



# noaa week

National Climatic Center  
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## Scientists Develop Lightning Warning System for Space Center

For the Kennedy Space Center, lightning has been a persistent saboteur, striking swiftly, destroying crucial electronic circuits, unbalancing the delicate electronic memories of unlaunched satellites.

Researchers with the Environmental Research Laboratories, supported by the National Aeronautics and Space Administration, have devised a system which greatly improves the ability of Space Center personnel to anticipate, and counter, the destructive intrusions of this electric enemy.

After lightning struck Apollo 12 during liftoff several years ago, a project was begun by ERL's Atmospheric Physics and Chemistry Laboratory to develop an improved lightning warning system which would help NASA officials to anticipate potential lightning strikes in and around launch areas, and to take appropriate action. This system is now installed at the Kennedy Space Center.

According to Dr. Heinz W. Kasemir, who leads the project for NOAA, the work has emphasized the cause-and-effect relationships between rockets and lightning discharges, and the best methods of monitoring and displaying the local lightning situation.

The present system consists of a network of 25 electric-field meters to measure the electric field in the Cape Canaveral area, and a weather radar to monitor precipitation in rain clouds. This information is fed into a computer, and displayed in the form of electric field contour maps of the launch area.

"This means that Space Center personnel will have a much better idea of what the possibility for lightning will be while the vehicle is on the launch pad and during the low-altitude portion of its ascent, and when to take appropriate action to protect people and equipment when the lightning hazard is high," said Dr. Kasemir.

A triangular array of three cross-loop antennas measures which clouds have had lightning discharges within any prior ten-minute interval. A weather radar detects precipitation (another sign of possible electrical activity) over the area.

Eventually, the lightning hazard monitoring network will comprise 50 stations and will display data directly on a color television console showing a map of the area, electric-field contours, and lightning discharges at one-minute intervals. The computer-produced video display will show the total electrical activity of nearby storms in real time, with radar contours of precipitation in one color, electric field contours in another, and the positions of lightning strokes in a third.

It is also expected that, over a period of time--perhaps over the schedule of the Space Shuttle, expected in the late 1970's--new

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## Evelyn J. Fields Is Selected As First Woman Black NOAA Corps Officer



Evelyn J. Fields being sworn in as the first woman black officer in the NOAA Corps. The oath was administered on October 5 by Rear Admiral Alfred C. Holmes, Director of the National Ocean Survey's Atlantic Marine Center, Norfolk, Va. Ensign Fields' mother is holding the bible.

## NOAA Funds Granted To Restore Spring Flood-Damaged Oyster Reefs

NOAA has made available funds totaling \$213,620 for the restoration of oyster resources in Alabama, Louisiana, and Mississippi that were heavily damaged by the spring floods this year. The funds were awarded under the provisions of the Commercial Fisheries Research and Development Act (PL 88-309) as amended.

Apportioned on the basis of the extent of the destruction of oyster reefs, Alabama received \$79,040; Louisiana, \$85,448; and Mississippi, \$49,132. Funds are administered through the National Marine Fisheries Service under grant-in-aid awards from the NMFS Southeast Regional Office, St. Petersburg, Fla. Additional funding requested, in the amount of \$482,396, is under consideration by Federal authorities.

The oyster resources involved represent a \$5 million contribution to the economy of the three states, and are an important part of the national supply of marine food. Flooding by muddy fresh water entering the grounds on which the oysters are cultivated resulted in heavy deposits of silt and growth of marine organisms on the material which furnishes points of attachment for baby oysters. Unless

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## Fisheries Service Accepts Delivery Of New Mobile Inspection Laboratory

The National Marine Fisheries Service has accepted delivery of a specially equipped mobile laboratory designed primarily to inspect seafood processing plants for hygienic and other conditions.

Dubbed PRIME/Van (for "Processing Research, Inspection, and Marine Extension") the laboratory-on-wheels is self-contained, with sufficient auxiliary power generating capacity to handle all electrical systems, including air conditioners. As presently equipped, it weighs about 12 tons.

Based at the technology laboratory at Pascagoula, Miss., the van will be used principally at fisheries processing plants that use the voluntary fisheries inspection program conducted by NMFS. Numerous inspection and testing services will be carried out on the scene without having to take samples to laboratories for analysis. According to Laboratory Director E. Spencer Garrett, the most frequent uses will be for research on fish processing, for inspection and quality control, and for marine advisory services.

Other capabilities of the vehicle include testing for spoilage and examining environmental sanitation of processing facilities and testing the safety of drinking water supplies during natural disasters or testing water quality before, during, or after a fish kill.

The vehicle will also be available for demonstration seminars dealing with fisheries product inspection and will serve as a valuable educational tool in teaching the interested public via Sea Grant universities and other groups how inspection is carried out under the NMFS program.

The vehicle will be utilized throughout the Southeast Region of NMFS and is scheduled to be on display at Fish Expo 73, scheduled in New Orleans November 25-28.

## New Cloud Sensor Evaluated by Test & Evaluation Lab

The Test and Evaluation Laboratory of the National Weather Service's Systems Development Office is evaluating an infrared sensor designed to detect clouds.



likely the sensor's output is statistically correlated with a combination of cloud cover and height. If this is verified by additional data this winter, the sensor will become a prime candidate for automatic state-of-sky indications from future Automatic Meteorological Observing System locations.

designed to detect clouds.

Walter E. Hoehne, Chief of the Laboratory's Functional Experimentation and Test Branch (shown here inspecting the sensor's bird guard), says it appears quite

## Jack B. Hughes Is Appointed MIC of Wichita, Kans., WSO

Jack B. Hughes, Quality Control Officer at the National Weather Service Forecast Office



Mr. Hughes

in Great Falls, Mont., has been selected to be the Meteorologist in Charge at the Wichita, Kans., Weather Service Office. He replaces Ellis Pike, who retired in June.

Mr. Hughes' previous assignments during his 25 years of service in the NWS included that of Principal Assistant at Dodge City, Kans., and MIC of the WSMO at Garden City, Kans.

The Wichita WSO serves the largest city in Kansas, operates a WSR-57 radar, and plays a key role in protecting residents of "tornado alley."

## ERL Scientists Aid Miami Sports Fishermen

An artificial reef was established near Long Reef in the Florida Keys, southeast of Miami, as a future "sports fishermen's paradise" with the help of the Environmental Research Laboratories' Atlantic Oceanographic and Meteorological Laboratories.

Gerald L. Hood, Marine Services Chief in the Director's Office at AOML, and the research vessel Virginia Key provided the scientific support needed by the Miami Sports Fishing Club to position the approved site and sink the reef--a 100 by 20-foot barge donated by the Belcher Oil Company.

Designed to attract snappers, groupers, and yellowtail, the artificial reef is the first of three to be established by the Miami club. Using navigational charts of the area, the crew on board AOML's research vessel pinpointed the site for a Belcher tug, which towed the barge into position. Four eight-inch pipes with valves on the barge were opened, and the artificial reef sank to the 114-foot depth just outside the Biscayne National Monument.

This was the second time AOML participated in a project to establish an artificial reef. The first reef consisted of approximately 500 rubber tires sunk by the Virginia Key, as part of NOAA's FLARE experiment in 1971.

## Benjamin S. Richmond Receives Bronze Medal



Benjamin S. Richmond, who retired September 29 after 30 years of Federal service, has received the Department of Commerce Bronze Medal "in recognition of a long and distinguished career." Since 1962, he had been the National Oceanographic Data Center's Liaison Officer for the New England area.

## NWS Area and Terminal Forecasts Now Being Issued Only Twice a Day

National Weather Service Area Forecasts (covering a number of states) and Terminal Forecasts (for airports) are now being issued twice a day and amended as necessary, instead of being issued four times a day. This change was made to free time and energy previously devoted to preparing routine forecasts sometimes not actually necessary--as when the weather is good.

The format of the Area Forecasts also has been simplified, and SIGMETS--short warning messages about hazardous flying conditions--and AIRMETS--short warning messages concerning less severe weather phenomena that may be potentially hazardous to aircraft--are no longer included as part of Area Forecasts, but are issued separately.

At the same time, the amendment criteria for Terminal Forecasts were simplified. The number of Terminal Forecast amendments increased markedly, and resulted in a number of complaints from pilot briefers who objected to having to refer to an increased number of pieces of paper. Arrangements were made immediately with the Federal Aviation Administration and the National Meteorological Center to issue a Terminal Forecast summary six hours after the original Terminal Forecast issuance. This summary, prepared by NMC, was implemented on October 5, and is expected to ease the situation.

According to Ralph P. James, Chief of the Aviation Branch, the amendment criteria are also being further reviewed with industry for additional improvements.

## Three Women NOAA Corps Officers Assigned to Ships

NOAA will soon have three women commissioned officers serving in its fleet. Ensign Francesca Marion Cava, of Mystic, Conn., has been assigned to the NOAA Ship Fairweather, a hydrographic survey vessel based in Seattle, Wash., while Ensign Joanne Gulley, of Bothell, Wash., has been assigned to the Researcher, an ocean survey craft based in Miami, Fla. Ensign Pamela Chelgren, NOAA's first woman commissioned officer, has been serving on the Seattle-based Oceanographer since November 1972. Ensigns Cava and Gulley recently completed a nine-week training course at the U.S. Merchant Marine Academy, Kings Point, N.Y., and will report on board their ships after a six-week hydrographic training course at Atlantic Marine Center, Norfolk, Va.



Ensign Cava



Ensign Gulley

## Japanese Fined Total of \$230,000 For Illegal Fishing Operations

The master of a Japanese fishing vessel taken into custody for illegal fishing operations off Alaska on September 16 pleaded guilty and was fined \$30,000; a levy of \$200,000 was also made against the vessel at a hearing in Federal District Court in Anchorage September 21.

The U.S. Coast Guard Cutters Jarvis and Balsam overtook the 170-foot Mitsu Maru No. 30 about 150 miles northwest of Dutch Harbor in the Aleutians after a 13-hour chase. The vessel had been observed hauling in her nets about nine miles off Akutan Island when the Jarvis began pursuit, with the Balsam joining the chase later.

A fisheries enforcement agent from the National Marine Fisheries Service was aboard the Jarvis, and he was joined by other enforcement officials in inspecting the Japanese trawler after she was escorted to Kodiak. The vessel was detained pending legal action, and the ship's master and fishing manager flown to Anchorage for the legal proceedings.

Following the legal action in Anchorage, the master and fishing manager were flown to Kodiak, the vessel was released, and she departed for open waters on September 22.

## NCC Now Providing Climatological Services to SCS

The Environmental Data Service's National Climatic Center in Asheville, N.C., is now providing climatological services to the U.S. Department of Agriculture's Soil Conservation Service, previously supplied by State Climatologists under that former National Weather Service program. NCC provides the basic climatological information for soils handbooks and soil surveys on climate in relation to soil use, and expects to prepare this information for 85 or more counties per year.

These climatological data products consist of a narrative description of the climate, usually on a county-wide basis, and a detailed climatic summary including probability, distribution of temperature, precipitation, and freezing temperatures.

## Geodetic Survey To Be Made in Orange County, Calif.

National Geodetic Survey technician Eugene A. Beauchamp is conducting preliminary field work in the western portion of Orange County, Calif., for an extensive survey which will link areas in that county with those in neighboring Los Angeles County. The survey, a cooperative effort of the NGS and Orange County, is estimated to cost \$200,000. The purpose of the survey, scheduled to begin in early November and be completed in mid-1974, is to provide a geodetic framework of control points throughout a 300-square-mile area.

A 20-man survey team will take measurements every two to five miles throughout the area, including the communities of La Habra, Buena Park, Seal Beach, Brea, Orange, Santa Ana, Anaheim, Fullerton, Richfield, Modena, Tustin, and Newport Beach.

# personnel perspective

## Employee Utilization Under the 1973 NOAA EEO Affirmative Action Plan

Part III of the 1973 NOAA National EEO Affirmative Action Plan discusses NOAA's efforts to provide for the full utilization of the present skills of its employees.

By using the classification maintenance review process, career management programs and employee qualification statistical data, 57 NOAA employees have been identified who were either underutilized or nonutilized thus far in Calendar Year 1973. Special placement activities were initiated to help these employees and 15 have been placed in positions that will more effectively utilize their skills.

NOAA has cooperated with the Department of Commerce in reviewing qualification requirements to assure their adequacy and appropriateness to the work required and to assure that they do not have built-in features which discriminate against job applicants. Comprehensive reviews were made in the Wage Marine, Marine Enforcement Agent, and Attorney areas and changes were made in the qualification standards for these series to assure their relevancy to the actual work performed.

Much attention has been given to restructuring jobs within NOAA and to establishing entry level and trainee positions to facilitate the movement of minority and female employees into NOAA's varied occupational areas.

During this year NOAA restructured 53 positions downward to increase operating efficiency and facilitate the upward movement of employees. Seventy-five NOAA employees participated in basic upward mobility training through the use of the Upward Mobility College as well as on-and off-the-job training. This training ranged from secretarial training at the community college level to Laboratory Technician training at some of NOAA's major research laboratories. The Administrative Trainee Program, the Computer Operator Trainee Program, the Graduate Scientist Trainee Program are only three examples of the kinds of formal training programs which have been established to facilitate employee and outside candidate entry into major NOAA occupational areas.

As a means of better identifying employees with underutilized or nonutilized skills, NOAA plans to develop more effective skills files. Activity is now under way to incorporate skills and training data into the NOAA Automatic Data Processing System. Several of our automated Personnel subsystems will be merged. These include the NOAA-wide Training Information System, the pilot Meteorologists' Skills Inventory, the NOAA-wide Skills Inventory System and parts of the Personnel Master File. When merged, these systems will form a usable, interactive Education and Skills Inventory System.

Studies are now being made which utilize basic ADP data such as: the analysis of the records of employees, GS-9 and below, who have not been promoted for two years; a review of the records of employees with college training who are not serving in professional positions; and other studies of similar character.

The Personnel Division is also examining the Civil Service Commission's Federal Automated Career System and the Personnel Skills Systems of other Federal agencies to determine their applicability to NOAA's needs. We hope to build upon the pioneer work in education and skills files systems done by other agencies to meet, in a more effective manner, the particular needs of NOAA's technical and administrative areas.

Managers are continuously urged, as a means of maximizing operating efficiency as well as providing opportunity for advancement to their employees, to identify and assist their underutilized employees through reassignment, job restructuring, and in the establishment of entry level and trainee positions. Members of the Personnel Operations Branch as well as the Personnel Relations Branch are available for assistance in these areas.

### Use of Names on Official Personnel Folders

Widespread use of Social Security Account numbers in Government employment, taxation, and other official records has lessened the technical significance of the name as a recordkeeping identifier. Nevertheless, a person's name is an essential identifier for many official and nonofficial purposes and should be used consistently.

Therefore, Government records, including official personnel records, should reflect the true legal names of its personnel. Usually one given name is used, with additional initials if any, and the surname. Government records will ordinarily designate a married woman employee by the surname of her husband, consistent with custom, past practice, and many State and local ordinances. However, there is no objection to the continued use in Government personnel records of her maiden name after marriage for practically all purposes.

When a woman's married name is the name of record, a change back to the use of her maiden name should be made only on the basis of a court order (e.g. a decree of divorce or separation).

Employees who have recently changed their names should make sure their official records are properly changed. This is done by completing a Standard Form 52, Request for Personnel Action, and submitting it to their servicing personnel office.

# NOAA Special Program Coordinators Named

## Special Emphasis Programs Coordinator



Eleanor Shannon

Ms. Eleanor Shannon has been designated as the NOAA Special Emphasis Programs Coordinator. As such, she is responsible for administering the Federal Women's Program, the Spanish-Speaking Program, and the Handicapped Program. As NOAA's Special Emphasis Programs Coordinator, Ms. Shannon is concerned primarily with pro-

gram matters NOAA-wide and is responsible for maintaining liaison with the Civil Service Commission, other Federal, State and local government agencies and community organizations concerned with the unique problems of women, Spanish-speaking Americans, and the handicapped. Ms. Shannon plays a major role in calling management's attention to personnel program activity which is considered less than fully supportive of the objective of creating equal employment opportunity for women, Spanish-speaking, and the handicapped.

## Upward Mobility Coordinator

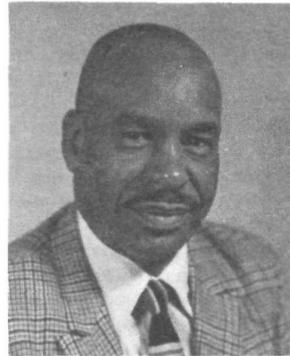


Constance Zarbo

Ms. Constance Zarbo is NOAA's Upward Mobility Coordinator. As such, she is responsible for the creation, development and implementation of training programs designed to achieve better utilization of available manpower within NOAA. In line with this, Ms. Zarbo conducts in-house recruitment and then assists

in the planning of training for employees selected for any of NOAA's Upward Mobility Training Programs. These include, among others, the four new Scientific Upward Mobility Training Programs announced by Dr. Robert M. White, NOAA Administrator, in the September 14, 1973, issue of NOAA WEEK: Scientific Technician, 20/20 Work/Study-Scientific, Science Intern and Graduate Scientist. Working with Ms. Zarbo is Mr. Willie Littlejohn who coordinates the Administrative Trainee Program and Ms. Alice Hinson who coordinates the Scientific Upward Mobility Training Programs.

## EEO Affirmative Action Program Coordinator



Perry Strum

Mr. Perry Strum has been with NOAA four years serving as the EEO Affirmative Action Plan Coordinator. He is responsible for developing the annual NOAA Equal Employment Opportunity Affirmative Action Plan and provides guidance for the development of the MLC's national, regional and local EEO Action Plans. Mr. Strum monitors the

progress made under the national plans and conducts quarterly and special studies of EEO statistics affecting minority groups and women employees of NOAA.

## Recruitment Program Coordinator



Frank Christhlf

Mr. Frank Christhlf is the NOAA Recruitment Program Coordinator. He has specific program responsibility for the recruitment, training, counseling, evaluation, and final placement of college and high school students who are in cooperative education programs approved by NOAA.

Mr. James Wright serves as College Recruitment Coordinator, and is responsible for seeking out and recommending qualified minorities and women to fill professional, scientific, administrative, and technical vacancies in NOAA and its Major Line Components in the Washington area.

## Possible Retirement Bonus

Last week, Congress approved and sent to President Nixon, a bill which would eliminate deadline retirements for future cost-of-living increases. If signed, the bill would allow eligible Federal employees to retire after a cost-of-living raise goes into effect and still benefit from it. Such employees would receive either the amount of the previous annuity raise or the increase in annuity earned by additional service since the last annuity boost, whichever is greater.

Future editions of Personnel Perspective will keep NOAA employees posted on the status of this legislation, as well as the status of cost-of-living increases affecting retirement bonuses.

## Alaska Sea Grant-Supported Study Develops Information for Book Series

The first of three books on "Alaska and the Law of the Sea" has been published by the Arctic Environmental Information and Data Center of the University of Alaska. A major study of the historic development and future of Alaska marine interests, supported by the Alaska Sea Grant Program, has developed the information for the series.

"Alaska and the Law of the Sea--National Patterns and Trends of Fishery Development in the North Pacific," written by Eugene H. Buck, research analyst in fisheries for AEIDC, contains statistics underscoring the magnitude of foreign harvest versus Alaska harvest; comparing the U.S. catch with foreign catches for each species of commercially harvested fish; and providing a general summary to be used in national and international fisheries discussions.

Intended as a handbook for fishermen, scientists, and agencies responsible for fisheries management, the book provides a basis for asking important questions about management practices and their effect on fisheries, and may be used as a foundation for pursuing statistics on fisheries in more detail.

Copies are available at three dollars each postpaid from AEIDC, University of Alaska, 142 E. Third Ave., Anchorage, Alaska 99501.

## Weather Discussed at Asia/Pacific ICAO Meeting

An Asia/Pacific Regional meeting of the International Civil Aviation Organization held in Honolulu recently dealt with meteorological services, communications, air traffic services, search and rescue, airports, navigation aids, and aeronautical information services. Paul H. Peridier, Meteorologist in the Environmental Division of NOAA's Office of International Affairs, and Ralph P. James, Chief of the Aviation Branch in the National Weather Service's Weather Analysis and Prediction Division, represented NOAA at the meeting. The third weather representative on the U.S. delegation was John Newhouse of the Air Force.

Weather agenda items were: Aeronautical Meteorological Offices and Their Functions; Exchange of Operational Meteorological Data Between Ground Stations; and Meteorological Observation Networks.

Under agreements reached at the meeting, the U.S. areas of responsibility for Area Forecasts in the Pacific remain unchanged. Under plans scheduled for implementation by 1976, New Zealand will assume the responsibility for Area Forecasts south of the Equator, from Tahiti to west of New Zealand. Also by 1976, New Zealand will assume a VOLMET (broadcast of actual weather and forecasts for various international airports) five-minute broadcast period. This will require a 10-minute delay of the Honolulu VOLMET broadcast at that time.

## Lightning Warning System (Continued from page 1)

techniques of lightning suppression or mitigation now being explored by the APCL may be applied at the Space Center.

## notes about people

Margaret F. Kerr, of Norfolk, Va., is the new Administrative Officer of the National Ocean Survey's Atlantic Marine Center. The post at the Norfolk facility has been vacant for almost two years. Mrs. Kerr began her federal government career in 1950 as a GS-3 clerk-typist at the Naval Supply Center in Norfolk, where she worked until she transferred to the NOAA installation in 1964.



Dr. Jay C. Quast of the National Marine Fisheries Service's Auke Bay Fisheries Laboratory in Auke Bay, Alaska, was awarded a plaque and a check in the amount of \$150 at the 103rd Annual Meeting of the American Fisheries Society in Disneyworld, Fla., recently, for the best paper in Volume 101 of the Society's Transactions. The title of the paper was "Reduction in Stocks of the Pacific Ocean Perch, an Important Demersal Fish off Alaska."

Dr. L. Bajorunas, Chief of the Lake Survey Center's Limnology Division, has recently won professional recognition for his work. One of his papers, "Shifting Offshore Bars and Harbor Shoaling," prepared jointly with Dr. D. B. Duane (at present with Coastal Engineering Research Center), was selected as a benchmark paper in geology.



Dr. Bajorunas

Benchmark papers are the classic and recent papers representing the landmark development within the particular subject area. The selected paper was published in 1967 in the "Journal of Geophysical Research" and now is included in a book on coastal formations of "Spits and Bars."

## Funds for Oyster Reefs (Continued from page 1)

new material is promptly planted, growth and development of new oyster generations can be seriously inhibited and future supplies of the crop endangered.

To qualify for funds specifically authorized under Section 4 (b) of PL 88-309 to alleviate resource disasters, a state must clearly demonstrate that a commercial fishery failure has occurred owing to natural or undetermined causes. A declaration of eligibility concerning the three-state need for assistance in disaster was published in the Federal Register on September 14, 1973. The funds were released to the State fishery agencies on October 2, 1973.

# calendar of events

Nov. 5, 2 p.m. "Spectra of Molecular Ions," Suitland, Md. Conference Room of Federal Records Center  
Lecture by Dr. Gerhard Herzberg, Nobel Laureate in Chemistry in 1971, and Distinguished Research Scientist in the Division of Physics of the National Research Council of Canada. (Dr. Bernard Fridovich, Space Environment Laboratory, National Environmental Satellite Service. 301-763-5728.)

Nov. 7-8 Greenbelt, Md. Symposium on Possible Relationships between Solar Activity and Meteorological Phenomena. (W. R. Bandeen, Meteorology Program Office, Code 120, Goddard Space Flight Center, Greenbelt, Md. 20771. 301-982-4406.)

Nov. 13 Washington, D.C. Marine Technology Society, Washington, D.C., Chapter meeting. For further information, contact A. W. Anderson, 496-8787.

Nov. 25-28 New Orleans, La. FISH EXPO. (Jack Conroy, American Commercial Fish Exposition, 3 School St., Boston, Mass. 02108. 617-742-0334.)

Dec. 10-13 San Francisco, Calif. National Fall Meeting of the American Geophysical Union. (Leonard Levin, AGU, 1707 L St., N.W., Washington, D.C. 20036. 202-293-1144.)

## Geographic Center of Hawaii Is Pinpointed by Scientists

The geographic center of the State of Hawaii is about 29 miles west of the village of Honoipu near the northern tip of the Island of Hawaii and 24 miles south of Kanaheha Point on the southern shore of the Island of Maui, according to the National Ocean Survey.

When Hawaii was admitted to the Union, its geographic center was determined only approximately in order to include its effect on the geographic center of all 50 states. Since only a rough approximation of the geographic center of Hawaii was needed for this purpose, it was never published.

Since then, however, many questions have been received from the public regarding the geographic center of Hawaii. To determine the center, all the islands along the Hawaiian Archipelago were included, from the Island of Hawaii to the Island of Kure, with the exception of Midway Island. Only those land areas lying above the mean high water line were considered--reefs, shoals, and atolls were eliminated.

The computation of the center was accomplished by balancing the land areas east, west, north and south of the 20th parallel and 157th meridian. The technique used is similar to that of balancing a seesaw in that light weights at long distances from the balance point equal heavy weights located near the balance point. This mathematical weighing of the island land areas produced the computed theoretical geographic center of the Hawaiian Islands, which was determined to be 20° 15' North Latitude and 156° 20' West Latitude.

## Use of Operational Forecasting Model Featured at NWS Office of Hydrology Workshop



The National Weather Service Office of Hydrology recently conducted a workshop to train River Forecast Center hydrologists in the use of the NWS conceptual hydrologic model. The Slidell, La., RFC is now using the model for operational forecasting.

The workshop was part of a program for changing other RFC's from conventional empirical forecast methods to the model, which simulates the many phases of the hydrologic cycle. Representatives from the Corps of Engineers and the Agricultural Research Service also attended.

Participants in the workshop were: (front row, from left) Max Kohler, Associate Director, Hy-

drology; Jack Bowman, Atlanta, Ga., RFC; Tom Dietrich, Susan Zevin, and Kay Krouse, O/H; Jerry Nibler, Alaska RFC; Dick Rishel, Sacramento, Calif., RFC; (standing, from left) Walt Sittner, John Monro, and Eric Anderson, O/H; David Morris, Tulsa, Okla., RFC; Jose Buil, Cincinnati, Ohio, RFC; Chuck Hoffeditz, O/H; Dale Lillie, Kansas City, Mo., RFC; Don Oldmixon, Slidell, La., RFC; Larry Black, Kansas City, Mo., RFC; Ralph Hatch, Salt Lake City, Utah, RFC; John Croslin, Fort Worth, Tex., RFC; Roger DeAngelis, New England Watershed Research Center; Chuck Orwig, Portland, Oreg., RFC; Mike Gwinner, Harrisburg, Pa., RFC; Charles A. Smith, Hartford, Conn., RFC; Ed Davison and Bill Taylor, U.S. Army Corps of Engineers, Tulsa, Okla.; and Dr. Robert Clark, O/H.

# recipe of the week



## MEAL-IN-A-BOWL TUNA SALAD

- 1 package (7 ounce) elbow macaroni
- 1 can (1 pound 4 ounce) pineapple chunks
- 1 cup salad dressing or mayonnaise
- 1 teaspoon curry powder (optional)
- 1/2 teaspoon salt
- 2 cans (6-1/2 or 7 ounces each) tuna, drained and flaked
- 1-1/2 cups sliced celery
- 1 cup cubed process American Cheese
- 1/2 cup chopped green pepper
- 1/2 cup chopped sweet pickle
- salad greens

Cook macaroni as directed on package label. Drain and rinse well in cold water; drain. Drain pineapple chunks; save 1/4 cup syrup. Combine reserved pineapple syrup, salad dressing or mayonnaise, curry powder (if used), and salt; mix well. Pour over macaroni; mix to coat well. Chill at least 1 hour. Add pineapple chunks, tuna, celery, cheese, green pepper, and sweet pickle; mix well. Chill before serving. Serve on crisp salad greens. Makes about 12 cups salad.

## Environmental Conditions Off Coasts Covered in EDS Report for Data Buoy

A new report, "Environmental Conditions Within Specified Geographic Regions: Off-shore East and West Coasts of the United States and in the Gulf of Mexico," has recently been published by the Environmental Data Service. The report, prepared for the National Ocean Survey's National Data Buoy Office, consists of data in standard formats containing regional parameter and phenomenological characteristics. It provides an analysis of regional climatological environmental conditions for planning data buoy tests, supporting engineering design, assisting buoy deployment, and testing buoys and buoy networks.

The report should prove valuable to scientists and engineers making decisions in marine areas or preparing environmental impact statements, as well as the National Data Buoy Office. It should also prove useful to those interested in petroleum prospecting, drilling, production, and logistics; offshore power plant construction and operation; development of new energy sources in the marine environment; and transportation and recreation activities. Single copies may be obtained from Sid Marcus (author) at the National Oceanographic Data Center. Telephone (202) 426-9040.

## Alma H. Worth Receives Commerce Bronze Medal



Weather Service Specialist Ms. Alma H. Worth has received a Commerce Bronze Medal Award "in Recognition of Sustained Excellence of Performance in Aviation Weather in the National Weather Service." Meteorologist in Charge Ed Morin at the Weather Service Office in New York, N.Y. (LGA), presented the award.

## Davidson Aids Sinking Canadian Fishing Vessel

Enroute to Alaska, the NOAA Ship Davidson went to the aid of a sinking Canadian fishing vessel, the *Helen II*. The ship's crew and equipment prevented the ship from sinking and then towed her to port.

Items to be considered for publication in NOAA WEEK should be submitted to:  
Office of Public Affairs, NOAA, Room 221, Bldg. 5, Rockville, Md. 20852. Phone (301) 496-8243.

# **National Oceanic and Atmospheric Administration**

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