



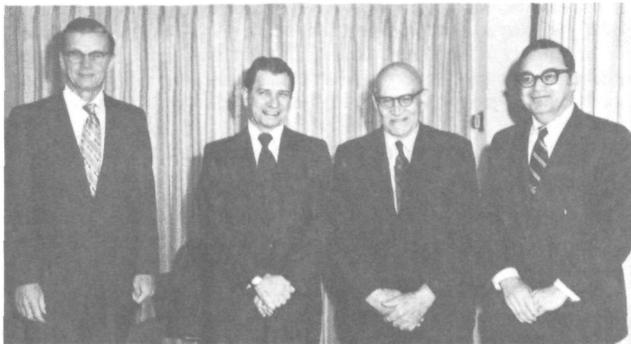
# noaa week

Volume 4 Number 54

December 28, 1973

## Unusually High Ocean Tides Jan.8 and Feb.7 Predicted by NOS

### Weather Service Heads Gather To Honor Max A. Kohler



Max A. Kohler, Associate Director for Hydrology for the National Weather Service, will retire December 31. On hand to wish him well after a 36-year Federal career were three men who have headed the Nation's civilian weather services for the past 45 years. From the left are Dr. George P. Cressman, current NWS Director; Mr. Kohler; Dr. Francis W. Reichelderfer, Chief of the Weather Bureau from 1938 to 1963; and Dr. Robert M. White, NOAA Administrator, who headed the Weather Bureau from 1963 to 1965. Highlights of Mr. Kohler's career are on page 8.

### Applications of Satellite Data To Alaska's Needs Are Examined

Potential uses of high-resolution satellite images in providing vital information on Alaska's environmental conditions and hazards are being examined in a one-year pilot project sponsored by the National Environmental Satellite Service. Under a NESS contract, a scientific team at the Geophysical Institute of the University of Alaska is seeking new and improved applications of one-half-mile-resolution images received from the NOAA-2 and NOAA-3 spacecraft.

The very high resolution radiometers (VHRR) on NOAA spacecraft furnish detailed images of the earth, clouds, and oceans, in daylight and darkness. In cloud-free areas, the images provide a measure of sea-surface temperatures which affect the way weather systems develop and move over ocean areas toward land. Sea surface temperature patterns reveal the location of ocean surface currents, important information for shipping and for the state's large fishing industry. The radiometer observations of

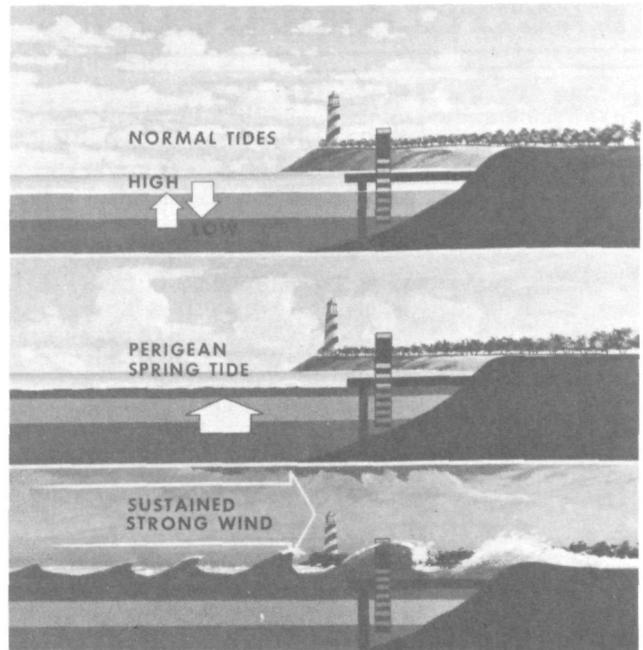
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Astronomical conditions will bring unusually high tides on January 8 and February 7, 1974, and NOAA has cautioned that should these conditions be combined with severe Atlantic storms--a development which cannot be predicted at this time--extreme flooding might strike low-lying coastal areas.

By themselves, the astronomical tides will not produce problems, weather being the controlling factor. However, similar astronomical conditions, accompanied by an offshore storm and onshore winds, generated much higher than usual water levels on March 6 and 7, 1962, which resulted in the death of 40 persons and wrought an estimated \$500 million damage from Long Island, N.Y., to the Outer Banks of North Carolina.

The National Weather Service has alerted its forecasters along the Atlantic coast to be especially aware of meteorological conditions which produce "north-easters" or other offshore storms which, if combined with the unusual astronomical conditions, could prove hazardous to low-lying areas.

(Continued on page 6)



The astronomical coincidences between sun-earth-moon alignment and a close lunar distance occurring on January 8 and February 7 will cause perigean spring tides of unusual amplitude. The possible addition of persistent onshore winds associated with coastal storms could raise already-high astronomical tides to even higher levels and produce destructive coastal flooding.

# NOAA, Agriculture Offer Way To Learn How Cold It Has Been This Year

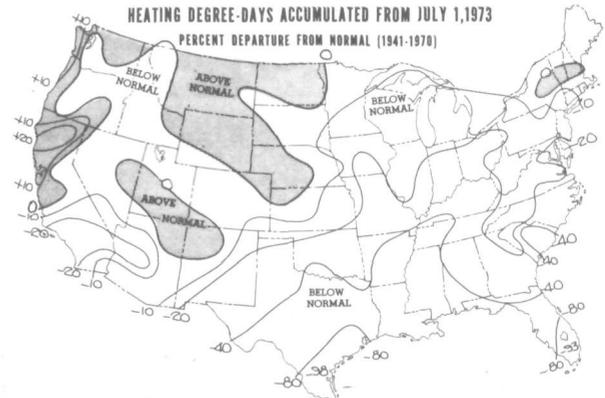
The "Weekly Weather and Crop Bulletin," published jointly by NOAA and the Agriculture Department's Statistical Reporting Service, is carrying a new feature designed to keep subscribers abreast of how things have been going this autumn and winter in terms of chilly or cold days across the Nation.

Key elements are three maps and a table. One map shows this year's accumulation of cold weather as compared with last. A second shows the most recent week's cold weather as compared with a 30-year normal for that week. A third shows this year's accumulation of cold weather compared with a 30-year normal for the same period. The table supplies much the same information as the maps, but for more than 200 individual cities, nationwide.

The statistic used to make these comparisons is the "heating degree-day," a concept developed by heating engineers to provide a useful measure of how coldness affects heating-fuel consumption. It's pegged to the temperature of 65 degrees; the dividing line between where heat is needed to maintain an indoor temperature of 70 degrees, and where it's not. When the average temperature for the day (obtained by adding together the high and the low and dividing by two) equals 64 degrees, that counts as one degree day. When it's 65 or 66 degrees, it counts as zero because no heat is needed. The heating degree-day is also used to estimate how much more heat is needed on a bitter cold day than on just a

chilly day. On a given day, each additional degree below 65 counts as an additional degree day.

While current energy conservation recommendations change this a bit, by recommending indoor temperatures of 68 rather than 70, the heating degree day is still useful for comparison with years past.



An examination of this map, which appeared in the December 3 issue of the "Weekly Weather and Crop Bulletin," shows, for example, that the state of Pennsylvania had a pretty mild season up until December 2, with 10 to 20 percent fewer heating degree days than normal. But in coastal Oregon it was cold, with 10 percent more degree-days than normal. It was cold, too, in western and northern Washington and northern California, while southern California was unseasonably mild, as was much of the U. S. east of the Continental Divide.

## notes about people

Among the qualified divers at the Environmental Research Laboratories' Atlantic Oceanographic and Meteorological Laboratories in



Miami, Fla., is Patricia Bush of the Physical Oceanography Laboratory. She has become an accomplished SCUBA diver, and has made many dives installing and inspecting the current meter arrays installed on the seafloor and suspended from buoys in the ocean seaward of Miami Beach. These current measurements are part of a continuing program to monitor water movements in the section between the Gulf Stream and the beach. Some eight sewer outfalls are located in the area, and AOML,

together with the University of Miami, is attempting to understand the water circulation in the area. This information is essential to those concerned with the engineering as-

pects of extending these outfalls into deeper waters. Mrs. Bush, together with Project Leader Dennis Mayer and Southeast Regional Diving Officer Richard Rutkowski, make regular dives to monitor this equipment and to exchange current meters without having to bring the whole system to the surface.



These are batiks with a marine and coastal motif produced by Grady W. Reinert and Gabrielle M. Ranallo of the NMFS' Southeast Fisheries Center in Miami. As if you didn't know, batik is a method of hand-printing textiles by staining fabric with dye, masking areas of the design with wax where the color is to be retained, and restaining and remasking repeatedly until all the colors of the design have been introduced. The wax masking is then ironed out with the results shown above.

# Televised Aviation Weather Show To Be Carried Nationwide by PBS

"Aviation Weather," a special half-hour program for general aviation interests, will be carried nationally by the Public Broadcasting Service on Thursday and Friday evenings beginning January 3, 1974.

Produced in the studios of the Maryland Center for Public Broadcasting in cooperation with the National Weather Service and the Federal Aviation Administration, and funded, in part, by a grant from the Aircraft Owners and Pilots Association's Air Safety Foundation, "Aviation Weather" provides pilots with a visual and oral aviation weather briefing for flight planning purposes with local forecasts provided by 34 NWS forecast offices across the country via voice inserts.

Originally offered to the Maryland and Washington, D.C., residents, the show's success encouraged the Public Broadcasting Service to expand the show to the northeastern states in July 1973 and now nationwide. As of December 21, 118 stations plan to participate in the network coverage.

Each 30-minute program consists of about 15 minutes of weather discussion and 15 minutes of pilot education information regarding rules and regulations, improved flying technique, safe operation of aircraft, and the weather relationship to aviation. The first 12-1/2 minutes of the program is a discussion of the most recent surface weather situation, ceiling and visibility, significant radar echoes, significant low level weather forecasts for the next 12 and 24 hours (including general forecasts of the freezing level, turbulence and icing conditions across the country), the upper-level wind patterns at 5000, 10000 and 18000 feet, and terminal forecasts at selected airports across the country.

The last 2-1/2 minutes of the weather briefing is a forecast for the weekend provided by NWS forecasters at 34 offices across the country.

While the latest 12-, 24-, 36-, and 48-hour weather forecasts are displayed on the TV screen, forecasters at the following offices are providing a voice insert: Boston, Mass.; Buffalo, N.Y.; New York, N.Y.; Philadelphia, Pa.; Columbia, S.C.; Raleigh, N.C.; Washington, D.C.; Charleston, W.Va.; Cleveland, Ohio; Atlanta, Ga.; Jackson, Miss.; Birmingham, Ala.; Memphis, Tenn.; Miami, Fla.; New Orleans, La.; Lubbock and San Antonio, Tex.; Albuquerque, N.Mex.; Louisville, Ky.; Indianapolis, Ind.; Chicago, Ill.; St. Louis, Mo.; Topeka, Kans.; Milwaukee, Wis.; Detroit, Mich.; Sioux Falls, S. Dak.; Bismarck, N. Dak.; Minneapolis, Minn.; Denver, Colo.; Seattle, Wash.; Boise, Idaho; Los Angeles and San Francisco, Calif.; and Phoenix, Ariz.

The forecasts consist of a 48-hour outlook for aviation weather within the forecast office's area of responsibility. Edward Gross, Domestic Aviation Program Leader, Weather Analysis and Prediction Division, at NWS Headquarters in Silver Spring, Md., stated that this further expansion of "Aviation Weather" across the Nation could not have taken place without the cooperation of all the regional headquarters' staffs and the Meteorologists In Charge at all the stations involved. This is the first time this type of TV insertion has been attempted on such a large scale and its success reflects the cooperation of all involved. NWS and FAA participation in this show with its vast audience is another first in terms of mass dissemination and briefings to the aviation industry.

## Nineteenth Weather Service Operations Class Held at NWS Technical Training Center in Kansas City, Mo.



Participants in the Nineteenth Weather Service Operations Class held at the National Weather Service Technical Training Center in Kansas City, Mo., from November 27 - December 20 were (front row, from left) Sammie Calhoun, Jackson, Miss.; Bruce Bradley, El Paso, Tex.; Edgar Revis, Denver, Colo.; George Grimm, Rockford, Ill.; James Saunders, Philadelphia, Pa.; Dale Voss, Bismarck, N. Dak.; Lon Burks, Albuquerque, N. Mex.; Maximo Nuesca, Kwajalein, Marshall Islands; (back row, from left) Mike Weinrich, Instructor; George Poulson, Erie, Pa.; Michael Coffin, Long Beach, Calif.; Carroll Clark, Greensboro, N. C.; Jim Wantz, Instructor; Harrison Longshaw, Flagstaff, Ariz.; Robert Newland, North Platte, Nebr.; Kevin Sullivan, Valdez, Alaska; Delbert Sharp, Pocatello, Idaho.; Ronald Linder, McGrath, Alaska; and Larry McEwen, Instructor.

# personnel perspective

## Complaint Processing Under the 1973 NOAA EEO Affirmative Action Plan

Part VIII of the NOAA National EEO Affirmative Action Plan requires that NOAA provide for prompt, fair, and impartial processing of complaints of discrimination and equal employment opportunity counseling. Oftentimes employees are confronted with actions which they believe to be discriminatory because of either their race, color, religion, sex, or national origin. Under the authorities of Executive Order 11478 of August 8, 1969, and the Equal Employment Opportunity Act of 1972, (Public Law 92-261), the Civil Service Commission is responsible for providing for the prompt, fair and impartial consideration of employee complaints based on these factors. This article explains the system for processing those complaints.

The discrimination complaints system is divided into three parts: precomplaint, formal complaint, and appeal. The handling of each is done by Equal Employment Opportunity Counselors; Equal Employment Opportunity Officers and Directors of Equal Employment Opportunity; and the Civil Service Commission, respectively. The opportunity to seek redress through the discrimination complaint system is available to all aggrieved employees except aliens employed outside the limits of the United States.

As the first step in processing a discrimination complaint, an employee who feels that he or she has been discriminated against on the basis of race, color, religion, sex, or national origin must seek resolution of the issues through an EEO Counselor. The complainant must bring the matter to the attention of an EEO Counselor within 30 calendar days of the date of the matter or, if a personnel action, within 30 calendar days of its effective date.

The EEO Counselor has 21 calendar days to make whatever inquiry necessary to resolve the discrimination complaint on an informal basis. This inquiry may include discussing the matter with the complainant's supervisor and associates, if necessary. The EEO Counselor will not, however, reveal the identity of the complainant except when authorized to do so by the complainant or until the agency has accepted a formal complaint from the complainant. The EEO Counselor will, insofar as is practicable, conduct a final interview with the complainant within 21 calendar days from the date the matter was brought to the attention of the EEO Counselor. If the final interview is not concluded within 21 calendar days and the matter is not satisfactorily resolved, the complainant will be informed in writing of his or her right to file a formal complaint. The complainant may then file a formal complaint anytime up to 15 calendar days after the final interview.

A formal complaint should be submitted in writing by the complainant or the

complainant's representative to NOAA's EEO Officer. Other appropriate officials who may also receive complaints are NOAA's Federal Women's Program Coordinator; the Director of Equal Employment Opportunity, Department of Commerce; Heads of Major Line Components; Regional and Field Directors; and the Administrator of NOAA. Complaints filed with any of these officials would be forwarded without delay to the NOAA EEO Officer, for processing.

The complainant may be accompanied, represented and advised by a representative of the complainant's own choosing at any stage in the presentation of a complaint. EEO Counselors or the NOAA EEO Officer, however, will not serve as representatives for a complainant or an agency in connection with the processing of a discrimination complaint.

Upon receipt of a complaint, the EEO Officer will acknowledge the complaint and review it to determine whether it should be accepted or rejected. If accepted, the EEO Officer will inform the Director, EEO, DOC, that a complaint has been accepted, and request that an investigation be undertaken. The investigation, which is conducted by DOC's Office of Investigations and Security or the Civil Service Commission, will include a thorough review of the alleged discrimination.

After the investigation is completed the complainant will be given a copy of the investigative file to review and the EEO Officer will provide the complainant with an opportunity for an informal adjustment of the complaint. If an adjustment cannot be made or the complaint otherwise resolved, the EEO Officer will notify the complainant of the proposed disposition. The EEO Officer will also advise the complainant of his or her right to a hearing with a subsequent decision by the Director, EEO, DOC, or to a decision by the Director, EEO, DOC, without a hearing.

If a hearing is requested by the complainant it is conducted by a complaints examiner who is an employee of an agency other than Commerce, usually the Civil Service Commission. After reviewing a record of the hearing and the investigative file the complaints examiner transmits his findings, analysis and recommendations to the Director, EEO, DOC. The Director, EEO, then makes a final decision and forwards the complainant a copy of the complaints examiner's report along with that decision. The complainant is informed in the decision letter of his or her right to appeal the decision of the Department of Commerce to the Board of Appeals and Review, U.S. Civil Service Commission, within 15 calendar days and of his or her right to file a civil action in Federal District Court within 30 calendar days of the decision. The discrimination complaint process, up to this point, should be completed within 180 calendar days.

## National Environmental Satellite Service EEO Committee



Continuing with our pictorial series of NOAA's various EEO Committees, this week we are featuring the members of the National Environmental Satellite Service's EEO Committee. The Committee advises the Director of NESS on matters concerning equal employment opportunity and has been active in counseling NESS employees toward upward mobility opportunities within NOAA. Seated: Helen Hamlett, Marie Weight, Elizabeth Shaw. Second row: Arthur Hamilton, Sam Ross, Russell Koffler, William Thomas. Third row: James Lucas, Leigh Stewart, William Chapman, and Warren Jacob, Chairman. Not pictured: Arthur W. Johnson, NESS Deputy Director and Management Advisor to the Committee.

### Staffing Problems

The Personnel Division has been receiving complaints that certification of eligibles takes too long resulting in excellent candidates taking other jobs, prime candidates for jobs cannot be certified, civil service registers are not open so that outstanding people can apply for rating, and a myriad of other problems which cause staffing problems.

The reasons these problems are occurring are because government salaries are now comparable to private industry in many disciplines, more eligibles are on registers, and registers are closing when there are many more eligibles than needed to fill the estimated openings. The numbers of eligibles are so great in some cases that apportionment is being invoked again. (It had been waived for many jobs until recently.) Authorities given agencies (including NOAA) to make on-the-spot offers to qualified scientists and engineers have been revoked because of the availability of a large number of eligibles. More specific information on this subject will be included in the next Personnel Perspective.

### Change in Annual Leave Regulations

President Nixon has signed Public Law 93-181, which permits Federal employees to carry over, in emergency situations, more than thirty days annual leave into a new leave year. The law also permits employees to be paid for excess leave time when they retire.

Under the new law employees are now permitted to carry over unused leave they would have lost, if they were prevented from taking it as planned because of work emergencies, sickness, or administrative error. In such cases the excess leave would be carried over into the next leave year and be put into a special "account." Such leave must be used by an employee within two years.

### Scientific Upward Mobility Programs

Responses to NOAA's announcement of openings in the Scientific Upward Mobility Programs has been slow. NOAA employees should send interest statements as soon as possible to the address below so that we may decide whether to open recruitment for candidates outside of NOAA. Interest statements should be sent to: NOAA Personnel Division, AD422, 6001 Executive Boulevard, Rockville, Maryland, 20852.

## NMFS Enforcement Agents Receive Training at Treasury School

Law enforcement training for the present members of the Enforcement and Surveillance Division assigned to the Southeast Regional District of the National Marine Fisheries Service was completed recently, when Marine Enforcement Agent William Dickinson of New Orleans, La., received a certificate of completion at a graduation ceremony of the Treasury Department's Criminal Investigator School in Washington, D.C.

Agents Kevin Sullivan, New Bedford, Mass.; William Beers, Gloucester, Mass.; Charles Fuss, St. Petersburg, Fla.; Otto Whitfield, Juneau, Alaska; and Jorge Picon, St. Petersburg, Fla., have previously attended the school this year and represent participation from three of the Service's five Regions.

The instruction at the center, which trains all Federal enforcement officers with the exception of the F.B.I., is mandatory for all new Marine Enforcement Agents entering the NMFS. The necessity for such training has become apparent as the role of the Enforcement and Surveillance Division has grown extensively in recent years. The school provides a sound basis in enforcement training and also promotes the professional attitude required and assists in establishing a uniformity of performance throughout the NMFS.



Mr. Dickinson (left) is congratulated by NMFS Director Robert W. Schoning.

## Applications of Satellite Data (Continued from page 1)

ice on oceans, lakes, and rivers can be used to improve the safety and efficiency of shipping, and images of snow pack in remote areas can aid in assessing the potential for flooding.

The Alaska VHRR pilot project, which began in September, is using very high resolution radiometer images received twice daily at NOAA's Gilmore Creek Command and Data Acquisition Station near Fairbanks.

In early 1974, after special display equipment has been installed, a three-man team--one meteorologist, one hydrologist, and an oceanographer--will begin working at the Gilmore Creek station, interpreting and analyzing the images. Their analyses will be relayed to the National Weather Service in Anchorage, and later to other Federal, state, and local users.

## LSC's Shenehon Completes Work For Lakes Michigan, Huron Study

The Lake Survey Center's 65-foot R/V Shenehon has completed its 1973 investigation of water mass movements between Lakes Michigan and Huron and returned to Detroit. She has been participating in a summer program begun in May to study the currents and composition of the water that flows from Lake Michigan into Lake Huron through the Straits of Mackinac.

Members of two separate Limnology Division field teams have been working aboard the vessel. The Water Motion Branch has been gathering data relative to the currents in the Straits, including those occasionally strong currents caused by the differences in water level fluctuations of Lakes Michigan and Huron. The net flow is from Michigan into Huron, introducing water into Lake Huron and the lower lakes. These data will be used to relate the volume transport of water through the Straits to the oscillations of the two lakes. The Water Characteristics Branch has been gathering data for studying the physical and chemical characteristics of the flows. Time-critical analyses were carried out in the Shenehon's lab, with additional samples being sent back to Detroit for further testing.

The purpose of the investigations is to provide information to the International Joint Commission for pollution studies on the boundary waters of the Upper Great Lakes.

## High Ocean Tides (Continued from page 1)

Other low-lying regions on the earth could be similarly affected.

A combination of unusual astronomical conditions will occur on January 8 and February 7. On these days, the moon, whose gravitational pull is the major influence on the tides, will be full, causing "spring tides," a higher than normal rise in the water which occurs twice monthly. But around these two particular days the tides will rise even higher than normal because of two phenomena: the moon will be 1137 miles closer to the mid-Atlantic coast on January 8 and on February 7 within 800 miles of the distance it was on March 6, 1962. In addition, the sun, whose gravitational pull also influences the tides, will be in approximately the same longitudinal plane as the moon. This alignment further enhances the astronomical effect on the tides. The earth will also be near its closest annual approach to the sun. Therefore, spring tides during these periods will be particularly high.

The Coastal Environment Studies Group of the National Ocean Survey has found that destructive high waters along the Atlantic coast occurred close to such extreme spring tides on April 27 and December 3, 1967, and have been traced as far back as November 2, 1861, November 1-2, 1877, and November 23-26, 1885.

The NOS Group reports that in 1974 there will be an above-average number of longitudinal alignments of the moon and sun which are associated with close approaches of the moon to the earth. As a result, there will be a greater than usual number of extreme spring tide situations in 1974.

# Acoustic Detector of Wind Shear Operating at Denver's Airport

An echo-sounding device capable of measuring wind-shear -- abrupt changes in horizontal wind speed and direction with height -- has been installed at Denver's Stapleton International Airport by Environmental Research Laboratories scientists.

Wind shear is a known contributor to many landing accidents (and to many less serious incidents as well) because the change in wind velocity can interfere with the rate of ascent or descent during critical phases of takeoffs and landings.

Developed by the Wave Propagation Laboratory under an agreement with the Federal Aviation Administration, the acoustic wind-shear sensor measures wind motion at 30-meter intervals from a height of a few meters up to one-half kilometer.

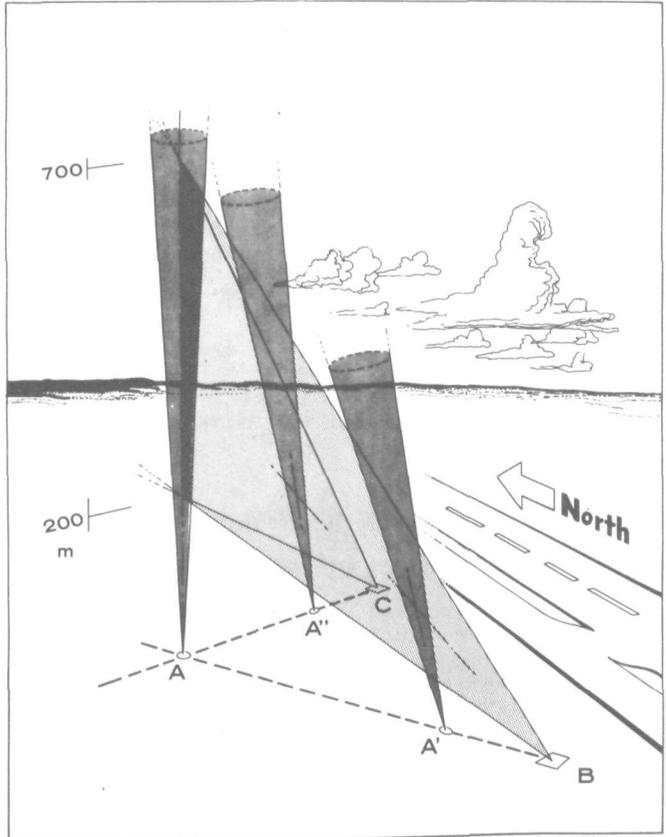
The measurements are obtained by beaming a pulse of sound vertically into the atmosphere from a speaker installed near the north end of the north-south runway, then measuring the Doppler effect -- the change in frequency as the sound waves are blown toward or away from an array of receivers -- produced by wind motion.

By "listening" for the scattered echoes returned from turbulence, which marks areas of wind shear, the Doppler-shifted frequency can be detected, and, with the help of a minicomputer, translated into wind speeds across a vertical section up to about one-half kilometer (1,600 feet). This information is then automatically displayed in the control tower as the altitude of maximum wind shear, and wind strength and direction at that level. When wind shear reaches a critical point, air traffic controllers at Stapleton will relay the data to pilots using the airport.

According to Dr. Donald W. Beran, the NOAA physicist who directed the FAA-funded project, the present phase of the wind-shear sensor program will test the experimental system at Stapleton for about two months. If it is successful, prototype systems will be developed for further testing, and, if they perform well, may become part of the instrumentation used

by major airports in the National Aviation System.

Collaborating with Dr. Beran on the project are Wave Propagation Laboratory scientists D. E. Hunter, R. J. Keeler, E. J. Owens, and Ben C. Willmarth.



Antennas A, A', and A'' broadcast a "beep" into the atmosphere which is reflected from a column of air back to antennas B and C. Frequency change (Doppler shift) data are then fed into an on-line computer for conversion to information about wind speed, direction, and height, and this is displayed in the airport control tower and broadcast to pilots.

## Fishery Products Inspectors Complete Statistical Quality Control Course

National Marine Fisheries Service participants in a two-week course in statistical quality control held recently at the U.S. Army Medical Department Veterinary School at Fort Sheridan, Ill., were (front row,



from left) Edward Quigley, Northeast Regional Inspection Division; Douglas W. Gronski, Northwest Regional Inspection Division; Thomas J. Moreau, Earl C. Johnston, and Carl E. Grant, Northeast Regional Inspection Division; (standing, from left) Glen W. Fliehman, Sheldon H. Lokitz, Southeast Regional Inspection Division; Roy V. Wales, Southwest Regional Inspection Division; Vernon B. Rix, Frank Piraino, Northeast Regional Inspection Division; and Gary L. Putnam, Southeast Regional Inspection Division.

# NWS Forecasters Meet To Evaluate Effectiveness of Warning Services

The NOAA-National Weather Service Hurricane Warning Service Evaluation Conference was held at the National Hurricane Center in Miami, Fla., on December 5-6. The general session was an evaluation of the warning service during the 1973 hurricane season, a review of research conducted at the National Hurricane Research Laboratory and the NHC, the satellite program, the data buoy program, the SPLASH program, radar plans, the operative observational program, and plans for 1974.

The second day was devoted to changes to Hurricane Warnings procedures and recommendations for the National Hurricane Operations Plan (1973) for consideration at the Interdepartmental Hurricane Warning Conference, January 24-25, 1974.

Representatives from NOAA headquarters, the National Ocean Survey, and the National Environmental Satellite Service participated, along with NWS regional and headquarters personnel.

## NWS Associate Director for Hydrology Retires After 36 Years of Federal Service

Max A. Kohler, Associate Director for Hydrology of the National Weather Service, is retiring on December 31, after over 36 years of Government service. He has been the Weather Service's top hydrologist since March 1972.

Mr. Kohler began his 32-year Weather Service career as a Meteorologist Intern in Roswell, N. Mex., in 1940. After a year there and another year in the same capacity in Los Angeles, he was transferred to Weather Service headquarters in Washington, D.C. In 1942 he went to work in the Office of the Hydrologic Director as Assistant Hydrologic Engineer.

In 1946, Mr. Kohler was named head Hydrologic Engineer in a research unit of the Office of Hydrology. Two years after that he was promoted to chief of that unit.

In August 1953, he was named Chief Research Hydrologist. Early in 1965, he was named Chief Hydrologist, and from 1969 to 1972 also served as Director of the Research and Development Laboratory in the Office of Hydrology.

He has been active in the World Meteorological Organization, serving as President of the WMO Commission for Hydrometeorology from 1961-1968.

In 1949, Mr. Kohler received a Commerce Department Silver Medal (together with Messrs. Foskett and Linsley) for his part in development of an electronic flood-routing machine.

In 1959, he was awarded a Commerce Gold Medal for outstanding service.

# recipe of the week



### SMELT PIZZA

- 1 pound pan-dressed smelt, or other small fish (approximately 24 per pound), fresh or frozen
- 1/4 cup milk
- 1 egg, beaten
- 1 teaspoon salt
- Dash pepper
- 1 cup dry bread, cereal, or cracker crumbs
- Fat for frying
- 2 packages (15-3/8 to 15-3/4 ounces each) cheese pizza
- 1/4 pound Mozzarella cheese, sliced
- Chopped parsley

Thaw frozen fish. Clean, wash, and dry fish. Combine milk, egg, salt, and pepper. Dip fish in milk mixture and roll in crumbs. Place fish in a single layer, in hot fat, in a 12-inch frypan. Fry at moderate heat for 2 to 3 minutes or until brown. Turn carefully. Fry 2 to 3 minutes longer or until fish are brown and flake easily when tested with a fork. Drain on absorbent paper. Prepare pizza crusts according to package directions. Divide dough in half. Press dough into two 14-inch pizza pans, shaping edge of dough to form a ridge. Spread sauce evenly over crusts. Sprinkle herbs over sauce. Place Mozzarella cheese on top of sauce. Arrange smelt in a circle on top of cheese. Sprinkle grated cheese over pizzas. Bake in a hot oven, 425° F., for 16 to 20 minutes or until crusts are brown and cheese melts. Garnish with parsley. Makes 6 servings.

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.

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# **National Oceanic and Atmospheric Administration**

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