



noaa week

Volume 4 Number 50

November 30, 1973

Commerce Secretary Dent Urges Energy Conservation

Following is the text of a recent memorandum to all employees from Secretary of Commerce Frederick B. Dent:

As you are all aware, our country is facing a shortage in its energy resources which, as the winter months approach, is fast reaching critical proportions. As one of the agencies spearheading the energy conservation program, the Department of Commerce should make a special effort to exhibit its sincere concern with saving energy. I am, therefore, requesting that you join with me in support of the following measures to conserve energy:

--reduction of lighting, heating, and cooling of buildings controlled by Commerce especially at Gaithersburg and Boulder which are the two major consumers of electricity in the Department; and

--the reduction in the use of government vehicles and privately owned vehicles for official business, especially in the large bureaus.

The energy crisis is not a personal problem to be faced individually; it is nationwide and requires a unified commitment by all Americans. Therefore, we must all unite in the development of a new ethic, the ethic of energy conservation, if we are to optimize our standard of living. It is the patriotic duty not only of Federal employees, but all Americans, to support the energy conservation ethic in their private lives as well as on the job. I am confident that the employees of this Department will set an example worthy of being followed by all Americans.

Secretary of Commerce

NOAA Warns of Flood and Erosion Danger Around the Great Lakes

High water levels in most of the Great Lakes pose a threat of flooding and shore erosion as the region enters the peak of the winter storm season, NOAA has warned.

Flood danger is greatest in low-lying areas bordering Lake Erie, the Detroit River, Lake St. Clair, and Lake Huron's Saginaw Bay. Shores along the rest of Lake Huron, Lake Michigan, and Lake Superior could be seriously eroded.

The Lake Survey Center of the National Ocean Survey reports that the water level

(Continued on page 6)

Concordia, Kansas, WSO Receives Unit Citation

A unit citation was presented this week to the staff of the National Weather Service Office at Concordia, Kans., for its timely warnings on September 25, when more than a dozen tornadoes raked north-central Kansas.

NWS Director Dr. George P. Cressman, who signed the unit citation, stated that the "warnings were credited with saving lives in a number of Kansas communities, particularly Salina, Clay Center and Greenleaf." He added:

"Of equal significance during this outbreak was the outstanding performance of county and community warning organizations and their tornado-spotter networks." On November 26 and 27, the NWS presented Public Service Awards in Salina and Clay Center to more than a score of Kansas agencies and individuals in recognition of their performance.



A Salina Journal Photo

(Top photo) The staff of the Concordia WSO--(from left) Weather Service Specialists Roy F. Freiburger, Keith E. Adams, Wilson Floe, and Willie Ray Sanders, Electronic Technician William P. Matthes, WSS Marvin D. Petersen, and Official in Charge Harold E. Lowman.

The bottom photo shows the tornado approaching the southeast outskirts of Salina, Kans., at about 6 p.m., September 25. A few minutes later it completely demolished a 44-unit mobile-home court.

Possible Air Turbulence, Infrasound, Pressure Disturbances Link Found

Recent research by the Environmental Research Laboratories indicates that an invisible aviation hazard--atmospheric turbulence--may be audible to very sensitive microphones. It affects aircraft even when they fly "above the weather," its consequences ranging in severity from a little roughness to control problems. Invisible in clear air, turbulence has been extremely difficult to detect and study.

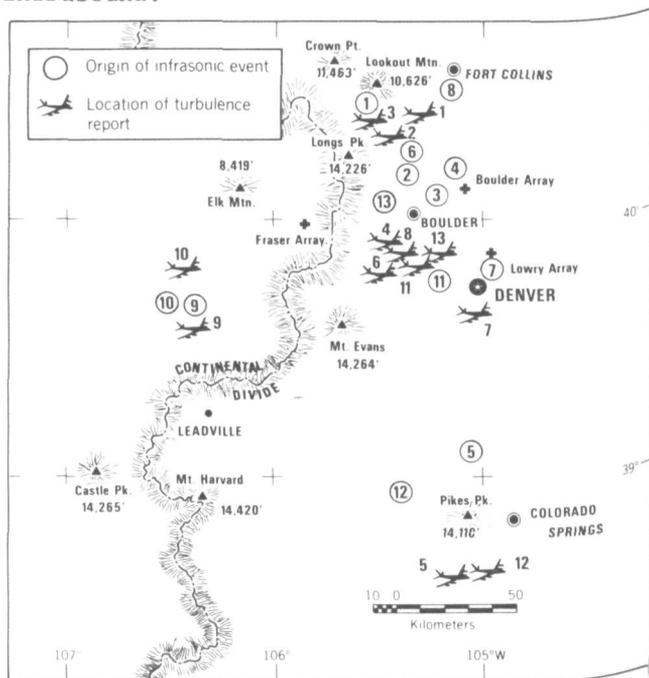
Alfred J. Bedard, Jr., a physicist with the Wave Propagation Laboratory in Boulder, Colo., has discovered a relationship between turbulence reported by airline pilots, mountainous sources of infrasound (sound waves which are pitched too low for human ears to hear), and subsonic pressure disturbances in the atmosphere, which move much more slowly than the speed of sound.

The NOAA scientist made a study of these phenomena between February 1972 and June 1973 as part of a cooperative program with Dr. Douglas K. Lilly of the National Center for Atmospheric Research. Data from arrays of microphones positioned in mountainous regions near the Continental Divide showed that commercial aircraft reports of turbulence occurred in the vicinity of sources of infrasound in 14 of 29 cases.

Subsonic pressure disturbances also occurred during intervals of aircraft turbulence reported by airline pilots, and matched upper-level wind speed and direction at the 33,000-foot level. Moreover, the measurements agreed in source direction and propagation time between two microbarograph stations at Boulder and Fraser, Colo. The stations consist of arrays of sensitive microphones used to "hear" infrasound and measure small pressure differences in the atmosphere.

In evaluating the results of his recent study, Mr. Bedard included all incidents of infrasonic events identified by the late Ver-

non Goerke of NOAA between 1962 and 1968, adding his own data for 1970 and 1971. He found that the historical data showed a recurring signal direction that passed through the lee of the group of mountains including Longs Peak. The more than 150 infrasound events isolated provided good statistics on the frequency of occurrence of this class of infrasound.



The numbered circles shown here indicate apparent sources of infrasound signals received by instruments in Boulder, Fraser, and Lowry Air Force Base, Colo. The corresponding aircraft turbulence report is indicated by a numbered airplane silhouette.

William N. Nicholson Participates in United States/Japan Panel Tour of Marine Facilities



Representing NCAA, William N. Nicholson, Associate Director, Office of Marine Technology, National Ocean Survey, participated with other members of a United States/Japan Panel on a tour of marine facilities in this country. The group is shown during a visit to the Ocean Simulation Facility at the Naval Coastal Systems Laboratory in Panama City, Fla., for a discussion of the laboratory's diving program.

(From left) Dr. Shoji Sato; Mr. Nicholson, Chairman; Dr. George Sullivan, General Electric Company, Philadelphia, Pa.; Dr. Yasafumi Yamanouchi, Co-Chairman; Captain Richards T. Miller (USN Retired), former Commanding Officer of the Laboratory; Ikuro Mutoh; Minoru Ishida; (in back of Mr. Ishida) Captain George F. Bond, USN, of NCSL; Tamio Ashino; Tsunao Ishihara; Koji Teranishi; and Dr. Neil Monney, Ocean Engineering Department, U. S. Naval Academy, Annapolis, Md.

NOAA Proposes Change in Weather Modification Reporting Rules

A proposed change in weather modification reporting rules, requiring operators to submit information on safety and environmental precautions taken in their projects, has been announced by NOAA. Notice of the proposed amendments was published in the Federal Register of November 6, 1973, and interested parties have until December 6, 1973, to submit their comments to NOAA.

It also was announced that Federal agencies began reporting their weather modification activities to NOAA on November 1, 1973.

Public Law 92-205, passed by Congress in 1971, required all non-Federal weather modification projects conducted within the United States and its territories to be reported to the Secretary of Commerce. The reporting requirement became effective November 1, 1972, with NOAA carrying out the program on behalf of the Secretary.

The proposed change in reporting rules would provide additional information needed by NOAA to carry out a directive issued by the President to the Secretary of Commerce on February 15 of this year. The President directed the Secretary "to expand his regulations to provide for Federal notification, including recommendations where appropriate, to operators and State officials in cases where a report discloses that a proposed project may endanger persons, property or the environment or the success of Federal research projects."

Twenty-seven years of weather modification have produced no evidence that these activities have significantly endangered persons, property, or the environment, but the President's instructions recognize that these efforts have the potential for causing

adverse effects if carried out without appropriate safeguards.

The reports required by the proposed rule changes would establish an archive of information on safety practices and environmental precautions employed in weather modification activities. If, after considering a weather modification activity report, NOAA finds that a proposed project does not include adequate measures to protect persons, property, or the environment--or that it might adversely affect Federal research programs--the agency will notify the operator and State officials, informing them of commonly used safety procedures or of the Federal research projects involved. The notification will be advisory only, not constituting approval or disapproval of the project, and will also be available to the public.

Federal agencies conducting or sponsoring weather modification activities in the United States and its territories were not included in the 1971 Public Law, but now have agreed to report their programs to NOAA. The agencies involved are the Departments of Agriculture, Defense, Interior, and Transportation, the Atomic Energy Commission, National Aeronautics and Space Administration, and the National Science Foundation, in addition to NOAA. Their reports together with those from non-Federal projects, will establish a central source for information on all weather modification activities in the nation.

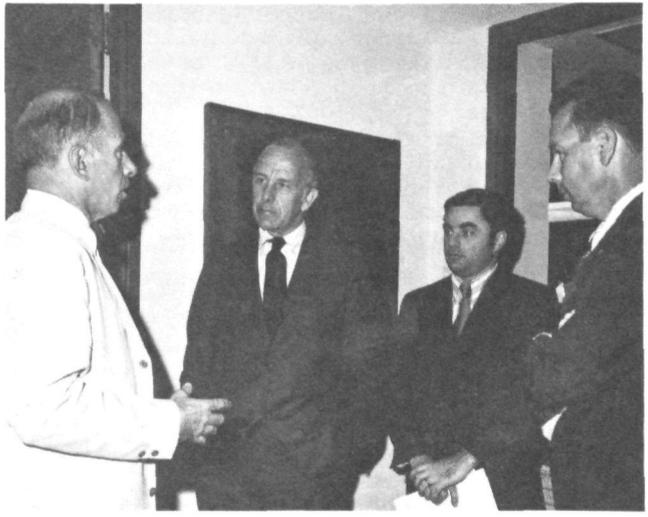
Projects conducted by Government agencies outside U.S. territory are not included in the reporting program and will continue to be reviewed by the National Security Council's Under Secretaries' Committee.

Demetrio A. Dinardi Receives Bronze Medal



Demetrio A. Dinardi (left), a Physical Oceanographer in the Oceanographic Surveys Branch of the National Ocean Survey, receiving Department of Commerce Bronze Medal from Rear Admiral Allen L. Powell, NOS Director. Mr. Dinardi was honored for his development of tidal current diagrams, which provide a simplified method for calculating the speed and direction of tidal currents in bays, estuaries and harbors as an aid to mariners.

Under Secretary of Commerce Tabor Visits AOML



This photo was taken during a recent visit of Under Secretary of Commerce John K. Tabor to the Environmental Research Laboratories' Atlantic Oceanographic and Meteorological Laboratories in Miami, Fla. (From left) Dr. Harris B. Stewart, Jr., Director, AOML; Under Secretary Tabor; James A. Goyette, Special Assistant to the Under Secretary; and Dr. Donald V. Hansen, Director of the Physical Oceanographic Laboratory, AOML.

personnel perspective

Community Participation Under 1973 NOAA EEO Affirmative Action Plan

Part VI of the 1973 NOAA National EEO Affirmative Action Plan requires that NOAA actively participate in community efforts in EEO by supporting community equal housing efforts, assisting employees in finding adequate housing, working with local authorities to improve transportation between work sites and residential areas, and maintaining contacts with community organizations and schools.

A centralized housing locator and fair housing discrimination complaint service for NOAA employees in the Washington Metropolitan area has been established in the Employee Relations Section of the Personnel Division. The housing locator service provides assistance to employees seeking housing by identifying suitable housing within their financial means. The fair housing discrimination service provides information on and assistance in filing fair housing discrimination complaints with the Department of Housing and Urban Development. Contacts are also maintained with fair housing groups and local realty boards. NOAA has also designated field housing coordinators in its major field locations. Their responsibilities are essentially the same as those described for the Washington Metropolitan area.

The Employee Relations Section maintains information on train and bus schedules for the Washington Metropolitan area. Plans are being made to develop car pool locators for the four major NOAA locations in the Washington Metropolitan area with large concentrations of employees. These sites include the Washington Science Center, Page Buildings, Gramax Building and FOB #4. Contacts have also been made with METRO to keep NOAA informed of new bus routes and schedules.

Indicative of the diverse minority and women's organizations with which NOAA has established continuing productive relationships in the field as well as the Washington Metropolitan area are the following:

NAACP, Federally Employed Women, Inc., Urban League, Kappa Alpha Psi Fraternity, Afro-American Newspaper, American GI Forum, Heart of American Indian Center Community Council, LINKS, Apprenticeship Outreach Program, Foundation for Mexican - American Studies, Inc., East Los Angeles Service Center, Concentrated Employment Program, CORE, KINATECHITAPI Indian Council, Alaskan Federation of Natives, Community Action Agencies, Black Community Development Centers, National Organization of Women, CHICANO Offices, and many other like organizations.

NOAA has a broad range of contacts

with the above organizations. For example, we have contacts not only with the national headquarters of organizations such as the Urban League and NAACP, but also with their respective local activities where NOAA has major field establishments. As you can readily ascertain, these organizations are representative of the broad spectrum of minorities existent in our society today.

Some progress has been made in working with colleges and universities where minorities are heavily enrolled to structure curricula that relate directly to the requirements of NOAA's professional and scientific disciplines.

Assistance has been provided to both the Washington Technical Institute, Washington, D.C., and Prairie View College, Prairie View, Texas, in modifying and expanding their curricula to help meet our needs. We anticipate much more progress in this area especially as we move into our new Scientific Upward Mobility Training Programs whereby some schools will be participating with us by providing the necessary training to candidates in these programs.

Annual Leave Forfeiture

As the leave year nears its conclusion, NOAA employees should check their annual leave balances to insure no forfeiture of leave occurs at year's end. Most Federal employees may accumulate annual leave up to a maximum of 240 hours. This leave may be carried forward from year to year but any leave in excess of this amount must be forfeited at the end of a given leave year. Hence, NOAA employees should make certain all their leave over the 240 maximum will be used before January 5, 1974, to eliminate the possibility of annual leave forfeiture.

A savings clause exists entitling some employees to carry forward to the new year more than the 240-hour annual leave maximum. This clause applies to Federal workers who accrued more than 30 days prior to the institution of that maximum figure. Should employees in that situation use more annual leave in a leave year than they earn, the balance carried forward becomes their new leave ceiling unless they lower their leave balance to 240 hours or less. Employees should consult their supervisors to schedule excess annual leave if leave forfeiture is a possibility.

Scientific Upward Mobility Programs

Deadlines to apply for positions in the Scientific Upward Mobility Training Programs have been extended to allow time for information on them to reach field offices. The extensions follow:

Scientific Technician Program	- 1/15/74
20/20 Work Study Program	- 1/15/74
Science Intern Program	- 2/15/74
Graduate Scientist Program	- 2/15/74

Upward Mobility Showcase Planned for Employees and Supervisors

Secretary of Commerce, Frederick B. Dent, has declared the week of December 3 - 7, 1973, to be Commerce Federal Women's Program Week. The Secretary asked that each agency in Commerce plan activities to emphasize the Department's commitment to federally employed women as well as its commitment to overall Equal Employment Opportunity.

To emphasize NOAA's commitment to all facets of Equal Employment Opportunity, NOAA has planned an "Upward Mobility Showcase" to be presented to employees and managers during the Commerce Federal Women's Program Week. The Showcase consists of two major programs. The first program is designed for managers and supervisors to create an awareness on their part of ways in which they can encourage and support upward mobility for their employees. A showing of the film "51%" will provide some insight into the problems women face in achieving advancement opportunities. A video tape presentation will discuss the "how to" of job restructuring and will be followed by a discussion session.

The second program is designed to provide NOAA employees with a brief overview of NOAA's EEO Program and the various Upward Mobility Programs available to them. A video tape which discusses how to complete an SF-171 (Personal Qualifications Statement) will be presented and be followed by a question and answer period.

NOAA's Upward Mobility Showcase will be presented at NOAA's major locations in the Washington Metropolitan area. Schedules for the two programs which make up the Showcase follow:

<u>For Supervisors</u>				<u>For Employees</u>			
<u>Date</u>	<u>Location</u>	<u>Session</u>	<u>Time</u>	<u>Date</u>	<u>Location</u>	<u>Session</u>	<u>Time</u>
12/4	FOB-4 Room 202, Zero Wing	1	9 a.m.-12 p.m.	12/4	WSC #5 Room 926	1	9 a.m.-12 p.m.
		2	1 p.m.-4 p.m.			2	1 p.m.-4 p.m.
12/5	WSC #5 Room 926	3	9 a.m.-12 p.m.	12/5	FOB-4 Room 202, Zero Wing	3	9 a.m.-12 p.m.
		4	1 p.m.-4 p.m.			4	1 p.m.-4 p.m.
12/6	Page 1 Room 358	5	9 a.m.-12 p.m.	12/6	Riverdale Conference Room	5	9 a.m.-12 p.m.
		6	1 p.m.-4 p.m.				
12/7	WSC #5 Room 926	7	1 p.m.-4 p.m.	12/7	Page 1 Room 358	6	9 a.m.-12 p.m.
						7	1 p.m.-4 p.m.
12/10	Gramax Bldg. Room 406	8	9 a.m.-12 p.m.	12/11	Gramax Bldg. Room 406	8	9 a.m.-12 p.m.
		9	1 p.m.-4 p.m.			9	1 p.m.-4 p.m.

Retirees Will Receive 5.5 Percent Bonus

Because of the October rise in the Consumer Price Index (CPI), retired Federal employees will receive a 5.5 percent cost-of-living increase effective January 1, 1974. Unlike previous cost-of-living increases, there is no deadline requirement for retirement which employees must meet to take advantage of the bonus. Under the new Public Law 93-136 (see November 16, 1973, edition of Personnel Perspective) a Federal employee who retires after an annuity increase goes into effect is entitled to an annuity that would be no less than the one he or she would have received had he or she retired prior to the increase.

The January bonus will be the second cost-of-living raise for retired Federal employees in six months. The last one boosted annuities 6.1 percent and occurred last July. Some employees may want to retire on or before December 31, 1973, in order to take advantage of the minimum guarantee of the 6.1 percent increase which became effective last July. An example of how an employee's annuity would be computed if he or she did retire before December 31, 1973, follows:

A comparison of his or her actual annuity earned as of the date of separation would be made with the annuity that would have been payable based on his or her total service and high-3 average pay that existed on June 30, 1973, plus the 6.1 percent bonus:

	<u>June</u>	<u>December</u>
High-3 average:	\$15,000	\$15,500
Years of service:	30 years	30 1/2 years
Earned monthly annuity:	\$655.	\$688.
(includes survivor benefit)		
Cost-of-living adjustment:	\$655.	
	<u>x 1.061</u>	
	\$695.	\$688.

The June figure would be greater and would be used for the annuity computation. Then the 5.5 percent would be added in the January check. If an employee chooses to retire after December 31, 1973, he or she would get the benefit of the 5.5 percent increase but not of the 6.1 percent minimum guarantee.

ERL Awards Grants for Research To University of Oklahoma Men

Two grants, totaling nearly \$35,000 for research on dynamics of severe local storms and tornado numerical modeling, have been given to Drs. Yoshikazu Sasaki and Martin C. Jischke of the University of Oklahoma by the Environmental Research Laboratories.

Dr. Sasaki, a professor in the Department of Meteorology, is continuing his research in clarifying the dynamic characteristics of severe local storms to improve analysis and forecasting. His research will be monitored by Dr. Stanley L. Barnes of ERL's Norman, Okla.-based National Severe Storms Laboratory, who is involved in tornado analysis and prediction.

Dr. Jischke, an associate professor in the School of Aerospace, Mechanical and Nuclear Engineering, is making theoretical calculations of four physical features that are basic to tornado formation. Dr. Robert P. Davies-Jones, also of the National Severe Storms Laboratory, will monitor the research project.

Geodetic Survey of Erie County, N.Y., Completed

The National Geodetic Survey has completed a two-year geodetic survey of Erie County, N.Y., including Buffalo.

The extensive survey was carried out in cooperation with the county. Over 150 geographic positions (latitude and longitude) were established throughout the county's 1058 square miles for use in large scale engineering projects.

NOAA Warns of Flood and Erosion Danger Around the Great Lakes (Continued from page 1)

in all of the lakes except Ontario is well above the long-term average for November, although slightly lower than last year's record highs. Accelerated release of water from Lake Ontario through the St. Lawrence River has lowered its level to a point only three inches above the long-term November average.

The high water levels are not dangerous in themselves; it is the added ingredient of winter storms that brings the threat of flooding and erosion. Between September and April, winter storms approach the Great Lakes region from the central part of the country, with the greatest number occurring during November, December, and January. If the storm winds blow along the axis of a lake, the water is driven by the wind to the end of the lake. Piled-up waters flood into low-lying areas, and the wind-whipped waves beat at the shorelines, causing serious property losses. Just a year ago, on November 14, 1972, strong winds piled up Lake Erie's water at its western end, and the ensuing flood caused \$22 million damage.

Great Lakes-area offices of the National Weather Service receive a continuous flow of lake-level observations from the Lake Survey Center. With this information, whenever there is a likelihood of strong, sustained winds over the lakes, forecasters are ready to provide computer-assisted

Special Achievement Awards Presented for Work on RUFAS

Special Achievement Awards in recognition of outstanding work during the RUFAS (Remote Underwater Fisheries Assessment System) bottom surveys on the Florida calico scallop grounds have been presented to Electronic Technician Walden P. McKim, Fishery Biologist David L. Sutherland, and Fishery Methods and Equipment Specialist Abraham J. Barrett, of the National Marine Fisheries Service Southeast Fisheries Center Miami Laboratory.



(From left) Mr. McKim; Mr. Sutherland; Harvey R. Bullis, Jr., Director of the Southeast Fisheries Center; and Mr. Barrett.

Airport in Carbondale, Ill., Being Surveyed

A National Ocean Survey airport survey party headed by James W. Barton is conducting a field survey of Southern Illinois Airport in Carbondale, Ill., as part of a joint program with the Federal Aviation Administration to advance air safety.

predictions of storm surges in advance of the rising water. These Lake Shore Warnings, indicating that flooding or erosion is expected in a given area in six hours or less, are transmitted on Weather Service teletype-writer circuits for relay to the public through newspapers, radio, and television. NOAA's VHF radio weather broadcast facilities--located at Buffalo, Erie, Cleveland, Sandusky, Detroit, Chicago, and Milwaukee--carry the warnings on a round-the-clock basis on 162.55 or 162.40 megahertz.

Federal, state, and local agencies are continuing their cooperative preparedness programs to minimize death and destruction from Great Lakes flooding. The U.S. Army Corps of Engineers has invested \$30 million this year for dikes and other temporary protective works, principally for Lakes Erie and St. Clair and also for Lakes Michigan and Ontario. Other Federal agencies involved, in addition to the NWS and LSC include the U.S. Coast Guard and the Department of Housing and Urban Development's Federal Disaster Assistance Administration, which will take over if the President declares an affected community a Federal disaster area.

During the coming months, shore residents along the Great Lakes should be alert for the NWS warnings, and be prepared to leave low-lying areas if local public-safety officials recommend doing so.

Composite Check Program Offers Solution to Check Delivery Ills

An increasing number of Federal employees have found the composite check program to be the answer to their paycheck delivery problems. The composite check is a Treasury check issued to a financial institution, which represents net pay of all the employees of an agency who bank at the same place. A list of the names and net salary amounts of these employees is sent along with the composite check, so that each employee's checking or savings account can be properly credited. (NOAA employees participating in this program continue to receive their Statement of Earnings and Leave--NOAA Form 34-14--at their offices.)

In 1968, the Congress passed a law requiring agencies to make salary payments directly to financial institutions when so requested by employees. In 1970, the Treasury issued instructions making it mandatory to issue a single, composite check to a financial institution whenever five or more employees selected the same financial institution to receive their net pay for deposit.

In 1970, 3.7 percent of all government employees used the composite check program. By 1972, this number had grown to 15 percent. Nearly 12,000 banks participate in this program nationwide.

NOAA began participating in January 1972. As of September 1973, 2,680 people, or 20 percent of all NOAA employees, had their paychecks sent to their banks through the composite check program; 148 composite checks rather than 2,680 individual checks are issued each payday. An additional 1,500 have their paychecks drawn to their own names and mailed to their banks for deposit.

Under the composite check program an employee is guaranteed that his net salary will be available in his bank account each payday, even if the check sent by the Treasury is lost or delayed in transit. Also, employees need never be concerned about the possibility of forgery, since the composite check is made out to the bank and is "forgery proof."

For those who don't participate in the composite check program, a check lost or stolen before or after being received by an employee means a delay while a substitute check is issued.

The composite check program also deposits an employee's paycheck when he is absent from the office due to sickness, leave or travel.

NOAA employees who use the composite check program make a positive contribution to ecology and the energy crisis. Today they are helping to avoid the issuance of 65,000 individual paychecks each year.

If you are not now having your paycheck sent to your bank, we encourage you to consider this service.

This can be done easily by filling out Standard Form 1189, available from your normal supply source.

Give U.S. Savings Bonds

Gift shopping? A U.S. Savings Bond is more than a present--it's a future.

AMC Conducts Charting Seminars For U.S. Power Squadron Groups

Rear Admiral Alfred C. Holmes, Director of the National Ocean Survey's Atlantic Marine Center in Norfolk, Va., welcomed members of the U. S. Power Squadrons Districts 27 and 5 to the AMC on November 3 and 10, respectively, when the first Cooperative Charting Educational Seminars were conducted at the AMC. The purpose of the seminars was to improve liaison and promote maximum efficiency in obtaining and improving nautical charting data received. The data helps enable the nautical chart portray actual conditions, for the benefit of commerce, recreation, and economic development.

The seminars, attended by 30 members of District 27 and 20 from District 5, were built around how the U. S. Power Squadrons could relate their cooperative charting program to the ways and means of the National Ocean Survey field procedures. Subjects covered included tides; verification; coastal mapping, a comprehensive session on photogrammetry, landmarks (ways of locating), obstructions; processing data; and actual launch hydro, which covered use of the sextant, See Boat Sheet Method, explanation of modified sweep methods, locating landmarks using sextant, and current observations.

The U. S. Power Squadrons, a voluntary organization consisting of 83,000 members devoted to boating safety through education, submitted 14,142 nautical chart suggestions during 1972.



Rear Admiral Holmes welcomes Power Squadron members to a seminar.

Survey Underway in West-Central Georgia

A 13-month federal geodetic survey of more than 5700 square miles has been launched in west-central Georgia between Atlanta and Americus by the National Geodetic Survey. The survey, which includes the cities of Columbus and Macon, is part of a long-range cooperative program of Georgia and the NGS. A statewide program has been underway since November 1971 to provide geographic positions (latitude and longitude) of sites established throughout the area.

Preliminary field work planning is now underway by surveying technicians Jerry C. Layton and Donald Rexrode. The survey itself is slated to begin in December by a 20-man field party headed by Leslie H. Williams and continue until November 1974.

Maryland's Oldest Boundary Is Being Remeasured by NGS

Maryland's oldest boundary, the dividing line between southern Delaware and the Free State, is being remeasured. The 35-mile boundary was established originally in 1751 by colonial surveyors, who marked the border with eight monuments spaced about five miles apart on a line extending from the Atlantic Ocean at Fenwick Island (on the border) to a point almost midway between the coast and Chesapeake Bay.

Over the intervening more than two centuries the value of the land along the border has increased greatly and the two states decided to define the boundary more closely. The survey was entrusted to the National Geodetic Survey, and the estimated \$120,000 cost will be divided equally among the three.

Little attempt was made over the past 222 years to maintain or restore the line. A check in 1950 by the Coast and Geodetic Survey, predecessor of the NGS, revealed that most of the monuments had suffered from nearly two centuries of neglect. The first marker, on the coast, was located on Federal property around the Fenwick Island Light and had been protected against vandalism and, to some extent, against the elements. The fifth marker was in an isolated area where it was protected by trees and was the best preserved of all the monuments. A marker at Middle Point, the westernmost end of the boundary, had been broken off at the ground level and later repaired with an iron band. Two other stones there were in fair condition except for weathering. The remaining two stones on the boundary, located along a highway, were insecure in the earth and so badly broken they were barely recognizable as boundary markers.

Verlin Novak, who was sent by the NGS to locate the old markers, found all but one of the original eight markers.

Actual survey of the boundary is expected to get underway early next year by a 17-man field party headed by Lieutenant Lewis A. Lapine. The survey will take five to six weeks during which the party will determine the exact geographic position (latitude and longitude) of each marker. Following this, a smaller group of personnel from the NGS and the two states will place new markers on the border at one mile distances between the original monuments, which will be left in place.

ARL, NSF Co-Sponsor Solar Energy Data Workshop

NOAA's Air Resources Laboratories and the National Science Foundation were co-sponsors of a two-day Solar Energy Data Workshop, held in Silver Spring, Md., November 29 and 30. The workshop brought together scientists and engineers involved in solar radiation monitoring and solar energy use, to assess the data requirements for solar energy applications and methods for meeting those needs.

recipe of the week



QUICK 'N' EASY SEAFOOD SUPPER

- 1 package (1 pound) frozen cod, haddock, or other fish fillets
- 1 cup sliced onion
- 2 tablespoons melted margarine or cooking oil
- 1 can (11 ounce) condensed Cheddar cheese soup
- 1/4 cup water*
- 1 can (1 pound) whole Irish potatoes, drained and sliced (2 cups sliced)
- 1 package (9 ounce) frozen cross-cut green beans, thawed
- 1/2 teaspoon salt
- 1/4 teaspoon pepper
- 1/4 teaspoon dry mustard
- 1 cup shredded process American cheese
- 3/4 cup dry bread crumbs mixed with 2 tablespoons melted margarine or cooking oil**

Thaw frozen fish; cut into 1-1/2 inch chunks. Cook onion in margarine or cooking oil until tender, but not brown. Add soup, water, potatoes, beans, salt, pepper, and mustard; mix well. Heat until bubbly. Fold in fish and 1/2 of the cheese. Spoon into shallow 1-1/2 quart casserole. Sprinkle remaining cheese over top of fish mixture and cover with bread crumbs. Bake in moderate oven, 350° F., until hot and bubbly, 25 to 30 minutes. Makes 6 servings.

*Water drained from potatoes may be used, if desired.

**Fine cornflake crumbs may be used instead of bread crumbs and margarine.

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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July 23, 2010