

NOAA REPORT



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Hurricane Hunters Tour Gulf States: A team of NOAA hurricane specialists led by Dr. Robert Sheets, director of the National Hurricane Center, took one of their P3-Orion "Hurricane Hunters" aircraft on a tour of 10 storm-prone Gulf cities last month to emphasize the importance of preparing for the hurricane season. The awareness tour is also aimed at promoting public understanding of the importance of a "Federal-State-Local team approach" and the vital warning role of news media in hurricane warning and readiness.

Offshore New Jersey Area Closed to Fishing: NMFS has extended an emergency rule restricting fishing from an area offshore Cape May, N.J., through

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August 10, 1992. The closure will prohibit the harvesting of fish from the area while search and salvage operations continue their attempts to recover the remaining drums of arsenic trioxide spilled from a cargo ship in January 1992. During the original action taken in the affected 16-square mile area, 320 of the estimated 414 drums were recovered. Water, sediment and shellfish analyses were also conducted. NMFS determined that the remaining 35-gallon drums may still pose an environmental and human health threat, and therefore prohibited all fishing in the area while drum retrieval continues. Search teams from the U.S. Coast Guard ended their efforts to recover any remaining drums in late May.

1991's Top Ten Ports: For the third straight year, the Port of Dutch Harbor-Unalaska, Alaska, landed more fish than any other major U.S. port in 1991, NMFS announced.

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Damage from 1979's Hurricane Frederic, shown here as it hit Mobile, Ala., reached nearly \$3.5 billion. Frederic was a Category 3 hurricane, in the middle of the hurricane scale of 1 through 5.

New Radar Will Aid in Hurricane Season Tracking

Hurricane season begins June 1, and a newly installed Doppler radar at Melbourne, Fl. and near Washington could help NOAA's National Hurricane Center in Miami predict the paths of this year's crop more quickly and accurately than ever before.

The radar installations at Melbourne and Sterling, Va., two of 10 NEXRAD (Next Generational Radar) sites around the country, are far superior to the radar used at other National Weather Service forecast offices. In fact, the radar has already proven its worth by giving more than 40 minutes of lead time to residents in Lake and Orange counties when, on the evening of March 25, a

hailstorm called "the most economically destructive force ever to hit the Orlando area" struck central Florida with a vengeance.

Although 40 minutes may not seem like a long time, in the business of forecasting almost unpredictable severe storms, it's a massive leap over what was possible before.

Impressive NEXRAD Numbers

NEXRAD installations around the country have also racked up some pretty impressive numbers. The installation at Sterling, Va., outside Washington, was able to see an April 24 storm brewing 85 miles northwest, in the West Virginia panhandle, far

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NWS Modernization Helps Hurricane Forecasters

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exceeding the view of other radar. That extra view translated into up to a 20 minute warning in advance of the storm. A similar NEXRAD site in Norman, Okla., is providing forecasters there with useful storm information at distances of more than 200 miles.

"The new systems are proving to be a quantum leap in the science of weather forecasting and information gathering," according to NWS assistant administrator Joe Friday.

Hurricane tracking and warning is the main business of the National Hurricane Center, a branch of NOAA's National Weather Service. Its roots as a civilian agency go back to the Spanish American War, before the turn of the century, when then-

President William McKinley stated that he was "more afraid of a hurricane than of the Spanish Navy." Hurricane warning stations were

until 1935, when it was decentralized, with offices in Jacksonville, Fla.; San Juan, Puerto Rico; New Orleans and Boston. The Jacksonville office

'The new systems are proving to be a quantum leap in the science of weather forecasting and information gathering,' according to NWS assistant administrator Joe Friday.

scattered around the West Indies, with headquarters first in Kingston, Jamaica, and later Havana in 1899.

But in 1900, a huge hurricane struck Galveston, Texas, with no warning. Six thousand people died in what was the greatest natural disaster in American history at the time. This prompted the move of the Center to Washington, D.C., where it stayed

moved to Miami in 1943, and Miami was named operations headquarters in 1955.

Hunting Hurricanes

New radar installations and satellite weather data are important in the forecasting of hurricanes, but for sheer thrills, nothing beats the "hurricane

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Name That Hurricane!

Hurricanes are named each year by the World Meteorological Organization, a United Nations body. Here's the 1992 list for Atlantic storms:

Andrew	Lisa
Bonnie	Mitch
Charley	Nicole
Danielle	Otto
Earl	Paula
Frances	Richard
Georges	Shary
Hermine	Tomas
Ivan	Virginie
Jeanne	Walter
Karl	

Certain names of particularly famous (or infamous) storms have been retired, such as Hugo, Camille, and Gloria. And if you hear a warning for Hurricane Zelda, relax—Zelda is a fictitious hurricane used for emergency training purposes. □

WASC Honored for Disabled Policies

NOAA's Western Administrative Service Center (WASC), based in Seattle, has been named Public Sector Employer of the Year by the President's Committee on Employment of People with Disabilities.

The award, which was presented at a Washington ceremony late last month by Labor Secretary Lynn Martin, cited WASC's "involvement of vocational rehabilitation agencies and special hiring procedures to recruit, hire and accommodate workers with disabilities."

One third of the new hires in WASC in 1991 were persons of disability, and people with disabilities were 14 percent of the work force.

WASC created a special committee to deal with issues related to employees with disabilities. All committee members have disabilities. The committee has sponsored special activities including a one day seminar

on awareness of disabilities, sign language training for employees, and assertiveness training for disabled and able-bodied employees.

WASC has also hired several people with hearing impairments and each time has worked with the

state DVR to provide the necessary amplification/TDD equipment. WASC gives personal assistance and counseling

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New Wind Profilers to Aid Forecasters

NOAA's new Wind Profiler Network, a 29-station array of Doppler radar sites in the central U.S., is expected to greatly improve weather forecasting by obtaining more detailed and accurate information about winds up to 10 miles overhead, and transmitting the data 120 times more often than previous methods.

The wind profilers measure wind speed and direction at 72 different levels in a column of air up to 10 miles, and are accurate to within two miles an hour. They transmit this information every six minutes to NOAA's Forecast System Laboratory (FSL) in Boulder, Colo. Hourly averaged information is sent from Boulder to National Weather Service forecast offices throughout the country to aid in local forecasting, and to the National Meteorological Center outside Washington for mid-range forecasts.

Admin. Center Gets Kudos for Training Program

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to employees with continuing problems with their disabilities. Meetings are arranged with counselors, job assessments undertaken and when possible steps taken to accommodate special individual needs.

Angela Mazure is the program coordinator working to recruiting and placing people with disabilities in the WASC work force.

The Committee provides information, training, and technical assistance to America's business leaders, organized labor, rehabilitation and service providers, advocacy groups, families and individuals with disabilities. It also serves as an advisor and counsel to the President on policy issues affecting employment of people with disabilities. □



Supplement Weather Balloons

The network will supplement the use of instruments carried by weather balloons which are launched every 12 hours. "The weather goes faster than we can send up balloons," said Alexander MacDonald, FSL director.

"The wind profilers will improve our cloud and precipitation forecasting abilities," he added. "They're extremely sensitive, and give us the chance to look at the microstructures of clouds."

Benefits to Industry

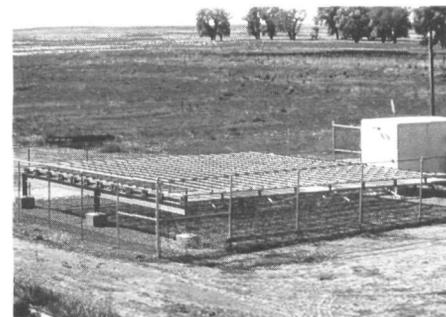
This increase in information will not only benefit forecasters, but the people and industries which rely on accurate forecasts as well, MacDonald noted.

"The profiler's ability to monitor winds aloft almost continuously is especially beneficial to aviation," he said. "It allows commercial and general aviation pilots to plan flight routes that avoid strong headwinds and take advantage of tailwinds, resulting in substantial fuel savings."

Agriculture will also benefit from improved forecasts of high winds, temperatures, freezing rain, dew, evaporation and heavy precipitation, such as hail.

Profilers' Value Apparent

Even before installation of the network was completed, MacDonald



Wind profilers (l., r.) are now part of a 29-station network bringing increased forecasting abilities to the Weather Service.

said, the profilers' value became apparent. For example, the National Severe Storms Forecast Center in Kansas City, which issues tornado watches, noted readings from the Lamont, Okla. wind profiler on April 26, 1991 that were favorable for tornadoes. Later that day, after the center issued a tornado watch, several large tornadoes devastated parts of Oklahoma and Kansas.

The 29 wind profilers are stationed in 15 midwestern states, where tornadoes and other severe weather are more prevalent. One is in Alaska. □

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The continued large landings of ground-fish, primarily Alaskan pollock, helped keep Dutch Harbor the top U.S. port in volume of landings by a wide margin with 731.7 million pounds. Dutch Harbor's 1990 and 1989 landing volumes were 509.9 and 504.3 million pounds, respectively. The Port of New Bedford, Mass., was first in total value for the third year with landing \$157.7 million worth of fish in 1991.

New Sea Turtle Protection Proposals: NMFS has proposed new sea turtle conservation regulations for shrimp trawlers in the South Atlantic and Gulf of Mexico. The proposed rule, issued following a thorough review process, will strengthen existing sea turtle protection measures while guarding the economic viability of the U.S. shrimp industry.

"These regulations will increase protection for five different species of endan-

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gered and threatened sea turtles in U.S. waters," said Dr. William W. Fox, Jr., Assistant Administrator for the Fisheries Service, "but they will also make Turtle Excluder Device (TED) requirements less confusing and less burdensome to shrimp fishermen."

Arctic Crossing Planned: Scientists from NOAA's Pacific Marine Environmental Laboratory will cooperate in the first scientific crossing of the Arctic Ocean in summer 1993 using Canadian and American icebreakers. Their path will run from the Chukchi Sea across the North Pole to the Greenland Sea in about two months. The research conducted will focus on the Arctic and global climate change.

Change of Command: John C. Albright was promoted to Rear Admiral and sworn in as Director of the Pacific Marine Center last month in Seattle. He will relieve RADM Raymond Speer.

Quake Measured: NOAA's Alaska Tsunami Warning Center detected an earthquake measuring 5.5 in the Aleutian Islands in late May. No injuries or damage were reported. □

Bush May Attend 17th Fish Fry

Where can \$21 buy you all the fish you can eat, cold beer, salads, sodas. . . and a glimpse of the President? At the NOAA Fish Fry!

This Thursday, June 4th, from 5:30 to 9:00 pm, the Department of Commerce will open its doors to the 17th annual NOAA Fish Fry. Not only will you get a chance to have some of the most delicious fish around, and rub shoulders with your NOAA colleagues, but you may even stand in line with

Agriculture Secretary Edward Madigan, Interior Secretary Manuel Lujan and Education Secretary Lamar Alexander, all of whom are scheduled to attend. Even President Bush might stop by, making this truly an event not to be missed.

Tickets are \$21 at the door, Commerce entrance number three of the Main Lobby, 14th Street and Constitution Avenue, N.W., in Washington. □

Head Start Turtles Released in Gulf

Nearly 2,000 endangered Kemp's ridley sea turtles were released into the Gulf of Mexico off Galveston, Texas last month. The turtles had been raised in captivity under the Southwest Fisheries Center's Head Start Experiment.

The dinner plate-sized Head Start turtles are reared at the Center's Galveston Laboratory for about ten months, and are then tagged and released. The research program is designed to determine if head-

starting these turtles will prevent their extinction. The seriously endangered turtles suffer a high mortality rate in the wild during their first year of life.

The release was performed in cooperation with Mexico's Instituto Nacional de la Pesca, and the Texas Parks and Wildlife Department. The Arco Oil and Gas Company provided the boat used to release the turtles.

Almost 18,000 sea turtles have been released through the program since its inception in 1978. □

Hurricane Season Begins

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hunters"—the pilots of the Aircraft Operations Center in Miami who fly the Lockheed P-3 turboprop aircraft actually into the center of a hurricane, to bring back atmospheric and weather readings at no little risk to themselves. In fact, in the more than 40 years since aircraft crews began to fly into hurricanes, three have been lost, vanishing without a trace.

These hurricane hunters bring back valuable information with them, information that can't be obtained from the ground. This includes measurements of wind, atmospheric pressure, temperature, and the location of the center of the storm. Also, the crews send into the hurricane dropsondes—radios which can transmit pressure, humidity, temperature and wind direction readings as they fall into the sea. These dropsondes give forecasters a detailed look at the storm's structure and its intensity. □

NOAA NOW



June 1992

NWS Pioneers Lightning Safety at Kemper Open

While some golfers look to a hole-in-one as catching lightning in a bottle, catching a real dose of lightning on the golf course can be dangerous, if not fatal. For this month's 25th

Kemper Open golf tournament in Potomac, Md., just outside Washington, NOAA's National Weather Service is pioneering an effort toward greater safety for players and spectators with an enhanced lightning detection system and a new high-tech lightning rod installation at the course.

During this month's play, the public is being protected against the hazard of lightning strikes by an early warning lightning detection service provided by NOAA's Washington Forecast Office at Dulles Airport in Sterling, Va.

Benefits of Modernization

This service is one of many dividends being generated by the NWS's nationwide modernization program now in progress. It relies upon skilled forecasters who are evaluating never-before-seen storm "pictures" produced by a phenom-

enally sensitive and accurate new Doppler radar, and computer images from a network of lightning sensors spread across the nation.

The NWS forecast office and the Kemper Open are connected by a "hotline" maintained for the duration of the tourney by amateur ham radio operators from the Dulles/Sterling Skywarn network which covers three states and the

District of Columbia. Operators are government-trained storm spotters and emergency communications volunteers.

The Weather Service provides the Kemper and PGA early warning information through the amateur radio hotline but it is the responsibility of the Professional Golfers Association, which

administers the Kemper Open, to decide when to halt play.

To supplement the NWS service, Kemper management has just installed at Avenel, on an 80-foot treetop near the clubhouse and atop a 60 foot pole beside the approach to the 18th green, two new high-tech lightning rod systems. They create shelter zones 400 yards in diameter each.

Old Hazards

Lightning on golf courses is a hazard as old as the game. Last year, when the Weather Service first employed its test lightning detection system for the Kemper, play was halted twice.

Last month, at the Ladies' Professional Golfers Association championship at Bethesda (Md.) Country Club near Avenel, play was halted late one afternoon in response to the NWS advisory service. □



Diver Wins Underwater Award . . . Again

William High, marine scientist with the Alaska Fisheries Science Center in Seattle, has been awarded the 1991 NOGI Award for Science. The award was presented to High at the Our World Underwater Convention in Chicago last month.

High also received the 1964 award in the Sports/Education category. He now joins a select group of only three people from around the world that have received the award in two categories.

Bill High's scientific diving activity spans his entire 35 year career in marine biology/technology. His studies, utilizing deep

submersibles and undersea habitats in addition to more conventional diving systems, advanced the understanding of marine animal behavior. He was one of the first scientists to dive into a tuna purse seine on the high seas and direct underwater surveys

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Va. Tide Gauge is for the Birds: Ospreys Set Up 8-Foot Nest

A pair of ospreys in Lewisetta, Va., have set up housekeeping atop one of NOAA's small instrument buildings that holds tidal measuring equipment, keeping an observer from taking daily readings and sending NOAA personnel scurrying a round looking for balloons and fake owls.

The instrument station, a six-foot-square building that has stood for nearly 20 years at the end of a 1500-foot pier jutting into the Chesapeake Bay, holds an antenna that every six minutes sends information on tidal height to a NOAA satellite and by telephone to commercial pilots in Virginia and Maryland. It is one of almost 2140 such stations on the East and Gulf coasts used by NOAA's office of Ocean and Earth Sciences in Rockville, Md., for the tricky business of collecting tidal and water-level data.

If the satellite transmissions were the building's only function, the ospreys, which by now have completed their eight-foot diameter nest of driftwood, could go about their avian task of catching fish and raising a brood unimpeded by bothersome humans.

However, instruments inside the building collect additional information on tidal height used by NOAA for its tide tables. A volunteer "gauge observer" must record these and other meteorological data daily and submit the information in weekly reports used by the earth and ocean sciences office.

"The ospreys can be pretty threatening," says James Dixon chief of the Atlantic Operations Division. The adults have a wing span of about eight feet and come

Scientist Honored

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to facilitate dolphin escape. High has authored more than 130 technical papers and popular articles while more than 200 of his descriptive photographs have been published.

—Hal Alabaster □

equipped with sharp and powerful talons. The osprey is protected under both state and federal law.

Dixon says he's trying to get the birds used to the observer's presence by placing several large silver and gold balloons near the observation office. Each of the balloons, which were recommended by an ornithologist named William Byrd at the College of William and Mary, has a large eye in its center to help the ospreys remember them.

"Then we'll send our observer out with a balloon or two of his own. We're hoping the ospreys will think, 'Oh, it's just some more balloons. Nothing to worry about.'"

'Race for Cure' Aids Breast Cancer Research

The national "Race for the Cure," a five-kilometer (5K) run, 5K walk, and one mile "Fun Walk" to benefit breast cancer research, detection and education, has become an annual event in the Washington area.

On June 20th, at 8:30 a.m., participants will gather at 14th & Constitution, Ave., NW, Washington, to take part in the third annual running of this event.

The Washington "Race for the Cure" has become the largest 5K race in the world. Organized in 1989 through the Susan G. Komen Breast Cancer Foundation, its earnings provide funds for breast cancer research, education and treatment. Approximately two-thirds of the money raised by this race will be put back into Metropolitan Washington through local hospitals and cancer treatment centers. These funds will make available, among other things, low cost mammography to all women. The remaining monies raised will be used towards national breast cancer research grants.

In 1991, the Washington "Race for the Cure" attracted over 13,000

participants, 400 of which were Commerce employees. This year the total goal is to attract 20,000 participants including 2,500 from the Department of Commerce.

And next year?

"This coming winter, after the ospreys have left for the season," says Dixon, "we're hoping to place some balloons a few hundred feet away on a group of pilings that may be installed by the state just for the ospreys later this year. That--and some decoy owls on the observation station to frighten the ospreys from their old haunt -- should encourage the birds to nest elsewhere next year."

Meanwhile NOAA's other 140-odd national water level observation stations are submitting their weekly data cards with no reports of invading birds.

—Brian Gorman □

For the third consecutive year Vice President Quayle and his family will participate in the 5K run along with a host of celebrity guests including actresses Loni Anderson and Lynda Carter.

Your involvement can be very strenuous, or nothing more than donating your time or money. For the truly athletic, you can enter the 5K Run, 5K Walk, and 1 mile fun Walk. For the less athletic but equally enthusiastic, volunteers are always needed and donations are warmly welcomed. An entry fee of \$10.00 is required for all participants.

For more information contact Joan Sckalor, NOAA Public Affairs, at (202) 377-8090. □

National Oceanic and Atmospheric Administration

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