

San Mateo County Coastside Tsunami-Preparedness Assessment Report

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Executive Summary

On March 11, 2011, residents of Half Moon Bay and nearby communities responded to a voluntary tsunami evacuation warning immediately following the massive 8.9-magnitude earthquake and tsunami in Japan. By most accounts, response to this warning went fairly smoothly, but there were several problems that prompted Silicon Valley Community Foundation to commission a community disaster preparedness assessment.

The purpose of the assessment was to review the extent to which recommendations from a 2006 San Mateo County Civil Grand Jury report had been addressed; highlight any new problems that were identified through the March 11 warning and evacuation; and, make additional recommendations for improvements to the community response.

The community foundation hired a consultant, Regina Neu, to conduct the assessment. She interviewed close to fifty key informants, including government officials, public-safety officers, first responders, school-district officials and nonprofit leaders between July and October 2011. She also reviewed dozens of related documents, websites and reports. Based on her research, three key priority areas emerged: communications, resources and training.

Coordinated communication is critical at the onset and throughout any disaster, but perhaps even more so in the case of a tsunami when people need as much time as possible to evacuate and then need to know when it is safe to return to their homes. The March 11 evacuation highlighted the need for a consistent and clear path for information dissemination through the media and grassroots organizations to local communities, particularly to vulnerable and isolated populations such as seniors and people with disabilities. It also pointed out that there is not a clearly understood chain of command or protocol, which further impeded effective communications.

Resources in coastal communities are inadequate. Severe budget cutbacks have caused funding and staffing reductions at both government and nonprofit agencies, making it difficult to implement and maintain disaster preparedness programs, services and supplies. There are two evacuation shelters located at the two high schools and several emergency-supply trailers on the coastside, but they lack sufficient or safe food, water and other emergency supplies and equipment.

While there are many disaster-preparedness and safety trainings available through government and nonprofit organizations, people interested in attending these trainings often cannot find out who provides them or when and where they are offered. Follow-up training is minimal and inconsistent.

Focusing on the above priority areas, the following recommendations have been developed. Further detail on each recommendation can be found in the body of the report.

- Establish an **annual disaster preparedness day** for coastside residents to address issues that are specifically relevant to them, such as tsunamis, animal rescue and wilderness search and rescue.

- Hold an **annual convening to review and provide structure for on-going educational outreach on disaster preparedness protocol** for coastside nonprofits, neighborhood groups and the faith-based community to meet with government agencies.
- Develop a **Spanish-language communication protocol**, beyond the distribution of disaster-preparedness brochures, to get alerts to the radio and television media as well as organizations and programs that are trusted and utilized by Spanish-speaking residents.
- Form a **Voluntary Organizations Active in Disasters (VOAD)** for San Mateo County with clear coastside representation. This can be established and managed either by a regional organization such as THRIVE (San Mateo County’s Alliance for Nonprofits) or the American Red Cross.
- Provide **funding for supplies and procurement and repair of emergency equipment** for shelter sites and emergency trailers.
- Establish and maintain an **emergency-preparedness database** that is centralized, updated and accessible to key first responders.
- Provide support to standardize local **Community Emergency Response Teams (CERT)**¹ training, follow up and maintenance of the program. The CERT program is the standard for first-responder training at the neighborhood level and helps promote self-sufficiency and community resiliency.
- Hire an **emergency preparedness coordinator** to act as a liaison at the local level with the government, nonprofit and community groups to establish consistency, training and maintenance of emergency preparedness programs at the local level.

Protecting coastside residents is important to the community foundation. Therefore, we will be discussing immediate, short-term and longer-term actions that we, and others, can take. In light of the current fiscal realities, however, we recognize that implementation of all of these recommendations is not feasible, but hope that they can be prioritized through community conversations and addressed as resources become available.

¹ The FEMA-approved Community Emergency Response Team (CERT) program educates people about disaster preparedness for hazards that may impact their area and trains them in basic disaster response skills, such as fire safety, light search and rescue, team organization and disaster medical operations.

Introduction

On March 11, 2011, residents of Half Moon Bay and nearby communities obeyed a voluntary evacuation warning in preparation for a tsunami. This warning followed a massive 8.9-magnitude earthquake and tsunami in Japan. By most official accounts, response to the warning went relatively well, but there were some notable problems.

Because of the potentially fatal ramifications of these shortcomings in the event of an actual tsunami, Silicon Valley Community Foundation commissioned an assessment of the San Mateo County coastside's readiness to respond to a tsunami disaster. The purpose of the assessment was to review the extent to which recommendations from a 2006 San Mateo County Civil Grand Jury report had been addressed; highlight any new problems that were identified through the March 11 warning and evacuation; and make additional recommendations for improvements to the community response.

The community foundation contracted with an independent consultant, Regina Neu, to conduct this assessment. Ms. Neu has extensive knowledge of coastside issues and has worked with a variety of coastside agencies over the last several years. She interviewed close to fifty key informants, including government officials, public-safety officers, school-district officials, first responders and nonprofit leaders between July and October 2011. Ms. Neu also reviewed the 2006 Civil Grand Jury report, "Summary of Tsunami Alert and Evacuation on the San Mateo County Coast", and its recommendations in order to understand past issues and concerns about coastside disaster preparedness. She also reviewed local media response to the March 2011 tsunami preparedness event as well as a wide range of documents, reports and resources on disaster preparedness with a particular emphasis on tsunamis and the San Mateo County coastside.

Understanding the Disaster Response System

There are many government entities that have a role in disaster planning and response. The San Mateo County Sheriff's Office of Emergency Services and Homeland Security (OES) is the disaster planning and response coordinator. OES staff members provide planning and training services to San Mateo County and its 20 incorporated cities. All 20 cities have emergency plans that are compliant with the new Standardized Emergency Management Systems, a method of response to critical incidents and disasters that was developed in response to the coordination problems encountered during the Oakland fire in 1991. OES also maintains an amateur-radio repeater for use by the amateur-radio community. The repeater serves as a link to the outside world during disasters. San Mateo County also has a ground station for the Operational Area Satellite Information System, which can provide satellite telephone and data communications when landlines or cell phones are not working during a disaster. In addition, OES provides a fleet of support vehicles to respond to emergencies.

OES is funded through a Joint Powers Agreement between the cities and the County of San Mateo. The cities contribute money to fund the JPA based upon a formula that takes into account the population and average assessed property value of each city. The county then matches the funds contributed by the cities. The remainder of the OES budget comes from state and federal Emergency Management Assistance program funds. The JPA is governed by an Emergency Services Council, which consists of one representative of each city and a member of the county Board of Supervisors. The council approves budgets and provides strategic direction for the Joint Powers Agreement

Public Safety

CAL FIRE, the Department of Forestry and Fire Protection, is the first responder for emergency services and animal evacuation for the coastside. Their jurisdiction is Devil's Slide to the north and the Santa Cruz County line to the south. It also oversees all fire services in Half Moon Bay and in the unincorporated areas.

The police department functions of Half Moon Bay have been outsourced to the San Mateo County Sheriff's Office, making their deputies the first responders for civil disorder and protection services.

Medical Services

State law requires that there be a medical health operation coordinator for each region under the Emergency Medical Services (EMS) system. The coordinator goes on site at disasters to maintain integrity of the health care system that consists of on-site emergency medical care and local hospitals. There are some federal funds available for hospitals for disaster preparedness and this funding is particularly important for the coastside where there are such limited medical services. Seton Medical Center works as the government authority with the hospital system during a disaster.

EMS is developing field-treatment sites for life support, first aid for the general public, alternative care sites to help hospitals and 911 transportation. They are also working on getting medical supplies to the emergency trailers on the coast. Disaster protocol outlines a resource chain starting with city supplies and moving to county, then to state and federal supplies, if necessary.

The Medical Reserve Corps is a program sponsored by the Surgeon General's office. There are 800 units around the country with three in the Bay Area. The volunteers are credentialed medical and public-health professionals who are trained to respond to disaster situations. The coastside unit has around 60 people. They also conduct disaster trainings and help the local Emergency Operations Center. They tie into the county through the EMS system but do not receive county financial support and are exploring applying for nonprofit status.

Food, Shelter and Transportation Services

The San Mateo County Human Services Agency (HSA) is responsible for case management and shelter operations during a disaster. They open shelters when necessary and help people apply for benefits that could help them stay in their homes and remain self-sufficient. There is one county-

owned, OES-managed emergency-supply trailer on the coastside, located at the Half Moon Bay fire department. The American Red Cross manages a few other shelter trailers on the South Coast. HSA's emergency prep coordinator oversees the entire emergency-shelter operation.

CalTrans and SamTrans do not have specific plans for tsunami disasters since planning and coordination for disaster and emergency services is usually managed by California Emergency Management Agency (CalEMA), OES and/or the California Highway Patrol.

Nonprofit Agencies

The geography and rural nature of most of the San Mateo County coastside limits the number of nonprofits and resources available. The key coastside social services nonprofit agencies are as follows:

- Senior Coastsiders works with seniors, primarily in the Half Moon Bay area. They maintain a database of isolated vulnerable people (updated on a regular basis), copies of which are given to police and other first responders. They also have agreements with nonprofits to get food and medical supplies to vulnerable populations.
- Coastside HOPE is a core agency providing food and other social services to Half Moon Bay and the unincorporated areas of Montara and Granada.
- Puente de la Costa Sur is also a core agency and covers the south coast communities of San Gregorio, La Honda and Pescadero.
- Pacifica Resource Center is an agency providing a safety net of food, housing assistance and other critical services along with advocacy, coaching, information, and referral to Pacific residents.

In general, each agency has a disaster-preparedness plan and a formal communication plan in place, along with staff members who are CERT and first-aid trained. Coastside HOPE and Puente de la Costa Sur are core service agencies for the county and therefore have a wider knowledge of county protocol. But, none of the agencies would say they have a clear understanding of the county's disaster protocols and their specific role in the process.

In addition to the agencies listed above, the American Red Cross plays a key role in responding to disasters but has no coastside office. It is a volunteer-driven organization that works closely with the government to provide disaster training and to support shelter operations but it is not the lead organization to respond to a disaster. This is a critical distinction that often is unclear at the community level.

Community Groups

There are two advisory councils for the unincorporated areas – Pescadero Municipal Advisory Council (PMAC) and the Midcoast Advisory Council (MCAC). These councils do not make community decisions, but provide feedback and advice to the county on local issues. They have no clear role in disaster preparedness and are not trained in the county protocol system. Neither group

appears to be clear on the government disaster protocol or the communication paths to the unincorporated areas.

PMAC has an emergency-preparedness subgroup that meets on a regular basis to discuss emergency services and planning. Since there is no city government in the unincorporated areas, they need clear communication and emergency protocols. In addition to protecting residents, they are also concerned about planning to assist the thousands of visitors along the 25-mile stretch of coastline and beaches in the event of a tsunami disaster.

The Half Moon Bay Chamber of Commerce has coordinated the Coastside Emergency Action Program for three years. They meet quarterly to provide a dialogue among businesses, nonprofits, government, grassroots groups and individuals about all areas of emergency preparedness, the CERT program, and getting neighborhood and business groups to work together on their disaster planning. Some neighborhoods are organized but the Chamber believes neighborhoods need to become more prepared and self-sufficient. The Chamber has a large business and nonprofit database that could be used to communicate more widely.

Tsunami Background

The California coast is exposed to tsunamis caused primarily by sub-oceanic earthquakes around the Pacific basin, mainly in Alaska, Japan, Chile and off the coast of Oregon and Washington. A 2005 report issued by the State of California Seismic Safety Commission noted that damaging tsunamis are rare, but potentially catastrophic, events that present a danger to the people and economy of California. The report further noted the public is generally unaware of the risks tsunamis pose and consequently unaware of how to respond.

Response to the 2005 Tsunami Warning

In 2006, the San Mateo County Civil Grand Jury released a report in direct response to a June 2005 72-minute tsunami warning issued by the West Coast & Alaska Tsunami Warning Center. The report exposed communication and preparedness issues among San Mateo County coastal communities, including the cities of Half Moon Bay and Pacifica and unincorporated communities of Montara, El Granada, Princeton and Pescadero. The Grand Jury met with representatives from the San Mateo County OES, the local chapter of the American Red Cross and police departments in Half Moon Bay and Pacifica. It also reviewed the draft OES plan, State of California tsunami documents and Tsunami Ready² program documents. Findings from the investigation included a communication system that crashed and Half Moon Bay's poor response to the tsunami warning. There were also mixed levels of preparedness among other coastside communities, discrepancy between the OES plan and what actually happened and the need for the coastside to become TsunamiReady.

² The TsunamiReady program was developed by the National Weather Service and is designed to help cities, towns, counties, universities and other large sites in coastal areas reduce the potential for disastrous tsunami-related impacts.

To respond to these findings, the Civil Grand Jury made a number of recommendations, which included

1. Developing an aggressive approach to educating local communities and beach visitors about dangers of a tsunami and what they should do in the event of an alert. As part of this recommendation, communities were to: become certified TsunamiReady locations; activate a community-alert network for all residents; establish tsunami-evacuation signage; and activate an emergency siren system.
2. Completing and implementing the San Mateo County/Operational Area Tsunami Annex report. This document lists contacts, indicates responsibilities and outlines procedures to be followed throughout the county should a tsunami alert be issued.
3. Addressing the limited emergency supplies currently stored and available in coastal communities. The assumption has been that supplies could be obtained from neighboring communities, but Highways 92 and 1 are likely to be seriously impacted in a disaster, hindering access to supplies and equipment.

Most of the above-mentioned recommendations have been addressed. San Mateo County, Half Moon Bay and Pacifica are TsunamiReady communities as certified by the National Weather Service. The tsunami-alert system was greatly improved to include siren systems, SMCAlert³ and public-service announcements on local radio and television stations. A tsunami-preparedness brochure was also developed (posted online and printed) to include a tsunami evacuation map. CERT classes are being held to train residents to assist in emergency situations. Updated tsunami inundation maps have also been developed and evacuation route signage put up along Highway 1.

Future monitoring is necessary to ensure that San Mateo County, Half Moon Bay and Pacifica maintain certification as TsunamiReady communities and that their Annex (disaster plan) reports are current and disseminated. With major staff cutbacks at the local government level including the outsourcing of police services to the Sheriff's Department and fire department to Cal FIRE, there is concern about follow through and clarity on the procedures/protocols that were put in place.

Response to the March 2011 Tsunami evacuation

While the participating government and nonprofit agencies felt that overall the response to this warning and evacuation went smoothly, there were several notable challenges.

1. The first of these challenges related to communication. According to a debrief led by the San Mateo County Human Services Agency, Spanish-language media broadcast false information, which caused many Spanish-speaking residents to needlessly evacuate to the hills along Skyline Boulevard. Some 200 evacuees (most of whom were Spanish speaking) went to designated shelter sites, but Red Cross volunteers did not speak Spanish and were

³ A county emergency-alert system that sends emails and text messages to members who sign up for the service.

- unable to communicate with the evacuees, pointing out a need for more bi-lingual volunteers and staff.
2. People did not understand where the shelters were located or who was in charge of them. This information needs to be distributed clearly and more often to the media and community members. People thought the American Red Cross staff were in charge and did not realize that they are volunteers and meant only to provide services not manage the process.
 3. The importance of being prepared to take care of oneself and family for the first 72 hours after a disaster needs to be emphasized.
 4. Cell phones did not work well; another mode of communication is critical.
 5. There are several emergency-supply trailers on the coastside, but the supplies were inadequate and road closures on Highway 92 impeded transporting those supplies to the shelters.
 6. There were no emergency radios in the shelters.
 7. There was a lack of understanding of disaster-response protocol. While there is a clear understanding among state and county government agencies on how to operate during a disaster situation, it needs to be better communicated at the local level. There were concerns about clarity between roles of the Red Cross and OES as well as coordination issues with Red Cross and county agencies.
 8. CERT was not activated in a consistent manner throughout the coastside to participate in the effort.
 9. Connecting to isolated communities was a challenge due to trust issues and a natural rural culture of self reliance.

Findings

After analyzing the system in place and the reports from both tsunami warnings, several important, shared on-going findings rose to the surface.

Lack of communication and coordination

The main challenge is the effective, efficient dissemination of disaster information both between governmental and nonprofit entities and between those groups and the general community. There are a variety of government agencies that have clear roles and emergency-response protocols in place, but those roles and protocols are not coordinated or communicated to each other, the nonprofits and the community in general. There is not a clear community-level chain of command for disasters, especially in the unincorporated areas that have limited resources and processes to deal with emergency situations.

The coastside covers a large geographic area with isolated rural populations as well as distinct neighborhoods. There is often a distrust of government systems as well as a lack of infrastructure at the community level for disaster planning. Currently, there are many different database systems and

procedures at the local and regional level, but no mechanism for government and nonprofit agencies to share updates, disseminate information and coordinate plans and protocol.

There are many mono-lingual Spanish-speaking people living and working on the coastside and limited Spanish-language communication systems in place in case of a disaster. The only available tools are Spanish-language media alerts and information booklets and Spanish-speaking staff at the shelter locations. Accurate media alerts are crucial and the brochures can help prepare people, but the latter are not very practical during an actual disaster. Spanish-speaking staff would be very helpful, but they are not always available at short notice and potentially in the dead of night. Nor are there many Spanish-speaking trainers or volunteers available to teach and/or provide for first aid or serve on a Community Emergency Response Team (CERT).

During the March 2011 tsunami alert, Spanish-language media stations were broadcasting false and fearful messages that caused panic, with many families “escaping” to the hills even though they were in no danger. The key word in effective media alerts is ‘accurate’. Communicating with people who do not trust government has been a long-standing challenge for many nonprofits, such as the American Red Cross, since there is a perception that they are all part of the government and might report individuals for immigration transgressions.

In addition to communication challenges with Spanish-speaking households, timely media alerts in general were problematic during the March 2011 tsunami event. The *Half Moon Bay Review* provided updates regularly through Twitter, their “talkout” blog and the website, but, in general, the feeling among the media is that the Sheriff’s Department and other government and emergency authorities did not do a good job of informing the media of the disaster protocol and letting them know who the media contact person is and when to expect updates. They believe a general emergency-response communication process between the first-responder agencies and the local media needs to be in place so the media can let people know what is going on and tell them what they should do.

Since cell-phone coverage is erratic throughout the coastside, it has been a challenge to establish a communications platform that will be consistent and efficient during an emergency. There has been much discussion about utilizing satellite phones, but the cost of purchasing the phones and the ongoing maintenance fees are prohibitive for most nonprofit and school-district sites. In addition, there is skepticism about their efficacy in the rural areas. Therefore, amateur or ham radios are considered the most cost-effective and efficient communication tool. The challenge has been distributing the radios and then convincing people to go through the day-long training and then testing to get licensed. OES was able to purchase amateur radio kits for student use but the students were alienated by the rigorous training and licensing required and the project did not succeed. THRIVE managed the radio distribution to nonprofits but it is unclear who has them and how they are being used and managed.

Lack of Disaster Funding

Over the years, philanthropy has been a major source of funding for disaster-planning and preparedness efforts. After Katrina, the San Francisco Foundation, in partnership with the California Endowment and the Walter and Elise Haas Fund, funded a Bay Area disaster-preparedness initiative. One of the primary purposes of the initiative was to help nonprofits become community responders by building their capacity to reach and respond quickly to their communities and vulnerable populations during and after a disaster. Nonprofits were eligible to participate if their budget was over \$1 million and if they had enough staff to manage the process. This left out most coastside nonprofits that are too small in both budget and staff size. While 51 Bay Area nonprofits were chosen to be part of the initiative, including four in San Mateo County, only one (Puente de la Costa Sur) was on the coastside and that one is longer part of the initiative.

The United Way of the Bay Area has also supported disaster-preparedness projects, but the funding for their most recent initiative ended in June 2011. The project was similar to the San Francisco Foundation initiative but focused on providing support to 22 smaller Bay Area nonprofits through technical assistance and helping intermediaries such as Collaborating Agencies Responding to Disaster (CARD) and THRIVE to play lead roles in their respective regions.

Other funders include the Fritz Institute with its BayPrep project, which was rolled up into SF CARD in 2010 and no longer engaged in San Mateo County, and Pacific Gas & Electric, which is a major funder of the American Red Cross.

With the exception of the San Francisco Foundation and Pacific Gas & Electric, most of the funders that have had disaster-planning initiatives have either cut back or eliminated these initiatives to focus their efforts on the safety-net needs created by the economic downturn.

Local governments and their ability to support disaster-planning and preparedness efforts have also been greatly impacted by the recession and budget challenges.

The City of Half Moon Bay has greatly reduced its staff over the last few years from 48 to 15 and has reorganized key city services, including outsourcing the police responsibilities to the Sheriff's Department and the fire protection and fighting to Cal FIRE. Their new Emergency Operations Center, scheduled for completion this summer, is putting further strain on city resources because the grant from the federal government is only subsidizing a portion of the construction and furnishing costs.

The City of Pacifica's emergency-preparedness activities are also severely hampered by budget cutbacks and limited staffing. In Pacifica, the police department coordinates disaster preparedness efforts with the county agencies and coordinates the CERT program but there is no specific funding for the work. There are around 100 CERT-trained residents in Pacifica and the program is high on the City Council's list of important on-going priorities. The police department also oversees the

Emergency Preparedness and Safety Commission, which meets on a monthly basis to discuss needs within the community. There is no specific funding for this program either and the city does not have an emergency medical corps.

The unincorporated areas' advisory councils do not have funding earmarked for disaster preparedness, but rely on support by the regional first responders and nonprofit organizations. This has caused a discrepancy in services and resources up and down the coast.

Lack of disaster-preparedness training, education and staffing

Although there are a variety of emergency-preparedness training programs available, the programs on the coastside tend to be inconsistent and often not clearly focused on coastside issues. The CERT program is designed to train local people to be volunteer first responders in case of a disaster through a standardized seven-week curriculum that is taught by a team of first responders. Unfortunately, the local program is not consistently funded and supported due to budget and staff cutbacks and turnover. There is no formal CERT-program follow up nor a centralized communication process for activating CERT volunteers when a disaster situation occurs. A "champion" is needed to support and maintain the program since it is time consuming and needs funding at the local level.

Members of the county Board of Supervisors believe OES should be the communication umbrella to work with the nonprofits and government agencies; to distribute information to the communities and neighborhoods; and oversee all CERT programs for consistency and follow through. They see CERT as a critical neighborhood tool to train people to respond in an emergency. OES staff, on the other hand, struggles to keep information current and people informed on disaster preparedness protocol with limited funds and staff. In June 2011, OES used special funding to hire an independent contractor to be the coastside CERT coordinator to address these issues.

The American Red Cross offers fee-based programs, but the costs present a financial challenge for local nonprofits. In addition, the persistent perception that the Red Cross is part of the government fuels the distrust harbored by some of the Spanish-speaking households and inhibits participation in their programs.

There is also a lack of disaster planning training specific to the needs of the rural coastside. For instance, residents are concerned about sheltering their livestock during a disaster as well as rural search and survival training. There has also been little support and funding for neighbor-to-neighbor training to reach the vulnerable and isolated populations to promote and build self sufficiency among coastside residents.

The annual Disaster Preparedness Day held at the San Mateo County Event Center is well regarded but not well attended by coastside residents due to distance and the feeling that it is not as relevant for them.

There is no county-wide disaster preparedness coordinator to help each community oversee consistency and maintenance of systems, trainings, supplies, etc. Too often these liaison positions have been grant funded for a short time and therefore consistency in staffing and information has been lacking.

THRIVE had funding until the beginning of 2011 for an emergency-preparedness coordinator position. The person in this position acted as a county-wide liaison with nonprofits and government agencies to coordinate disaster-preparedness efforts. Without the funding, however, THRIVE has had to cut back on services in this area. The organization currently coordinates a bi-monthly emergency-task-force meeting open to all San Mateo County nonprofits and government agencies interested in disaster preparedness. The task force shares resources and ideas, helps coordinate the annual Disaster Preparedness Day at the San Mateo Event Center, keeps an updated database of all the San Mateo County nonprofits and distributes materials, including ham radios, to agencies that are licensed. However, the task force is only able to get a minimal amount of information out to the community and does not have significant coastside representation.

Lack of On-going Maintenance and Upgrading of Emergency Supplies and Equipment

There are several emergency trailers where food, water, other supplies and equipment are stored. However, there is no system or protocol for regularly evaluating and maintaining the emergency trailers and distribution centers (food, medical supplies, etc.). Many of the trailers had not been opened since the 2007 review so had expired supplies, items missing or broken equipment when opened for the March 2011 tsunami event. Also some local leadership seemed unsure of who has ownership and access to the trailers. It was clear following the March 2011 tsunami event that the trailers needed to be regularly maintained and replenished with supplies.

The Cabrillo School District has two school sites that are tsunami-evacuation centers or shelters. They believe the March event went well and they were able to communicate quickly and efficiently to their parents. The district has a clear emergency protocol in place and provides frequent trainings to their staff. Their recommendations for improvement included:

- Obtaining long-term supplies and generators for the evacuation center/shelter sites.
- Gaining clarity on the local disaster protocol and interconnections between the government and local agencies with more regular updates.
- Providing more tabletop presentations for parents on disaster preparedness, and more exercises and drills for parents and teachers.
- Holding an interagency debrief after disaster events to include county, schools, nonprofits, and others to discuss protocol and lessons learned.

The La Honda Pescadero School District has a clear disaster plan that they implemented during the March event. The school district did not get a call from OES, but from Puente de la Costa Sur

regarding the March event and procedures. They felt confused about process but ended up making their own decision to close the school. Their recommendations include:

- Installing an automated phone system, rather than the current phone tree, to communicate to parents and staff.
- Placing a working generator at the shelter.
- Putting up more supplies in the emergency trailers.

Second Harvest is not a first responder but provides support as needed mainly through the core agencies, Coastside HOPE and Puente de la Costa Sur. Therefore, they are not clear on disaster protocol and the role of nonprofits in this process. Second Harvest is aware of the containers that have food in Half Moon Bay and Pescadero but they have no access or budget to provide food for them. When they do receive donations of “meals ready to eat”, they have been sent to be put in the containers. They suggested that cooperative buying of food for the trailers by the core agencies would be helpful.

Coordination, documentation, maintenance and access protocol for emergency supplies and shelter and trailer use is necessary due to changing leadership and usability of equipment and supplies.

Overall Recommendations

1. **Coastside Disaster-Preparedness Day** - Establish an annual disaster-preparedness day for coastside residents where they can address issues that are specifically relevant to them (e.g., tsunamis, animal rescue, wilderness search and rescue). The event could have a similar format to the annual event held at the San Mateo County Event Center, but take place during a larger community event and be located at a site that is easily accessible to the coastside community. This would also provide an opportunity to give residents incentive items to help them build their disaster-preparedness kits and connect the disaster-preparedness agencies to community members and local media outlets to build a sense of community and understanding about preparedness.
2. **Convening Event** – Establish an annual convening for coastside nonprofits, community groups, the faith-based community and government agencies to review and update the disaster-preparedness protocol. Some topics might be scheduling and debriefing of drills and exercises as well as reviewing and updating contact database on agencies and for all the key players. This could be held in conjunction with the annual Coastside Disaster-Preparedness Day.
3. **Training** - Provide support to standardize local CERT training follow up and maintenance of the program. The CERT program can provide the standard for local first-responder training at the neighborhood level and help to encourage local self-sufficiency beyond the

72-hour rule. "Neighbor-to-neighbor" and "train-the-trainer" approaches are needed due to the isolated nature of the coastside communities and the tendency to be more skeptical and suspicious of outside organizations providing training. This approach helps position trained people in the community to build trust and could support on-going training for certification and use of ham radios to make sure they are available throughout the coastside.

4. **Supplies** - Provide funding for supplies and updating emergency trailers. Most food items have a four-to five-year life span so trailers need checking and replenishing at least that often. For the most part, the trailers have not been assessed in several years. The March event brought to notice that there is not a checklist system to review the trailers and their contents on a regular basis.
5. **Communication system for the Spanish-speaking community** - Develop a Spanish-language communication protocol, beyond the distribution of disaster-preparedness brochures, to include methods to distribute media alerts to the Spanish-language media. Currently, there are basic tsunami and emergency preparedness brochures available in Spanish, but a sizable portion of the Spanish-speaking population has limited literacy and brochures are not effective in emergency situations.
6. **Emergency-Preparedness Coordinator** - Hire an emergency-preparedness coordinator to act as a liaison at the local level with the government, nonprofit and community groups to establish consistency, training and maintenance of emergency-preparedness programs, including exercises, drills with community groups, schools, etc., to manage the emergency supplies for trailers and maintain a centralized database of key coastside and government contacts.
7. **One Centralized Database** - Choose an existing database as the core and build around it to collect contact information of all nonprofits and key leaders. There are several different databases now managed by different community and government agencies. These include the Google-map-based, THRIVE-managed database of all San Mateo County nonprofits, the Half Moon Bay Chamber of Commerce business and emergency-council databases and the vulnerable-populations database managed by Senior Coastsiders. The emergency preparedness database should be centralized, updated and widely available to key first responders. The SMCAAlert program could connect with this database to make sure the alerts get out to all nonprofits and community groups that can spread the message to their constituents.
8. **VOAD (Voluntary Organizations Active in Disasters)** – Form a VOAD for San Mateo County with strong coastside representation. This would be another method to ensure the sharing of information and resources regarding disaster preparedness at the nonprofit and

government level. VOAD members often include faith-based groups, nonprofits and governmental departments and agencies that provide relief and recovery services in times of disaster. The state and national VOADs coordinate the planning efforts of their member organizations to improve communication and reduce duplication of services to ultimately enhance disaster relief efforts. There is no VOAD in San Mateo County but there are active ones in surrounding counties.

Conclusion

San Mateo County has a sophisticated disaster-preparedness and response system in place, but on the coastside there are weaknesses in the system in coordination and communication. A robust system build on the recommendations in this report will improve the disaster response and protect the lives and property of the area residents. Addressing some of these challenges will require planning as well as up-front and on-going funding, but others can be implemented more quickly and at lower costs.

The cities and unincorporated areas must work together to protect community members and visitors. The community foundation is committed to leading the conversation about addressing these concerns and thanks all of the leaders who agreed to provide information and recommendations for this assessment.

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1. San Mateo County Civil Grand Jury Report – “Tsunami Alert and Evacuation on the San Mateo County Coast” – 2006
2. Half Moon Bay Disaster Preparedness Committee database
3. United Way of the Bay Area report – “Ready or Not: Ensuring Bay Area Nonprofits Can Serve During Disaster” – 2007
4. San Mateo County Emergency Services Council minutes and reports
5. San Mateo County Office of Emergency Services Joint Powers Agreement Program 2009-2010 (work plans)
6. San Mateo County Human Services Agency – “Tsunami Shelter Debrief” – March 23, 2011
7. San Mateo County/Operational Area – Tsunami Annex Report (OES, Emergency Services) – September 2010
8. Annex to 2010 Association of Bay Area Governments Local Hazard Mitigation Plan “Taming Natural Disasters” – City of Half Moon Bay -April 15, 2011
9. San Mateo County Sheriff’s Office Tsunami Response Plan
10. Get Ready Disaster Preparedness Manual – Spring 2010
11. Tsunami Maps (CA) – inundation maps updated 2009

12. American Red Cross – assorted (including Neighbor to Neighbor and Ready Rating programs)
13. Tsunami Information brochures (English and Spanish)
 - a. City of Half Moon Bay
 - b. San Mateo County OES
14. CalEMA – Tsunami materials/brochures
15. SMCRReady - San Mateo County – Office of Emergency Services
16. TechSoup – Disaster Planning and Recovery Toolkit – resources to help organizations (general, technology, communication, security, software)
www.techsoup.org/toolkits/disasterplan/index.cfm
17. Migrant and Seasonal Worker Emergency Preparedness Guide written by NORC of the University of Chicago in collaboration with the National Rural Health Association
18. TechSoup – Apps for disaster planning – <http://forums.techsoup.org> - includes interesting resources like FEMA’s free emergency preparedness app that once downloaded is accessible whether have phone or internet service or not.
19. 72hours.org – checklists for how to be prepared for at least 72 hours after a disaster hits (produced by the San Francisco Department of Emergency Management)
www.sfgov.org/oes
20. NVOAD. Org – National Voluntary Organizations Active in Disasters

MEDIA

1. Half Moon Bay Review
2. Half Moon Bay Patch
3. San Francisco Examiner

WEBSITES

1. ARES – Amateur Radio Emergency Service – www.areshmb.org
2. Bay Area CAN – www.bayareacan.communityos.org - free disaster resource and client database for nonprofit and faith-based organizations (managed by SF CARD)
3. CalEMA – www.calema.org - sections on tsunami program and mapping
4. California Volunteers – www.californiavolunteers.org – FAST (Functional Assessment Service Team)
5. CERT – www.citizenscorps.gov/cert, www.coastsidefire.org/cert
6. City of Pacifica – Emergency Preparedness and Safety Commission
www.cityofpacifica.org/government/committees/emergency_preparedness
7. PrepareNow.org - www.preparenow.org
8. San Francisco CARD – www.sfcard.org
9. SMCAAlert - www.smcalert.info
10. San Mateo County Medical Reserve Corps - www.smcmmc.org
11. SMCRReady – www.smcready.org

12. San Mateo County Health System, Emergency Medical Services –
www.co.sanmateo.ca.us/portal/site/health
13. THRIVE - www.THRIVEalliance.org
14. TsunamiReady - www.tsunamiready.noaa.gov

About Silicon Valley Community Foundation

Silicon Valley Community Foundation makes all forms of philanthropy more powerful. We serve as a catalyst and leader for innovative solutions to our region's most challenging problems. The community foundation has \$2 billion in assets under management and more than 1,500 philanthropic funds. As Silicon Valley's center of philanthropy, we provide individuals, families and corporations with simple and effective ways to give locally and around the world. Find out more at www.siliconvalleycf.org