

NOAA REPORT



Vol. IV, No. 2

March 1995

NMFS Transfers Gloucester Lab to State:

NMFS has announced that the Gloucester, Mass., laboratory will not close, but will be transferred to the Massachusetts Division of Marine Fisheries within the next few months, and all Federal lab employees will be offered positions elsewhere within the fisheries service.

The facility transfer marks the end of several years of negotiations between the fisheries service and the Massachusetts Division of Marine Fisheries to provide an established scientific facility where the state agency can conduct critical natural

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resource conservation and management operations.

Research functions critical to New England groundfish survival, such as stock assessments, do not take place at the Gloucester lab; they will continue to be conducted at NMFS's Northeast Fisheries Science Center and laboratory in Woods Hole, Mass.

Fisheries, Forest Services Protect Salmon, Land:

NMFS and the U.S. Forest Service have announced a plan to ensure that recent court rulings do not result in unnecessary disruption of logging, grazing and mining activities in Pacific Northwest national forests. At the same time, the agencies' efforts will make major strides in protecting the habitat of several species of salmon listed as endangered or threatened.

continued on page 8



The NOAA Ship Malcolm Baldrige left Miami last month for a round-the-world research mission.

Year-Long Cruise to Yield Climate Change Data



The NOAA ship *Malcolm Baldrige*, one of the United States' largest and best-equipped oceanographic research vessels, left Miami on February 13, for an around-the-world scientific expedition to gather data integral to solving some of the world's most pressing environmental problems.

These investigations will include:

- Where does all of the carbon dioxide go when we burn fossil fuels?
- Is the Indian Ocean a carbon dioxide source or a carbon dioxide sink?
- How does the circulation in the Indian Ocean affect climate? and
- What pollutants are in the air overlying the world's oceans?

NOAA is sending the ship on a 12-month voyage to fulfill one of the agency's prime missions: searching for the solutions to many of the most critical environmental problems,

including the greenhouse effect and potential global climate change. During the year, scientists from NOAA, from other U.S. oceanographic research institutions, and from foreign countries will sail on the *Baldrige* in search of answers to these and other environmental questions.

The *Baldrige* will make 14 port calls in eight countries, Puerto Rico and American Samoa as it circles the globe. (See map, page 3.) The first leg of the trip is from Miami, Florida, to San Juan, Puerto Rico. During that segment, the ship will be taking water samples and current measurements to study the dynamics of the North Atlantic Ocean circulation.

Enroute to Durban, South Africa, from Puerto Rico, the ship will be sampling Radiatively Important Trace Species (RITS)—sampling the air for

continued on page 3

Charting a Course for Our Future

We see a world where societal and economic decisions are coupled strongly with a comprehensive understanding of the environment." This is NOAA's vision for the future.

This vision is detailed in the newly revised NOAA Strategic Plan, which focuses on NOAA's mission to predict and protect the environment. I encourage each of you to read the plan, which presents NOAA from a strategic point of view. The plan focuses on the programmatic goals we plan to achieve in the next ten years, and shows how the traditional organizational structure contributes to the implementation of the plan.

The strategic plan is divided into two main portfolios that reflect NOAA's mission of protection and prediction.

D. JAMES BAKER



Environmental Assessment and Prediction includes three main goals: Advancing Short Term Warnings, Implementing Seasonal to Interannual Climate Forecasts, and Predicting and Assessing Decadal to Centennial Change. The unifying theme in this portfolio is the operation of an integrated environmental observation, assessment, forecast, and research service that enhances public safety and the Nation's economic and environmental security.

Healthy Ecosystems

The Environmental Stewardship portfolio includes four main goals: Building Sustainable Fisheries, Recovering Protected Species, Sustaining Healthy Coastal Ecosystems, and Modernizing Navigation and Positioning Services. In this area, NOAA supports sustainable use of ocean, coastal, and living marine resources and maintenance of healthy coastal ecosystems with the best science and management practices.

The Strategic Plan provides a

NOAA is on the cutting edge with this strategic approach to our mission to predict and protect the environment.

framework for articulating these goals and provides for consensus in reaching them. Our line offices—NWS, NMFS, NOS, NESDIS and OAR—implement the goals of the Strategic Plan. The plan allows NOAA as a whole to better synergize the contributions each line office makes toward achieving the goals. It is worth noting that the strategic planning process has involved all the line and program offices, and that teams have been set up to continually evaluate, and where necessary, revise our approach.

Strategic Plan's Vision

In order to achieve the goals of the Strategic Plan, we will have to focus on some specific areas of concern:

- Implementing integrated approaches to environmental management
- Developing reliable assessments and predictions
- Investing in research and development, and in new technologies
- Developing new partnerships between the public and private sectors
- Building and using new information services

The bottom line of our goals and of the new approach to achieving them is the concept of sustainable development: the links between a healthy economy and a healthy environment. NOAA and the Department of Commerce have taken the lead in pursuing policies of prediction and protection in the context of economic growth. This theme is present in all aspects of our Strategic Plan.

NOAA is on the cutting edge with this approach to our mission. The Strategic Plan helps us to contribute to re-inventing government and the

National Performance Reviews. We are one of the first Federal agencies to actively embrace the concept of

strategic planning, which has long been a hallmark of successful private sector activity. As such, NOAA is part of a demonstration project under the new Government Performance and Results Act, which will eventually become standard practice for all Federal agencies.

Positive Hill Reaction

We have already reaped benefits as a result of thinking and acting strategically. In one area of NOAA, modernization of the National Weather Service is dramatically changing the way the agency does business. New technology is leading to better information and greater efficiencies in the delivery of weather services. On a NOAA-wide scale, the Strategic Plan allowed a strong presentation of the case for increase resources in the FY 1996 budget discussion, and we were successful. Our budget request of \$2.2 billion reflects a \$161 million increase in the President's budget. On Capitol Hill, reaction to the Strategic Plan has been quite positive from both new and more senior members. This will help us in the current tight budget climate as final decisions are made.

I am confident that we will continue to see positive results from the NOAA Strategic Plan. Developing and updating the plan is a large task, and I appreciate the efforts of all of those who have participated.

As always, I welcome your comments on this ongoing process. The Banyan address for comments is [column@pa@noaa](mailto:column@pa.noaa). The Internet address is column@hq.noaa.gov. ☺

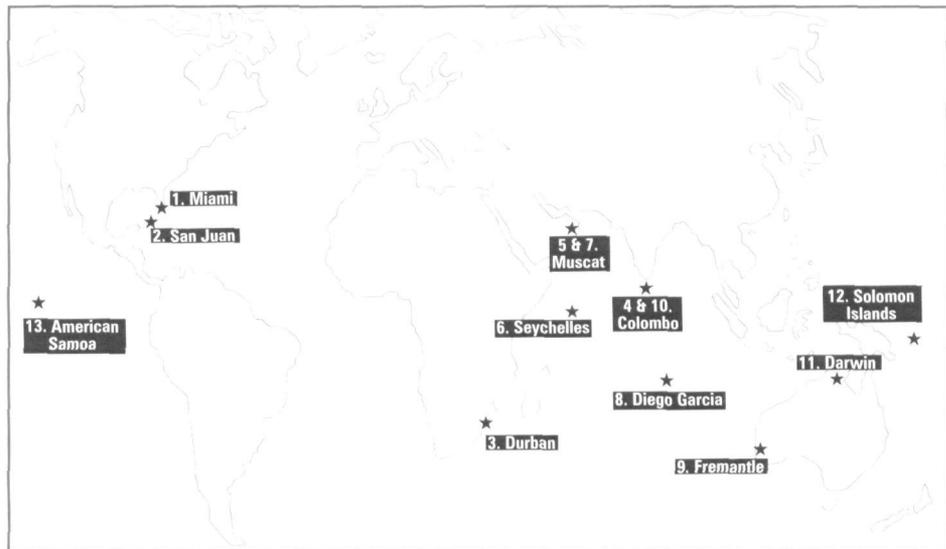
(Editor's Note: For more on the FY '96 NOAA budget request, see pages 4 and 5.)

Year-Long Research Mission**Baldrige to Circle Globe On Year-Long Mission***continued from page 1*

compounds such as nitrogen, carbon dioxide, ammonia and aerosols. This sampling is important for understanding the complex components of the atmosphere, and for providing a baseline to see how the composition of our atmosphere changes over time. Along with this study the ship will take water samples and examine current flow for the World Ocean Circulation Experiment (WOCE).

After departing Durban, South Africa, the ship will head to Colombo, Sri Lanka. From Sri Lanka to Muscat, Oman, scientists will collect and study the plankton and fish along the coast of Somalia to Oman.

More WOCE data will be collected on the legs from Oman to the Seychelles, and from the Seychelles back to Oman. After departing Oman, the ship will tow the ship *Mocness* to collect



The Malcolm Baldrige will make 14 stops on its mission, beginning and ending in Miami.

plankton and fish samples along the Somalia coast on its way to Diego Garcia in the Indian Ocean.

Ocean and Atmosphere Carbon Exchange studies (OACES) will be

conducted from Diego Garcia to Fremantle, Australia, and back to Colombo. These studies examine the amount of carbon dioxide in the ocean and compare it to the amount of carbon dioxide in the atmosphere to determine if a specific ocean area is absorbing or emitting carbon dioxide. This information will help answer questions about the greenhouse effect and the possibility of global warming.

From Sri Lanka, the ship will sail to the Solomon Islands with a stop in Port Darwin, Australia. The Solomon Islands are being used as a supply point for the last project in the world cruise. Deep sea oceanographic buoys will be loaded on board for deployment in the western and central Pacific Ocean. These buoys will be placed in the Tropical Ocean Global Atmosphere-Tropical Ocean Atmosphere array of more than 60 buoys that extends from Indonesia to just west of the Galapagos Islands. The buoys measure surface winds and temperatures, subsurface thermal structure, and currents. This information is recorded and reported and used as a key diagnostic tool for understanding and predicting the El Niño phenomenon. After a call in American Samoa, the ship returns to Miami.



NESDIS recently recognized the efforts of employees involved in activities sponsored by its Equal Employment Opportunity Advisory Committee. Robert S. Winokur, Assistant Administrator for Satellite and Information Services, is seen here presenting an award to Larason Lambert, Office of Research and Applications. Recognition was given to employees for participating in the Metropolitan Consortium for Minorities in Engineering, cultural awareness programs, and community outreach, for membership in EEOAC, and for holding past EEOAC chairmanships.

FOCUS ON...

NOAA's Fiscal Year 1996 Budget Request

NOAA's Strategic Plan—the blueprint for the agency's future through the year 2005—takes center stage in this year's budget request to Congress. The fiscal year 1996 request is organized along the lines of the seven Strategic Plan objectives, as well as by the traditional line office structure.

The nearly \$2.2 billion budget request—an increase of \$161 million over the 1995 appropriation—shows big gains in the areas of *Recovering Protected Species*, mainly for the National Marine Fisheries Service to assess the status of endangered and at-risk species, and *Advance Short-Term Forecast and Warning Services*, for supporting continuous satellite coverage for warnings and forecasts, and for modernizing the National Weather Service. **'Opportunities for the Nation': Brown**

"Among the key goals of the Department are to ensure and enhance sustainable economic opportunities for the Nation and to ensure that economic prosperity and environmental quality are compatible goals," said Department of Commerce Secretary Ronald H. Brown. "Commerce responsibilities include stewardship of the global environment through conservation and effective management of the Nation's marine and coastal resources, as well as monitoring and predicting changes in the Earth's environment."

NOAA administrator D. James Baker said the budget proposal mixed greater outlays to some programs with decreases to others. "This budget proposal represents continued investments that will generate major environmental and economic returns, but it also reflects reductions in personnel and some program areas," he said. "These difficult decisions demonstrate our commitment to ensure that we fund

only the highest priority programs.

"We have mapped a course with NOAA's Strategic Plan that will bring us toward our vision for 2005—a world in which environmental stewardship, assessment and prediction serve as keystones to enhancing economic prosperity and quality of life," Baker added.

NOAA's priorities, Baker explained, are:

- increasing funding to build sustainable fisheries;
- continuing to research Health of the Atmosphere;
- sustaining healthy coastal ecosystems;
- merging the Nation's civilian and military weather satellite systems;
- advancing short-term warning and forecast services; and
- developing High Performance Computing Capability further.

Approval by Congress Sought

The NOAA budget, part of the overall Department of Commerce and Federal government budgets, now goes before Congress for approval.

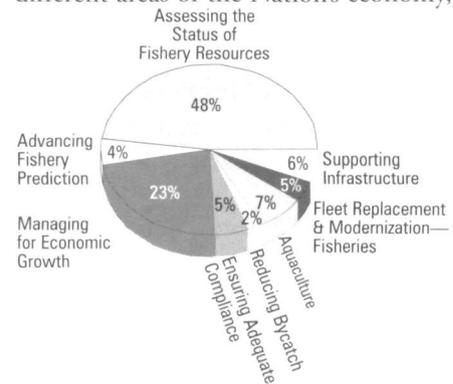
By line office, the proposed budget gives NWS 30 percent, OAR 12 percent, NMFS 14 percent, NOS eight percent, NESDIS 25 percent, Program Support seven percent, and Other Accounts four percent.

Here's a breakdown of the budget request by Strategic Plan initiative:

ENVIRONMENTAL STEWARDSHIP

Build Sustainable Fisheries (\$339.4 million, +\$9 million)

The fishing industry affects many different areas of the Nation's economy,



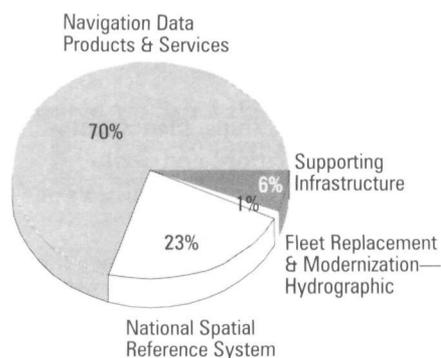
such as tourism, recreation, and food services. It's also the main industry in many coastal communities. Right now, billions of dollars in potential economic growth, thousands of jobs and numerous recreational opportunities are being lost because of over-fishing—too many boats chasing too few fish.

The budget request increase will go to develop and implement fishery management plans around the country. Line offices supporting this development and implementation include NMFS, OAR and NOS.

Modernize Navigation and Positioning Services

(\$86.2 million, -\$1.7 million)

NOAA wants to be on the cutting edge of the next decade's marine and aeronautical systems, electronically integrating accurate chart data, global positioning and system-based locations, and real-time environmental information. Accurate positioning, charts, and navigation services are integral to the

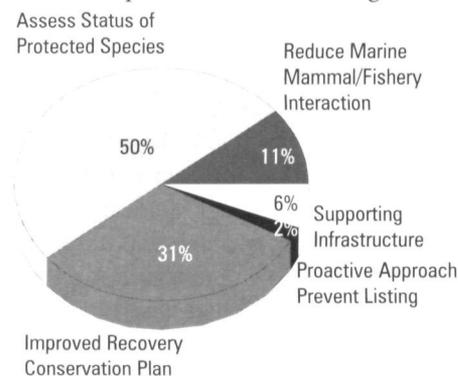


Nation's economic well-being, benefiting such industries as shipping, transportation, and exporting. These services also promote sound environmental stewardship by giving decision-makers basic planning, environmental and geographic information. NOS is the lead line office for this activity.

Recover Protected Species

(\$64.6 million, +\$19.9 million)

Providing scientifically sound stewardship of the Nation's living



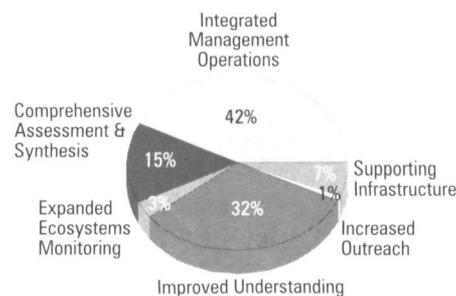
marine resources and promoting the long-term health of marine ecosystems are two of NOAA's goals. Bringing depleted or nearly depleted species back to more abundant levels through recovery and conservation plans will contribute to the overall health and understanding of marine ecosystems, as well as enhance economic and social opportunities for future generations. NMFS and NESDIS are the line offices involved in this mission.

Sustain Healthy Coastal Ecosystems

(\$206.2 million, -\$1.5 million)

The biodiversity and productivity of coastal ecosystems are slowly ebbing away, victims of rapid population

growth and increasing demand for recreational and economic develop-



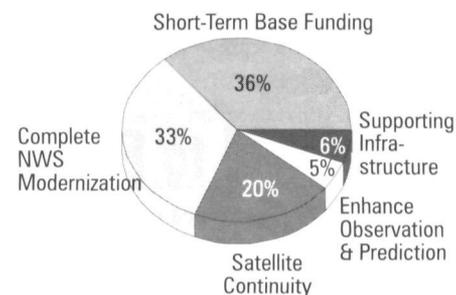
ment. But by managing both coastal development and conservation, we can ensure the essential goal of sustainable development of the Nation's valuable coastal resources, so crucial to the country's health and economic well-being. NOS, NMFS, OAR, NESDIS and the Coastal Ocean Program office all contribute to this effort.

ENVIRONMENTAL ASSESSMENT AND PREDICTION

Advance Short-Term Warning and Forecast Services

(\$1.281 billion, +\$77.7 million)

Enhancing NOAA's ability to observe and understand the environment will allow the agency to significantly improve short-term weather warnings and forecasts. Getting these



improved forecasts to users quickly and efficiently is also paramount. Each year, hundreds of lives and billions of dollars are lost because of weather which could have been predicted minutes to months in advance.

Completing the modernization and restructuring of the National Weather Service, maintaining continuous satellite coverage, strengthening observing and predicting abilities, and improving the dissemination of

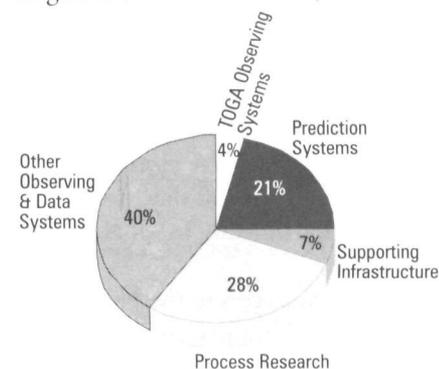
information to the public will benefit nearly every sector of the Nation's economy, with estimates showing the benefits at eight times greater than the costs involved. Among the important projects covered here is the expansion of the NOAA Weather Radio network to cover 95 percent of the country's population.

NWS, NESDIS, OAR and NOS are the line offices involved in this initiative.

Implement Seasonal to Interannual Climate Forecasts

(\$125.9 million, +\$14.3 million)

NOAA's goal is to provide forecasts of global climate variations, such as El



Niño and its effects, one year in advance. This would allow businesses and governments around the world the opportunity to guard against economic losses and social disruptions. NOAA scientists can now predict El Niño-related events with enough accuracy and lead time that hundreds of millions of dollars a year can be saved both here and abroad. Lead agencies are NOS, OAR, NWS and NESDIS.

Predict and Assess Decadal to Centennial Change

(\$121.5 million, +\$12.7 million)

Global climate change, depletion of the ozone layer, and air quality improvement are all issues requiring long-term observations and solutions. Some climatic changes, occurring over decades and even centuries, have the awesome potential of changing how the planet supports life.

To deal with these issues, NOAA intends to chart all the forces, particu-

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NWS Celebrates 125th Anniversary

If President Ulysses S. Grant still had his way, Joe Friday might be the Secretary of Defense.

Grant could be called the father of the National Weather Service. In 1870, Grant signed a joint resolution of Congress authorizing the Secretary of War—later changed to Defense—to establish a national weather service. Later that year, the first systematized,

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Want a quick and easy way to find out what's happening daily in the world of NOAA and environmental science? Check out the *NOAA Daily Clips*, a collection of newspaper, magazine and newswire stories updated every business day, now available electronically to all NOAA employees.

If you have access to the NOAA Tackboard, look in the Office of Public

synchronous weather observations ever taken in the U.S. were made by "observer sergeants" of the Army Signal Service.

Now, 125 years later, NWS is in the midst of a major modernization program that will significantly improve its forecasting. Thousands of weather observations are made hourly and daily by government agencies, volunteer

citizen-observers, ships, planes, automatic weather stations and earth-orbiting satellites, with the mission of protecting life and property.

"We've come a long way since those first weather observations," said Elbert W. Friday Jr., director of the National Weather Service. "Back then we were using only human surface observations; today we are in the midst of a major program to modernize the National Weather Service based on state-of-the-art technology and knowledge about meteorology."

The original weather agency operated under the War Department from 1870 to 1891 with headquarters in Washington, D.C., and field offices concentrated mainly east of the Rockies. Little meteorological science was used to make weather forecasts during those early days. Instead, a weather phenomenon that occurred at one location was assumed to move into the next area downstream.

From 1891 to 1940, the Weather Bureau was part of the Department of Agriculture. Technological advancements in the first two decades of the 20th century had a remarkable effect on the Nation's meteorological services. In 1902, Weather Bureau forecasts were

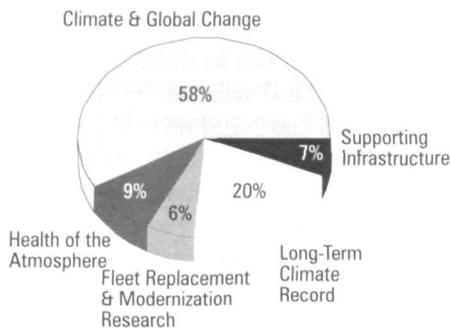
Affairs directory. If you can get to Internet, the clips are available through anonymous ftp at [ftp.noaa.gov/CLIP/zipclips.exe](ftp://ftp.noaa.gov/CLIP/zipclips.exe). Full instructions on how to get and read the clips are available at both access sites. You need a Mac or Windows PC to download, decompress and read the clips.

Need help on getting the clips, or reading them? Call Jerry Slaff of NOAA Public Affairs at (202) 482-6090, or e-mail to jslaff@hq.noaa.gov on Internet, or jerrys@pa@noaa on Banyan.

(The *NOAA Daily Clips* are an internal publication, meant exclusively for the use of the employees of NOAA, the Department of Commerce, and the Federal government.) ☺

'96 Budget Announced

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larly the ocean, that affect global climate; guide the rehabilitation of the ozone layer; and monitor and assess surface ozone levels. All NOAA line offices contribute to these activities.

—Jerry Slaff ☺

Stay Tuned to Earth & Sky Radio

Earth & Sky, a science education radio program sponsored in part by NOAA, has scheduled the following NOAA topics in March:

- March 15: NEXRAD Doppler radar
- March 16: weather satellites
- March 17: climate highlights for 1994
- March 22: the Pacific coast—

where land meets sea

March 23: the Atlantic coast—barrier islands

March 24: south Florida coast—coral reefs and sea meadows

The Washington, D.C., affiliate for *Earth & Sky* is WDCU-FM, 90.1, airing Monday through Friday at 8:00 a.m. For affiliates outside D.C., call Jeanne Kouhestani at (202) 482-6090, or e-mail to jeannek@pa@noaa (Banyan) or jkouhestani@hq.noaa.gov (Internet). Scripts available upon request. ☺



Earth & Sky

'Heroic' Avalanche Rescue by NWS Skiers

Two Salt Lake City-based NWS employees who helped rescue some back-country skiers trapped in an avalanche on February 12 are being called heroes by avalanche officials.

A strong snowstorm that had struck the Wasatch Mountains the previous day left more than two feet of new snow on top of a crusted layer of ice, setting up unstable avalanche conditions.

Larry Dunn, a science and operations officer in the Salt Lake Weather Forecast Office, and Graham Stork, a computer systems analyst in the NWS Western Region Headquarters, were part of a group of back-country skiers who became rescuers after hearing screams for help about 12:45 p.m.

Said Dunn, "We heard cries for help in the distance. It appeared an avalanche had come down from high on the slope and overtaken another group of skiers."

"We were almost certain that we were headed for a party of trapped skiers," added Stork. "My fears were confirmed when lead skiers in our group said that another member and I should ski for help and notify officials."

Dunn and two others spread out, coordinating their movements. They spotted two skiers who were almost completely buried in snow and pinned to aspen trees. The snow slab, one to two feet deep and 150 feet across, hit the skiers, sweeping them about 70 yards through the trees.

The rescuers found Jim Paul beginning to dig himself out. He had kept his hands in front of his face to create an air pocket around his head as the new snow pushed him downhill. Paul said the group was buried by the avalanche for approximately 30 minutes. The rescuers also learned that there was a third skier who was still missing.

Dunn skied to the second victim located in the middle of the slope—Marshall Denton, buried in two feet of snow, had just his face showing. Denton said he was cold and in a great deal of pain; he thought his leg was

badly broken. The group covered Denton with additional clothing as his condition stabilized. Unable to move, he lay at the bottom of the snow pit that had been dug around him.

The skiers switched their avalanche transceivers to receive mode and began a beacon search to locate the third skier. Within five minutes, Dunn dug down about two feet and found Steve Carruthers, who showed signs of severe trauma. Dunn began cardiopulmonary resuscitation, but Carruthers never regained consciousness.

Meanwhile, Stork's thoughts and energies were focused on getting to the road as quickly as possible. "I decided to continue skiing on the packed trail until I could reach an area with sufficient gradient to allow a descent that would not require much trail-breaking."

Stork knew a missed turn could result in tumbling into the creek or crashing into one of the trees lining the trail. He reached the road and flagged down the first vehicle, feeling sad as he settled in for the three-mile ride to the nearest telephone.

Fog and snow kept aircraft from immediately approaching the accident site. The rescue helicopter crew arrived at 3:30 p.m. After checking Carruthers' vital signs, medical rescue personnel

issued instructions to end the resuscitation efforts.

Dunn said the toughest part of the incident occurred when the rescuers had to decide on how much time to spend stabilizing Paul and Denton before beginning the beacon search for the third person. They knew Denton could go into shock from the extreme pain and cold if he was not stabilized. They also knew the odds for Carruthers' survival were very low.

Stork and Dunn, who accept the risks of ski touring, practice good avalanche safety techniques. This incident reinforced for them the importance of using these techniques.

Stork said, "As I skied out, I knew the back-country skiing that I have enjoyed for more than 20 years may have taken another life...and it was time, once again, to critically evaluate when, where and how I ski the back country."

According to Tom Kimbrough, a forecaster with the Utah Avalanche Forecast Center, Dunn and Stork made good choices in the rescue plan. "These gentlemen showed exceptionally heroic fortitude in their actions. They made the appropriate technical decisions within a very short time and knowing they would be putting themselves in great danger. They couldn't have done the job any better. As a matter of fact, one of the slopes they had to cross to perform the rescue released spontaneously later that night," Kimbrough said.

—Marilu Trainor

Docs Honor Skin Saving UV Index

NWS director Elbert W. Friday Jr. has received a special Presidential Citation from the American Academy of Dermatology in recognition of the "extraordinary public education value" of the Experimental Ultraviolet Exposure Index.

The index was jointly launched by NOAA and EPA in 58 cities last year.

Dr. Friday was presented the award on February 5 by AAD President Peyton E. Weary, M.D., at the academy's annual national meeting in New Orleans.

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In letters to Senators Larry Craig (R-Idaho) and Mark Hatfield (R-Oregon), the two agency heads committed their staffs to working closely together to come to a speedy resolution. However, according to the letters, "...in light of the stay, and the importance of having a biologically and legally defensible document, we feel that a more appropriate date for completion (for the release of a biological opinion) is March 1.

"We believe that by working together, the agencies can produce land resource management plans that make the best use of the forest, while still protecting the listed species of salmon," said Rolland Schmitt, NMFS director. "Environ-

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mental protection doesn't mean productive use of our natural resources has to come to a halt."

May Launch for GOES: The second in a series of five advanced U.S. weather satellites has been scheduled for launch from Cape Canaveral Air Station on May 19. The Geostationary Operational Environmental Satellite, now called GOES-J, will be renamed GOES-9 once it achieves orbit. It was shipped last month from a Space Systems/Loral manufacturing facility in Palo Alto, Calif., to an Astrotech facility in Titusville, Fla.

GOES-J will join GOES-8, the first of the advanced satellites, which was launched April 13, 1994, in providing more precise and timely weather observation and atmospheric measurement data for the United States. ☺

Data Director Named Top Engineer Manager

Helen M. Wood, director of NOAA's Office of Satellite Data Processing and Distribution, has been named Engineering Manager of the Year by the Engineering Management Society of the Institute of Electrical and Electronics Engineers (IEEE). Wood is being recognized for her "exceptional personal leadership in directing computing and communications research and operations," the society said.



NOAA's Helen Wood was honored by the IEEE as Engineering Manager of the Year.

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sent via wireless telegraphy to ships at sea. In fact, the first wireless weather report was received from a ship at sea in 1905. In two years, weather bureau meteorologists were exchanging observations with Russia and Asia.

In 1910, the Weather Bureau began issuing weekly outlooks to aid agricultural planning. And in 1913, the first fire-weather forecast was issued. Weather forecasters began using more sophisticated methods, including surface weather observations; kite experiments to measure temperature, relative humidity and winds in the upper atmosphere; and airborne observations.

During the late 1940s, the military gave the Weather Bureau a new and valuable tool—25 surplus radars—and launched the network of weather surveillance radars still in use today. ☺

In her position at NOAA, Wood directs a space- and earth-based system involving operational, real-time data gathered by NOAA and other environmental satellites. She also leads the agency's computer network integration.

Wood said her management philosophy is simple: "Understand what motivates people in a job; be seen; make clear what you're after; tell them what's going on."

Most Happy Fellow

Wood holds a B.S. degree in mathematics from the University of Maryland and an M.S. degree in computer science from American University. An active member of the IEEE since 1978, Wood was the organization's vice president for publication activities last year and is an IEEE Fellow.

Founded in 1884, the IEEE is the world's largest technical professional society with 320,000 professionals in about 150 countries.

—Pat Viets ☺

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