

NOAA REPORT



Vol. V, No. 2

February 1996

Fishing Authorizations Under New MMPA Rules Extended: Fishermen who must register with NMFS under the Marine Mammal Protection Act because of their interaction with marine mammals are being granted an extension of their current exemption certificates through March 31, due to the recent government shutdown, coupled with a delay in publishing the final list of fisheries for 1996 because of an extended public comment process.

Under amendments to the MMPA passed by Congress in 1994, commercial fishermen must reduce their incidental in-

News Briefs

teractions with marine mammals to near-zero by 2001.

GOES 9 Goes West: The country's newest weather satellite, GOES 9, has completed a 3,130-mile trek through space and is now overlooking the western states, the West Coast of the United States, Hawaii, Alaska, and well out into the Pacific Ocean.

"For the first time, the National Weather Service has high resolution digital satellite data over both the Atlantic and Pacific oceans, where many of the weather systems affecting the U.S. originate," said Louis Uccellini, director of the Office of Meteorology. "This digital imagery, including cloud movements and atmospheric profiles of temperature and moisture, will improve our capabilities to produce three to five day forecasts." ☺

Proud of Our Achievements

As we begin this new year, I want you to know that we are working hard for your interests in these chaotic times. Last year, much time was spent on budget and dismantling issues that faced both the Department of Commerce and NOAA itself. The strong support of the Administration, the Department

of Commerce, our constituents and many Members of Congress was heartening to see and gladly welcomed. We survived the year intact, and I think there is a new appreciation of our services and programs among all our supporters.

**D. JAMES
BAKER**



We have just

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NOAA AT WORK

Teams at Center of R.I. Spill Response

Hundreds of barges, each carrying millions of gallons of home heating oil, make the trip each year from the massive refineries of New Jersey to the New England ports of Long Island Sound. On Friday night January 19, while battling a raging winter gale near Narragansett Bay, the tug *Scandia* caught fire as she towed the 340-foot barge North Cape, carrying four million gallons of oil. Driven by fierce winds and seas, the tug washed ashore on Rhode Island's Moonstone beach, near Trustom Pond National Wildlife Refuge.

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Blizzard Stops All But Weather Service

When an enormous blizzard paralyzed most of the Northeast in early January, a dedicated group of NOAA employees kicked into high gear to keep the public abreast of the storm's every move.

As two-foot snowfalls from Roanoke to Boston kept most Federal employees snowbound, many National Weather Service employees "camped out" at their offices so they could do what they do 24-hours a day, 365 days a year—provide the warnings and forecasts that help protect life and property.

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58,000 Mile Mission Focused on Global Warming, El Niño

Baldrige Completes Global Research Cruise

After successfully completing a year-long scientific expedition to gather critical data on the ocean's role in global climate change, global warming, and the El Niño phenomenon, the NOAA Ship *Malcolm Baldrige* has returned to the United States.

This feat—involving nine U.S. institutions and six foreign countries, and covering 58,000 nautical miles—marks the first time in NOAA Corps' 25-year history that a NOAA vessel has circumnavigated the globe on a scientific voyage.

"This research will provide a sound scientific base for understanding ocean-atmosphere exchange processes and their effects on climate and

climate change in the Atlantic, Indian, and Equatorial Pacific oceans, as well as abundance, diversity and distribution of marine organisms in the Arabian Sea," said NOAA Corps Captain Craig S. Nelson, commanding officer of the ship.

First Ozone Data for Western Indian Ocean

"In some cases the data will be used to establish baseline measurements to which future measurements can be compared," Nelson said. "For example, high altitude ozone samples collected during this cruise were some of the first comprehensive ozone measurements ever taken over the western Indian Ocean. They will help determine how far north the Antarctic

ozone hole now extends, and give a basis for comparison in the future."

The *Baldrige* supported a number of environmental initiatives with its research, including the international World Ocean Circulation Experiment, the U.S. Global Ocean Ecosystem Dynamics (GLOBEC) project, and the Ocean-Atmosphere Carbon Exchange Study.

The *Baldrige* was part of a coordinated international expedition that included other vessels of the U.S. academic and foreign research fleet. The logistics of the research done aboard the *Baldrige* and management of the vessel was handled by the NOAA Corps. ☺

X Files Goes to Source for Images

On the television program *The X Files*, Federal agents search for aliens and the super natural. Now, they'll have help from NOAA.

The program's production company asked NESDIS satellite chief Gary Davis for satellite imagery for an



upcoming episode. X Files actors Gillian Anderson and David Duchovny sent this autographed photo in appreciation for NESDIS satellite imagery. The images will be seen in mid-February on the Fox network's popular science fiction program. ☺



1995 Was Tough, But Full of Accomplishments

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passed through a series of partial government shutdowns driven by the lack of agreement on the Federal budget. This is not the first time in history that there have been disagreements about budgetary policy, or even the first time that the Government has been shut down for two or three days for all but emergency services. But it is the first time that we have seen a shutdown of weeks in duration, and the first lengthy time that thousands of government workers were denied their pay while working, and thousands of others forced to stay home from their career positions. Even though short-term emergency services were provided, many basic services were delayed or stopped. Most of the long-range activities which the Nation needs for economic growth and a healthy environment were delayed and some may never be recovered. Companies and citizens alike have been affected.

Service in Uncertain Times

We used carryover funds to keep NOAA open on two occasions, covering four days in November and then another four days at the end of December. We had used carryover in the hope that the budget crisis would have been resolved quickly; unfortunately, we had to shut down along with many other agencies. We are now operating under the fourth Continuing Resolution passed by Congress which provides funding through March 15, 1996. During these uncertain times, I'm especially impressed by the high caliber of service NOAA employees continue to provide in support of crucial national interests, despite their own financial concerns and damaged morale.

NOAA can be proud of its major accomplishments in 1995. Just a few examples: the National Weather Service handled the worst tropical storm season since 1933 in exemplary

Service, facing unprecedented challenges to its efforts to protect endangered species, negotiated a difficult agreement that preserves its salmon recovery plan in the Pacific

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fashion, and received much praise for accurate forecasts of storms in the Pacific Northwest and of the Blizzard of '96. The National Marine Fisheries

Northwest, and applied the necessary strict conservation rules in New England waters. NESDIS brought *continued on page 8*

Long-time Head of Research Retires

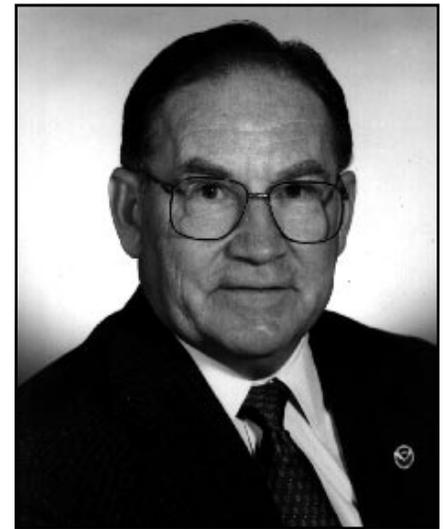
Dr. Ned Ostenso, assistant administrator for oceanic and atmospheric research since October 1989, retired Jan. 3 after 31 years of federal service.

A world-renowned expert in solid-earth and marine geophysics, Ostenso's long scientific career has included service as a meteorological project officer at the U.S. Army Arctic Center, University of Wisconsin faculty member, an assistant Presidential science advisor, deputy director and senior oceanographer in the Ocean Science and Technology Division of the Office of Naval Research, director of the National Sea Grant College

Program, and acting NOAA Chief Scientist. As an American Political Science Association congressional fellow, he also developed the National Earthquake Hazard Reduction and National Climate Program Acts.

He received his bachelors, masters, and Ph.D. degrees from the University of Wisconsin.

Author of over 50 scientific papers and winner of numerous honors, including meritorious service awards from the Department of Defense, the U.S. Navy, and the National Academy of Sciences, Ostenso also has a mountain in Antarctica and a seamount in the Arctic Ocean named in his honor. ☺



Dr. Ned Ostenso

Focus On...

NOAA Response to Rhode Island Oil Spill

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As soon as they knew it was in trouble, the crew of the *Scandia* radioed the Coast Guard, which immediately put its emergency oil spill response into action.

One of the first calls to go out was to Steve Lehmann, the NOAA HAZMAT team leader in Boston. For any oil spill in US waters, NOAA provides the Coast Guard with a Scientific Support Coordinator (SSC), responsible to marshal the best scientific understanding of what happens when oil and water mix in the wild.

This includes a detailed understanding of literally hundreds of varieties of petroleum products and how they interact with different sea conditions. It also includes biological assessment capabilities, detailed knowledge of spill response strategies, the world's best computer spill trajectory capability, and localized weather forecasts several times a day, including wave heights, tides and currents.

Teams Assembled Quickly

There are a dozen NOAA SSC's stationed along the U.S.'s ocean and inland coasts, from Alaska to New Orleans to Boston to Cleveland. At literally a moment's notice, they can assemble a team to aid in controlling the spill. For the Rhode Island effort, in addition to Steve Lehmann, the



Members of NOAA's oil spill response team at their command center in Rhode Island with NOAA Administrator D. James Baker (rear right).

NOAA team included Ed Levine, the SSC from New York who served as Steve's Deputy. Also tapped were a number of specialists from the HAZMAT main office in Seattle including Renn Hansen, Bill Lehr and Alan Mearns, who headed up the biological assessment effort and coordinated input from state and federal environmental agencies and the University of Rhode Island. Also on the NOAA team were Chris Hall, providing information systems support and Jacqui Michel doing on-the-beach assessments. The on-site team also relied on constant support from the Seattle home office including spill trajectory support from the

modeling and simulation studies branch and graphics support from Gini Curl.

In their gray jump suits and distinctive NOAA patches, the NOAA team was at the center of a round-the-clock swirl of action in the command center as hundreds of people battled against the elements to minimize the damage to the environment. On Monday morning as salvage crews still fought to gain control of the leaking barge, NOAA Administrator D. James Baker toured the site with HAZMAT chief Charles (Bud) Ehler. By 6 a.m. Saturday, the Dutch Inn in Galilee R.I., a truck stop for the local fishing fleet and summer resort, had been converted to a full scale command and control center.

Lead in Damage Assessment

In addition to fielding the SSC and his team, NOAA also has the lead responsibility to assess the damages caused by the spill and to plan for their restoration. Under new NOAA regulations just going into effect this month, NOAA will oversee a changed approach to oil spill damage assessment. Previously, after damages were measured, a bill for the cost was presented to the responsible parties (with plenty of litigation all round). Then came extensive discussions on how to spend whatever money was awarded by the courts. Under the new approach, efforts will focus from the very beginning on doing whatever is necessary to restore the injured resources to their pre-spill condition. This effort also began at once, with a NOAA Damage Assess-

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NWS Overcomes Shutdown in The Blizzard of '96

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The Blizzard of '96 came on the heels of a partial government shutdown that kept most NOAA employees home for more than two weeks. Yet, excepted NWS employees went to work and performed well beyond the call of duty.

"Employees at National Weather Service field offices worked through the furlough and right into the blizzard, not knowing when they would be paid," said Elbert W. Friday Jr., NOAA Assistant Administrator for Weather Services. "Their hard work and professionalism reflects well on all of NOAA and the Department of Commerce."

Dedicated Workers

Dedication to public service drives many of the forecast office staff members who battle through blinding storms and road hazards to work their shifts, while fascination and excitement in watching a storm develop keeps them glued to radar screens long after their shifts have ended. Some employees even logged triple shifts with only brief breaks and catnaps during the storm. Caffeine and sugar from depleted vending machines added to the adrenaline that kept employees working long hours.

Davida Streett, of the National Centers for Environmental Prediction (NCEP), in Camp Springs, Md., spent 11 hours getting to work, and then put in a 36-hour shift—with only a one-hour nap to keep her going. Others caught rides in military humvees and other emergency vehicles as their own cars were



Chris Hedge, a meteorologist in the NCEP Meteorological Operations Division, analyzes a surface chart. (Background) Steve Flood works on a forecast. (Far left) Meteorologists Eric Wolf, Mike Schichtel and Frank Rosenstein.

snowed in for days.

'Wild Weather'

One might say the blizzard provided the kind of weather NOAA meteorologists live for. "So far, this winter has been wild!" said David Vallee, a Weather Service forecaster at the Taunton, Mass., office. "It's a great time for weather fanatics—especially with the modernized equipment at our fingertips."

Erich Wolfe, a senior NCEP meteorologist, may agree with Vallee's assessment. Wolfe reported to work 8 a.m. on Thursday, Jan. 11, worked through the night, and at 10 a.m. the next morning was seen measuring snowfall with a yardstick outside of the building, a procedure duplicated hundreds of times by the Weather Service's network of cooperative observers.

Floor space was at a premium in

most offices and hallways as employees nestled in sleeping bags. For others such as Jim Travers, meteorologist in charge at the Sterling, Va., forecast office, a sleeping bag would have been a luxury—he slept on his office chair.

In a letter published in the *Washington Post*, Department of Commerce Secretary Ronald H. Brown exulted, "The Blizzard of '96 was one of the best predicted in history, both for intensity and location of snowfall...The forecasts for this monumental storm were a real triumph for NOAA's National Weather Service."

Training a 'Critical' Factor

Friday added that better training for NWS professionals is a critical factor in applying all of the weather data

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Oil Spill Response

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ment team on site. This team was headed by Frank Csulak, NOAA's Northeast regional coordinator for damage assessment. From NOAA Headquarters in Silver Spring, spill coordinator Doug Helton was joined by Carol Ann Manen, chief of the Injury Assessment Branch and resource economist Norman Meade. John Catena from the NMFS restoration center in Gloucester had just finished work on restoration plans for a previous spill in the area when he got the call to head for Rhode Island. Filling out the Damage Assessment team was Marguerite Matera from the General Counsel's office in Gloucester.

NMFS, Corps Share the Load

The barge spilled over 800,000 gallons of its oily cargo before the leak was stanchied. The continuing turbulence of the seas prevented the light oil from evaporating quickly and churned the oil into the water. This made taking careful measurements out in the deep water imperative. Luckily, the NOAA research vessel Albatross IV had just arrived in Woods Hole expecting to look for spawning groundfish on Georges Bank. They were quickly diverted to the spill area and began taking samples of water and marine life. Ken Sherman of the NMFS Narragansett lab worked with other Federal and state scientists to come up with a sampling protocol. "We are looking at everything that we can to measure the short-term presence of the fuel as well as residual amount that may linger in the water or sediment," said Sherman. Of particular interest were the winter flounder, with already depressed population. Also under scrutiny were clams and lobsters, which can take in residual petroleum



NOAA Administrator D. James Baker (rear right) confers with members of NOAA's oil spill response team in Rhode Island.

that lingers in the ecosystem.

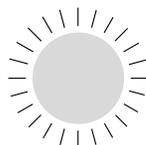
Commerce Secretary Ron Brown, head of a Presidentially appointed task force to respond to the economic damage done by the spill, has asked NMFS to begin emergency inspection of Rhode Island seafood, at the request of the state's governor and Congressional delegation.

"We are working quickly and effectively to counter the adverse economic effects that an environmental disaster can have on this fishing-reliant region," Secretary Brown said. "With a coordinated Federal and state governmental effort, we can

help ensure that the Southern New England region will rebound from this tragic event."

The now empty barge is on its way back home for repairs though the tug still sits on Moonstone beach. The fisheries off Narragansett Bay have been closed and NOAA continues to keep a watchful eye as conditions slowly come back to normal. Over the coming months, NOAA scientists will continue to monitor the situation and begin to assess the long-term impacts of the spill and the need for restoration.

—*Eliot Hurwitz* 🐦



The average American spends 10 vacation days at the beach every year. Yet few of us realize the impact we each have on the health of our nation's troubled coasts.

To learn more about how to preserve our coasts, at the beach or at home, call for your free Adopt the Coast Kit: 1-800-226-1234.

Adopt the Coast

The National Coastal Guardian Campaign

Blizzard of '96

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produced by new technologies such as doppler radars and automated observing systems. "Our people are getting better all the time at analyzing and interpreting the data they see," said Friday, "and the confidence these people gain from their training has a direct effect on their success in making timely, accurate warnings to the public."

In the case of the blizzard, the threat of severe weather was so great, so early on, that NWS employees went the extra yard to contact local emergency managers.

Chet Hendricksen, meteorologist in charge of the Mount Holly, N.J., Weather Service Forecast Office, reported that he and his staff took the unprecedented step of calling each of their coverage area's 35 county emergency management directors at home to warn them of the approaching storm.

"This was the first time we called the emergency directors at home, and they knew right away we meant business," said Hendricksen, whose words were echoed by Taunton, Mass., Meteorologist in Charge Bob Thompson. "I called the state's emergency management director at home and his first words upon hearing my voice on a Sunday morning were 'uh oh,'" Thompson said.

Early Warnings Bring Results

As a result of the timely and accurate forecasts, the Virginia governor George Allen issued a state of emergency Saturday morning before the first snowflake fell. States of emergency were declared for Maryland, Delaware, Pennsylvania, New York, and West Virginia as the storm intensified.

Commenting on the forecasts, Friday

noted that the three- to five-day forecasts being issued today are as accurate as the one day forecasts of a decade ago due, in part, to research and improved computer models. Running complicated computer models of the atmosphere on the most powerful computers in the world, the NCEP forecasters saw the storm coming about five days before it actually hit.

"The blizzard materialized pretty much as we expected it," said Jim Hoke, director of the NCEP Hydrometeorological Prediction Center.

Where Did It All Go?

Although some people expected the huge piles of snow to last for weeks or even months, warm humid air with high winds and significant rainfall caused rapid melting of much

of the snow and brought the worst flooding in more than 20 years to many of the states walloped by the blizzard. The speed of the melt was extraordinary, said Danny Fread, director of the NWS Office of Hydrology. "Snowmelt like this in January is like having a blizzard in May."

Weather Service personnel, barely rested from the Blizzard of '96, quickly resumed their hectic pace to provide warnings and forecasts for the Flood of '96 as high water flooded parts of Albany, Charleston, Columbus, Dayton, Harrisburg, Hartford, Richmond, and Trenton, as well as the Nation's Capital. "1996 has been quite a year for weather and it's not even Spring yet," Friday said.

—Barry Reichenbaugh ☺

Battleship Potamkin

They Auto Know Better

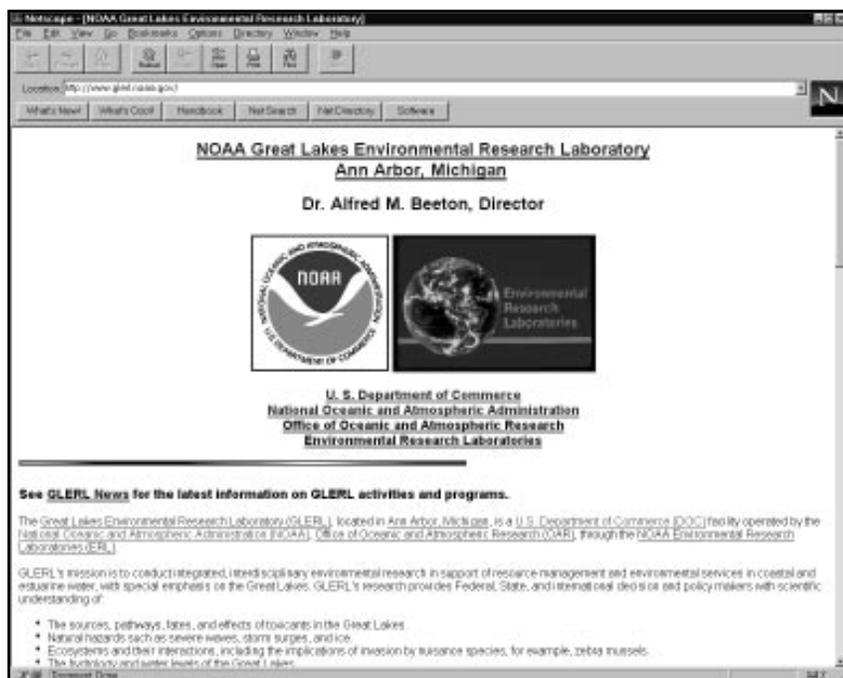
In the midst of coping with an avalanche of emergency coordination calls during the Blizzard of '96, the Brookhaven, N.Y., Weather Service Forecast Office had the added burden of inquiries from more than 300 New Yorkers and reporters in search of human interest angles on the storm, thanks to the Potamkin Automotive Center in Manhattan.

Potamkin, the largest car dealership in Manhattan, had promised that if more than four inches of snow fell in Central Park between 10 a.m. and 10 p.m. on Jan. 8, the dealership would pay all costs on cars leased between Dec. 22 and Jan. 2.

The following day, controversy over the snowfall amount was the number one weather topic as the official total for Potamkin's 12-hour period was 2.2 inches. NWS staffers had the unique opportunity of explaining to dozens of people how official snow measurements are made. On top of that, they had to handle calls from folks who leased a car and could not believe it only snowed a little over two inches in Central Park during a blizzard that dumped 20.2 inches on New York City.

The next group to join the fray were lawyers—a class action suit was under consideration against the car dealer—and the snow measurements and procedures will most likely be subpoenaed. Meanwhile, Potamkin repeated the offer for Super Bowl Sunday. Skies were, unfortunately, clear.

—Bob Chartuk ☺



GLERL's award-winning Internet site on the World Wide Web, seen above, can be reached at <http://www.glerl.noaa.gov>.

Baker: Many Achievements in 1995, More to Come in '96

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the two GOES systems into full operation with next-generation satellites, and civilian-military satellite convergence became a reality.

Major Steps

The National Ocean Service provided new maps of the ocean from the GEOSAT and TOPEX/POSEIDON altimeter satellites, and developed an innovative relationship with industry with a cooperative research agreement. The Office of Oceanic and Atmospheric Research made major steps in reducing the uncertainties in forcing of climate change by aerosols, and provided detailed assessments to the United Nations Environment Program of effects of hydrochlorofluorocarbons (HCFCs) and methyl bromide on the ozone layer. The Office of Administration made significant contributions to NOAA's overall efforts to streamline its administrative processes by developing simplified procedures and

conducting training programs for NOAA managers on delegation of several personnel authorities. Finally, I would like to gratefully acknowledge the special services of the NOAA Corps who filled in for furloughed colleagues and performed many different and unfamiliar duties during the recent shutdown.

On the International Scene

NOAA was also an important player internationally, leading conferences on the impacts of land-based sources of pollution on coastal waters, El Niño forecasting, fisheries straddling stocks, and laying the groundwork for a new era of weather and climate data exchange. All of these efforts show the dedication and commitment of NOAA personnel to their jobs and to understanding and managing the oceanic and atmospheric resources of our planet.

We don't know what the new year will bring, but I know that we will survive as a strong and effective

Award for GLERL's World Wide Web Site on Internet

GLERL's World Wide Web Home Page was recently selected by the McKinley Group's professional editorial team as a "3-Star" site—a special achievement among the 1.5 million sites Internet sites listed in "Magellan", McKinley's comprehensive online directory. The GLERL site was selected after rigorous review based on depth of content, ease of exploration, and Net appeal. At a February 1 lab-wide meeting, GLERL Director Alfred M. Beeton presented a "Cash-in-a Flash" award to Glenn Muhr, Computer Programmer/Analyst for his accomplishments as the GLERL Webmaster. ☺

agency. I have full confidence in NOAA people, and we will continue our efforts to ensure that NOAA programs are adequately supported. You are all to be congratulated for a good job well done, and we look forward to making the new year even more successful. ☺

NOAA Report is a monthly publication for NOAA employees from the Office of Public and Constituent Affairs, Washington.

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