



TEXAS EMERGENCY MANAGEMENT ONLINE

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The Texas Division of Emergency Management is accepting article submissions for The Texas Emergency Management Online (TEMO) newsletter. If you have an idea for a topic or would like to submit an article, contact [Mike Jones](#) at 512-424-7050.

MESSAGE FROM THE CHIEF – January 2016

As the New Year begins, it's a natural time to look back at the challenges and accomplishments of the previous year while we look toward the new opportunities and resolve of the new one.

Texans are not shy about telling whoever will listen about how great our state is. But Texas, like many other states in the nation, continues to grapple with complex issues, such as border security, population growth, dwindling water resources, increasingly severe weather, work place violence and the threat to our security from foreign and domestic terrorists. As always, TDEM staff and I are ready to work alongside our first responders as well as our state and local officials and emergency managers to assure that Texas is prepared to respond to any threats it faces in the coming year and that our citizens are not forgotten in the wake of natural or manmade disasters.

With the historic drought finally off the Texas map, recovery from the devastating 2011 wildfire season continues, even though many areas burned in those fires may take generations to fully recover. On top of that, recovery from the May/June and October flood events and December's tornadoes is underway. If you have the time, think about volunteering some of it and help out your Texas neighbors who have lost so much due to the storm damage. To find volunteer opportunities near you, the [Central Texas VOAD](#) website is a great place to start!

Finally, please make one of your New Year's Resolutions for 2016 to make sure you, your family and your community are prepared for the potential hazards and threats we face day to day in Texas.

Save the Date: 2016 Texas Emergency Management Conference

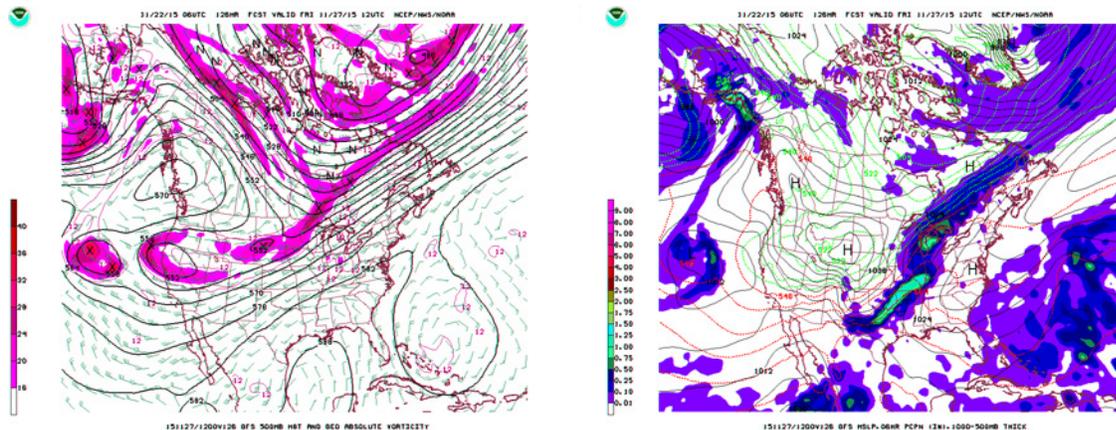
This year the 2016 Texas Emergency Management Conference will be held earlier than the past few years. The conference dates for 2016 are Tuesday, April 5 through Friday, April 8 at the Henry B. Gonzalez Convention Center in San Antonio. Registration is open and this year it will feature a new track focusing on the importance of family preparedness by offering family-oriented workshops. Join us at this premier event, learn about what's happening in emergency management in your community and statewide and network with

your colleagues from across the state. Visit the [2016 Texas Emergency Management Conference](#) website and stay tuned for more information.

What You Need to Know About the Use of Numerical Weather Prediction Models ***Introduction of Numerical Weather Prediction and its history***

By Troy M. Kimmel, Jr.

Born in the 1950s with the advent of computer technology—crude compared to today’s standards—forecasters began to use computer models to predict the state of the atmosphere into the future. In short, a computer-generated weather forecast. The advancement of Numerical Weather Prediction (NWP) models since then is nothing short of amazing. Models are now able to make reasonably accurate forecasts a week in advance, an unthinkable occurrence just a decade ago. Computer models are now even used in making long-term seasonal and climate forecasts. Although used heavily by today’s forecasters, these computer models are not perfect. Each model has its own biases, weaknesses and strengths. Meteorologists and weather forecasters must know these model traits inside and out before using them to make forecasts.



There are five global-scale NWP models used on a daily basis by meteorologists here in the United States:

- National Weather Service Global Forecast System (GFS)
- European Center for Medium-Range Weather Forecasts (ECMWF)
- Global Ensemble Forecast System (GEFS)
- United Kingdom Meteorological Agency (UKMET)
- U.S. Navy Operational Global Atmospheric Prediction System (NOGAPS)

There are other higher resolution mesoscale models, including the North American Mesoscale (NAM) and High-Resolution Rapid Refresh (HRRR) models as well as specialized models, such as specific hurricane models. These models produce many types of forecasts ranging from surface pressure and precipitation forecasts to upper air jet stream and vorticity (atmospheric spin) forecasts. Many of the global scale models also have ensembles where atmospheric conditions are slightly tweaked and changed each time before the model is processed by the computer. For example, the European Center Model (ECMWF) has over 50 different ensemble members (solutions) while the GFS model has over 30 of these ensemble members. Meteorologists look at these ensemble data sets to see if the individual ensemble members are similar or different. Similar forecasts would indicate higher confidence in the forecast model. Large differences in the ensembles would indicate a high level of uncertainty in the forecast output. In addition, model output statistics (MOS) are created for specific forecast locations.

Many smart phone apps are heavily reliant on MOS data for a given location, such as city or zip code, so it is important to remember that the MOS data will be inaccurate if the model is

at the NWS/National Hurricane Center. They outline the respective model strengths and weaknesses and how their finalized public forecast track was made. Another reminder—although not related to the primary discussion here—when looking at the forecast track of any tropical cyclone, remember that a tropical cyclone is never a point, it may cover hundreds if not thousands of square miles.

In Closing

Numerical weather prediction is a tool, and, as part of the meteorologist's tool box, it is an important for forecasting the state of the atmosphere into the future. It is a specialized tool, however, and one that requires meteorological experience and understanding about the various models strengths, weaknesses, limitations and biases. These biases are each different based upon the model type, the time of year as well as the type of weather pattern. While these models can be used by non-meteorologists, it is essential that everyone understand that these atmospheric models are not perfect. A model user must also take the time to read NWS weather discussion products to get a better understanding of how the respective models have been performing and are expected to perform in the near future.

For additional information:

Weather Map Handbook (2015), Tim Vasquez, Weather Graphics Technologies
(www.weathergraphics.com)

Numerical Weather Prediction, Wikipedia
(https://en.wikipedia.org/wiki/Numerical_weather_prediction)

Courtesy/Acknowledgments...

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TDI, insurers work at front lines to help consumers



Texas insurers are often on the front lines talking with consumers in the aftermath of damaging storms like those that hit several areas of the state in May and October. The Texas Department of Insurance (TDI) works closely with the companies to ensure that consumers get the help they need as quickly and efficiently as possible.

TDI and more than 100 insurance companies, trade groups and state agencies in the Texas State Disaster Coalition communicate regularly after a disaster about consumer needs and how claims services can quickly be delivered in distressed areas.

“We want the companies to get out there and help their policyholders as soon as it is safe,” said Melissa Hield, TDI associate commissioner and coalition coordinator. “We direct companies to the Texas Department of Emergency Management website for updates during a disaster. We also have teleconferences throughout the year to maintain a robust communications network.”



Insurers follow their own disaster response protocols, which may include setting up temporary claim centers in hard-hit areas.

In May, Governor Greg Abbott declared 113 Texas counties disaster areas after a month of destructive hail, straight-line winds, tornadoes and what the National Weather Service determined to be a 150- to 200-year flood that devastated Central Texas and parts of the Hill Country. Heavy rain hit the state again over Halloween weekend, bringing more damage to several already hard-hit areas.

TDI sent its first disaster response team into the field June 10, when the Federal Emergency Management Agency opened a disaster recovery center in Wimberley. Two-person teams also were deployed to Houston and

Bastrop. The teams, which receive training before they go, serve for five days in the field before being replaced by a new team. They answer basic insurance questions, help consumers file claims or complaints, and distribute helpful publications. In addition, TDI staff help consumers at town hall meetings, evacuation shelters, community centers, and libraries.

“We understand the importance of helping consumers get back on their feet after a disaster, and we want to do what we can to help with that process,” Hield said.

Click here for more information about the [Texas State Disaster Coalition](#), including members.

Texas EMS First Responder Award

We are proud to announce the Texas Department of Public Safety (DPS) was honored with the First Responder of the Year Award at the 2015 Texas EMS Conference in Dallas, Texas, on November 24, 2015. The award recognizes a first responder organization that demonstrated leadership in EMS in patient care, public access, medical control, disaster preparedness, public education or training. On hand to accept the award was staff from the Texas Division of Emergency Management's (TDEM's) EMS program.



Left to right: Jason Dush, Maxie Bishop, Chief Nim Kidd, Ryan Schaefer and John Dunn.

situations. As we continue to build this program, we will see the benefit of everyone's continued support and efforts to become the leaders in law enforcement first responders.

To date, almost 5,000 DPS personnel have been trained in the use of CPR and automated external defibrillator (AED). In addition, 400 AEDs are placed in public areas of DPS offices across the state and have been used three times this year with two CPR saves.

A First Responders Program, developed and overseen by TDEM, has been implemented to train DPS' commissioned officers to render aid to Texans, themselves, each other and law enforcement personnel from other agencies until EMS arrives on scene. This is particularly important with law enforcement being high-profile targets for attack, as well as in rural areas of the state where DPS troopers are often the first on scene for medical emergencies or a major accident.

Through the collaborative efforts of TDEM's EMS and Field Response personnel, as well as

numerous stakeholders from other divisions within DPS, as an agency, we have improved outcomes of our staff and of Texas' citizens during emerging, life-threatening medical

January 2016: Credits

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