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Partnerships IN ACTION

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University Implements Campus-Wide Crisis and Emergency Communication System

Over the past three years, increasing attention has been paid to how colleges and universities communicate with students, faculty, staff, parents, and first responders in the event of an emergency. The University of Oregon places the security and safety of its students, employees and visitors as its highest priority. Emergency notification systems are only effective when the end users (e.g., faculty, staff, students, and first responders) both receive and understand emergency notification messages. Thus, emergency notification systems must take a holistic approach to notification that goes beyond simple dissemination of emergency messages.

Effective, holistic systems must include not just the technological system components and the warnings themselves, but also training for system administrators, development of system activation policies, and education and outreach for faculty, staff, students, and first responders. An advanced warning system is worthless if the intended audience does not receive the message or doesn't know what to do about the information they received.

The University of Oregon recognizes the importance of a holistic notification system as part of a broader emergency management program. The University is proposing a series of communication and training components that include multiple methods of notification delivery, as well as training, education, outreach, and policy development to ensure that messages are received and understood by members of the campus community. As a result, the proposed program goes far beyond the purchase and installation of an emergency notification system.

One of those system components is the new **UO Alert!** text notification system. The University's Office of Emergency Management has begun implementation of a campus-wide emergency communication system that will have the ability to send text messages to student, faculty, and staff members' personal cell phones in the event of an emergency on campus. Campus community members sign up for the system by entering their cell phone number on the University's on-line registration and personal information system known as DuckWeb. Phone numbers will be collected during the fall term and will be uploaded into the system early in the winter term so that a test of the system can be completed.

The **UO Alert!** system is only one of several ways that the University can communicate crisis or emergency information with the campus community. Other methods include: the UO Homepage, mass emails, broadcast voice messages, UO Parent's Association, and local media.

By Krista Dillon, Emergency Planner/Response Coordinator
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Inside...

Pre-Disaster Mitigation Coastal Planning Efforts

Since October, 2007, the Oregon Partnership for Disaster Resilience (the Partnership) has been working with Oregon's coastal communities to develop natural hazards mitigation plans. Plans are nearing completion, and are being sent to FEMA for review this fall and winter. Communities with FEMA-approved natural hazard mitigation plans gain eligibility for the Pre-Disaster Mitigation Grant Program, Hazard Mitigation Grant Program, and the Flood Mitigation Assistance Grant Program.

Communities involved in the 2007 – 2008 planning effort include Clatsop and Lincoln Counties – and the cities therein – as well as the cities of Florence, Dunes City, Reedsport, Powers, Bandon, North Bend, Coos Bay, Myrtle Point, Coquille, Port Orford, Gold Beach, Lakeside, and Brookings. Resource Assistance for Rural Environments (RARE) Participants led the planning efforts in each community, with the exception of Clatsop County and Dunes City. The Columbia River Estuary Taskforce (CREST) led the Clatsop County planning effort, and a University of Oregon Graduate Teaching Fellow (GTF) led the planning process in Dunes City. Planning efforts occurred in partnership with Oregon Emergency Management (OEM), FEMA Region X, the United States Geological Survey (USGS), and local governments.

Photo: OPDR

In addition to the 'Kickoff' and 'Risk Assessment' trainings in September 2007 and January 2008, the Partnership held two additional trainings. In April the Partnership met individually with each of the communities' plan facilitators to discuss the development of their plan's mission, goals, and action items. In July 2008, the Partnership hosted a training in Lincoln City that focused on how to maintain and implement a natural hazards mitigation plan. The Partnership presented a variety of grant opportunities, and provided recommendations for how to maintain and implement natural hazards mitigation plans. Joseph Murray from Oregon Emergency Management provided a brief overview of the 'benefit-cost analysis' (BCA) process that's required in FEMA's grant applications.

As of October, 2008, Clatsop County and the cities of Astoria and Cannon Beach have received pre-approval from FEMA and are in the process of adopting their plans. Lincoln County's Plan is nearing completion and will be sent to FEMA for review this fall. With the completion of Clatsop and Lincoln County's planning processes, every county in Oregon will have a FEMA-approved natural hazards mitigation plan. The State's next set of mitigation planning priorities are focused on maintaining the State's Enhanced Plan status. Additionally, Clackamas County will host a RARE Participant from October 1, 2008 through August 31st, 2009. The RARE Participant will assist Clackamas County's cities in updating and/or developing addenda to the County's Plan.

By Megan Findley, Program Manager, Oregon Partnership for Disaster Resilience
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The Challenges of Vulnerable Populations and Emergency Preparedness

For the past year, Bill Riley has been working to connect emergency managers with people who work in health and human services all over the state. Together, they are developing emergency plans that identify and assist vulnerable populations within a community.

1. We're Working Against Human Services History

Over the last 30 years, with improved medications, new treatments and a better understanding of human rights, Oregon has reversed a long history of centralized, asylum-based care for people with special needs. In order to make sure that all Oregonians have as many opportunities for the highest quality of life possible, we have geographically dispersed large numbers of individuals who are medically fragile, who require extensive support from public services or who may need extra help to prepare for and respond to disasters. We have become aware that these people are our neighbors and we frequently don't know where in the community they are and what specific help they may need.

2. Where Do We Go From Here?

The prevailing conceptual model for where to start comes from the National Organization on Disability and has been promoted by the federal Centers for Disease Control. It tells us that we must define who we will target as our vulnerable populations, locate them geographically in the community and then make a plan to reach them in an emergency. In Oregon, this logically becomes the responsibility of city and county emergency management.

3. What's Being Done in Oregon To Help Vulnerable Populations Prepare

Since local emergency management resources alone can't begin to accomplish this task, people who work in health and human services have come together with emergency managers all over the state. Many communities are bringing vulnerable individuals into the local emergency management system through community coalitions. These coalitions are doing a range of vital preparedness activities including: developing relationships with non-English speaking minorities, older people who live alone and with individuals who need adaptive ways to communicate in an emergency; compiling voluntary disaster registries; and producing community maps to identify locations where vulnerable individuals are living.

Photo: DHS

The Vulnerable Populations Project of the state Department of Human Services has been mobilizing program staff and connecting them to their local emergency management system in one-day workshops for the last year. To date, seven workshops have been held involving about 450 participants. County public health preparedness coordinators provide details on a range of local types of disasters and different response strategies. Local emergency managers describe the emergency management system and resources in their cities and counties. The workshop includes a section where the human services programs meet with their county vulnerable populations coalition or community group so that they can join them. At the end of each workshop, small groups from each human service area (addictions services, aging services, etc.) work with a facilitator and use a planning template to begin the process of putting an emergency plan together.

Even with all these initiatives, significant vulnerable population groups and individuals are being missed. While we work in tandem with one another, we lack a statewide coordinated umbrella initiative where we can share information so that the good work of one community need not be reinvented by another. Despite this, in a period of less than two years, Oregon has moved from a position where everyone was trying to get a grasp on the problem to a point where much is understood and much is being accomplished.

By Bill Riley, Vulnerable Populations Project Manager, Oregon Departyment of Human Services
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Using LiDAR to Produce Better Tsunami Hazard Maps

With the risk of a Cascadia seismic event looming just a scant 100 miles off the Oregon coast, emergency managers, educators and others are always looking for better preparedness tools. The Cannon Beach mapping project is the pilot project for an initiative to remap the entire Oregon coast with updated tsunami modeling and a standardized look and feel. This will help planners and educators give the best possible answers to questions from the public. Public education plays a huge role in disaster preparation, mitigation, response and recovery. Providing the public and professionals with the best possible science enables proactive actions and can save lives and property.

The Cannon Beach mapping project is a collaborative effort between the Department of Geology and Mineral Industries (DOGAMI), scientists, and local stakeholders. Using the latest mapping technology (LiDAR[1]), computer technology and computer modeling, DOGAMI is producing new tsunami hazard maps that are much more accurate and useful. Previous maps varied by locality in both visual presentation of the information and the actual location of the inundation line, with sometimes very subjective results. The Cannon Beach pilot project enables the creation of highly accurate maps.

Previous maps had one inundation line. The new maps will have two inundation lines; a worst-case distant tsunami and a worst-case Cascadia tsunami. Included on the new maps will be emergency preparedness information, some of it in Spanish. This new format, coupled with updated modeling, will give emergency planners, educators and the general public a powerful new tool in emergency preparedness. Easy to read formats were tested to be readable by the color blind and also to be reproduced in black and white. The idea is to make the maps useful for as many different populations as possible.

The Oregon Tsunami Advisory Council (TAC) played a large role in the development of these maps. The TAC is made up of stakeholders from all along the Oregon coast. They brought expertise and a passionate desire to produce a truly valuable document. Because these are the people that do most of the public education and preparedness efforts, they were able to provide valuable feedback to DOGAMI.

The next community to be mapped is Bandon, in Coos County Oregon. DOGAMI will continue to map and model as funds and time permit. The TAC will continue to aid in the development of tsunami preparedness tools for use in creating public awareness of the tsunami risk on the Oregon coast.

[1]LiDAR (light detection and ranging) is a new tool that can provide very precise, accurate, and high-resolution images of the surface of the earth, vegetation, and the built environment. Airborne lidar uses a laser range finder mounted in a precisely navigated aircraft to scan the earth's surface at very high rates and collect very dense clouds of X-Y-Z coordinates. Lidar data are useful for anyone wanting to know the shape of the land surface or of the vegetation and buildings on the land.

By Althea Turner, Earthquake, Tsunami & Volcano Programs Coordinator, Oregon Emergency Management
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MITIGATION IN ACTION

Oregon Active in Mitigation

Mitigation can save lives, money and property. In December, 2007 a large and very damaging wind and rain storm hit the Pacific Northwest. This storm severely impacted nine Oregon counties. The Governor asked for and received a federal disaster declaration.

With all of the reported damage from the storm, previously implemented mitigation measures in a number of counties withstood the impact. Northport Plaza in Tillamook had just completed elevating their structures above the floodplain in October. The December flooding caused no damage as the first floors are now above the flood waters. Power lines that were frequently knocked down by wind-driven trees and debris had been placed underground and were protected.

Preliminary damage estimates for the December storm still came in at over $50 million in losses to public facilities, businesses and homes. Temporary housing was needed for people who were displaced from their residences due to the storms. More mitigation was needed.

Following the December storm federal disaster assistance became available, not only for qualified individuals and public entities, but also to implement new mitigation measures. Since Oregon has a FEMA-approved Enhanced State Mitigation Plan, the FEMA disaster assistance package included an additional estimated $10 million dollars for hazard mitigation projects and planning activities under the Hazard Mitigation Grant Program (HMGP).

Photo: ODOT

Oregon Emergency Management (OEM) administers HMGP and works with Oregon's cities, counties and certain special districts to identify eligible projects that meet the Federal Emergency Management Agency (FEMA) program criteria.

To apply for HMGP grants, cities and counties must also have a local mitigation plan. Community mitigation plans identify their natural hazard risks, and recommend actions for reducing those risks.

A number of December storm HMGP projects are already under development in some counties. Widespread flooding in Vernonia and along the Nehalem River Valley in Columbia County seriously affected homeowners, businesses, schools and other public and private facilities. In Clatsop County, widespread wind damage took its toll on public and private facilities and critical communications infrastructure. In Tillamook County, wind and flood damage was evident in numerous locations with severe flooding and downed power lines.

Approved project implementation work is already underway. With continued mitigation measures being taken, more lives, money and property may be saved during the storms to come. Mitigation works!

By Dennis Sigrist, State Hazard Mitigation Officer, Oregon Emergency Management
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Planning for a Pandemic

Stories and reports on avian influenza ("bird flu") have largely disappeared from the national media, but the threat of a pandemic has not gone away. Public health experts agree that a pandemic is inevitable – only the timing and severity are uncertain. With that in mind it is important for communities, businesses and governments to continue planning and preparing for the next pandemic – a pandemic which may have significant and prolonged effects.

Influenza is a highly contagious viral respiratory infection which spreads from person to person mainly in respiratory droplets from coughs and sneezes or from handling objects contaminated by respiratory secretions. In the United States seasonal outbreaks of influenza occur in communities during the fall and winter. Seasonal influenza illness, while common, is not a minor infection. During a typical flu season about 10% of people in the U.S. become ill; more than 200,000 are hospitalized; and about 36,000 die.

At unpredictable intervals a novel (new) influenza virus appears in humans to which we have no immunity. If the novel influenza virus is able to spread easily from person to person and cause significant illness, this creates the setting for an influenza pandemic: a potential global outbreak of influenza illness with rapid spread from person to person and country to country.

A severe influenza pandemic, in the absence of interventions, will lead to a public health emergency with much higher rates of infection, many more hospitalizations and significantly more deaths than usual. Such a pandemic has the potential to overwhelm normal healthcare systems and negatively affect the local, regional, and national economy. The following chart compares seasonal and pandemic influenza.

Pandemic Flu	Seasonal Flu
Occurs infrequently (3 pandemics in 20th century)	Occurs annually, usually in winter, in U.S.
Little or no immunity to infection	Usually some immunity from previous exposure or immunization
Infection rate: 30% or more	Infection rate: ~10%
Each pandemic wave may last 2 - 3 months with more than one wave over a period of months to a year or more	Seasonal outbreak lasts usually 6 - 8 weeks in a community
Healthy people may be at increased risk for serious complications	The very young, the elderly, and those with underlying health conditions at increased risk of complications
Health system can be overwhelmed	Health system can meet public and patient needs
No vaccine early in pandemic / Anti-virals in limited supply	Vaccine available /adequate supplies of anti-virals
A severe pandemic could cause over 1.8 million deaths in the U.S.	Approximately 36,000 deaths from seasonal flu each year
May cause major impact on society with school / business closures, event cancellations, travel restrictions, supply shortages, delivery delays	Generally modest impact on society with some school closures or increased absenteeism
Potential for severe impact on domestic and world economy	Manageable impact on domestic and world economy

Pandemic planning, whether for a university, a business, or a government entity, involves actions and resources directed towards preparedness, mitigation, response, and recovery. There are several reliable web-based resources listed at the end of this article which offer helpful planning information and guidance.

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Planning for a Pandemic

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Experts estimate that it will take six months or more to develop a vaccine after a pandemic begins. This means that for at least the first several months of a pandemic, communities will need to rely on infection control strategies and social distancing practices to protect people, slow the spread of the pandemic, and ease the demand for healthcare resources. Guidance and instructions regarding infection control strategies and social distancing practices will come from county health departments and the Oregon Public Health Division.

Infection control strategies include frequent hand washing, cough etiquette (covering coughs and sneezes with a tissue, discarding used tissues in trash receptacles, and washing hands after coughing or sneezing), staying home from work or school when ill, and screening for and self-reporting of illness at work or school.

Social distancing practices include intervention efforts within the community, workplace and classroom, and they're intended to limit the spread of the pandemic by reducing opportunities for close contact between individuals. Social distancing practices include: increasing the distance between people at work, in class and on public transportation; modifying workplace schedules and practices through actions such as telecommuting, staggered shifts, and teleconferences; cancelling public gatherings such as sporting events, plays, concerts and movies; closing public facilities; and cancelling all school classes for up to 12 weeks. Public health officials will base guidance for social distancing options on pandemic severity; the more severe the pandemic, the more restrictive and potentially disruptive the social distancing actions required.

The University of Oregon has developed a Pandemic Response Plan which addresses departmental and individual actions, roles and decisions necessary to reduce, control, and respond to a pandemic illness. The Plan utilizes Incident Command System protocols to facilitate a coordinated university response and enable the University to work effectively with community and state partners. The Plan is limited to preparation, mitigation, and response while calling attention to the critical need for additional comprehensive planning to address continuity of operations and recovery. The University will conduct a multi-jurisdictional tabletop exercise in December 2008 which will explore decision-making, communication, and interagency coordination issues related to a pandemic. The exercise will also include a discussion of business continuity issues with participants including the executive and departmental administrative leadership of the University.

Photo: MedicineNet.com

Because of its potentially far reaching and prolonged effects on services and operations, planning for a pandemic provides communities, governments, healthcare agencies, non-profits, and the private sector with an added incentive to work together in developing mutually supportive business continuity plans directed towards maintaining or quickly re-establishing essential services and operations.

Resources:

- Pandemicflu.gov
- Ready.gov
- Readybusiness.gov
- Centers for Disease Control & Prevention: Influenza, http://www.cdc.gov/flu/

By Tom Ryan, Prevention and Preparedness Coordinator, Oregon Partnership for Disaster Resilience
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The Gorge Moves Towards Establishing a Regional Mitigation Collaborative

In January 2008, the Community Planning Workshop (CPW)[1] at the University of Oregon began researching methods of regional collaboration with the intent of finding a feasible model for Hood River, Wasco, Sherman, Gilliam, Wheeler, Morrow and Umatilla Counties to implement their natural hazard mitigation plans on a regional level. These seven counties all have hazard mitigation plans but face challenges with implementation including funding and human resources.

In many communities the plan's convener is either a Planning Director or an Emergency Manager. Typically, these positions oversee a number of different programs and grants – natural hazard mitigation is only a small fraction of what they do on a daily basis. As such, the communities are not able to spend the time and resources necessary to implement the strategies outlined in their plans. In addition, hiring a mitigation specialist in each community in the Mid-Columbia Gorge region is not an option because of limited resources.

The CPW team identified regional collaboration as a potential way to address mitigation while overcoming financial and human resource barriers. A regional collaboration would be beneficial for the following reasons:

- A collaborative approach recognizes the inter-relationships among counties in the regions. Natural hazards do not following political boundaries and disasters often affect multiple jurisdictions.
- A collaborative approach recognizes the shared goals of the participating counties. A review of pre-disaster mitigation plans suggests that plans share many of the same goals and action items.
- A collaborative would allow counties to share the costs of planning and grant writing.
- A collaborative would allow counties to reduce competition for federal or state grant funding, save time and resources, and improve the chance of receiving funding.
- A collaborative would allow counties to create partnerships that include other phases of the disaster cycle.

The CPW team found that the benefits of the collaborative option out-weighed the concerns. Since June 2008, the Mid-Columbia Gorge steering committee has continued to pursue a regional natural disaster collaborative and will be seeking buy-in and funding from local elected officials.

[1]Community Planning Workshop (CPW) is an experiential program within the Department of Planning, Public Policy and Management at the University of Oregon. Established in 1977, CPW provides students the opportunity to address planning and public policy problems for clients throughout Oregon. Students in the Master of Community and Regional Planning Program work in teams under the direction of faculty and Graduate Teaching Fellows to develop proposals, conduct research, analyze and evaluate alternatives, and make recommendations for possible solutions to planning problems in rural Oregon communities

By Rochelle James, Community Planning Workshop, University of Oregon
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New Staff Profile

At the University of Oregon, the Partnership's staff is expanding. We are excited to introduce the following addition to our team.

Adam is a recent graduate from the University of Oregon and completed a concurrent Master's in Public Administration and Community and Regional Planning. While he was a student at UO, Adam became interested in emergency management through a project that focused on collectively implementing mitigation plans. Prior to his time at UO, he received a Bachelors of Science in International Relations and Diplomacy. His current research interests include the overlap of emergency planning, collaboration, public policy and land-use planning. In his spare time, Adam enjoys reading, brewing beer, and being a snappy dresser.

Adam Crawford

RARE Participant Profile

The Resource Assistance for Rural Environments (RARE) Program is administered by the Community Service Center (CSC) at the University of Oregon. The mission of RARE is to increase the capacity of rural communities to improve their economic, social, and environmental conditions through the assistance of trained graduate-level participants who live and work in the communities for 11 months. The RARE program is supported through grants from AmeriCorps, the U.S. Department of Agriculture, Oregon Economic and Community Development, and other agencies. The following RARE participant is currently working with the *Partnership* in Clackamas County.

Laurel Reimer is a 2008 graduate of the University of California, Los Angeles where she received a bachelor's degree in Geography/ Environmental Studies and a minor in Urban and Regional Studies. Laurel decided to come to Oregon to witness smart growth principles in practice and to experience life outside of southern California. During her RARE service, Laurel's focus will be to update and complete Natural Hazard Mitigation Plans for the cities of Clackamas County. In her spare time she enjoys watching UCLA sports and sampling beers from around the world in hopes of becoming a beer connoisseur.

Laurel Reimer

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