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# DIVISION OF EMERGENCY MANAGEMENT

# DIGEST



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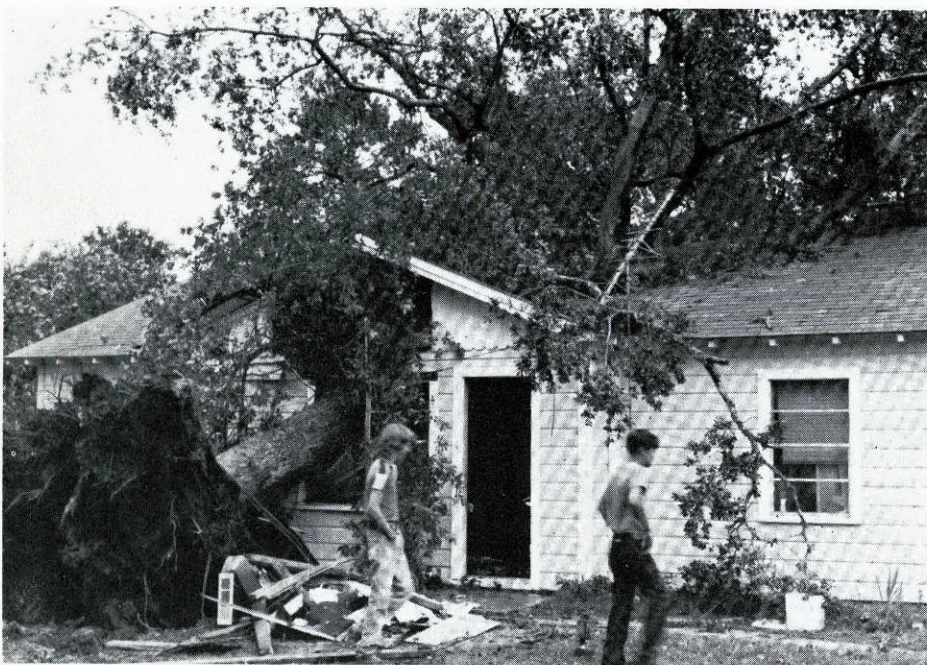
**ROBERT A. LANSFORD**  
State Coordinator

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Austin, Texas

July 1983



Violent weather May 19-23 in the form of tornadoes and flooding resulted in the Small Business Administration declaring Montgomery, Grimes, Waller, Harris, Liberty, and San Jacinto counties a disaster area. The SBA is offering long-term, low interest rate loans to eligible individuals and businesses.

As of July 12, the SBA had accepted 306 applications for processing (40 businesses, 266 homes) and had so far approved loans for one business and 25 homes. The total dollar amount was for \$388,200.

The American Red Cross opened 13 shelters in the stricken area, and sheltered 670 persons. As of July 13 the Red Cross assisted 1,182 families, rebuilt 11 dwellings and repaired 112. The Red Cross estimated a total of 1,959 families suffered losses in the storm.

Ten persons lost their lives, according to State Emergency Management figures.

A request for a presidential disaster declaration for nine counties for public assistance was denied.

The SBA is also taking applications for loans from individuals and businesses in Jim Wells County. Damages occurred as a result of a hailstorm June 6. As of July 18, the SBA has received 344 applications from individuals and two from businesses. Total dollar



Photos by Sgt. Kenneth Crossley, THP Conroe

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Official Publication  
 Division of Emergency Management  
 Texas Department of Public Safety

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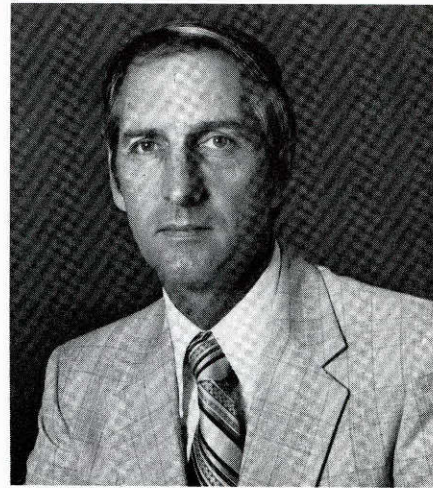
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# DEM UPDATE



**by Robert A. Lansford**  
**State Coordinator**  
**Division of Emergency Management**

The civil defense portion of FEMA's FY '84 budget has cleared the conference committee mark-up. As it stands now, \$168.9 million has been finalized. This is about \$20 million more than last year, but far short of the \$253 million requested. Although we are short of the request, continuation of the current programs are assured, with some increase.

Our biggest problem with FEMA's FY '84 program is deciding how to implement the training and education proposals -- and deciding what their new program means. We have had difficulty through the years with FEMA's constant change and redirection of this program. It is worse now than I have ever known it to be.

For those of you who still have excess property, we have been informed by FEMA that they are working hard on turnover authority. As you will recall, Congress approved the transfer of title to current holders of the property, and now it is up to FEMA to process the paperwork. I urge you to sit tight with the property until the turnover is authorized.

This past session of the state legislature transferred a program from TENRAC (Texas Energy and Natural Resources Advisory Council) to this division. The state's energy preparedness program will now reside with us. Primarily, its function is emergency fuel allocation. Two people will transfer from TENRAC to DEM September 1. We welcome Program Manager Mike Scott and his assistant, Dawn Demuth.

# 920th 'Storm Trackers' Gather Vital Hurricane Information

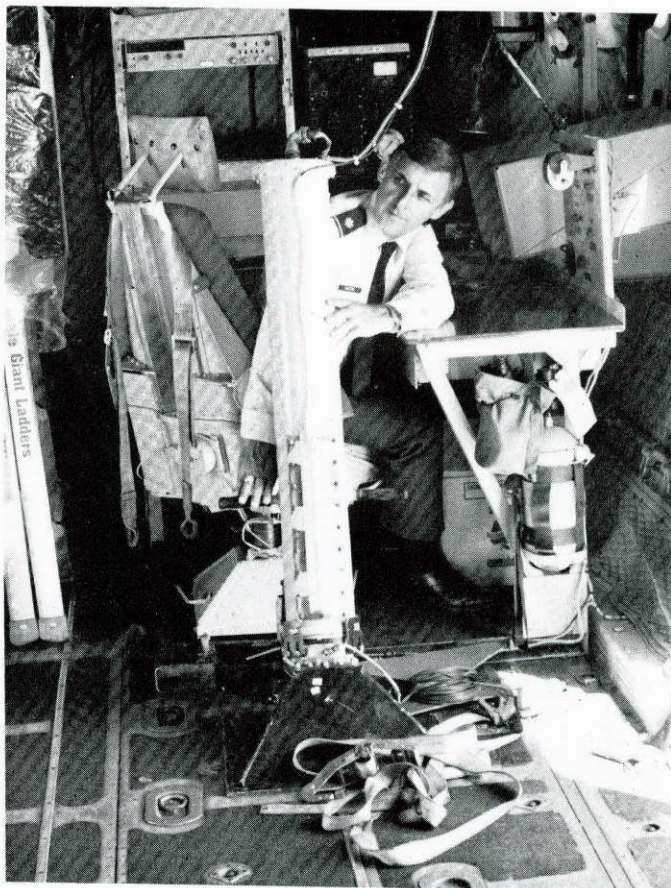
When the National Hurricane Center needs to know more about an area of disturbed weather, it calls on the 920th Weather Reconnaissance Group "Storm Trackers" to take a look.

The Air Force Reserve Storm Trackers fly their modified WC-130 around and through hurricanes and potential hurricanes, relaying important information to the National Hurricane Center on the strength and speed of the system, as well as the central position of the eye and the lowest pressure in the center.

Recently, state, local, and federal emergency management personnel toured the 920th's facilities at Keesler AFB, Mississippi, at the invitation of 10th Air Force. An explanation of the sophisticated technology used aboard the aircraft and the duties of the 920th were among several briefings given the Texas emergency managers.

The 920th flies approximately 70 percent of the hurricane reconnaissance missions in the Gulf of Mexico, the Caribbean Sea, and the Atlantic and eastern Pacific Oceans. An active-duty squadron flies the remainder of the missions. The Group also flies other weather reconnaissance missions throughout the year, including overwater refueling areas and routes for the deployment of Tactical Air Command fighter planes going to or from overseas.

Antigua, West Indies, is the usual take-off point for the 920th when its members are involved in hurricane reconnaissance. The average length of a mission is 12 to 15 hours, although the plane carries enough fuel to keep its six-member crew aloft for just over 17 hours.



*Major Toby Mattox demonstrates a dropsonde, which when released from the plane will radio back weather information to the airplane's computer.*

The storm's intensity, speed and direction, and size of  
**Continued on page 6**

## Disaster Support Available From AF Reserves

Col. Charles Kendall, 10th Air Force Director of Disaster Preparedness (Bergstrom AFB), briefed the Texas group on the overall civilian support capabilities of the Air Force Reserves.

AFR support is available to civilians during a declared national emergency or a declared imminent serious situation. The support must be requested by the proper authority, and it must be determined that civil resources are not available and that the military does not immediately require the same support.

Support potentially available from the AFR includes

airlift, aerial reconnaissance, aeromedical evacuation, and airborne fire fighting. Support can also include the use of the Air Force terminal facilities, medical personnel and facilities, communications, emergency operations centers, firefighting, transportation, and security and law enforcement.

Although regular operating expenses are not reimbursable to the Air Force, fuel, consumed supplies, transportation, and equipment repair are, either from the federal government in a declared emergency, or from the requesting agency during a non-declared emergency.

# Proclamations, Publications Note Arrival Of Hurricane Season

Coastal area cities and counties, as well as this Division, have been preparing for hurricane season.

Governor Mark White proclaimed the week of June 5-11 as Hurricane Awareness Week in the State of Texas. Representatives from the National Weather Service, the Insurance Information Institute, the Texas Department of Water Resources, the Texas Catastrophe Property Insurance Association, as well as Col. James B. Adams of the Department of Public Safety and representatives of the Division of Emergency Management, attended the public signing at the Capitol.

The City of Pasadena proclaimed June "Hurricane Awareness Month." The proclamation, signed by Mayor Johnny Isbell, said in part, "...by taking reasonable precautions the citizens of Pasadena can reduce the loss of life and property, and decrease the effects of hurricanes on the economy."

Many coastal communities have been presenting hurricane awareness/preparedness programs and participating in hurricane exercises.

The Division of Emergency Management has available several newly-revised brochures on hurricane and tornado safety tips, in both English and Spanish. Contact your Regional Liaison Officer or the state office for copies.

Also being distributed is the "Keys to Hurricane Safety" brochure, with Corpus Christi and Houston/Galveston SLOSH map inserts.

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## Violent Weather continued from page 1

amount so far is for \$1,164,600. The Red Cross had taken more than 490 applications for assistance.

A request has been made to Secretary of Agriculture John Block to designate Zavala and Liberty counties disaster areas due to hailstorms and high winds which occurred in May and June. The designation would make Farmers Home Administration loans available to eligible farmers and ranchers in the two counties.

Farmers Home Administration loans, as well as other agricultural aid programs, are being sought for several West Texas counties that have been drought-stricken for the past three years. Included are the counties of Andrews, Brewster, Coke, Crane, Ector, Culberson, Howard, Jeff Davis, Martin, Midland, Mitchell, Nolan, Pecos, Presidio, Reagan, Sutton, Terrell, Ward and Winkler.

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*Col. Ysidro Villarreal, U.S. Air Force Reserve, was presented a Meritorious Service Medal by FEMA Region VI Director Jerry Stephens (center) and DEM Assistant Coordinator Bob Halverson at the first San Antonio Advanced Seminar.*

*Col. Villarreal has been working with the San Antonio emergency management office since 1979, helping to review and update plans and coordinating with host counties for Crisis Relocation Planning.*

*He has been a chemist at Fort Sam Houston's Institute for Surgical Research (Burn Center) for almost 24 years. Col. Villarreal and his wife, Sarah, have a 12-year-old son, Adrian.*



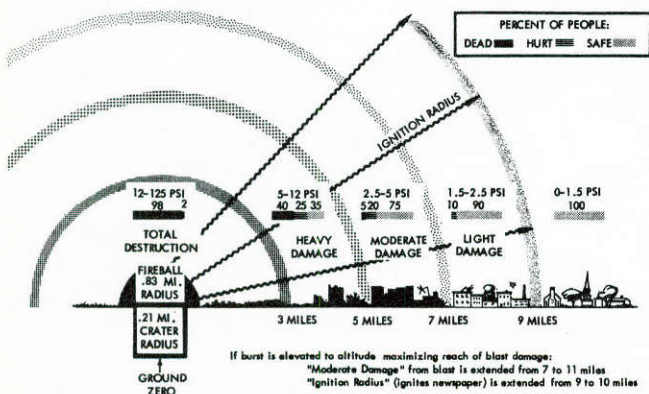
# Civil Defense: The Effects Of Nuclear Weapons Blasts Pt. 2

This is part two of the third in a series of articles on Civil Defense in the United States. The "FEMA Attack Environment Manual," available from the Federal Emergency Management Agency, is the source for much of the information and illustrations.

The fact that civil defense planning is largely concerned with the low overpressure region of the direct effects area should not be interpreted as concern for only a small part of the area affected by blast. Quite to the contrary, most of the direct effects area is subjected to "low" overpressures.

The importance of knowledge about the effects of low overpressure is graphically illustrated in Illustrations 2 and 3. The first illustration shows the direct effects of a 5-MT surface burst, with the limit of light damage extending nine miles from ground zero. Illustration 2 is the recent revision of this effects picture. It shows light damage extending to 13 miles. This change more than doubles the direct effects area.

Illus. 1 EFFECTS OF A 5 MT BLAST



A close comparison of the two sketches reveals that the principal change was a downward shift of .5 psi in the overpressure needed to cause damage -- from 2.5 psi to 2 psi for moderate damage and from 1.5 psi to 1 psi for light damage. The change came about as the result of experimental work. It is significant that such small changes in knowledge of blast effects can make such large changes in the area of coverage. The implication for emergency planning is that small changes in the vulnerability of people can make large changes in survival. Intelligent use of best available shelter can result in such changes.

And remember: The area covered by overpressures less than 12 psi constitutes 95 percent of the whole area experiencing at least 1 psi blast.

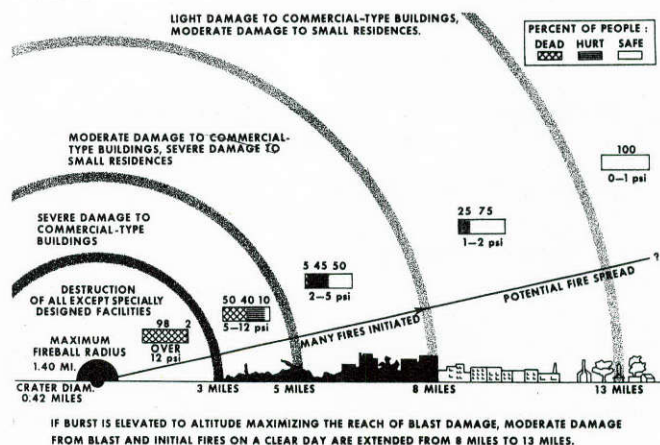
When a nuclear weapon explodes in the air, the air surrounding the detonation point is rapidly compressed and forced outward, initially at speeds much higher than the speed of sound. A blast or shock wave is created whenever air is suddenly forced to move very rapidly. Commonly observed but very weak shock waves are those created when the end of a whip is snapped to supersonic velocities or when a supersonic jet aircraft creates a "sonic boom."

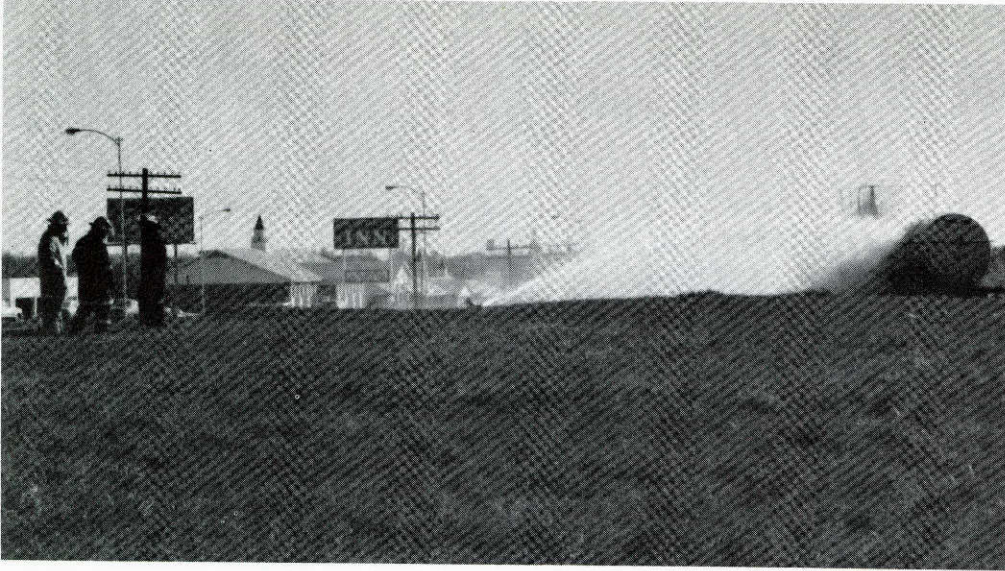
As the blast wave expands, it encompasses an ever greater volume of space. The peak pressure at the leading edge of the wave (commonly called the shock front) continuously decreases as it expands outward and the speed of expansion slows down. At great distances from a nuclear detonation, the shock front velocity slows to the speed of sound (about 1,100 feet per second or 750 mph). At this point the shock front disappears and the disturbance becomes an ordinary sound wave -- a "boom."

People are so accustomed to the world around them that they are not aware that they are being pressed in by the weight of the atmosphere, about 15 pounds per square inch at sea level. Nevertheless, the pressure is real. A diver holding on to an anchor at the bottom of a reservoir 23 feet deep would feel an overpressure of about 10 psi above atmospheric pressure.

If the dam were suddenly to fail, the diver remains under the pressure of 23 feet of water, but now the water begins to move and tends to tear him from his anchor point. In an air blast wave, this "tearing force" is a wind produced by the outward movement of the air molecules. At an overpressure of 10 psi, the momentary wind velocity accompanying the shock front is about 290 mph.

Illus. 2 DIRECT EFFECTS OF 5 MT. BLAST (SURFACE BURST)





*Grand Prairie's "Operation Hotspot" was held to test fire and police department response as well as communications. The Missouri-Pacific Railroad voluntarily "derailed" a car, which for exercise purposes was discovered to contain carbon disulfide. Because of the prevailing winds at the time, the police department, jail, library, post office, a seven-story bank building and 300 homes would have been evacuated.*

## DEM Personnel

William J. McLean has succeeded Chief James W. Morris, who retired at the end of June, as chief of the DPS Administration Division. The chief of administration directs operations of the headquarters divisions and administrative matters for the entire department.

Chief McLean, a former DPS regional commander stationed in Houston, joined DPS in June, 1960, and has served in various capacities in the Highway Patrol Service. He was promoted to assistant chief of the Traffic Law Enforcement Division September 1, 1981. Chief McLean is a graduate of Texas A&M University. He is married, and has two children.

Mike L. Scott has joined DEM as the Energy Management Officer in charge of energy emergency preparedness. Mike's function at the Division will be to prepare the state for energy shortages and emergencies. Formerly with the Texas Energy and Natural Resources Advisory Council (TENRAC), Mike has also worked for Phillips Petroleum Co. and as an energy assistant to former Speaker of the House Billy Clayton. He has a Bachelor of Science in Education from SWTSU, a B.A. in economic geography from UT Austin, and a Master degree in economic geography from the University of Missouri. Mike and his wife, Marilyn, live in Austin.

Ed Laundry is the new Auditor for DEM. Ed has previous experience in private industry and in the Air Force, where he was also an instructor in political science and leadership. Ed will soon receive his Bachelor of Science in accounting from Park College. Ed and his wife, Roberta, have one son, Robert.

## Storm Trackers

continued from page 3

the area covered are among the most important information requested by the Hurricane Center, according to Supervisory Meteorological Officer Major James Shimkus of the 920th.

A dropsonde -- a metal cylinder containing a radio transmitter and weather instruments -- is used to

measure atmospheric pressure, temperature, and relative humidity. When released from the aircraft, the dropsonde transmits the weather information to an on-board computer which processes the data within three minutes. The information is then radioed to the Hurricane Center in Miami, Florida, where it is used as the basis for hurricane warnings to the public.

## RADEF Conference Focuses On Program Direction

FEMA Region VI Radiological Defense Conference participants centered their presentations on new program direction, according to State Radiological Maintenance Officer Tom Payne. He and Radiological Defense Officer Ted Chinn represented the State of Texas at the conference, held recently in Santa Fe, New Mexico.

FEMA spokesman Thomas R. Joslin said the Integrated Emergency Management concept for all-hazard response will be more effective in the intensified activities needed to improve response to disaster situations.

FEMA RADEF program manager Harry Harrison said that new training methods and materials for RDO instructors are being prepared by FEMA and should be ready for distribution during FY '84. Local instructors are to be utilized in Monitor Training for volunteers, and all-hazard response capabilities will be emphasized.

Dave Foster of the National Nuclear Accident Response Center showed filmed excerpts from different types of radiation accidents with which the Center's teams have dealt. These teams conduct exercises for response to all types of accident situations where radiation danger could exist.

Conference attendants also visited the Los Alamos Atomic Museum. Many replicas of past achievements, as well as new projects, are on display; some afford hands-on operation.

Additional information on Radiological Defense may be obtained from Theodore (Ted) Chinn, RDO, 512-458-7551 or Tom Payne, RMO, 512-458-7494. Mailing address for both is Texas Department of Health, Bureau of Emergency Management, 1100 W. 49th St., Austin, Texas 78756.

### State Of Texas Schedule Of Training Courses For Fiscal Year '83 August - September

#### AUGUST

3	Commanche Peak RADEF Assessment Drill	Glen Rose
15-19	PHASE I	Denton
16-26	CRP Emergency Operations Simulation/State/District	Abilene, Taylor Co., Sub District 4B
30-Sept. 1	Radiological Defense Instructor's Workshop	Odessa

#### SEPTEMBER

TBA	FY '84 Work Plan Seminar	Houston, Beaumont
TBA	FY '84 Work Plan Seminar	Midland, Amarillo
TBA	FY '84 Work Plan Seminar	San Antonio
TBA	FY '84 Work Plan Seminar	Corpus Christi
TBA	FY '84 Work Plan Seminar	Austin, Waco
TBA	FY '84 Work Plan Seminar	McAllen, Dallas
TBA	FY '84 Work Plan Seminar	Wichita Falls

\* TBA - DATE OR LOCATION TO BE ANNOUNCED

## Notice to RACES Members

The state-wide RACES net will meet on the second and fourth Sunday of each month at 1:30 p.m. on 7248.5 Khz.

All District RACES Radio Officers and/or their alternates are encouraged to check into the nets.

If you have pertinent information for dissemination to the membership, or if you have questions or suggestions, please contact Charles Goodwin in Austin at 512-465-2000 ext. 2442.

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