# DISASTERCOM

DERA HOLD DERA

**DERA Newsletter** 

43 Years of Service

September 2004



#### Three Feet of sand

The Santa Rosa and Escambia County EOC officials have some serious digging to do. What may be found beneath all the sand could prove to be tragic for multiple communities.

# Virtual Emergency Operations Center in Hurricane and Earthquake Response and Recovery

TVEOC and DERA members Walter Green and Candace Carman have been busy working with the various NVOAD member agencies to present vital contacts in the many affected counties and states plus shelter information and contacts. warehouse information, **FEMA** Situation Reports, special disaster alerts and daily IA summaries. The coordinated responses between the National Voluntary Agencies Active in Disaster in concert with the federal government was unparalleled and was facilitated for all users by the medium of the Virtual Emergency Operations Center.

(See full story inside)

## DERA equipment saves a life

Mike Green had no idea when he dropped his father off at the Santa Rosa County Special Needs Shelter that everything wouldn't go as planned. Mikes dad, Elwood Green a chronic dialysis patient, was left with three bottles of medication thought to sustain him for three days. staff at the shelter nursing administered the medicine to Mike's dad in the dosage that Mike conveyed to them. It wasn't until Dr. Paul Arons arrived on the scene that they realized that Mr. Green was seriously under-dosed.

In the meantime both Escambia and Santa Rosa Counties had called the American Radio Relay League (ARRL) to send members for emergency communications support. Armed with a cache of equipment from D.E.R.A., your editor was one of the first to respond. (See inside)

## Transportation problems in disasters



Truck caught on Interstate 10 in Pensacola during Hurricane Ivan bridge destruction

#### Hurricane Charley downs Arcadia water tower in Florida



## DERA members provide support to Haiti

By: Rick Lindquist, ARRL Senior News Editor

NEWINGTON, CT, Sep 28, 2005-An ARRL member from Florida, Catherine Lawhun, KG4UKI, is heading to Haiti with a small team to provide communication support for the relief effort in the floodravaged city of Gonaives. DERA is sponsoring the project. During the recent spate of hurricanes affecting Florida and Caribbean, she's been active in the field in Florida on behalf of DERA and also has assisted numerous organizations including The Salvation Army. Lawhun says she recognizes that while stormstricken communities in the US also need help in recovering, the need in Haiti is especially urgent. (Continued on the ARRL website)

**DisasterCom** is the quarterly newsletter of DERA International. News items and articles are always welcome.

ISSN 1521-1592 Editor: Catherine Lawhun

Membership in this Nonprofit Association is open to all who share our commitment to effective disaster preparedness and response.

See Back Page for Membership Application

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#### **DERA International**

P.O. Box 797 Longmont, CO 80502

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## DERA SPECIAL OPERATIONS

DERA is mounting a disaster relief mission to Flood ravaged Haiti.

Please join us in this outreach to help thousands of relief workers and native Haitians in an effort to bring communications support to this poor and beleaguered island.

DERA will be sending an envoy to the island in October to establish a communications station.

They will position a mobile Icom 706 Mark IIG on the hillside overlooking Gonaives and provide key relief operators with GMRS handheld capability down into the still flooded city.

Relief operatives and doctors from Doctors Without Borders (1999) Nobel Peace Prize Laureate) will be to relay messages questions up to the mobile HF station for transfer to the US and other responding countries. volunteer operators are also needed to provide round the clock relay of the information. Please sign up to take a single hour shift at www.manywaters.org/haiti.htm Primary frequencies will be in the 20 meter band, 14.265-14.275, with evening contact on 40 or 80 meters.

Support for our team on the ground is being provided by Living Hope Missions out of Cap Haitian, Haiti. Passenger and Cargo transport is being provided by MFI out of West Palm Beach. HF Radio Equipment including peripherals is being provided by DERA.

We need your help!!!!. As many GMRS devices as we can carry in can be given out to doctors on the ground in the affected city. The need is huge. Let me speak to your heart of hearts and say that right now we know that the US will recover from the Hurricanes and Flooding that have devastated many of it's states in the last quarter- they have the resources to recover- but Haiti does not!!!!. We need cash donations to fund this mission. We have established a Haiti relief donations using paypal www.manywaters.org/haiti.htm

Alternately, you can send a check to DERA c/o Haiti Relief Support 11445 Honey Jordan Point, Inglis, FL. 34449 Any help at all - even just your thought or ideas would be greatly appreciated. But please... GET INVOLVED NOW!!!!!

When recovery is completed for the current disaster, the communications station will remain on the island and be manned by Wilbert and Meg Merzilus in Cap Haitian. This will give the entire island a leg up in the event of any future catastrophes and establish a working relationship between DERA and the entire network of missions currently active on the island.

David Larsen, long time DERA member and President of FAIRS, Foundation for Amateur International Radio Service, is providing valuable knowledge for establishing the station in accordance with ITU and in country regulations.

Please join with this effort as we move forward in working out all the details. Thank you so much Your editor,

Catherine Lawhun

President of
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## Tampa Radio Club makes a difference

Channel 13 (Fox) did a feature story on Tampa Amateur Radio Club and Salvation Army. The video clip is on the TARC website at

http://www.hamclub.org

I don't believe TARC had worked with Salvation Army before. We do regularly work with the American Red Cross, Hillsborough County Emergency Management, and Hillsborough County ARES/RACES. The TARC clubhouse is located a short distance away from the county EOC and served as an operations center during the evacuation phase.

The Salvation Army needed help with communications between their canteens and their Base of Operations which was located in the parking lot of the Charlotte County Convention Center (or what remained of it). The Base also needed to have the opportunity to contact its Tampa Warehouse. Somewhere, someone, in the Salvation Army decided awhile back that communications between their units would be handled by use of the Nextel direct connect system. The cell phones are one of the first means of communications that goes down and that fact became evident quickly.

The Salvation Army unexpectedly threw an additional big request into the mix. The people in the Salvation Army Team Emergency Radio Network, (SATERN), were experimenting with the use of APRS. Early into the relief operations we received 10 Kenwood D-700 dualbanders from the Oklahoma Division. We were called upon to deploy these units with the canteens and have a working unit at Base Camp and the Tampa Warehouse. After the necessary power cords were built, antennas and mounts over-nighted by priority early delivery, and some minor adjustments to the way that the units were digipeting their signals, we accomplished the goal set before us. Anyone - Salvation Army big-wigs included - could see via the Internet where all the equipped canteens were located along with the Base of Operations and the Tampa Warehouse and see their locations within an accuracy of 40 feet. The powers-thatbe at the Salvation Army were very pleased. My understanding is that previous use of APRS had never been utilized in actual disaster relief operating conditions. We proved that it was not only feasible but could be an extremely valuable tool. I think that it is safe to say that the Salvation Army will be expanding its use of APRS in the future. I also know that there were many hams who are now

adding the purchase of a Kenwood D-700 to their wish lists.

When the call was put out for assistance and hams responded. Biff Craine -K4LAW got a call from the Wellington Radio Club near West Palm Beach telling him that two hams were on their way over. Those two hams proved to be a God-send. Larry Lazar - KS4NB and Lindy - KG4PQG have many years experience between them being involved in disaster relief. Larry spent two years when he was younger in the Peace Corp setting up remote radio communications and most recently was called upon to set up emergency communications in Peru when they were devastated by an earthquake.

The Salvation Army has been doing what they do for a long time and because of that they do it extremely well. One of the problems whenever one group is called upon to assist another organization is to determine "who's on first" and "what's on second". When William Booth first started the Salvation Army he structured it along military lines. This made it guite easy to figure out the pecking order of their organization. For example a Major will outrank a Captain. It was very rewarding to have the Major in charge of Base Camp look over to the hams at least twice a day and say: "I don't know what we'd do without you guys". When we informed the Major that we were going to be relieved by members of the Sarasota Emergency Group we had to assure him that they were hams like us and would fall into their system. Larry -KS4NB gave him his cell phone number just in case.

We have made friends with Salvation Army people that will remain or a long time. We have responded to answers from many of them who said: "This stuff if pretty neat. How can I become a ham?" The Tampa Amateur Radio Club now knows what its direction is going to be. Climb on the bus gang. This is going to be a great ride !!!!!

Jim Gerhart - WA3DIT

TARC members also deployed one of the MAC (Mutual Aid Communications) trailers from the Florida Fire Marshals to Wauchula. They were reportedly going through 700 AA batteries a day in the mutual aid handhelds from the equipment cache.





Hurricane Economics 101 Lemonade Stand or Generators and Chainsaws For Sale

### Hurricane effects in North Carolina

Report by DERA Director & Trustee Robert Dockery, Asheville, North Carolina

Western Carolina Amateur Radio Society (WCARS) and Red Cross doing damage assesment via ham radio.

Asheville and western North Carolina had the experience of catching Frances on the down side but still faced a lot of problems:

-Black Mtn had 17 inches of rain in 24 hours = flooding of Swananoa

River Valley, evacuations from homes along that area

-mudslide on top of Old Fort Mtn on I-40 blocking both east/west

lanes...detour would add nearly 200 miles if one didn't know other ways over that mountain

-ALL bridges in Burke Co. (Morganton) were under water

-many roads at higher elevations closed due to flooding...when you have flooding at 4000 ft elevations, your eyes

open up to what is DOWN stream!
-flood warnings all over and every county

has particular areas where

little streams have become raging rivers -French Broad River now very large and watching downstream (Marshall &

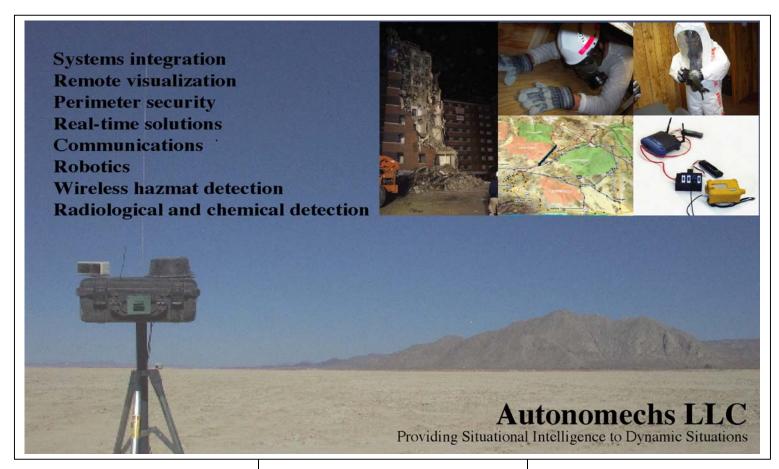
Hot Springs) for big problems...reminds one of the pix of the 1912 flood

-Lake Lure and Chimney Rock area was evacuated due to Broad River

becoming A RAGING BIG RIVER and washing out everything down stream...

-Water supply system SHUT DOWN in Asheville due to loss of supply from North Fork Reservoir...two 17" lines were severed due to flooding of Swananoa River

undermining where they crossed and weight of water + pipes caused break. Asheville passing out bottled water (2 gal/person/day) to enable folks to flush a toilet with waste water. Makes one fully realize just how much water we use for daily and mundane chores.



### INTERVIEW WITH TIM MURPHY By Candace Carman

Our communication structure for responding to terrorism and natural disasters was not intended to defend against an enemy that utilizes coordinated attacks. "In a large enough incident, situational commanders can fall into the trap of information overload, while critical information becomes bottlenecked, or overlooked."

Tim Murphy, a visionary pragmatist created Autonomechs -to develop faster communication systems, with setups that can survive infrastructure attacks, and provide situational intelligence to decision makers while minimizing the risk to human life. It is dedicated to providing aid to groups ranging from community-based first responders to government agencies."

I had the pleasure of an extended email conversation with Mr. Murphy. I'd like to share some of that conversation with you now:

Q. What does the Distributed Information Network (DIN) do?

A. The DIN moves information around in an approach more like a spider web versus a stovepipe. In a stovepipe, the different pipes of information don't talk to each other. In a web there is a redundancy that allows for points of failure. The way we structure our network is to detect the network faults and automatically bypass them, without the user having known anything was wrong.

Q. What is your long-range vision for this network?

A. To be able to allow FEMA-like groups to enter any area in the US

and know everything about every response vehicle and responder in the area.

There is too much information, and not enough routes to pass the information to the appropriate people. We are looking to consolidate how the information travels.

Q. How does it interface with the net?
A. If the net is available, great; if it isn't, it doesn't have to be.

The more resources that come into the DIN the stronger it is, but it can act completely as a stand alone system. Local responders can setup our devices in the field and look for chemicals in the air, or search for survivors in a rubble pile until communications arrive. When the reach back to the net occurs, there is a seamless transition to the web.

Q. Is this based on a multiple node system?

A. Yes. Nodes can be used to pass messages to each other, as well as

communicate with one another. Nodes can be anything, from a field station, to a laptop, to an ambulance.

Q. Can it be used from multiple sites simultaneously using military, commercial radio, wired, wireless or satellite?

A. It can become one giant cell or it can be a combination of distributed cells operating in the same area, and using satellite to link the groups together. This allows, for example, Center for Disease Control to look at a blood culture under a microscope while *IN* the hotzone, without leaving their facility.

Q. Who or what groups do you see making best use of this?

A. Primarily, first responders, but it's flexible enough to be used by anyone doing perimeter security, multi-agency operations, or deployed field monitoring. If, for example, one group has purchased your hardware and they have Memorandums Understanding of [MOU's] with several organizations does this mean that each of those groups would have to purchase your hardware?

Think of it like a potluck. The more you bring, the better, but there will be people who won't bring anything and still get to share. Our current goal is to make the systems cheap enough for volunteer groups. Our system does not have a per minute charge. Buy the hardware, leave it on 24/7; there is no added cost.

## DERA equipment saves a life

(continued from page 1)

special needs shelter generating so much radio traffic that E.O.C. was overwhelmed and ESF-8 was not able to clarify the urgency of the need for Mr. Green. This is why I was deployed to the special needs shelter with the D.E.R.A. satellite phone. The satellite phone broke through and enabled us to dispel the confusion caused by previous multiple relays and enabled us to reach additional family members and to clarify additional important information. Mr. Green was not any condition to convey information himself, which was primary reason for much of the confusion. It enabled us to ascertain which family members were closest and how best to transport given the situation with many major roads impassable. We were then in a position to start calling hospitals to determine which were still functional and capable of treating him. After attempting three other hospitals that were much closer, Mr. Green was successfully admitted as an emergency dialysis patient at a Fort Walton Beach hospital nearly 1-1/2 hours away.

D.E.R.A. provided the only mechanism of communication that could have saved this man's life. Thank you DERA!!!!

#### DERA forms D.C. region chapter from assistance provided at GovSec/ READY/ USLAW conference

DERA Member Missy Moran was instrumental in positioning DERA to receive an invitation to exhibit at this triple conference and expo held at the Washington Convention Center in July. DERA has many members in the DC area and several came out to assist with running the booth. Among those who gave of their time were, Paul Munch, Madeline Nawar, Karthik Polsani and Fred Schroeder. On behalf of DERA I want to thank all of you for your time and efforts and say that it was certainly a pleasure to work with each of you. Also assisting was Many Waters government relations engineer, Tony Wagner. We all think we did a pretty good job convincing Tony to become a DERA member. Everyone enjoyed meeting each other and the booth was well attended. Fred Shroeder has offered to coordinate ongoing training and social opportunities

locally with the group and our Chairman thinks that this type of regional approach is very beneficial. We will be exchanging contact information between those interested members to form a regional chapter.

If this idea sounds appealing to any of our members in other areas please feel free to contact Catherine Lawhun at editor@disasters.org and we will see how we can best implement a similar regional chapter for your area as well.

#### Insurance in Florida: High Deductibles for insured and safety nets for Insurers

The state of Florida has strengthened the industry through the creation of the Florida Hurricane Catastrophe Fund. After Andrew caused a handful of local insurers to become insolvent, The FHCF was started to make sure that the insurers could pay their claims and stay in business after disasters. By law, any insurer that writes property and casualty insurance in Florida has to pay a surcharge on the policy to the fund.

Before Charley hit, the fund had a cash balance of 5.6 billion. In addition, the fund has an additional bonding capacity of \$9 billion, backed by emergency assessments on all property and casualty policies written in the state. There are 229 companies participating in the fund and it would take an industry loss of about \$10 to \$11 billion before bonding was triggered.

In some parts of Florida insurance premiums are double or triple what they were when Andrew hit. Deductibles are calculated differently. Instead of the typical flat \$500 to \$1000 deductible most insurance companies require the deductible to be between 2% and 5% of the home's value. With Florida's real estate market providing some of the fastest inflation in the housing market, this places the burden on the investor rather than the insurers.

Sadly, it also places that burden on the first time home buyer and financially struggling families, who, right now are faced with major damage and have no ability to pay their deductibles.

#### **Cayo Costa**

Hurricane Charley made landfall at Cayo Costa, a barrier island just west of Cape Coral, as a Category 4 storm at approximately 3:45 PM EDT on Friday, 13 August 2004. Winds were estimated at 145 mph, with a

minimum central pressure of 941 millibars.



Previous Breach: The pre-Hurricane
Charley aerial photo on the left was taken
several days following the passage of
2001's Tropical Storm Gabrielle. Note the
two relatively small breaches in the
central part of the island. On August 13,
2004, Hurricane Charley carved the 450meter-wide breach that is shown in the
right photo. (Photos compliments of
Humiston & Moore Coastal Engineers,
Naples, FL)

## DERA assists Salvation Army Main Headquarters

Mike Sullivan was simply trying to drive into downtown and check on his data center after Hurricane Ivan hit Pensacola Florida. Unfortunately, he was tuning the repeater now in full time employment of the Santa Rosa County EOC. In exchange for giving him directions on how to best navigate in the storm ravaged streets, they asked if he would mind volunteering his radio interface to relay messages from the Salvation Army (SA) Headquarters until they could get a relief radio operator at that location. Of course he obliged, his entire family are Amateur Radio Operators. There are 8 hams in their family alone. The DERA team was to be his relief operator.

When the E.O.C. transferred us from the special needs shelter to the Salvation Army Headquarters the driving distance was about 20 miles, but because of the combination of traffic signals out and congestion due to the damaged bridges, the drive took three hours. During that time the SA Headquarters was having problems of its own. Not only were they running a distribution center to receive and redistribute it to all of the canteens from this location (somewhere between 18 and 25 canteens), but they were also housing and feeding all the out of state volunteers that were manning the canteens. All of this work was being accomplished without the use of telephones. While we were en route we

heard a message come over the radio requesting additional security urgently needed at SA Headquarters. This was due to the numbers of affected neighborhood population approaching the building with needs being almost 1000 and the people were beginning to fight. The SA Headquarters is situated in an extremely impoverished section of downtown Pensacola, now utterly ravaged by the disaster. Within fifteen minutes the EOC had provided the extra security in the form of helicopters. They flew over several times, low enough so the crowd had to calm.

When we finally arrived, Mike, who had chosen to stay and volunteer his time and equipment, had to come to escort our cars into the building compound which was difficult due to all of the downed trees, electrical lines and massive amounts of people out front..

The leadership at the main headquarters was so impressed with the ability of the radio communication to be able to evoke such an immediate and effective response from the county that Major Tom Vick, Incident Commander of the Ivan Response Effort, Hurricane requested info on specifications and pricing so that Salvation Army personnel could have the same type of equipment in house. DERA is working with Major Vick currently to assist in getting that info and will continue to work alongside the Salvation Army to assure that they are able to indoctrinate their staff into the expanding world of emergency communications.

## Interoperability moves forward with RapidCom 9/30

From Natural Hazards Observer, Volume XXIX Number 1, September 2004

By September 30, 2004, DHS' RapidCom 9/30, a crisis communications system enabling first responders to communicate with each other in a large scale emergency, will be in place in ten highthreat urban areas: New York, Chicago, Washington D.C, .Los Angeles, San Francisco, Philadelphia, Houston, Jersey City, Miami, and Boston. The local knowledge and active involvement of officials in these areas is critical to the project as RapidCom 9/30 is designed to fit the unique needs of each urban area. Lessons Learned in these cities will serve as a foundation for similar efforts in other urban areas as well as for the long term goal of full interoperability.

In addition to specifying equipment needs, RapidCom 9/30 will engage public safety officials to identify and

incorporate the crucial human factors of interoperability, frequency use, standard operating procedures, regional governance, and training and exercises. RapidCom 9/30 will also provide training and technical assistance as well as assist with the development of standard operating procedures, the planning and conducting of test exercises and the establishment of regional governance structures

A RapidCom9/30 fact sheet is available at http://www.dhs.gov/dhspublic/display?content=3869.

#### Communications Interoperability and Funding

The United States Conference of Mayors Interoperability Survey 2004. 23 pp. Available free on line from the United States Conference of Mayors, 1620 Eye Street, NW, Washington, D.C., 20006; (202) 293-7330;

e-mail:info@usmayors.org; http://www.usmayors.org/72ndannualme eting/interoperabilityreport\_062804.pdf

The purpose of this survey was to measure the reliability and effectiveness of communication between city agencies and federal, regional, state and other local entities in responding to disasters. Issues addressed include the level of interoperability. obstacles interoperability and whether the distribution of funds from the US Department of Homeland Security by states delayed interoperable investment. and the investment to become fully interoperable, and whether and how much federal funding is expected or has been made available to aid interoperable implementation. While the survey results do include encouraging data, they also challenges reveal several communication, most importantly, the lack of funding.

From Natural Hazards Observer, Volume XXIX Number 1, September 2004

# TVEOC plays important role in quadruple Hurricane Response and Recovery

The historic quadruple punch of hurricanes Charley, Frances, and Ivan pounded Florida with a head shot followed by mutilating body blows from August 13 through September 25, 2004. Not since Texas in 1886 has the United

States seen such a series of hurricanes in one season. American Disaster Reserve's Virtual Emergency Operation Center [TVEOC] was initially deployed to watch and provide support for our the National Voluntary partners, Organizations Active in Disaster (NVOAD) and subsequently the Florida Voluntary Organizations Active in Disaster (FLVOAD) as Hurricane Charley swept through Florida, and worked her way up the coast of the Eastern United States. Our Watch Team started pulling reports from government and public news stations as soon as The Virtual Emergency Operations Centers [TVEOC] was activated for Hurricane Charley, number one of, what turned out to be, four sequential hurricanes, by one of our clients. We provided a steady stream of information with operators across the nation coming online as the time zones changed and we continued to provide this information throughout the four hurricanes. Data from these reports taken from varied sources on the Internet including National Hurricane reports and discussions, airport reports, nuclear facility alerts, local county and state situation briefings, local news reports as well as national news reports, plus many other avenues for information helped provide the data for the distilled Situation Briefings Reports available throughout these six weeks and available for view at the Virtual Emergency Operations Center. Included in these reports were shelter status and availability, evacuation reports, warnings, and other significant data necessary for various voluntary response groups to plan their own movements.

Charley hit Aug. 13 as a Category 4 on the Safford-Simpson Scale with winds of 145 mph but was a very fast moving storm, in and out almost in the blink of an eye. Unfortunately, it was also a fickle storm, leading people to believe it was going to hit particular areas and then taking a sudden turn just before landfall leading it to hit the west coast of Florida which had not been told to evacuate and doing extensive damage both from wind and rain. Frances hit on Labor Day weekend as a Category 2 with winds of 105 mph but lingered and moved slowly doing more damage with water than with high velocity winds. Ivan hit last week as a strong Category 3 with winds of 130 mph but missing much of the previously impacted areas of Florida and hitting the Panhandle instead as well as impacting other states, primarily Alabama, although Georgia, Mississippi and Louisiana all experienced some of the effects. September 26, already nicknamed the "Yom Kippur Hurricane", Hurricane Jeanne hit Florida as a Category 3, entering just a few miles south of Stuart in the already ravaged St. Lucie County.

The American Disaster Reserve was invited to monitor and upload the daily conference calls which were held by the National VOAD, as well as the Florida VOAD. These notes became instrumental in the National VOAD's thrice daily briefings with FEMA and the Department of Homeland Security. In addition, after Hurricane Ivan hit, we were requested to aid with the conference calls for the VOADs of Georgia, Alabama, Mississippi and Louisiana and were available to them for uploading their conference call notes to The Virtual Emergency Operations Center [TVEOC]. We have worked with the various member agencies to present vital contacts in the many affected counties and states plus shelter information and contacts, warehouse information and contacts as well as presenting FEMA Situation Reports and special Disaster alerts and daily IA summaries for Florida, North Carolina and Mississippi. The Virtual Emergency Operations Centers [TVEOC] was able to respond in a timely and efficient manner, providing the vital information for both Federal and State representatives. Our services were praised and suggested to others by various FEMA representatives and by the various national and state voluntary agencies in association with the VOAD complex. The responses from FEMA were the fastest and most efficient on record, putting millions of dollars into the hands of residents to start the rebuilding process quickly. The coordinated responses between the National Voluntary Agencies Active in Disaster and the various state VOAD's in concert with the federal government was unparalleled and was facilitated for all users by the medium of the Virtual Emergency Operations Center.

You can see some of the things which we are doing with all 4 Hurricanes at http://virtualeoc.org

#### **Mount St. Helens Notice** of Volcanic Unrest

September 26, 2004 3:00 P.M., PDT

U.S. Geological Survey Cascades Volcano Observatory, Vancouver, Washington University of Washington Dept. of Earth Sciences. and Space Seattle. Washington

Seismic activity at Mount St. Helens has changed significantly during the past 24 hours and the changes make us believe that there is an increased likelihood of a hazardous event, which warrants release of this Notice of Volcanic Unrest. The swarm of very small, shallow

earthquakes (less than Magnitude 1) that began on the morning of 23 September peaked about mid-day on 24 September and slowly declined through yesterday morning. However, since then the character of the swarm has changed to include more than ten larger earthquakes (Magnitude 2-2.8), the most in a 24-hr period since the eruption of October 1986. In addition, some of the earthquakes are of a type that suggests the involvement of pressurized fluids (water and steam) or perhaps magma. The events are still occurring at shallow depths (less than one mile) below the lava dome that formed in the crater between 1980 and 1986. The cause and outcome of the earthquake swarm are uncertain at this time. Several causes are possible, but most point toward an increased probability of explosions from the lava dome if the level of current unrest continues or escalates. During such explosions the dome and crater floor are at greatest risk from ballistic projectiles, but the rim of the crater and flanks of the volcano could also be at risk. Explosions would also be expected to produce ash clouds that drift downwind at altitudes up to several thousand feet above the crater rim. Landslides and debris flows from the crater that are large enough to reach the Pumice Plain are also possible. Such events occurred at Mount St. Helens between 1989 and 1991.

strong earthquake occurred at 17:15:24 (UTC) on Tuesday. September 28, 2004. The magnitude 6.0 event has been located in CENTRAL CALIFORNIA. The hypocentral depth was estimated to be 8 km (5 miles). (This event has been reviewed by a seismologist.)

Daily updates can be found at:

Http://www.earthquake.usgs.gov; http://vulcan.wr.usgs.gov/Volcanoes/Cascades /CurrentActivity/current\_updates.html http://www.pnsn.org/HELENS/welcome.html

#### **Disaster Child Care** Volunteers

Disaster Child Care (DCC) is an ecumenical program of the Church of the Brethren General Board that trains and mobilizes volunteers to care for children of families suffering from a natural or man-made disaster. To learn more about this unique volunteer opportunity visit the DCC website at

www.disasterchildcare.org.

Caring for children after disasters has been a significant ministry of the Church of the Brethren since 1980 when a team of volunteers first set up temporary Child Care Centers in Kalamazoo, Michigan after a devastating tornado. Since then, over 2000 volunteers have cared for more than 67,000 children in response to floods, earthquakes, hurricanes, fires, ice storms, tornados, terrorist attacks and air incidents. The primary role of Disaster Child Care volunteers has centered around the needs of the children of emergency management personnel in recent years.

Persons interested in becoming a Certified Disaster Child Care Giver must successfully complete an intensive 27 hour training workshop. Training includes information on the needs of children following a disaster, learning skills for effective interaction with children; and a simulated experiencing disaster aftermath, including an overnight stay, sleeping on Red Cross-type cots, and sharing in the rigors of post-disaster living. Trainees must be in good physical and mental health, have a flexible schedule, and enjoy a challenge. The training is open to all women and men, 18 and older who care about and enjoy interacting with children. A nominal registration fee covers tuition and materials. Completion of the training workshops does not guarantee certification. Providing a background check and personal references are also requirements of the certification process.

To volunteer to help in Florida recovery operations contact Virginia Lindley 850-235-7879 or email vlindley@bellsouth.net

#### **Health Center Opened in** Gonaives, Haiti

In response to the severe flooding that has hit the Haitian city of Gonaives, Doctors Without Borders (Medicines Sans Frontiers, MSF) has begun treating people at a newly opened health center in Raboteau, a slum in the western part of the city.



Look for reports on DERA's assistance in Haiti in the next issue or on the website www.disasters.org

#### Membership Invitation



Established in 1962

#### <u>MISSION</u>

#### **Preparedness - Response - Education**

DERA is a Nonprofit Disaster Service and Professional Organization.

Our members work together as a world-wide professional network of disaster researchers, response and recovery specialists, trainers, consultants, technical experts, and project managers.

We help disaster victims by improving communications and logistics, reducing risks and mitigating hazards, conducting community preparedness workshops, and by sponsoring preparedness and response projects.

We sponsor a school awards program that encourages students to study the effects of disasters and conduct projects to reduce hazards and improve community preparedness.

As a prominent international professional association, our membership is composed of key leaders in the field of emergency management from around the world, including government officials, volunteers, consultants, business managers, researchers, educators, students and charitable groups.

Our quarterly newsletter, <u>DisasterCom</u>, brings current information about developments in emergency management and reports on the activities of our global membership.

We sponsor research projects and the publication of emergency management guides, case studies, technical assessments, and preparedness materials.

If you share our vision of commitment and service, we would welcome you as a member.

Please complete the application that follows or contact us for further information.

DERA P.O. Box 797 Longmont, CO 80502

Also, please visit us at http://www.disasters.org

#### **Professional Affiliation**

## Membership Application



| Name:  | Title:   |
|--|--|
| Organization:  |  |
| Street Address:  |  |
| City:  | State: ZIP/Postal Code:  |
| Country, if not USA or Canada:   | Phone:   |
| Email:   | Radio Callsign:  |
|  | se Select Membership Classification se Order, or Charge Card Authorization for Dues  |
| Professional / Technical / A<br>\$50.00 per year<br>\$25.00 for Volunteer, Student | \$75.00 per year   |
| Executive / Management \$75.00 per year  | Gov't Agency or Small Business \$95.00 per year  |
| Lifetime Individual \$450.00   | Corporate Membership \$250.00 per year   |
|  | d drafts are credited at commercial exchange rates. All checks must be payable through a U.S. ba<br>ar if you wish newsletter sent by Airmail, or \$20 for Global Priority Mail. |
|  | CHARGE AUTHORIZATION   |
| I authorize DERA to cha  | ge the following account for membership dues as marked above:  |
| Please Check:  VISA  M   | asterCard  |
| Card Number: -   | Expires: /   |
| Authorized Signature:  | Today's Date:  |

MAIL APPLICATION TO:

DERA - Membership P.O. Box 797 Longmont, CO 80502-0797