



# NOAA WEEK

U.S. DEPARTMENT OF COMMERCE National Oceanic and Atmospheric Administration

## WHITING and LAIDLAY Perform Dramatic Rescues



NOAA Ship WHITING



NOAA Ship LAIDLAY

### House and Senate Agree On NOAA's FY 1972 Budget

The House and Senate conferees met on July 28 to consider the FY 1972 Appropriation Bill for NOAA. They agreed on 50 percent of the difference between the amounts allowed by each House in the areas of Salaries and Expenses, Research, Development and Facilities, and Satellite Operations for FY 1972. There are no changes in the FY 1972 amounts for RD&F (Special Foreign Currency), Pribilof Islands, Fisherman's Loan Fund (Limitation on Admin. Expenses), or Fisherman's Protective Fund. The total amounts appropriated are:

Salaries & Expenses	\$183,067,000
Research, Development and Facilities	108,215,000
Satellite Operations	29,120,000
Research & Development (Special Foreign Currency)	500,000
Pribilof Islands	2,914,000
Fisherman's Loan Fund	(417,000)
Fisherman's Protective Fund	61,000
<b>Total</b>	<b>\$323,877,000</b>

Three men were rescued July 27 by a launch from the NOAA Ship WHITING from aboard a wrecked yacht in Delaware Bay as six nearby fishing craft warned against entering the treacherous waters surrounding the wreck and a U.S. Coast Guard helicopter circled overhead.

Lt. Pressley Campbell, operations officer of the WHITING in charge of the 26-foot three-man launch, said the 38-foot yacht ALRAE out of Cape May, N.J., had struck a four-year-old wrecked barge at full speed, split open her hull, and hung from the sunken obstruction in imminent danger of sinking. The fishing boats refused to go in for fear of endangering their own craft in the swift two-mile-an-hour current which eddied around the wreck. Three people died there July 4, 1970, when their craft struck the wreck. Only one was rescued.

Lt. Campbell, advised by the Coast Guard helicopter that it would be difficult to effect a rescue from the air, nosed his launch up to the stricken yacht and shouted to the men, hanging to the wrecked yacht, to jump. Two of the men did, but the third, unable to swim, hesitated. Lt. Campbell swung his launch into the swirling current again, but as the third man jumped aboard, the launch  
(continued on page 2 )

## **Rescues** (continued from page 1)

struck the wreck, hung momentarily there, then broke loose as Lt. Campbell gunned his motor. The only damage to the launch was a bent propeller. "The fishing vessels shouted warnings to us not to go in," he said, "or our ship would get caught also in the wreckage. I had surveyed the area with the launch before and I thought I could get in and rescue them."

Lt. Campbell radioed the WHITING in Lewes, Del., which, in turn, contacted the helicopter and was advised the helicopter preferred the launch to go in if it thought it could rescue the men because of the difficulty of saving them from the air. Lt. Campbell said the yacht struck the sunken barge about 2:45 p.m., and the men were rescued 15 minutes later. The accident occurred about 17 miles north northeast of Lewes, Del., and about six miles from Big Stone Beach, Del. The position of the wrecked barge was noted on a nautical chart and marked nearby by a buoy. The WHITING, commanded by Cdr. Charles Nixon, has been using its launches since June 1 for hydrographic surveys in Delaware Bay.

The Lake Survey Center Ship LAIDLAY, commanded by Capt. Herman Ebel, rescued two persons and recovered their capsized sailboat in the southern part of storm-tossed Lake Michigan, July 23. John Peck and June Micchia of Hobart, Indiana, were traveling from Gary to Michigan City in a 14-foot sailboat when a storm struck when they were about halfway and the 30-knot plus winds and heavy seas overturned their craft, pitching them into the water.

Captain Ebel and Survey Chief Bill Monteith of the LAIDLAY were also seeking shelter when the heavy rains and wind hit. They had seen the sailboat earlier and turned around to check on the frail craft. They found the capsized boat, but no sign of the passengers. While circling the area through the driving rain and white caps, they caught sight of orange life jackets. In minutes, the top-notch seamen had the soaked and chilled couple aboard the LAIDLAY and wrapped in blankets. Then, under extreme adverse conditions, they recovered the sailboat undamaged.

In a letter to Capt. Robert E. Williams, Lake Survey Center Director, Miss Micchia and John Peck said, in part: "If Herman Ebel and Bill Monteith are typical examples of the men who sail your boats, then your organization epitomizes competent seamanship, innate courtesy and a sincere interest in the safety and welfare of fellow beings at sea."

## **President Proclaims 1971 Fisheries Centennial Year**

President Nixon paid tribute to the United States Fisheries Services on July 26, 1971, proclaiming the year 1971 as Fisheries Centennial Year. Following is the text of the proclamation.

"Just one hundred years ago, on February 9, 1871, the Congress of the United States authorized the President to appoint the first Commissioner of Fish and Fisheries. Shortly thereafter, President Grant named Professor Spencer Fullerton Baird to this post and in June, 1871, Professor Baird initiated a program of research concerning the conservation of fish at Woods Hole, Massachusetts. From that original effort has evolved both the National Marine Fisheries Service of the Commerce Department's National Oceanic and Atmospheric Administration and the Department of the Interior's Bureau of Sport Fisheries and Wildlife.

"The efforts to conserve and improve America's fisheries are vitally important to all of our people. These efforts will require the continuing vigilance of the fishing industry, of government at all levels, of private conservationists and of the American public.

"NOW, THEREFORE, I, RICHARD NIXON, President of the United States of America, do hereby designate the year 1971 as Fisheries Centennial Year. I urge all citizens to support and encourage the work of Federal and State administrators and scientists and the work of private conservation organizations in protecting and enhancing the fisheries of our Nation.

"IN WITNESS WHEREOF, I have hereunto set my hand this twenty-sixth day of July, in the year of our Lord nineteen hundred seventy-one, and of the Independence of the United States of America the one hundred and ninety-sixth."

## **EMSU To Be Dedicated at San Jose, Calif.**

A dedication ceremony for the NWS San Francisco Office's Environmental Meteorological Support Unit at San Jose State College, San Jose, Calif., is planned for Aug. 27. Karl R. Johannessen, NWS Associate Director, Meteorological Operations, is slated to give the principal address. The Western Region headquarters is inviting officials of the college, the state, and the San Francisco area.

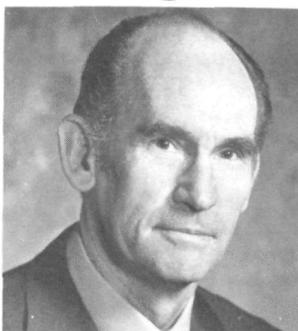
## Five NOAA Men Receive New Assignments



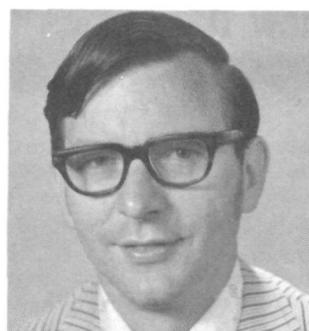
Dr. Hugh J. McLellan



Capt. Eugene Taylor



Jacob W. Morgan



James Noel

Dr. Hugh J. McLellan, former Associate Scientific and Technical Director for the U.S. Naval Oceanographic Office, has joined the Office of Sea Grant as Associate Program Director for Institutional Support. Dr. McLellan's career includes two years as a physicist with the National Research Council of Canada; three years as a Canadian Army officer; and ten years as a scientist with the Fisheries Research Board of Canada. He was also Head of the National Science Foundation's Oceanography Section, where he worked closely with the Sea Grant Program. While at NSF, he was U.S. National Coordinator for CICAR. Dr. McLellan holds bachelor's and master's degrees in physics from Dalhousie University in Halifax, Canada, and received his doctorate in physical oceanography at Scripps Institution and the University of California at Los Angeles in 1956.

Capt. Eugene Taylor, Chief of the Operations and Requirements Division in the Office of Marine Surveys and Charts has been selected by Rear Adm. Don A. Jones, Director, National Ocean Survey, to serve as the NOS Coordinating Officer for the GARP Atlantic Tropical Experiment (GATE). The international program, scheduled for the summer of 1974, follows Bomex (Barbados Oceanographic and Meteorological Experiment) in a succession of experiments designed to gain increased understanding of the atmosphere. Capt. Taylor joined the National Ocean Survey in 1950.

Jacob W. Morgan, formerly with the National Weather Service Forecast Office at Chicago, Ill., has been named the new meteorologist in charge at the Springfield, Ill., Weather Service Office. Prior to his assignment to Springfield, Mr. Morgan served at the Chicago office for more than 20 years. Previous experience included duty at Washington, D.C., New York City, and Albany, N.Y. He received a bachelor's degree from Illinois Normal State University, with graduate

study at Sienna College, New York University, and the University of Chicago.

James Noel has been assigned as the EDS representative to NOAA's Center for Experimental Design and Data Analysis (formerly the BOMAP Office) to help coordinate data management for the Barbados Oceanographic and Meteorological Experiment. He will participate in data management planning for national and international cooperative projects. Mr. Noel is the new EDS Staff Assistant for Special Projects and former NODC Staff Assistant for Plans.

Dr. Warren B. Johnson, chairman of the American Meteorological Society's Committee on Atmospheric Turbulence and Diffusion, has been appointed NOAA's Chief of the Model Development Branch of the Division of Meteorology, Research Triangle Park, North Carolina. This new branch will be responsible for the development of urban/regional air quality diffusion models and various other environmental models designed to assess the impact of a region's prospective changes or future growth on its air quality.

Dr. Johnson comes to the Division of Meteorology from the Atmospheric Sciences Laboratory of Stanford Research Institute (SRI), Menlo Park, California, where he was manager of the Environmental Meteorology Program. At Stanford, he specialized in urban diffusion modeling and experimentation, remote sensing of atmospheric effects on laser propagation, and observations of the structure of the marine aerosol layer.

Dr. Johnson's professional experience includes service as a research meteorologist with NOAA, a weather forecaster with the U.S. Air Force, and an electrical engineer with the Sandia Corporation. His M.S. and Ph.D. in meteorology were earned at the University of Wisconsin in 1952 and 1965. He received his B.S. in electrical engineering from Texas A and M University in 1957.

## **New Data Links Earth's Wobble As Cause of Earthquakes**

Citing data from NOAA's National Earthquake Information Center, Charles A. Whitten, National Ocean Survey Chief Geodesist, announced further evidence linking the earth's "wobble" with earthquakes. Mr. Whitten pointed out that the wobble is reaching a peak this year in its seven-year cycle and the earth can therefore be expected to witness more major earthquakes this year than any year since 1964. That was the last peak year, when an earthquake devastated Alaska. NEIC seismologist Carl Von Hake explained that the amount of energy released by earthquakes this year from January 1 - July 14 already exceeds that released in any one year since 1964. Mr. Von Hake has been keeping tabs on earthquakes each year since 1954.

The earth wobbles slightly as it spins in space. As it does so, the north-south polar axis on which it rotates shifts. This shift has been measured daily by world astronomers since 1900. The daily shift of the pole reaches its maximum every seven years. Three massive earthquakes have already occurred this year. Two earthquakes of a magnitude of 8.1 on the Richter scale--one in New Guinea in January; another in the Solomon Islands in July. A 7.8 shock in Chile also occurred in July. Mr. Von Hake noted that two 8.1 magnitude shocks--what seismologists term "great" earthquakes--have not occurred within a single year since two 8.2 quakes rumbled through the northwest Pacific in the fall of 1963. These tremors occurred as the wobble was building up to its peak in 1964 and were followed on March 27 by the Alaskan shock.

Earlier this year, Mr. Whitten prepared a graph portraying the correlation between the total energy released by earthquakes and the daily movement of the pole during the past 70 years. He said then that it showed what he considered to be a definite correlation between earthquakes and polar motion at various periods when the polar shift reached its peak. He pointed out that major earthquakes in 1950, 1957, and 1964 coincided with years of maximum polar motion. Mr. Whitten expressed the view then that if there is a correlation between the polar shift and earthquakes, there should be an increase in major earthquakes this year. The geodesist added that he was not suggesting that the earth's wobble was the sole cause of earthquakes.

## **\$100,300 Sea Grant Awarded To the University of Maine**

NOAA has awarded a \$100,300 Sea Grant to the University of Maine to support studies by the university to determine how best to "culture" deep sea scallops and the European oyster in Maine's coastal waters. Other studies will include an assessment of the Cancer crab fishery of Maine and an exploration of possible ways to increase the demand for blue mussel. Dr. David Dean will be the principal investigator.

University scientists, noting that over-exploitation of deep sea scallops in the past few years has forced the supply down and prices up, believe that this species would be an excellent one on which to concentrate efforts to restore a balanced fishery under the Sea Grant Program. Specifically, the university will attempt to develop culture techniques for a hatchery-type operation and subsequent restocking of scallop beds with seed. They will also study ways to improve the efficiency of the scallop dredge which is currently estimated to be only one percent efficient in catching scallops. They will seek an economic use and market for scallop viscera, such as a possible protein supplement to animal cereals.

In their assessment of the Cancer crab industry of Maine, the scientists will evaluate present crab picking machines and modify or improve them for the Cancer crab. The university's objectives in its study of the blue mussel fishery will be to determine the mussel's economic potential and, if it appears to be valuable, culture the species in a manner similar to that being considered for the European oyster.

## **Bowlers Wanted for NOAA League**

The NOAA Mixed Ten Pin Bowling League will resume its recreational activities beginning Tuesday, Sept. 7 at 6 p.m., at the Silver Spring Bowl, 8618 Cameron Street, Silver Spring, Md. Both men and women regulars and substitutes are needed. All NOAA employees in the Washington, D.C., area are invited to participate. There will be a meeting of all bowlers in the 4th floor Conference Room, Gramax Bldg., Silver Spring, Md., at 2 p.m. on August 20 to confirm starting date, fix fees, and consider other business. Further information can be obtained from Peggy Owens (IDS Code 14-68616) or Dick Hagemeyer (IDS Code 179-2334).

## Third NOAA Administrative Intern Class Gets Underway



Shown with Robert Carnahan, Deputy Assistant Administrator for Administration (left), are Anna Collier, Frank Edwards, Rebecca Thompson, Allen Dobbins, Marie Murphy, Ray Whitney, and Gerald Starrett.

A third group of NOAA Administrative Interns have begun their year's training bringing the total to 23 trainees in the program. The new group includes seven Interns, four of whom have completed work for the bachelor's degree: Allen Dobbins, B.S., Virginia Union University, Richmond, Virginia; Marie Murphy, B.A., Hampton Institute, Hampton, Virginia; Frank Edwards, B.S., and Rebecca Thompson, B.S., Shaw University, Raleigh, North Carolina. Out of the 13 NOAA field office employees who applied for the Intern program, two were selected as part of the third group: Gerald Starrett, NWS, Anchorage, Alaska, and Ray Whitney, EDS, NCC, Asheville, North Carolina. The seventh member of the Group III is Anna Collier from the NOAA Finance Division. The Interns have completed their initial Orientation to NOAA, including a tour of Washington facilities.

The Administrative Intern program will be changing its name to Administrative Trainee program and the entrance level

will be widened to include GS-4 through GS-9 to be consistent with the DOC program which was instituted earlier this year. Under the Commerce program there are presently 45 Administrative Trainees, with NOAA having the largest complement. A new brochure describing the Administrative Trainee program is being readied for distribution shortly and will also be publicized in NOAA Week. Those NOAA employees who applied through December 31, 1970, but were not selected will be considered once more for the next group which is scheduled to start in October 1971. Also, NOAA employees who applied informally for the program from January 1 - July 30, 1971, will be interviewed during the early part of August since it is anticipated a large number will apply later. It is anticipated that there will be up to 24-30 persons entering the Administrative Trainee program each year, both from within NOAA and from external recruitment, to meet the administrative requirements of NOAA.

## Rear Admiral Nygren To Head NOAA Fleet Allocation Council

An eight-man group has been appointed to advise the Administrator on the allocation of NOAA ships. Known as the NOAA Fleet Allocation Council, the group will submit recommendations regarding the allocation of ship time for the support of NOAA's programs and the centralized management of the 46-ship fleet. The Council is headed by Rear Adm. Harley D. Nygren, Director, NOAA Corps, and consists also of Rear Adm. Don A. Jones, Director, National Ocean Survey; Philip M. Roedel, Director, National Marine Fisheries Service; Dr. Wilmot N. Hess, Director, Environmental Research Laboratories; Donald F. Moore, Assistant Administrator for Policy and Plans; Dr. Richard E. Hallgren, Acting Associate Administrator for Science and Technology; Robert B. Abel, Director, Office of Sea Grant; and Rear Adm. Allen L. Powell, Associate Director, Office of Fleet Operations, who will serve as the group's Executive Secretary.

## National Weather Service Exhibit Displayed At Horticultural Science Meeting in Kansas

The National Weather Service had an educational display at the Annual Meeting of the American Society for Horticultural Science at Manhattan, Kansas, August 1-4. This display illustrated operational and climatological weather services for agriculture provided by the National Weather Service. Merle Brown, State Climatologist for Kansas and Ceel Van Den Brink, Advisory Agricultural Meteorologist for Michigan were the principal leaders of the project with support from Central Region headquarters. Mr. Van Den Brink is a member of the American Society for Horticulture Science and serves on the Committee for Meteorology and Climatology.

## Headquarters ERL Liaison Office Moves

ERL's Liaison Office at NOAA headquarters, headed by R. N. Culnan, was liquidated on August 4. Mr. Culnan will be located in ERL's Office of Programs at Boulder. The Office of NOAA's Deputy Executive Officer plans to continue operation of the Telecopier terminal which was maintained by the ERL Liaison Office for rapid written communication with ERL offices.

## Weather Radar Observatory At Hondo, Tex., Dedicated



(left photo) Hondo, Texas Radar Observatory. (right photo) Wallace D. Henderson, Administrative Aide to Congressman Abraham Kazen (left), and Hondo Mayor George L. Brucks cut ribbon to Observatory.

The new station radar facility which the National Weather Service has constructed at Hondo, Tex., was formally dedicated July 15.

The new station fills a large gap in the weather radar coverage of Southwest Texas. With ability to "see" in excess of 200 miles, it will be able to detect thunderstorm areas and other major weather disturbances as they move eastward from the Big Bend country and northward out of Coahuila State, Mexico.

The radar picture will be transmitted directly to the Weather Service's Forecast Center at San Antonio and its reports will be available to other Weather stations throughout the State.

Supervisor of the new 7-man observatory is Mr. William R. Hare.

Architect-engineering work for the observatory was done by National Weather Service Engineering staff at Fort Worth.

## Straiton To Chair OAS Working Group

Mr. John Straiton, Communications Chief for the NWS, has been selected by the Department of State to chair the Meteorological Telecommunications Working Group at the forthcoming Caracas meeting of the Organization of American States.

## Rhode Island State Tax Deductions Resumed

The withholding of state tax for Rhode Island has been reinstated. The first deductions were made from employee checks dated August 4, 1971.

## NODC Conducts Training Session For International Officials



The first group of international marine scientists and administrators representing the countries of Ecuador, Korea, Chile, India, and Peru arrived at EDS' National Oceanographic Data Center on July 19 for a two-month training period. This training is part of the program funded by the State Department's Agency for International Development to increase the capability of developing countries to effectively use information about oceanic resources near their coasts and ocean conditions affecting their coastal activities. Two other groups will arrive in October 1971 and June 1972. The trainees are expected to manage or assist in the development of data centers in their countries. Participants shown (left to right) are: Gaston Alvial, Assistant Director, Chilean National Oceanographic Data Center; Victor Liendo, Chief, Oceanography, Instituto del Mar, Peru; Rene Cuzon du Rest of NODC, in charge of program; Robert V. Ochinerro, Acting Director of NODC; Mr. D. Panakala Rao, Senior Scientific Assistant, National Institute of Oceanography Data Center, India; Dr. Jose Santoro de Icaza, Head, Department of Oceanography and Experimental Fisheries, Institute of Fisheries, Ecuador; Mr. Hai-Kwan Lee, Secretary, Korean Oceanographic Commission, Korea.

## First Storm Evacuation Maps Distributed

The first storm evacuation map, prepared for the National Weather Service by the National Ocean Survey, has been distributed to the Eastern and Southern Regions, National Hurricane Center, Office of Civil Defense, and the Red Cross for comment. The Slidell, La., map is the first of five maps showing evacuation routes and critical elevations from Slidell to Mobile, Ala.

## NMFS Announces Winners Of Billfish Tagging Contest



J. L. Squire, Jr., NMFS Coastal Marine Fisheries Laboratory Director (left), presents first place award to Jesus Araiza Ruiz.

NMFS representatives recently presented awards to winners in the First Annual Billfish Tagging Contest. Sponsored by the Thomas and Margaret Gardiner Foundation of Oakland, Calif., the contest was initiated last year to promote the Co-operative Marine Game Fish Tagging Program, and to encourage charter boat captains fishing in southern Baja, California waters to tag and release marlin and sailfish they do not wish to bring ashore. Plaques and cash prizes were presented to boat captains who released the most tagged billfish during the period Nov. 1, 1970 to May 31, 1971. Conservation awards were also awarded to the resort hotels whose captains received first prize for tagging the most fish.

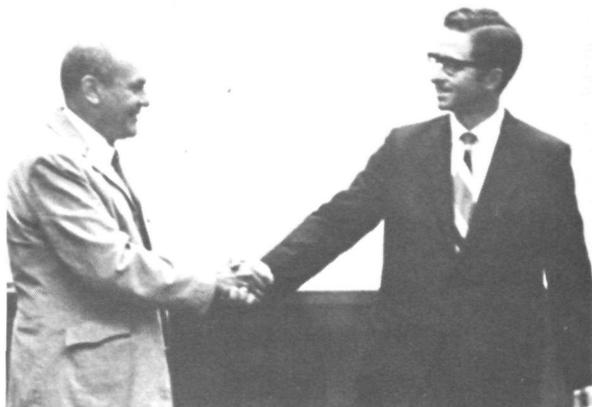
Jesus Araiza Ruiz, who tagged and released 45 marlin and sailfish, was named the overall winner for Baja, Calif., and received first prize for the eastern area from James L. Squire, Jr., Director of the NMFS Coastal Marine Fisheries Laboratory at Tiburon, Calif. Mr. Squire was assisted by Ray Connon, author and sportsman. In the southern area, first prize went to Pablo Cesena Aripez. Presentations were made by Horace Witherspoon, NMFS Advisory Committee member and Vice President of the International Game Fish Association, and Frank Mather III of the Woods Hole (Mass.) Oceanographic Institution.

## NOAA Employees Honored for Length-of-Service

The following employees have received awards for length-of-service:

### NWS Southern Region - Feb. - August

40 years - Wilmer L. Thompson, SRH; Aubrey L. Haynie, San Angelo, Tex.; and Walter P. Roquemore, SRH. 35 years - Lionel Broussard, Port Arthur, Tex.; Donald A. Compton, New Orleans, La.; William J. Ashcraft, Midland, Tex.; and Donald T. Rowland, Memphis, Tenn. 30 years - William McGehee and David H. Shideler, Miami; Orlando Perez, San Juan, P.R.; Wilson P. Ogden, Shreveport, La.; Gerald M. Dyal, Tallahassee, Fla.; John F. Hubenak, Fort Worth; Vernon F. Coose, Houston; John H. Lentz, Jackson, Miss.; James G. Georg, Lakeland, Fla.; Glenn Stallard, Memphis, Tenn.; Harold J. Smith, Nashville, Tenn.; Howard H. Walrath, Meridian, Miss.; Milton L. Williams, Tampa, Fla.; Chester H. Bowers, SRH; Roy J. Holub, SRH; Frances D. Humphreys, Miami; David S. Hill, SRH; Leonard Kahn, Miami; Gardner A. McGahen, Midland, Tex.; Eugene F. Thompson, Oklahoma City, Okla.; Charles M. Frounfelkner, Abilene, Tex.; Jeter A. Prueett, Fort Worth; Alfred Eisgrou, Huntsville, Ala.; Robert O. Reinhold, Little Rock, Ark.; Harold L. Frost, Lubbock, Tex.; Robe B. Carson, Miami; Edmund A. DiLoreto, San Antonio, Tex.; Clem D. Richardson, Waco, Tex.; Harold S. McCrabb, SRH; James F. Hallman, Bristol, Tenn.; Millard E. McKinnie, Houston, Tex.; Perry M. Landgren, Knoxville, Tenn.; James N. Cannon, Lake Charles, La.; Harry E. Yates, Lakeland, Fla.; Henry F. Silsby, Miami; Albert J. Rohlfs, New Orleans, La.; Claude W. Allen, Pensacola, Fla.; Clarence W. Nolte, Wichita Falls, Tex.; Ray R. Casada, Chattanooga, Tenn.; Cornelius J. O'Brien, Jackson, Miss.; Leonard A. Waas, Jackson, Miss.; and Walter B. Davis, San Juan, P.R. 25 years - Wilbur F. Mincey, Lakeland, Fla.; John K. Rhyne, Picayune, Miss.; Cecil M. Palmer, SRH; George E. Bradley, Mobile, Ala.; James A. Harman, Fort Worth; Kenneth O. Poteat, Miami; Robert T. Thornton, SRH; Oscar J. Meece, Bristol, Tenn.; Harry M. Hoose and Isaiah Zamarripa, San Juan, P.R.; Gerald P. O'Donnell, Savannah, Ga.; Carl V. Tyozandlak, Tampa, Fla.; Michael S. Hvizdak, El Paso, Tex.; William T. Keating, Jackson, Miss.; Jack B. Lyman, Jack-



Perry R. Davis (left), Operations Manager at the Marine Minerals Technology Center, was recently awarded a 35-year length-of-service award in a presentation at the Tiburon, Calif., installation. John W. Paden, Director of the ERL facility, made the presentation during an MMTC staff meeting.

sonville, Fla.; Billy P. Stephens, Memphis, Tenn.; Robert P. Livesay, San Antonio, Tex.; Doyle S. Casey, Waco, Tex.; Carl M. Adamson, Montgomery, Ala. 20 years - Roy R. Rudder, Jr., Miami; Charles E. Mays, Montgomery, Ala.; Carlos E. Noboa, San Juan, P.R.; Harris L. Karns, III, Atlanta, Ga.; Thomas W. Fuller, Fort Worth; Charles L. Anderson, Lake Charles, La.; Angel G. Vazquez, San Juan, P.R.; Roy S. Frost, Fort Worth; Eugene D. Eller, Apalachicola, Fla.; Thomas F. Jackson, Brownsville, Tex.; Walter A. Schulz, Jr., Jackson, Miss.; Patrick J. Morrissey, Miami; Gilbert F. Pitts, Oklahoma City, Okla.; Jerome H. Codington, Midland, Tex.; Raymond N. Burgess, Nashville, Tenn.; Paul E. Curtis, San Antonio, Tex.; Billy V. Hartsfield, Fort Worth; Robert E. Whitehead, Apalachicola, Fla.; James E. Smith, Athens, Ga.; Donald D. Kastner, Bristol, Tenn.; George C. Joyner, III, San Juan, P.R.; Carl R. Bohanan, Fort Worth; Freddie L. Davis, Augusta, Ga.; Donald H. Oldmixon, Brownsville, Tex.; and Douglas R. Grantham, Boothville, La.

# **National Oceanic and Atmospheric Administration**

## **ERRATA NOTICE**

One or more conditions of the original document may affect the quality of the image, such as:

Discolored pages

Faded or light ink

Binding intrudes into the text

This has been a co-operative project between the NOAA Central Library and the Climate Database Modernization Program, National Climate Data Center (NCDC). To view the original document, please contact the NOAA Central Library in Silver Spring, MD at (301) 713-2607 x124 or [Library.Reference@noaa.gov](mailto:Library.Reference@noaa.gov)

HOV Services  
Imaging Contractor  
12200 Kiln Court  
Beltsville, MD 20704-1387  
July 23, 2010