

Alabama Counties Join Nation's "Storm Ready" Communities

—By Ron Trumbla

On April 3-4, 1974, eight tornadoes ripped through northern Alabama, killing 86 people, injuring more than 900 and causing over \$50 million in property damage. They were part of a super tornado outbreak that killed 330 people, injured nearly 5,500 and caused \$4.5 billion in damage in 13 states. With a total of 148 twisters, spawned over a 25-hour period, it was the worst tornado outbreak in U.S. history.

Fast forward 29 years to April 4, 2003, in Decatur, Ala., where city, county, business and civic leaders joined Alabama Gov. Bob Riley, Rep. Robert Aderholt, Rep. Bud Cramer and John Gordon, meteorologist in charge of NOAA's National Weather Service forecast office in Huntsville, to recognize 11 northern Alabama counties as "Storm Ready."

Storm Ready is a national program that prepares communities to survive natural disasters by improving emergency communication and public education. The program is designed to complement a community's ongoing emergency preparedness activities. A voluntary program, Storm Ready provides communities with clear-cut advice through collaboration and partnerships with local
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Hawaii Fisheries Observer Program Logs 1000th Trip

—By Jim Milbury

NOAA's Fisheries Observer Program in Honolulu reached a milestone last month with the completion of the one thousandth trip aboard a commercial fishing vessel, sampling, monitoring and recording data for fishery managers.

The Hawaii observer program, which began in 1994, is one of 23 such programs nationwide that for the past thirty years have provided a dedicated and independent group of individuals to travel aboard foreign and commercial fishing vessels in the Atlantic and Pacific Oceans and the Gulf of Mexico to collect biological data.

Observers record the size and

weight of the fish being caught. This allows fishery managers to assess the viability of each generation of a particular commercial fish species. Based on this information, managers regulate the length of the fishing season, areas to be open for fishing and the amount of catch that will be allowed.

The information is also used to determine if a specific fishery has a detrimental impact of bycatch, which are other animals that are incidentally caught.

Observers also monitor interactions of the fishery with marine mammals and sea turtles and
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NOAA
Sascha Cushner, one of 500 NOAA fisheries observers in the Atlantic and Pacific Oceans and the Gulf of Mexico, displays bycatch onboard a commercial shrimp boat 80 miles south of the Louisiana/Texas border in the Gulf of Mexico.

NOAA Helps Commemorate the Lewis and Clark Expedition

—By Nikki Case

In March 1803, Capt. Meriweather Lewis journeyed to the U.S. Armory and Arsenal in Harpers Ferry, W. Va., to equip what became known as the Lewis and Clark Expedition to explore the unknown American west from the Missouri River to the Pacific Ocean.

Two hundred years later, on April 12, 2003, NOAA's National Geodetic Survey helped the National Park Service commemorate the event by dedicating a geodetic survey marker in Harpers Ferry National Historical Park.

Over the next three years, the National Geodetic Survey and the Park Service will establish a series of commemorative geodetic survey markers at signature sites along the 3,700-mile-long Lewis and Clark National Historic Trail in conjunction with other public events.

After a marker is set, a National Geodetic Survey crew determines its position within two centimeters. The position is entered into the National Geodetic Survey database and is available free of charge over the Internet. Because the geodetic markers very precisely establish a point's position on the Earth's surface, they are used by surveyors as control points.

"These markers will raise the public's awareness of the value of accurate positioning [by giving us] a chance to highlight some of the positioning activities that happen in our daily lives, such as property boundaries, safe landings at airports and flood plain mapping," said National Geodetic Survey director Charlie Challstrom.

After receiving a small replica of the marker during the April ceremony, Park Service ranger Todd Bolton said, "This marker provides a really exciting opportunity to tell the Meriweather Lewis story at Harpers Ferry. By showing the marker, we can talk about navigation 200 years ago and today."

The design of the commemorative Lewis and Clark markers is based on the Jefferson Peace Medal, because President Thomas Jefferson commissioned the expedition. Unlike the conventional 4-inch geodetic monuments that the National Geodetic Survey usually establishes, most of the Lewis and Clark markers are very large, with diameters from ten to 12 inches and weighing about 25 to 30 pounds. The markers are placed in locations that are easily accessible to the public.

The first marker in the series was dedicated at Thomas Jefferson's home at Monticello, near Charlottesville, Va., during the kick-off celebration of the Lewis and Clark Expedition in January.

The National Geodetic Survey plans to place markers at 14 more sites along the Lewis and Clark National Historic Trail. The next dedication ceremony will take place at the Falls of the Ohio Oct. 24-26.

President Thomas Jefferson officially initiated the Lewis and Clark Expedition on Jan. 18, 1803, when he requested \$2,500 from Congress for what he termed the "Corps of Discovery."

Beginning at Wood River, Ill., in 1804, Lewis and Clark spent the next two years traveling through what is now Missouri, Kansas, Iowa, Nebraska, South Dakota, North Dakota, Montana, Kansas, Idaho, Oregon and Washington. The expedition reached the Pacific Ocean in November of 1805, and returned east in 1806.

Equipped with only a few basic



David Doyle/NOAA National Geodetic Survey director Charlie Challstrom speaks at the dedication of a geodetic marker in Harpers Ferry, W. Va., to commemorate the 200th anniversary of the Lewis and Clark Expedition.

surveying tools, Lewis and Clark measured their way across the unexplored West.

David Doyle, senior geodesist at the National Geodetic Survey, said, "Lewis and Clark's surveying methods were actually pretty primitive. They found out more about the country by exploration. But the surveying and mapping they did was really the beginning of land delineation and positioning as we know it today."

President Jefferson's establishment of the Survey of the Coast, a predecessor agency of the National Geodetic Survey, came the year after the completion of the Lewis and Clark Expedition. Part of Jefferson's purpose for establishing both of these initiatives was his desire to survey and map the unexplored western territory and the coasts of the United States. The National Geodetic Survey now manages the modern day version of the surveying and mapping work that Lewis and Clark initiated. ☺



Wilfred VonDauster/NOAA

Leon Benjamin.

Leon Benjamin Is the Team Member of the Month

—By Barbara McGehan

Leon Benjamin, the May Team Member of the Month, is one of those optimistic, happy people who makes you feel good just to be around him. His colleagues call him one of the hardest working, most dedicated and nicest people you'll meet.

A contract employee with Systems Research Corporation of Colorado Springs, Colo., Benjamin has worked as a computer programmer on the wind profiler program at NOAA's Forecast Systems Laboratory in Boulder, Colo., since 1989.

A wind profiler is a Doppler radar that is pointed vertically to measure winds up to about ten miles. The program now operates and maintains a network of 35 profilers throughout the central U.S. and Alaska.

The profiler program was just getting started when Benjamin joined it. "It was an extremely exciting time. The people were outstanding and it was a fun place

to work. The attitude was how much do you want to learn? People were very willing to share information and teach you new things. It was a very dynamic and cooperative place," Benjamin said.

Benjamin was a key contributor in the design and implementation of the profiler program's centralized computer system, which takes raw measurements and processes them into high-quality wind data, then distributes them to a broad range of customers.

The NOAA profiler network has been fully operational for over 10 years and has a consistent data delivery rate to the National Weather Service and other customers of 95 to 97 percent.

"This system is still successfully operating today, much in part due to Leon's dedication, diligence and expertise at keeping this legacy system online," said Margot Ackley, chief of the Profiler Program and Demonstration Division.

In recent years, Benjamin has been involved in a project called "cooperative agency profilers," which collects and distributes wind and temperature data from profilers operated by a variety of other organizations including federal, state, local, educational and international entities. Because of the existing infrastructure to support the NOAA profiler network, the program could collect data from these systems with minimum expenditure of project funds.

"Leon responded by almost singlehandedly identifying numerous organizations that had profilers, initiating contact and then working with them to share their data with NOAA," Ackley said.

At the present time, he is responsible for setting up data collection from over 90 systems.

"Leon, in his laid back way, has been able to get people to share
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Marc Pullan/NOAA

Janice Sessing.

Janice Sessing Is the May Employee of the Month

—By John Leslie

Janice Sessing, the May Employee of the Month, is on a mission. She wants Congress—and the rest of America—to know the critical support NOAA's National Satellite, Data and Information Service provides the nation.

In her role as policy and program analyst in the budget and planning office at NESDIS headquarters, Sessing works with program managers to ensure an easy-to-understand message comes out of the barrage of one-pagers, Q&A documents, talking points and Powerpoint presentations used for Capitol Hill briefings.

Sessing works through NOAA's legislative affairs and budget offices to ensure that the message is on target and delivered to the Hill. Despite the recent Congressional focus on homeland security and the war in Iraq, NESDIS fared reasonably well in the passage of the 2003 budget. NESDIS also was the beneficiary of a Congressional
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Focus On...

Kids Day at NOAA

—By Dane Konop

NOAA facilities across the country hosted over 500 employee children who visited their parents at Bring Your Child to Work Day activities the week of April 21. By all accounts, “Kids Day” was a big success, thanks to the support of NOAA management and the many employee volunteers who planned, organized and conducted a wide range of educational and fun activities for our children.

At the Environmental Research Laboratories in Boulder, Colo., NOAA children launched a weather balloon and were wowed by the futuristic Earth science teaching tool called “Science on a Sphere.”

NOAA employees joined forces with other federal agencies in Juneau, Alaska, to provide demon-
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Our kids imagined they were sharks in Long Beach, Calif...

Jim Milbury/NOAA



...learned about surveying and mapping in Silver Spring, Md...

Ronald Bell/DOC



...tried on cold water survival gear with the NOAA Corps...

Carol Baldwin/NOAA



*James Zdrojewski/NOAA
...were forecasters for a day in Pendleton, Ore...*



*Shawn Carey/NOAA
...built models in Juneau, Alaska...*



*Dane Konop/NOAA
...examined squid at NOAA Fisheries...*

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strations and learning sessions, including one on the conservation and protection of the oceans.

In Pendleton, Ore., NOAA kids watched a mini tornado simulation, learned how weather forecasts are made and received framed pictures

of themselves as “Honorary Weather Forecasters.”

In Silver Spring, Md., over 400 children divided into age groups for a wide variety of demonstrations and hands-on activities, followed by an ice cream social. ☺



*Dane Konop/NOAA
...ate ice cream scooped by the bosses at NOAA headquarters...*



*Dane Konop/NOAA
...and visited their parents at work.*

Fishery Observers

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conduct debriefings with their home office when they return.

The work of observers isn't done in the confines of a warm cabin behind the soft glow of a computer screen. It's done on the deck of a working ship, day or night, and often during extreme and dangerous sea conditions. It's hazardous work in the most dangerous industry in the United States.

"Does it take a special person?" Joe Arceneaux, training coordinator and veteran observer in Hawaii, asked rhetorically. "Yeah, it takes a special kind of person to go out there and get knocked around on a boat."

Arceneaux should know. Twice the vessel he was on as an observer never made it back to port. One sank forty miles off the coast of Maui, and the other ran aground on Kure Atoll, 1,200 miles from Honolulu and at the very end of the Hawaiian archipelago. And yet he can barely contain his enthusiasm about his past experiences as an observer.

"One of the biggest rushes I ever had was when a turtle was wrapped in line and we couldn't get him aboard to cut him free," Arceneaux recalled. "So the skipper just looked at the smallest guy on the boat, and he started taking his boots off. We held the guy over the rail and he cut the turtle free, and it swam off. We all felt like we had really done something important that day."

A key goal of the observer program in Hawaii is documenting the little-known juvenile phase of sea turtle life.

John Buchanan, who now debriefs observers when they return to Honolulu, holds the unofficial office record for turtle saves. "I released 16 turtles, all alive," Buchanan said, "three leatherbacks

and 13 loggerheads. The funny thing about turtles is that they are very ornery. They hiss at you and they try to bite you. That's something they don't tell you in training."

The NOAA Fisheries Observer Program began placing observers on foreign fishing vessels operating off the northwest and Alaskan coasts of the United States in 1973 by a foreign country's invitation only. The Magnuson Fishery Conservation and Management Act of 1976 mandated that all foreign fishing vessels have observers onboard. Later, foreign fisheries were banned from the United States' 200-mile Exclusive Economic Zone. Observers continued to gather information with the domestic fishery fleet.

There are approximately 500 observers monitoring U.S. fisheries for the agency. The fisheries they cover may take them anywhere in the North Pacific Ocean, the Gulf of Mexico or the North Atlantic Ocean.

"A passion for the ocean and an exploratory spirit is what sets a good observer apart," said Vicki Cornish, team leader for the national observer program.

"They're all pretty tough, independent, quick on their feet thinking-wise and have a desire to see things you can't see in textbooks," she said.

"The work they do is invaluable," Cornish said, "for understanding what's truly being removed from the ocean and the impact that is having on the conservation and recovery of not only fish stock but marine mammals, sea turtles, sea birds—the whole range."

Observers in Alaska face the Bering Sea, 100 mph winds, ice floes and even erupting volcanoes. Another unique group of observers works on shore in Alaska during the entire summer season. Float planes drop them off in remote

areas of Kodiak to monitor the interaction of near-shore gillnets on marine mammals.

The observers live in harsh conditions in a cabin with no running water. Most of their spare time is used to cut wood, cook and carry water from a nearby spring.

"We had to live and operate communally and work together in order to do simple tasks like eating," said Kerry Waco, now with the Groundfish Observer Program in Alaska. "But we really had fun when we had time off."

Safety training includes how to avoid interaction with any of the 3,000 brown bears on the island. And all observers had to file a "float plan" whenever they ventured too far from the cabin.

The observers off the west coast typically work on boats that average 55 feet in length. Their biggest challenge, according to Jon Cusick, observer program team leader for the Northwest Fishery Science Center, is that they must be able to identify anywhere from 80 to 100 different species. Observers assigned to the "open access" fleet may monitor commercial fisherman catching live rockfish using kayaks, surfboards or even jet skis.

In the Gulf of Mexico, the observer program is voluntary for the 6,000 documented vessels operating in the shrimp fishery from the shoreline to 100 miles offshore. The program pays vessel owners for observers to go out for 31 to 60 days as compensation for evaluation and testing of equipment that will reduce the amount of bycatch of red snapper and test the effectiveness of turtle excluder devices.

Mike Harrelson, observer coordinator for the shrimp trawl fishery in the Gulf of Mexico and South Atlantic, said an observer's job searching for bycatch is very

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Storm Ready

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Weather Service field offices, state and local emergency managers, the media and the public.

The Storm Ready program got its start in 1998 when the Tulsa weather forecast office's former meteorologist in charge, Lans Rothfus, and warning coordination meteorologist Steven Piltz noticed the lack of standardized preparedness guidelines for communities in their warning area.

"We would see emergency managers who worked hard, but didn't get a lot of support and then we would see places where there was support and funding, but the manager lacked expertise," said Piltz, who is now the MIC in Tulsa. "So we kind of played around with the idea and before we knew it, it just took off.

"Today, we see an increased level of comfort in those communities," Piltz added. "If we have to issue a fast-breaking weather bulletin, we know it's much more likely to get where it needs to because they've invested the resources."

Today there is a national network of more than 550 Storm Ready communities in 43 states.

The most severe weather-prone country on Earth, the United States averages 10,000 thunderstorms, 5,000 floods, 1,000 tornadoes and seven hurricanes per year. Weather-related disasters account for about 500 deaths and \$14 billion in damage annually.

The 11 Alabama Storm Ready counties comprise the entire warning area of the Huntsville office. Largely due to the higher level of preparedness in Alabama's Storm Ready communities, Gordon said he doesn't expect to see that 1974 level of death and injury again. But he said he does expect the area to be hit hard in the future.

"This area gets hammered," he said. "We've got a plan, we're educating the public and we're more aware. We can't be storm-proof, but we are ready. And that will save lives."

According to NOAA's Storm Prediction Center data for 1950 through 1994, Alabama ranks fourth in the nation in confirmed tornado deaths (275) and third in injuries (4,483).

"That's why it is so important for us to help our emergency managers strengthen their hazardous weather operations with improved communication systems and public education programs," said Tim Troutman, warning coordination meteorologist for the Huntsville office. "Our Storm Ready communities put NOAA Weather Radios in key public buildings and use education programs to teach people how to protect themselves. You know, we can't stop Mother Nature, but we can help people keep their guard up."

To receive Storm Ready recognition, local communities must establish a 24-hour warning point, emergency operations center and redundant procedures to receive and relay severe weather forecasts and warnings to the public. The Storm Ready requirements application states a community also must create a system to monitor local weather conditions, promote public readiness through community seminars and develop a formal hazardous weather plan, including training for severe weather spotters.

"Once the application has been completed, a Storm Ready advisory board, made up of local National Weather Service management and state or local emergency managers, reviews it to ensure Storm Ready guidelines have been met," said Walt Zaleski, the warning coordination meteorologist who oversees the program for the Weather

Service's southern region.

"The board also sends a verification team to check the suitability and readiness of equipment and review the community's hazardous weather plan," Zaleski said. "When all the conditions have been met, the board grants Storm Ready recognition, which is valid for three years."

"The Storm Ready program will help save lives and help our communities meet the challenges brought on by severe weather," Aderholt said. "Thanks to planning, education and awareness, north Alabama is now much better equipped to handle severe weather and to prepare for future storms." ☺

Fishery Observers

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physically demanding. "We sample the entire catch, and observers have to shovel sometimes 250 to 300 kilograms [550 to 660 pounds] of catch per net." Trawlers typically pull anywhere from two to four nets on average three times a day.

One of the biggest challenges for observers is aerial bombardment by birds. "Seagulls are so thick," Harrelson says, "you almost have to wear a slicker suit to keep from getting drenched."

In the northeast, observers work on vessels that operate from one day to two weeks at a time, from Maine to North Carolina. The vessels' size and accommodations vary. According to Amy VanAtten, a fishery biologist with the Northeast Fisheries Observer Program, "An observer may have their own room, bunk and head, or they may be required to bring a sleeping bag and a bucket."

"They're just an incredible asset to the agency," Cornish said of the observers. "It's probably not said often or well enough how much we appreciate the sacrifices they make to collect this data." ☺

Sessing

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initiative during deliberations on the Wartime Supplemental, which provided critical funding to NOAA's satellite programs.

"Janice is the engine that drives our outreach on the Hill," said NESDIS director Gregory Withee. "Her determination to get the job done—and done right—is a big reason for our recent legislative success."

NESDIS leadership asked Sessing to assume her current position after she finished a three-month detail assignment in the NOAA Budget and Planning Office. Sessing said she noticed that the NESDIS budget was becoming "increasingly complex." The budget incorporated technological advances into its future satellite systems, yet it lacked a strategic plan to explain the programs to Congress.

"I documented my observations and proposed that NESDIS management create a position dedicated to developing a message to demonstrate to Congress the high return on its investment in NOAA's satellite, data and information programs," Sessing said.

Warren Hall, NESDIS chief financial officer, said, "Janice convinced NESDIS management of the vision. Her experience with NESDIS programs based on her five years in our International and Interagency Affairs Office and wider knowledge of NOAA from prior experience in NOAA's Ocean and Coasts and as a Sea Grant fellow provided an added bonus."

Sessing compared the challenges of her new office, which began in June 2002, to the hurdles of a start-up enterprise. "You're constantly refining and sharpening the NESDIS message so it can be heard and easily understood, gaining the trust and confidence of your target

audience that you are not wasting their time, showing the value-added to the taxpayers' dollar," she said.

"Our challenge at NESDIS is packaging our story for Congress, which is a non-technical audience, but a critically important one," Sessing said. The driving force behind her goal of improving communication between NESDIS and Congress, she said, boils down to gaining support.

"With fewer funds available for appropriations, it's our challenge to tell [Congress] why our programs need their support," Sessing said. "If the financial decision-makers don't fully appreciate what we do for America, they won't fund us."

She said NESDIS program managers play a key role, and developed a one-day training session to improve their understanding of the Congressional process and how to harness it to NESDIS' advantage. During that training exercise, she brought in experts from academia, NOAA headquarters and other line offices to offer lessons-learned insights.

"Knowing how to get something done is just as important as getting it done," Sessing said. "No one is interested in hearing about petabytes. They roll their eyes at us. They are, however, interested in the benefits that NESDIS data and information bring the nation."

Sessing's office in Silver Spring, Md., is a long journey from Jamaica, where she spent the majority of her youth.

After high school, she left Jamaica for the University of Miami, graduating in 1984 with a Bachelor's of Science degree and a double major in marine science and biology. A work-study program at the Rosensteel School of Marine and Atmospheric Sciences cemented her desire to study aquaculture at the University of Hawaii at Manoa, where she received her

master's degree.

For more than 20 years, NOAA has been a major influence in her life, Sessing said. NOAA sponsored her graduate research as a Sea Grant fellow and was the granting agency on projects she worked for at the Hawaii Sea Grant Extension Service.

"NOAA has been an integral part of my life for so long," Sessing said. "It's a privilege to be a part of it now as it serves the nation." ☺

Benjamin

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their data with us, which has made this whole project succeed," Ackley said. "He understands how to network. He's very skilled in data formats. Each of the systems we're getting data from has its own format; so to pull the data in, he's had to figure out how each system works and customize it. His computer expertise and extensive experience in profiler data formats allows him to do this very quickly."

Benjamin said that getting the data into the hands of the people who use it operationally is what motivates him.

Ackley said, "He's very people oriented in spite of the fact that he works with computers. He is the ultimate team player." ☺

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