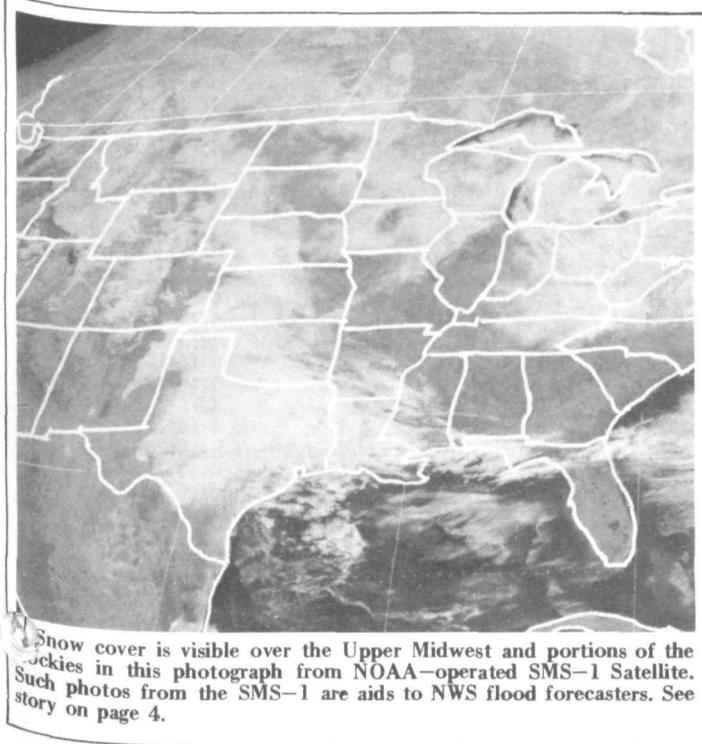


noaa week

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Snow cover is visible over the Upper Midwest and portions of the Rockies in this photograph from NOAA-operated SMS-1 Satellite. Such photos from the SMS-1 are aids to NWS flood forecasters. See story on page 4.

Recreational Fishing Survey To Be Conducted in Southeast

Under contract to the National Marine Fisheries Service, Chilton Research Services will conduct a survey to determine the number of saltwater recreational fishermen in North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, and Texas.

The survey also will provide an estimate of the number and pounds of fish and shellfish caught in each State, the use made of that fish and shellfish, the number of days spent fishing, and expenditures by saltwater recreational fishermen.

Information gained will be used in cooperative State/Federal efforts to develop fishery management programs.

Three techniques will be utilized in the survey:

- a telephone screening to establish a sample of saltwater recreational fishermen;

- a questionnaire sent to a sample of those fishermen asking detailed questions on numbers and pounds of fish caught by species, amount of time spent fishing, and other information;

and —a telephone followup to individuals who do not return the questionnaire asking the same questions that are asked on the mail questionnaire.

Results of the telephone screening part of the survey are expected to be published this fall and the final results of the complete survey in the spring of 1976.

Details of the survey can be obtained by contacting Statistics and Market News Division, National Marine Fisheries Service, NOAA, Washington, D.C. 20235.

New Temporary Markers Installed on Mason-Dixon Line

Something new has been added to the historic Mason-Dixon Line, the symbolical dividing line between the North and South, where it marks the boundary between Maryland and Delaware.

Interspersed between the original 500-pound limestone markers placed on the line by

Program Established For Handicapped Vets

Coastal Zone Grant Awarded To Guam

NOAA has announced the award of a grant totaling \$143,000 to help Guam develop a program for managing its coastal zone. Under terms of the Coastal Zone Management Act of 1972, Guam will provide an additional \$71,500 in matching funds.

Guam will use the grant to develop a coastal management program to balance competing uses of the shore by developers, fishermen, conservationists, the recreation industry, and the general public.

Governor Ricardo J. Bordallo has designated the Guam Bureau of Planning to administer the grant, according to a proposal submitted to the Office of Coastal Zone Management. The Bureau of Planning will allocate a portion of the grant to other government agencies for assistance in carrying out the first-year work program. Guam will take about three years to develop its coastal management plan.

Robert W. Knecht, Assistant Administrator for Coastal Zone Management, said that during the first year Guam will begin to determine its coastal boundary, geographic areas of particular concern, permissible land and water uses which impact on coastal waters, and means of exerting governmental control over land and water uses; to designate priority uses within the coastal zone; and to structure an organization to implement the development plan.

NOAA has launched a program to train handicapped veterans in data processing.

Using NOAA funds and with the cooperation of the Veterans Administration and IBM, a six-month pilot program has been started at the VA Hospital in Hampton, Va. If the VA pilot program works, it could be extended throughout the VA system with its thousands of handicapped veterans. The pilot program will cost about \$10,000.

Capt. Leonard S. Baker, Director of the National Geodetic Survey, which is financing the program, explained that the NGS is interested because it has 25 million pieces of data which must be processed into a central data bank.

The NGS is constantly gathering data from its geodetic operations, which involve maintenance of the nation's distance and elevation networks, and is now conducting a program to update the distance (horizontal) network in which practically all nations in North America are participating.

Processing the data is expected to take five years and cost two million dollars. Capt. Baker said that if handicapped veterans can be trained to perform data entry work, it will boost the program and at the same time provide therapy or rehabilitative training for veterans.

IBM has installed data entry equipment at a special rehabilitation center at the Hampton VA facility and is training volunteers from among the center's ambulatory patients. The pilot program will determine whether they can operate the equipment with sufficient volume and accuracy to be acceptable to the NGS.

Charles Mason and Jeremiah Dixon when they surveyed the boundary in 1768 are 19 two-foot-long, three-quarter inch iron rods. The temporary markers were placed there by a party of Federal and state surveyors because this section of the Mason-Dixon Line is getting a face-lifting. Permanent markers will

be used later.

The markers denote the most accurate alignment of the boundary that could be determined with the use of modern electronic measuring devices. The measurements were made by the National Geodetic Survey. Lengthy negotiations between

(Continued on page 3)

personnel perspective

Current Vacancies in NOAA

To insure that NOAA employees are aware of job possibilities throughout the agency, a list of current NOAA-wide vacancies is published below. Employees interested in any of the listed vacancies

should contact their servicing personnel office for information of where to apply.

Announcement No.	Position Title	Grade	MLC	Location	Issue Date	Closing Date
552-75	Supv. Meteorologist	GS-12	NWS	Cincinnati, Ohio	4/11/75	4/22/75
553-75	Meteorological Tech.	GS-10	NWS	Madison, Wis.	4/11/75	4/22/75
554-75	Supv. Meteorologist	GS-13	ERL	Las Vegas, Nev.	4/11/75	4/22/75
555-75	Supv. Meteorologist	GS-13	ERL	Boulder, Colo.	4/11/75	4/22/75
556-75	Electronics Tech.	GS-7	ERL	Seattle, Wash.	4/11/75	4/22/75
557-75	Meteorologist	GS-12	ERL	Coral Gables, Fla.	4/11/75	4/22/75
521-75	Physical Scientist	GS-12	ERL	Oak Ridge, Tenn.	4/10/75	4/24/75
546-75	Meteorologist	GS-13	NWS	Suitland, Md.	4/10/75	4/24/75
548-75	Supv. Meteorologist	GS-11	NWS	Longview, Texas	4/10/75	4/24/75
549-75	Fishery Biologist	GS-11	NMFS	Beaufort, N.C.	4/10/75	4/24/75
550-75	Ops. Research Analyst	GS-11	NMFS	Woods Hole, Mass.	4/10/75	4/24/75
551-75	Meteorological Tech.	GS-10	NWS	Columbia, Mo.	4/10/75	4/24/75
559-75	Physical Science Tech.	GS-5/7	ERL	Seattle, Wash.	4/11/75	4/25/75
560-75	Electronics Tech.	GS-11	NWS	Miami, Fla.	4/11/75	4/25/75
561-75	Computer Systems Analyst	GS-13	NESS	Suitland, Md.	4/11/75	4/25/75
562-75	Meteorologist	GS-14	NWS	Honolulu, Hawaii	4/11/75	4/25/75
447-75	Statistician (Biology)	GS-12/13	NMFS	Washington, D.C.	4/16/75	4/30/75
566-75	Computer Specialist	GS-13	NWS	Suitland, Md.	4/16/75	4/30/75
567-75	Meteorologist	GS-12	NWS	Topeka, Kans.	4/16/75	4/30/75
568-75	Marine Enforcement Agent	GS-5/12	NMFS	Washington, D.C.	4/16/75	4/30/75
547-75	General Engineer	GS-9/11	NWS	Garden City, N.Y.	4/10/75	5/1/75
558-75	Physical Scientist	GS-9/11	ERL	Ann Arbor, Mich.	4/11/75	5/3/75
569-75	Fishery Biologist	GS-12/13	NMFS	Washington, D.C.	4/16/75	5/7/75
581-75	Oceanographer	GS-9	ERL	Seattle, Wash.	4-18-75	5-2-75
582-75	Oceanographer	GS-9	ERL	Seattle, Wash.	4-18-75	5-2-75
583-75	Supv. Meteorologist	GS-15	ERL	Boulder, Colo.	4-18-75	5-2-75
584-75	Oceanographer	GS-7	ERL	Seattle, Wash.	4-18-75	5-2-75
587-75	Supv. Computer Systems Analyst	GS-14	NWS	Silver Spring, Md.	4-21-75	5-5-75
589-75	Biogeochemist	GS-12	ERL	Boulder, Colo.	4-21-75	5-5-75
590-75	Electronics Tech.	GS-9	ERL	Seattle, Wash.	4-21-75	5-5-75
578-75	Meteorologist	GS-11	ERL	Coral Gables, Fla.	4-18-75	5-6-75
596-75	Meteorologist	GS-12	NWS	Bismarck, N.D.	4-23-75	5-7-75

New Management Development Program Seeks Out Potential Managers

In January, 1974, the Civil Service Commission (CSC) issued to all Federal agencies new directions for Executive and Management Development, emphasizing the continuing need throughout the Federal government to find qualified candidates with good managerial experience to fill key positions. Recognizing that this need could not be met simply by training and developing current managers, the CSC directives imposed a requirement on all agencies to develop systematic programs for identifying and developing individuals early in their careers who demonstrate high potential for managerial assignments.

The NOAA Executive and Management Development Program has been given priority and the full support of NOAA's top administrators. As a result, resources have gone into developing viable and practicable programs designed to ensure an abundant source of broadly qualified candidates for key managerial positions in the Major Line Components as well as NOAA Headquarters.

Because no one program could meet the diverse needs of NOAA's many scientific areas, separate Management Development Programs are being developed for each MLC. These will identify target positions and employees who possess the abilities and desire to pursue careers as scientific managers.

In January, 1975, the first of these programs, the "National Weather Service Management Development Program," was launched and seemed to be well-received. The final selections should be announced in May, and the individuals chosen will begin a year-long development program during the summer.

In April, the National Marine Fisheries Service Program will be implemented, to be followed over the next several months by programs for NOS, EDS, NESS, ERL, the NOAA Corps, and NOAA Headquarters. In addition, a broader, NOAA-Wide "Administrative Management Development Program" will be forthcoming in the fall for individuals in the administrative areas, such as budget, personnel, procurement, finance, etc., who wish to pursue general administrative management careers. In all cases, selection for the programs will be competitive, and all eligible employees will be encouraged to apply.

President Signs New E.O. on Labor Management Relations

The President has signed a new Executive Order (E.O.) on Labor Management Relations in the Federal Government. He stated, when signing E.O. 11838, that good labor relations would continue to have high priority in his administration.

The principal changes in the Federal Labor Relations Program under E.O. 11838 include:

1. The establishment of new procedures to facilitate the consolidation of smaller bargaining units into fewer, larger ones. The result will be broader representation through regional and/or national coverage embracing more comprehensive negotiation agreements.
2. Broadening the scope of bargaining by limiting the authority of agencies to issue regulations restricting negotiations on conditions of employment.
3. Permitting bargaining on the scope of grievance and arbitration procedures—a change which could bring arbitrators into Federal personnel management operations.
4. Requiring agency heads to approve or disapprove collective bargaining agreements within 45 days of completion by the parties.

The labor relations program has come of age in the Federal Government. Recent revisions of the executive orders governing the program are indicative of this stage in its evolution. There have been a number of bills introduced in the Congress which would establish the Federal Government's Labor Relations Program under law similar to how labor relations operates in the private sector. There is a general feeling that the Congress may pass legislation in this area in the next two or three years.

NOAA is concerned with the development of all individuals and although present Management Development Programs will be open only to individuals GS-12 through GS-15, future programs - already on the drawing board - will address other needs and will be integrated with our ongoing Upward Mobility and other training programs to provide optimum means of obtaining managerial strengths throughout NOAA.

New Earthquake Intensity Data File Compiled

Seismologists at the Environmental Data Service's National Geophysical and Solar-Terrestrial Data Center in Boulder, Colo., have compiled a new earthquake intensity data file containing computerized descriptions of U.S. earthquakes in several formats. The file is used to answer data requests from structural engineers, who need to know the effects of past earthquakes to determine design requirements for new earthquake-resistant structures; seismologists, who analyze local or regional earthquakes to determine earthquake risks; and private citizens, who are concerned about living in earthquake-prone areas.

The file contains data on about 1,500 U.S. earthquakes that have occurred since 1928. It includes more than 80,000 intensity observations, usually one per community, that describe these tremors. In a matter of seconds, NGSDC can retrieve the following information about each earthquake: Date and time of occurrence, geographic location, magnitude, maximum intensity, depth of focus, cities (and coordinates) at which the earthquake was observed, intensity at each city, and distances of each city from the earthquake center. NGSDC can provide a printout from the intensity file for \$20 per location or area.

Temporary Iron Rods Mark Mason-Dixon Line

(Continued from page 1)
 the states of Delaware and Maryland have culminated in a decision to rebuild the 82-mile section of the Mason-Dixon Line which divides the two states.
 Ralph G. Poust of the NGS, Rudolph Jass of the Delaware Boundary Commission and James Vios of the Maryland Department of Transportation, traversed the line and on the basis of precise geodetic computations determined where the new markers should go to replace those which have disappeared

A NOAA UNIT CITATION has been presented to the staff of the National Weather Service Office in Chattanooga, Tenn., for its effective warnings on April 3, 1974, when Cleveland, Tenn., was struck by two tornadoes within two hours. Staff members are (seated, left) Hugh E. Pritchard, Jr., Acting Official in Charge; (standing) Sam A. De Lay; Ray R. Casada, former OIC, now retired; M. Harold Smith; Bobby W. Goodwin; and (not in photo) Jack A. Phillips. Seated on the right is Glenn Stallard, Meteorologist in Charge of the Weather Service Forecast Office in Memphis, Tenn., who made the presentation.



"Missing Link" May Improve Chances Of Locating New Oil Fields

A team of geologists exploring the deep coral reefs off Belize (British Honduras) in Central America has discovered a "missing link" in the ancestry of a group of rock-building marine plants.

In their research, supported by the National Science Foundation's geology program and NOAA's Manned Undersea Science and Technology Program, Robert N. Ginsburg, professor of marine geology and geophysics at the University of Miami's Rosenstiel School of Marine and Atmospheric Science, and Noel P. James, formerly of the University of Miami and currently associate professor of

geology at Memorial University, Newfoundland, used a research submersible (minisub) to collect specimens from the precipitous ocean-facing reef wall to depths of 800 feet.

The modern marine plants or algae, calcareous crusts that look like giant potato chips, are remarkably like fossil forms found in limestone 200-300 million years old in Western Texas, Kansas, New Mexico and in North Africa and the Soviet Union.

The fossil algae are major components of the limestones, and previously were thought to be extinct. Buried in lime sand and mud that hardened by sea water into marble-like limestone, the fossils form porous rock reservoirs that are frequently oil-bearing.

Dr. John L. Wray, research associate in Marathon Oil Company's Denver Research Center and adjunct professor of geology at the Colorado School of Mines, a leading authority on fossil algae who established the similarity in form and internal structure between the living and fossil algae, feels the find "opens new ideas of the ancestry of these important rock-building plants, and gives us precise information on their environments."

Mr. James views the results as "giving us a new tool for understanding the transformation of limy deposits into rocks," and Mr. Ginsburg suggests that "it is likely that this new link between present and past will improve geologists' chances of finding new oil fields."

U.S.-U.S.S.R. Fish Talks Terminated

Following three weeks of discussion in Washington, D.C., the United States and the Soviet Union recently reached agreement on Middle Atlantic fisheries issues but failed to agree on Pacific coast fisheries issues.

The Atlantic agreement extends previous arrangements but calls for stricter enforcement of U.S. regulations regarding U.S. Continental Shelf fishery resources and strengthens measures to lessen gear conflicts between U.S. and Soviet fishermen. Former Pacific coast agreements relating to crab fishing in the eastern Bering Sea, arrangements to prevent gear conflicts near Kodiak Island, and the fisheries of the northeastern Pacific extending from Alaska to California were extended to July 1, 1975.

Robert W. Schoning, Director of the National Marine Fisheries Service and a member of the U.S. Delegation, expressed serious concern about the level of Soviet fishing off the Pacific coast and lack of agreement at this time. He noted that it was the view of the U.S. Delegation that Soviet fishing in the North Pacific should be reduced to conserve important stocks of interest to U.S. fishermen in the area.

A NOAA Unit Citation recently was presented to the staff of the National Ocean Survey's Chart Sales and Geodetic Data Office in Anchorage, Alaska, for performance of work above and beyond the call of duty. Lt. Burl Wescott, Letha Gillespie, and Helen Pappas materially support NOAA vessel operations in Alaska, in addition to their chart and data duties. Numerous letters from Alaskan operating units have recommended that they be recognized for their extra effort and assistance to field units.



(From left) Ms. Gillespie; Lt. Wescott; Joseph F. Dracup, Chief of the Horizontal Network Branch in the National Geodetic Survey's Control Network Division, who presented the award; and Ms. Pappas.

noaa week

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Catherine S. Cawley, Editor
 Anna V. Felter, Art Director

next week's best fish buys

According to the NMFS National Fishery Education Center in Chicago, the best fish buys for the next week or so are likely to be fresh squid and striped bass along the Northeast Seaboard; sea bass and shad in the Middle Atlantic States, including the D.C. area; speckled trout and fresh whiting in the Southeast and along the Gulf Coast; fresh pan-dressed smelt and ocean perch fillets in the Midwest; salmon steaks and fresh clams in the Northwest; and fillets of turbot and butterfish in the Southwest.

Spaceage Technology Helps NWS Predict Spring Floods

Spring temperatures bring snowmelt flooding to the Upper Midwest and Great Plains with such regularity that National Weather Service forecasters can predict that the onset of high waters will be within a few weeks of mid-April each year.

"The trick is forecasting not when the floods will begin, but their severity," says Dr. Robert A. Clark, NWS Associate Director for Hydrology.

Observations of the areal extent, amount, and character of snow on the ground are vital to flood forecasters. Down through the years, the NWS has built up a network of thousands of "co-operative observers"—public spirited volunteers who provide reports of snow and water conditions each week (more often during the spring warming period). In the past, some forecasters have flown over data-sparse areas in small aircraft to make first-hand observations of the amount and condition of the snow cover.

"This year our men in the field have had some remarkable new technology to help them," Dr. Clark stated.

One of a number of NOAA-operated weather and environmental satellites, SMS-1 (Synchronous Meteorological Satellite), from its vantage point 22,300 miles above the equator, provides pictures of clouds and snowcover across the U.S. every

30 minutes from visible (daytime) and infrared (nighttime) observations of the Western Hemisphere and Atlantic Ocean areas.

Data Loggers at weather stations in St. Louis and Minneapolis, tied into satellite receiving equipment at a National Environmental Satellite Service facility in Kansas City by "dedicated" telephone lines, produce high resolution satellite pictures of the U.S. every half hour. Dark land masses, the Great Lakes, cloud cover, and—most important to flood forecasters—the boundary between clear and snow-covered land, are clearly visible on these pictures, which, along with observed and forecast temperatures, are important to the NWS flood forecast and warning mission.

A recently developed aid to flood forecasters is a new type of aerial survey from which the amount of water present in the snow cover over the Souris River basin on the North Dakota-Canada border is measured. Before there is snow on the ground, a small plane equipped with gamma ray spectrometers is flown at 500 feet over the terrain to measure the natural radiation from the earth. After the snow has fallen, the same track is flown, the decrease of radiation is measured, and the water equivalent is computed.

University of Hawaii Receives Hurricane Research Grant From ERL

A \$24,900 grant for research on west Pacific hurricanes or typhoons has been awarded to the University of Hawaii by the Environmental Research Laboratories. The grant will support NOAA's Project Stormfury, which is investigating the possibilities of beneficially modifying hurricanes.

The grant recipients are Drs. C.S. Ramage, Chairman of the Department of Meteorology, and James C. Sadler, an associate professor in the department.

"Most important in any evaluation of hurricane modification is knowledge of the intensity changes which would have occurred in the absence of a modification attempt," said Dr. Ramage. "Current typhoon studies at the University of Hawaii are improving our qualitative understanding of the causes of typhoon intensity changes.

"This research will accelerate our efforts in preparation for the proposed Project Stormfury experiments in the 1976 typhoon season. By then we hope to accurately forecast at least the sign of any 24-hour typhoon intensi-

ty changes and provide an essential framework for judging the true effects of modification attempts."

According to their previous research, the absolute value of sea surface temperature is unimportant in determining typhoon intensity changes within the typhoon region. What is important is the facility with which mass and heat can be channeled away from upper levels of typhoon circulations. Local jet streams, monsoon circulation velocity changes, and typhoon interactions play a much more significant role than sea surface temperature fluctuations.

Based on these findings, the two meteorologists plan to analyze a number of case studies of typhoons from 1970 and 1972 which occurred in the Project Stormfury area. By mid-1975 they hope to formulate certain qualitative hypotheses about typhoon intensity changes and try the theories out in a simulated Stormfury support operation over Guam next summer.



MANNING THE NOAA BOOTH AT THE RECENT CHICAGO BOAT SHOW when this photo was taken were (from left) Paul Swope, Caryl Ostrander, and Ray Waldman of the National Weather Service Forecast Office in Chicago; and Arthur Christenson of the National Ocean Survey's Lake Survey Center in Detroit, Mich. Others who manned the booth and discussed NOAA products and services with some of the 400,000 who attended the show were Bob Finley, Director of the National Marine Fisheries Service National Fishery Education Center in Chicago; and, from WSFO Chicago, George Polensky, Bob Somrek, Roy Osugi, James Vermoch, Arthur Strong, Donald Wernly, Eugene Harris, LaVerne Wermich, William Briggs, Dan Mallas, and Charles Stwertnik, who was local chairman of the project.

Chemical Laboratory Now in Ann Arbor

The Lake Survey Center's former chemical laboratory recently moved from Detroit, Mich., to the Great Lakes Environmental Research Laboratory in Ann Arbor, Mich. Since the Ann Arbor site lacked adequate facilities for complicated chemical analyses, the chemical laboratory had remained in Detroit when the major portion of the Detroit-stationed GLERL research personnel and equipment moved last fall.

This laboratory is one of two GLERL uses regularly for its water analyses. Typical site and time-critical measurements are performed in the LSC Research Vessel SHENEHON's floating laboratory. Then the samples are rushed to the main laboratory where additional tests are run, such as those employing the spectrophotometer to analyze the water samples for major ions. Other tests include those to determine the content of oil and grease, percentage of solid material, and settle-ability in the lake's bottom sediment.

In the photo, Chemistry Lab Chief John Malczyk checks out distillation apparatus.



obituaries

Garland Hill

Garland Hill, NOAA Staff Cart Operator, died in Washington, D.C., on April 13. He had served as driver for Dr. Robert M. White, NOAA's Administrator, since Dr. White became Chief of the U.S. Weather Bureau in 1963. Mr. Hill had been with the Department of Commerce during 32 years of his 33 years of Federal service.

He is survived by his wife, Maim E. Hill, of 4701 Benning Road, S.E., Washington, D.C. 20019.

Capt. Ernest B. Lewey

Captain Ernest B. Lewey, former Assistant Director of the Office of Cartography in the Coast and Geodetic Survey, predecessor of the National Ocean Survey, died in Bethesda, Md., on April 10. He had retired in 1961 after more than 33 years' service.

He is survived by his wife, Margaret, of 4514 Woodfield Road, Kensington, Md. 20795.

Francis A. Sly

Francis A. Sly, Office Services Assistant in NOAA's Administrative Operations Division in Rockville, Md., died in Arlington, Va., on April 11. With NOAA and its predecessors since 1964, he recently served as an Imprest Cashier, and also was Building Warden for WSC-5. His Government service totaled more than 22 years.

He is survived by a son, William W., a student at Texas A&M University; his mother, Mrs. Margaret Sly, of Gardnerville, Calif.; and a sister, Dorothy S. Brewster, of Bellevue, Wash.



National Oceanic and Atmospheric Administration

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