sheets
- Street maps of city
- Thomas Guide for county
- Pre-printed EVC signs
- Pre-printed EVC signs with directional arrows
- Pre-printed 8x10 signs for identifying the different stations
- Cones
- Vests, hats, shirts, badges or preprinted name tags to identify EVC staff

**Office Supplies:**
- Large Post-It flipcharts
- Poster board and/or cardboard and large marker pens
- Clipboards (3)
- Dry erase board and dry erase pens
- Eraser
- Paper
- R5 cards (pack of 100) and file box
- File folders and labels (I dozen)
- Accordion or portable file box
- Spiral notebooks (6)
- Envelopes
- Highlighter pens
- Pens & pencils (2 dozen each)
- Pencil sharpener
- Tape (masking, scotch & duct)
- Stapler and staples
- Scissors
- Paper clips
- Push pins, etc.
- Post-Its
- I Post-It fax pad
- Disposable
- Polaroid camera and film
- Supplies for Spontaneous Volunteer ID Badges (TBD)

**Equipment & Supplies:**
- Fax machine
- Laptop computer
- Cell phones
- Phones
- Copy machine
- Large taTp for outdoor set-up

**Preparedness Items (can be in a separate kit or with above supplies):**
- First aid kit
- Flashlights
- Portable radio
- Extra batteries
- Water
- Lightsticks
- Disposable wipes
- Emergency blankets

Attachment G
Glossary

(ACS) Auxiliary Communications Service - Volunteer specialists provide emergency administrative, logistical and tactical communications to the sponsoring government. The ACS can serve as the RACES during national emergencies.

(ARES) Amateur Radio Emergency Service - A service within the American Radio Relay League (ARRL), a private organization with a long history of training for emergency communications. Under certain conditions may serve as an ACS or RACES unit.

(DSW Volunteer) Disaster Service Worker Volunteer - Any person registered with an accredited Disaster Council for the purpose of engaging in disaster service without pay or other consideration.

(EMO) Emergency Management Organization - City/county staff assigned to the EOC to manage the response to a local disaster or emergency.

(EOC) Emergency Operations Center - The headquarters where emergency operations are managed by the DES and city/county staff assigned to fill roles in the Incident Command Structure.

(EOP) Emergency Operations Plan - A plan that describes principles, policies and methods to be applied in carrying out emergency operations and rendering mutual aid during emergencies.

(EVC) Emergency Volunteer Center - A walk-in center, phone bank or other means of referring the public to disaster volunteer opportunities. Can be administered by local government, an Operational Area or non-governmental organization.

(FEMA) Federal Emergency Management Agency - Agency of the US government tasked with disaster mitigation, preparedness, response and recovery planning. FEKA, bears responsibility for distributing federal relief funds to qualified applicants and allocating national resources to relief efforts.

(ICS) Incident Command System - The Incident Command System is a key component of the State of California's Standardized Emergency Management System (SEMS). ICS allows agencies throughout California to communicate using common terminology and operating procedures. ICS clearly defines staff roles, responsibilities, and lines of communication.

Attachment H
(OES) **Office of Emergency Services** - A city, county or state office designated with the responsibility for managing emergency services. Typically includes everyday oversight responsibility for preparedness, response, recovery and mitigation.

(POC) **Point of Contact** - A designated person or agency to contact regarding a specific issue or topic.

(RACES) **Radio Amateur Civil Emergency Service** - A communications service provided by amateur radio volunteers to city/county EOCs, hospitals and other locations during a disaster. RACES volunteers are registered as DSW volunteers and must be activated by local government.

(SEMS) **Standardized Emergency Management System** - California’s standardized system for managing disasters. SEMS uses the same operational procedures across jurisdictions so they can better interact and coordinate for faster mobilization, deployment and use of resources.
Typical Jobs for Spontaneous Volunteers

**Clean-up/Inside:** pick up and dispose of debris, clean furnishings and equipment, replace library books and other fallen items, do maintenance and janitorial work

**Clean-up/Outside:** clear roads blocked by toppled trees, remove and haul away fallen brick and other debris from sidewalks and roadways, shovel mud, fill sandbags

**Clerical Support:** assist with range of clerical duties including copying, faxing, mailing, acknowledging donations

**Damage Assessment:** go door to door in a designated area, observing and noting exterior damage

**Data Entry:** enter information on computer databases

**Donated Items:** staff designated collection and distribution sites, inventory goods

**Drivers:** transport people to work sites, deliver goods, drive courier routes

**Food Preparation Crews:** cook hot food, prepare cold food (sandwiches, etc.), serve food and beverages at fixed and mobile sites

**Greeters/Receptionists:** greet public, give information, refer to appropriate worker or location

**Interpreters:** assist in a wide variety of settings, wherever and whenever bilingual workers are unavailable

**Phone Bank Workers:** answer phones, provide information, make referrals

Researchers: call or visit agencies/work sites to assess needs and report back

Runners: take messages between agencies, work sites, command centers

**Security:** check IDs at entrances and exits to facilities where security is vital to safe, smooth operations

**Sorters/Packers/Loaders:** sort, pack and/or load goods (food, clothing, etc.)

**Training:** those with detailed knowledge of subject area and proven training ability, train other volunteers

Attachment I
Sample

MEMORANDUM OF UNDERSTANDING BETWEEN THE CITY OF SUNNYVALE AND THE VOLUNTEER CENTER OF SILICON VALLEY

This Memorandum of Understanding is entered into by and between the City of Sunnyvale and the Volunteer Center of Silicon Valley.

Purpose

The purpose of the Memorandum of Understanding is to define a cooperative working relationship between the City of Sunnyvale and the Volunteer Center of Silicon Valley for the purpose of registering and referring convergent or spontaneous, unaffiliated volunteers for the City of Sunnyvale immediately following a major emergency or disaster. This Memorandum will outline how the Volunteer Center will render assistance to provide this service following a major disaster to the City of Sunnyvale.

The Role of the Volunteer Center

When activated, the Volunteer Center has one distinct role in disaster response in Santa Clara County. As a referral organization working with 920 of the more than 2500 nonprofit organizations in Santa Clara County, the Volunteer Center will provide services to register and refer volunteers immediately following a major emergency or disaster. The Volunteer Center has developed a disaster response plan to manage a coordinated system for deploying volunteers to government and nonprofit organizations working closely with the 15 municipal jurisdictions and the county through the Santa Clara County Emergency Manager’s Association.

The Volunteer Center will consider any request to activate during both the response and recovery periods following a major disaster. Representatives of the City of Sunnyvale Office of Emergency Services (OES) may request the Volunteer Center to activate. The Volunteer Center executive staff will determine activation capabilities based on assessment of available staff and resources. The Volunteer Center will maintain its independent authority to determine activation and will make every effort to respond to a request for activation within 24 hours from the time of request.

The Volunteer Center will act as a referral agent only and will not be responsible for screening volunteers. The City of Sunnyvale, in utilizing a disaster volunteer referred by the Volunteer Center, assumes liability for working with the volunteer and is responsible for screening and determining if the volunteer is appropriate for their organization. This remains true for any organization to which the Volunteer Center refers volunteers, including all government and public service organizations.

Attachment J
Sample

MEMORANDUM OF UNDERSTANDING BETWEEN THE CITY OF SUNNYVALE AND THE VOLUNTEER CENTER OF SILICON VALLEY

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for screening and determining if the volunteer is appropriate for their organization. This remains true for any organization to which the Volunteer Center refers volunteers, including all government and public service organizations.

**Methods of Cooperation**

The Volunteer Center is incorporated into many municipal disaster plans and the county disaster plan and will support emergency response organizations by providing a system for referring and requesting convergent and/or spontaneous, unaffiliated volunteers (SUVs). Convergent and/or spontaneous, unaffiliated volunteers are those volunteers who are not pre-trained but come forward at the time of a disaster to offer their services to help with relief and recovery efforts. If the Volunteer Center Disaster Plan is activated, the Volunteer Center will set-up a walk-in Emergency Volunteer Center and/or a phone bank system to meet these needs throughout Santa Clara County. The Emergency Volunteer Operations Center will be located on the first floor of the United Way building at 1922 The Alameda in San Jose. If these facilities are uninhabitable, the county or a local municipality may offer an alternate site. Based on the scope and location of the disaster, the Volunteer Center may set up satellite centers to meet the needs of different regions in the county.

The City of Sunnyvale may help the Volunteer Center provide these services by providing alternate locations, and, if necessary, equipment and supplies for operating an Emergency Volunteer Operations Center.

The Volunteer Center will communicate with local government Emergency Operations Centers (EOC) via phone, amateur radio, messenger and/or in person. In a countywide event involving multiple jurisdictions, the Volunteer Center may send a liaison to the county EOC or in a localized event, may send a liaison to Sunnyvale’s EOC.

This coordination between the City of Sunnyvale and the Volunteer Center of Silicon Valley does not impose any administrative authority or fiscal control by government or its emergency organizations over the Volunteer Center, its policies, volunteers or employees; nor does it empower the Volunteer Center to encroach upon, invade, or substitute for local government statutory obligations to plan, prepare for and respond to, disaster situations within its jurisdictions.

Nothing in this agreement shall serve to limit the ability of the City of Sunnyvale to recruit or use volunteers on any basis.
Cost Recovery Section
In the event that the City of Sunnyvale declares a local emergency, and obtains a Gubernatorial and/or Presidential declaration, the Volunteer Center may be eligible for recovery of documented costs beyond normal operating expenses as deemed appropriate by administering state and federal agencies. The City of Sunnyvale Office of Emergency Services will assist with this recovery of documented costs.

MOU Costs
The City of Sunnyvale shall not be liable for any of the operating expenses of the Volunteer Center, emergency or otherwise as a result of this MOU. The Volunteer Center will pay for its own normal operating expenses and shall receive no compensation from the City of Sunnyvale.

Term of Memorandum
This Memorandum of Understanding will be in effect as of the date below and shall remain in effect until June 30, 2008 or 30 days after written notification from either party that they desire to terminate the MOU. Either the five-year term or notification of termination from either party, whichever occurs first, shall terminate the MOU.

Indemnification
The parties agree that all losses or liabilities incurred by either Party as a result of the Party’s performance of its responsibilities under this MOU shall not be shared pro rata but instead the parties agree that each Party shall hold the other harmless from any claim, expense or cost, damage or liability arising out of, or in connection with, the performances of its responsibilities pursuant to this MOU.

Amendments
Amendments to the terms and conditions of this MOU shall be effective only upon mutual agreement in writing by the parties hereto. The City of Sunnyvale Office of Emergency Services has the authority on behalf of the City of Sunnyvale to execute any amendments pertaining to the operational issues of this agreement.

Attachment J
Independent Contractor

The Volunteer Center shall be solely responsible for the acts and omissions of its officers, agents, employees, contractors, and subcontractors, if any. Nothing herein shall be considered as creating a partnership or joint venture between this local government and the Volunteer Center. No person performing any of the work or services described hereunder shall be considered an officer, agent, servant, or employee of a local government, agency, nor shall any such person be entitled to any benefits available or granted to local government employees.

Other Agreements

This MOU places no restrictions on either party from participation in similar agreements and/or activities with other public or private entities.

Insurance

Each party shall maintain its own insurance coverage, through commercial insurance, self-insurance or a combination thereof, against any claim, expense, cost, damage or liability arising out of the performance of its responsibilities pursuant to this MOU.
Notices

All notices required to be given pursuant this MOU shall be in writing and shall be delivered in person, delivered by electronic facsimile, or deposited in the United States mail, certified mail, return receipt requested, addressed to the parties as set forth below:

City of Sunnyvale
Office of Emergency Services
P.O. Box 3707
700 All America Way Sunnyvale, CA 94088-3707 PH: [generic number]
FAX:
Volunteer Center of Silicon Valley 1922 The Alameda, Suite 100 San Jose, CA 95126
PH (408) 247-1126
FAX (408) 247-5805

In Witness Whereof, the City of Sunnyvale, and the Volunteer Center of Silicon Valley have executed this MOU on the dates indicated below.

Entered into agreement by:

Attachment J
VOLUNTEER CENTER OF SONOMA COUNTY
EMERGENCY RESPONSE PLAN
COUNTY OF SONOMA

I. PURPOSE

A. A private nonprofit agency, the Volunteer Center acts as a clearinghouse for the recruitment and placement of volunteers throughout Sonoma County.

B. As appropriate during and immediately following a disaster the Volunteer Center will be responsible for establishing Volunteer Reception Center(s) and/or a phone bank which will recruit and refer convergent volunteers with government and nonprofit agencies.

C. County of Sonoma provides a range of public services and anticipates needing volunteers to assist with the provision of these services. The EOC Human Resources Coordinator designates the Volunteer Program Specialist to act as liaison with the Volunteer Center.

II. ACTIVATION OF PLAN

A. Upon direction from the County Volunteer Program Specialist, Department of Emergency Services, or Human Resources Department, the Volunteer Center of Sonoma County will proceed to recruit volunteers, match these convergent volunteers to appropriate tasks, and maintain accurate records of volunteers referred.

B. In the event of a catastrophic disaster where large numbers of volunteers are needed, the Volunteer Center shall establish Volunteer Reception Centers (VRC) and/or a phone bank to facilitate the timely recruitment and referral of volunteers where necessary in Santa Rosa, Petaluma, Rohnert Park, Sonoma and/or other locations as resources permit.

III. ORGANIZATION

The Volunteer Center of Sonoma County is wholly responsible for the effective operation of the Volunteer Reception Centers (VRC) in Santa Rosa, Rohnert Park, Petaluma and Sonoma. If resources permit, VRC's will be set up in other locations upon direction from the Department of Emergency Services. Should it become necessary (as in the event of massive communications interruption) for the County HR Director or his/her designee to establish a VRC utilizing Volunteer Managers, the Volunteer Center will be notified as soon as possible. Upon arrival of Volunteer Center staff, control of the VRC will be relinquished.

Attachment K
To ensure effective use of all convergent volunteers, offers of service received by the County Emergency Operations Center and the Volunteer Center will be referred to the appropriate location based on a priority assigned by the County's Human Resources Coordinator or designee. In the event the County EOC is activated, the County EOC will establish priority for all volunteer requests.

IV. COST RECOVERY

In the event the County of Sonoma is declared an official disaster area, the Volunteer Center will be eligible for recovery of documented costs beyond normal operating expenses as deemed appropriate by administering state and federal agencies. The County of Sonoma will assist with this recovery of documented costs. Bill should be directed to the County Human Resources Department.

For County of Sonoma:

[Signatures]

For Volunteer Center of Sonoma County:

[Signatures]

Attachment K
Trained and Affiliated Volunteer Groups

The following is a list of all trained volunteer groups that are affiliated with the jurisdiction, the SEMS Section and Branch/Unit with which they are affiliated, and how they are activated.

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Attachment L


**Work Cited**


http://www.ushahidi.com/products

http://www.ushahidi.com/products/ushahidi-platform

https://wiki.ushahidi.com/display/WIKI/System+Requirements

http://vizcenter.sdsu.edu/vizcenter