

TRIBAL PREPAREDNESS

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Shoalwater Bay Indians involve their entire community in developing plans for the threats they face

By Ed Mund

The tiny community of Tokeland sits off State Route 105 on a remote peninsula on the west coast of Washington State, exposed to the full fury of the wind, rain and waves coming off the Pacific Ocean. On days of heavy rain, it's sometimes hard to tell where the low-lying land ends and the sea begins. It is just such a combination of geography and environment that makes this area at risk for natural disasters.

This interplay of land and sea has not been lost on the Shoalwater Bay Indian Tribe, which has lived along these shores for millennia. This small tribe of about 300 members has an emergency-preparedness plan in place that undergoes continual updating and revision, making this tiny piece of the Washington coastline perhaps the safest location on the Pacific Coast in the event of a disaster.

PASSIONATE CHAMPIONS

Lee Shipman is a tribal elder with the title of emergency manager. That means she gets a lot of strange and interesting things thrown her way. One day it was a notification from the U.S. government that emergency agencies would be required to adopt, train on and use an approved incident management system to be eligible for future assistance. Shipman's first National Incident Management System (NIMS) training class left her with an overwhelming sense that she didn't know anything and her whole community needed to learn a lot.

The Shoalwater Bay Tribe is governed by an elected five-member council. After her first NIMS class, Shipman reported her conclusions to the council, which was receptive to taking action. She arranged for the entire council to attend Community Emergency Response Team (CERT) training.

WORST-CASE SCENARIOS

For the Shoalwater Bay Tribe, history and geography told them that earthquakes and tsunamis held the most potential to wipe



Landings have been cleared at 300 feet above sea level where evacuees can set up for extended stays.



All CERT-trained team members receive backpacks with equipment and supplies to support their emergency efforts.



The Shoalwater Bay Tribe
The Shoalwater Bay Tribe's first CERT team.



Lee Shipman holds her tribe's two communications lifelines to the outside world: a ham radio and a portable radio linked to the

out their community. Major winter storms can also have significant impact, but not community-ending outcomes.

Pacific County Sheriff's dispatch center.

Tokeland is about midway along a major geological faultline known as the Cascadia Subduction Zone. This thrust fault is approximately 800 miles long, running under the Pacific Ocean off the North American Coast from mid-Vancouver Island in British Columbia, Canada, south to Cape Mendocino in California. Historical records, geological history and native legends indicate that at least 13 great earthquakes have occurred along this zone in the past 6,000 years, with an average interval of about 500 years between them. Tsunamis are most often created when large sections of the ocean floor rise or drop quickly, displacing the water above and causing it to move violently. The most recent evidence of how dangerous tsunamis can be was seen in Sumatra in 2004.

Scientists believe that the last rupture of the Cascadia Subduction Zone occurred on January 26, 1700, resulting in one of the world's largest known earthquakes. Scientists peg it at a magnitude 9, with a unknown-sized tsunami in North America and a five-meter-high tsunami that came ashore in northern Japan.

COMMUNITY PARTICIPATION

To answer the question "If a disaster happened, what would we do?" Shipman, the council and other interested tribal members formed a planning team. While the team held some formal meetings, there was so much to do and such eagerness to accomplish it that impromptu meetings happened frequently--sometimes daily or anytime team members found themselves in the same place at the same time.

History has shown that in times of major storms or other natural disasters, the tribe must be self-sufficient for days at a time. Having no local emergency services of its own, it contracts with surrounding Pacific County for law enforcement and Grays Harbor County to the north for fire and EMS services. The nearest population centers are Aberdeen, WA, population 16,000, 33 miles away; Astoria, OR, population 7,800, 74 miles away; and Olympia, WA, the state capital, population 40,000, 85 miles away. All routes to these centers are over multiple bridges and sea-level highways likely to be impassable after an earthquake or tsunami.

CERT training was open to anyone who wanted to take it, and nearly one third of the local tribal members completed the course. Every CERT member is issued a backpack full of tools, survival gear and first aid supplies. Throughout the reservation, neighborhoods have volunteer block captains and backups to ensure everyone is notified of any emergency. Each has an NOAA weather radio for 24/7 alerts, and in the case of an evacuation drill or actual emergency, they go from house to house to ensure everyone gets to safety. Those who require special assistance have their homes clearly marked and are also issued NOAA radios.

In addition to the block captains, a team of "turn-off people" makes a final sweep of all public buildings, securing utilities and ensuring no one is left behind.

As well, 200 three-day survival kits have been purchased by the Shoalwater Bay Casino and donated to families on the reservation.

COMMUNICATIONS

Communications are often cited as problems in disaster after-action reports. Tokeland's remote location adds to this dilemma because cell phones work poorly if at all, and even satellite phones are spotty. The tribe's solution was ham radios. A call went out to the community's adults in hopes of getting one or two to become licensed operators. In response, 10 people completed the training and were provided radios for emergency communications.

In addition to the homes previously noted, NOAA radios are located and monitored in every public building. The Washington State Emergency Management Department (EMD) and University of Washington collaborated to locate a computer system and Web-based real-time earthquake monitoring capability in Shipman's office. The computer beeps and displays on a map every Pacific Rim earthquake as it happens--several an hour--around the clock. Those of sufficient magnitude or location trigger alarms via pager and e-mail.

A memorandum of understanding was signed with Pacific County to provide dispatch services in case of disaster. Six portable radios on the county's frequency were distributed around the reservation.

Another resource from the state EMD was an all-hazards alert broadcasting system located at the edge of the beach near the middle of the community. This is a sophisticated audible warning system that can be heard throughout the reservation and beyond.

EVACUATION ROUTES

All evacuations are done on foot--people are discouraged from trying to take vehicles from their homes to safety. Two walking paths have been established off S.R. 105 that lead to high ground. Each is clearly marked with Tsunami Evacuation Route signs.

The base of the nearest path is about half a mile from the Tribal Center, roughly the center of the reservation. It is truly a walking path, with no means of access by vehicle. This path tops out at 160 feet above sea level. A second route is Eagle Hill Road, roughly three quarters of a mile from the Tribal Center and rising 300 feet above sea level. Several landings have been graded on Eagle Hill Road to allow encampments to be set up for extended stays. In addition, a way is being sought to connect the two evacuation paths via high ground, and a safe route to connect to communities and resources further inland is being explored.

The tribe has cached emergency supplies to allow evacuees to survive several days on the hill. More than 400 three-day survival kits (all purchased and donated by the local Shoalwater Bay Casino), drinking water and medical supplies for tribal members with chronic conditions have been securely stored. Plans call for adding shelters, generators, fuel, two-way radios and other creature comforts to help survive even longer evacuations.

LESSONS LEARNED

A windstorm in the winter of 2005 provided an impromptu test of the tribe's emergency preparedness. Seawater washed over the berm separating the beach from homes, streets and public buildings. The storm's aftermath allowed careful assessment and modification of the plans and protocols in place.

Of course, better communications was high on the list of improvements, along with a pledge to utilize every possible training opportunity. Training works both ways: As important as they are to crisis leadership, training events are just as critical to the general population. Drills have been held in various buildings, including for all casino employees. In 2006 a full-community drill was held to test the entire system, from warning to evacuation and communications.

History suggests the tribe may have as little as 20 minutes' warning of an impending tsunami. According to Shipman, the state EMD standard is to evacuate everyone to at least 35 feet above sea level within 20 minutes of warning. The tribe's goal is 55 feet in 15 minutes. Both standards were exceeded on the first try during the 2006 drill. Shipman said she was the last person out and crossed the 55-foot line at 14 minutes "with my nephew pushing me from behind up the hill."

Maintaining positive relationships with surrounding governments reaps huge dividends in funding, expertise and plain, old-fashioned encouragement.

"The Washington EMD bent over backward to give us information, help, encouragement," Shipman says. In addition, she cites invaluable help from Homeland Security and the Washington Department of Health.

Startup Costs

In addition to the assistance from its state department of emergency management and local casino, the Shoalwater Bay Tribe relied mostly on donations and self-funding to accomplish its initial preparedness goals. The costs for preparations to date include:

Container: \$3,050

Locks and keys: \$600

CERT training: Free from Homeland Security

Food for trainees: Donated

Child care while parents attend training: \$500

CERT equipment backpacks with basics: Grant money from Homeland Security

Additional equipment: \$1,300

Out-of-area training: \$2,200

600 survival kits: \$6,500 in donations from casino

Medical supplies: \$800

NOAA radios: Donated by EMD

CERT and planning team members' time: All donated

Ham radios: \$2,800

First aid kits: Grant from state health department.

FUTURE PLANS

Improving evacuation trails and supply caches remains a high priority. Additional outreach to surrounding communities and governments is accomplished through participation in training events, conferences and local, regional, state and federal meetings. Community meetings offer opportunities to educate, energize and receive input from everyone affected.

As they continue to improve their "most-likely worst-case scenario" planning, members of the Shoalwater Bay Tribe will use it as the foundation to create a more comprehensive all-hazards approach in a formal, full-scale plan for disaster mitigation, preparedness, response and recovery. This plan will include building an Emergency Operations Center and developing an Office of Emergency Management. The tribal health center is assisting with preparation of a pandemic flu component.

Mostly, Shipman says, members are keeping their eyes and ears open to see what is needed and where they can learn how to meet the needs of such a constantly changing field. In a 2006 report to the Tribal Council, Shipman wrote, "We are very proud of the strides we've made in this area. We have a long way to go. It is a team effort, and we are thankful for all the input from our community and our employees and our partners in emergency management."

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