

Winter May Have Hit New Low in East

Average temperatures east of the Rocky Mountains during this past December through February appear to have hit a new low, according to Robert C. Quayle of EDS's National Climatic Center. While January of 1977 still stands as the coldest single month since formal weather records-keeping began in the late 1800's, for the winter as a whole, this winter's temperatures probably were worse than last.

Further, the combined average for two cold winters back-to-back shows the winters of 1977 and 1978 almost certainly setting a new low, vying with the winters of 1904-1905 for the record.

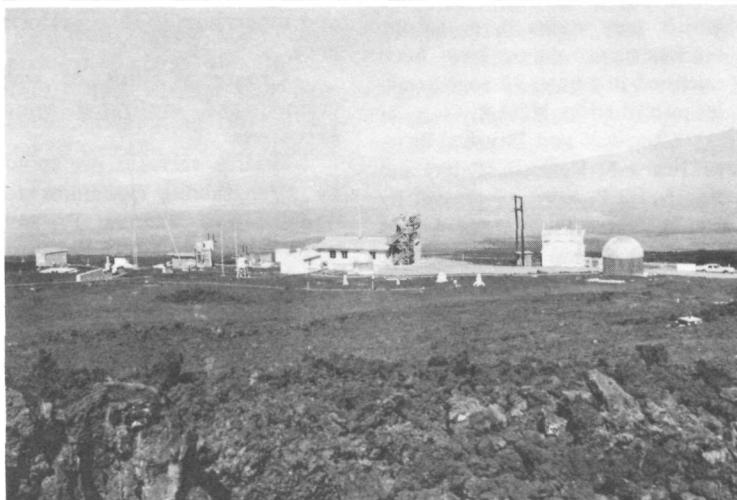
These preliminary conclusions are based upon a sampling of reports collected from several dozen National Weather Service stations scattered around the country. EDS's National Climatic Center in Asheville, N.C. will have final results in several months, after data from some 10,000 sources have been received and processed.

Despite some similarities, much of this winter's weather resulted from somewhat different circumstances than last year, as evidenced by the record drought in the far west last winter and the record floods this season.

Both winters exhibited high pressure in the west and low pressure in the east combining to pump cold arctic air deep into the U.S. heartland, but this year's high pressure area was farther north and east over Canada, leaving California open and exposed to Pacific storms. The jet streams were more intense, far-

(Continued on p. 2)

NOAA Data Buoy Aids Energy Study



ERL's Mauna Loa Observatory in Hawaii recently celebrated its 20th anniversary with a dedication ceremony for its new equipment. Story on page 7.

CIRES Finds Earthquakes May Give Advance Signals

A major earthquake which struck Hawaii in 1975 was preceded by several months' warning from nature, Arch C. Johnston of the NOAA-University of Colorado Cooperative Institute for Research in Environmental Sciences (CIRES) in Boulder, Colo., has reported.

Johnston found that vibrations from other earthquakes far distant from Hawaii slowed down as they passed through the area where the major Hawaiian quake later occurred.

The pressure waves from an earthquake travel through the earth at a rate that varies with the properties of the crust and mantle, according to Johnston. Seismological stations in Hawaii—part of a volcano observatory network run by the U.S. Geological Survey—routinely monitor the rumblings of the islands' volcanoes, and pick up more distant disturbances, including seismic waves from the active Fiji and Tonga island chains, some 3,000 miles (4,800 kilometers) away. In comparing the waves' arrival times at three sta-

tions in the observatory network, Johnston found that, beginning about three and a half years before the Kalapana earthquake, a given signal from one of the Fiji quakes took about a fifth of a second longer to reach the station nearest the Kalapana epicenter than had previous signals. The travel time returned to

(Continued on p. 2)

CSC Reform Will Affect All Employees

On March 2, President Carter announced the details of a comprehensive civil service reorganization and reform plan that will affect 2.1 million government civilian employees.

The proposed reorganization plan and reform act will require extensive and comprehensive legislation, but the major objectives are:

- Improve the organization
- (Continued on p. 2)*

A 100-ton NOAA Data Buoy, named OTEC-2, will collect data in the Gulf of Mexico, beginning this month, to provide important information on the mechanics of extracting energy from the sea. The collection system is a project of the NOAA Data Buoy Office, part of the NOAA Office of Ocean Engineering. NDBO, located at Bay St. Louis, Miss., is headed by Dr. Jerry C. McCall.

The 40-foot diameter discus buoy has been equipped to test the effect of seawater on Ocean Thermal Energy Conversion (OTEC) power plants. Such plants, currently in the experimental stage, generate electricity by using the temperature differential between the warm surface layers of the ocean and the colder waters below.

Under an interagency agreement with the Department of Energy, NOAA has moored the huge, unmanned buoy approximately 180 miles west of Tampa, Fla. It will remain on station for three- to six-month periods measuring the effects of biological fouling, corrosion, and scaling on heat transfer surfaces of the heat exchangers to be used in OTEC power plants.

The NOAA Data Buoy Office equipped OTEC-2 with a hydraulic flow system, which pumps seawater from a depth of 75 feet through tubes of aluminum and titanium into the heat transfer monitor assemblies. These metals are being evaluated for use in full scale OTEC plants, both because they are relatively corrosion free and because they contain the heat within the pipe.

A water quality indicator system is included to measure dissolved oxygen, acidity, turbidity, and conductivity of sea-

(Continued on p. 2)

Deputy Administrator
James P. (Bud) Walsh was confirmed by the U.S. Senate on March 7.

NOAA on Oil/Ecology

CEDDA Reports

On Mid-Atlantic

Oil Lease Areas

EDS's Center for Experiment Design and Data Analysis (CEDDA) has prepared an environmental study of Federal oil lease areas off the Mid-Atlantic coast for the Department of Interior's Bureau of Land Management (BLM). The report, entitled "Summarization and Interpretation of Historical Physical Oceanographic and Meteorological Information for the Mid-Atlantic Region," will be used by BLM to establish baselines for the physical characteristics of the marine and coastal environment, and to help predict the impact of exploration for the development of petroleum and natural gas deposits. The publication covers the region extending from 38°N to 41°N and from the coast to the 2,000 meter depth line.

The report summarizes historical meteorological and oceanographic data for the region to determine the movement of spilled oil and other pollutants. Much of the report describes the physical characteristics of the water masses in the Mid-Atlantic region, whose structure and variables attract and disperse pollutants.

Copies of the report are available from the Center for Experiment Design and Data Analysis, EDS, NOAA, Washington, DC 20235.

Retirement Club Started

A new retirement club is being started for National Ocean Survey (formerly U.S. Coast & Geodetic Survey) retirees, but it isn't limited to retirees only. Anyone still working can join.

The Coast & Geodetic Survey Retirement Club is the idea of Nicholas Koka, who presently works for NOS in the Gramax Building in Silver Spring, Md. His intention is to publish a membership list and possibly

MESA Booklet

Outlines Fuel

Oil Properties

The properties of fuel oils which may cause harm to the marine environment have been outlined in a new, 32-page booklet published by NOAA.

"Chemical and Physical Properties of Refined Petroleum Products," was prepared by ERL's Marine Ecosystems Analysis Puget Sound program office in Seattle, Wash.

The booklet includes detailed physical and chemical information on each of the six fuel oils routinely transported via tankers throughout the world's oceans, indexed according to type of refined petroleum product. Each fuel oil section contains two graphs: temperature and density of the specific fuel oil with respect to salt water, and the relative viscosity of the specific fuel oil at various temperatures compared with water.

Also listed in the publication are the major oil spills between 1956 and 1977, and several volume, weight, and temperature conversion tables.

Edited and compiled by Dr. Herbert Curl, Jr., and Kevin O'Donnell, the booklet also contains a list of references for additional information.

Copies of "Chemical and Physical Properties of Refined Petroleum Products" are available from the Office of Public Affairs, NOAA, Boulder, Colo. 80302.

start a newsletter, which may lead to get-togethers sometime in the future. According to Koka, there are about 300 retirees eligible, scattered across the U.S.

If you're interested, Koka asks to hear from you. Write to him at his home: 1509 Crest Rd., Silver Spring, Md. 20902; or phone him at (301) 649-5115.

Reform (from p. 1)

structure for Federal personnel administration.

-Improve the functioning of labor-management relations in the Federal sector.

-Provide managers in the Federal government with adequate authority to manage.

-Relate the pay of managers and supervisors to their performance.

-Create a corps of well-trained and motivated senior executives.

-Modify veterans preference by strengthening programs for disabled and Vietnam Era veterans while ending lifetime preference for veterans who are not disabled.

-Provide protection for those employees who lawfully make disclosures of violations of laws or regulations in the agencies where they work (whistleblowers).

-Protect employees against arbitrary management decisions and prevent merit system abuse.

To accomplish these goals, the present Civil Service Commission would be divided among

OTEC-2 (from p. 1)

water. The buoy also contains a standard set of meteorological sensors for collecting weather data at the OTEC-2 site. The experimental data will be analyzed by several government agencies and universities to determine the nature of the fouling in the heat exchanger tubes.

The data collected by OTEC-2, in conjunction with data from similar experiments previously conducted at Hawaii and the Virgin Islands, is expected to provide information vital to the development of large power plants capable of extracting the limitless solar energy stored in the oceans of the world.

Operational OTEC plants in the Gulf of Mexico would provide a substantial additional electrical power source for Gulf Coast states, thus reducing the nation's dependency on oil. Other possible uses of these power plants include the production of metals and chemicals from seawater and air which could then be transported to the continental United States by barge or ship.

separate agencies: the Office of Personnel Management to develop personnel policies, provide leadership, and administer central personnel programs; the Merit Systems Protection Board, to deal with abuses, provide resolution of employee complaints and appeals, and prevent reprisals; and the Federal Labor Relations Authority to consolidate the third-party functions in the Federal labor-management relations program with final decisional authority on matters within its jurisdiction.

If approved by Congress, the proposed Civil Service Reform Act would apply to all departments and agencies of the Executive Branch, the Administrative Office of the U.S. Courts, and the Government Printing Office. The General Accounting Office would have the authority to conduct audits and reviews to assure compliance.

Quake (from p. 1)

normal a few months before the quake occurred.

The other stations showed no such change, and did not change relative to each other. This means, Johnston said, that the slowing down of seismic signals was caused by some change in the immediate vicinity of the station; a more widespread or distant cause would have registered on instruments at the other stations as well.

A number of scientists at CIRES and elsewhere are studying such earthquake precursors, in hopes they may someday lead to accurate predictions of quakes.

Winter (from p. 1)

ther south, and less convoluted this year. Instead of a steady cold flow, like last year, this year's storms alternated at intervals of about five days, bringing snowy bursts of cold air with them every time. Both winters were similar in that the far west was warmer than normal.

Around the country, 1978 established new record cold winter average temperatures at such widely scattered places as Galveston, Tex.; St. Louis, Mo.; Cincinnati, Ohio; Nashville, Tenn.; and Concordia, Kans.

National Weather Service Launches SKYWARN '78

If you don't think a tornado could strike where you live, think again, says the National Weather Service. SKYWARN '78, this year's campaign to lessen deaths from these violent storms, is now underway.

"Tornadoes have occurred in every state in the Nation," according to Herbert S. Lieb, head of the Weather Service's Disaster Preparedness unit. "Anyone who thinks it can't happen where they live may be in for a deadly surprise.

"We're particularly concerned about schools," he adds. "Such large gatherings of youngsters are particularly vulnerable to the havoc caused by a tornado. Glass is shattered, furniture is thrown about, ceilings and walls may cave in.

"Every school has areas of relative safety where kids should be sent when a tornado threatens. There's good evidence that tornado drills pay off in schools."

He points to Pleasant Hill, Mo., as a good example. A tornado struck that community last May 4, destroying 25 houses, 17 mobile homes, and damaging 56 other residences. Two people were killed. Both the high school and elementary school were

heavily damaged, but there were only minor injuries among the schools' 1300 students because of advance warning and tornado drills.

"These lives were saved months before the tornado struck," one official said later, when commenting on the success of tornado drills in schools.

Preliminary figures from the Weather Service—a component of the Commerce Department's National Oceanic and Atmospheric Administration—show there were about 850 tornadoes in 40 states in 1977, 28 percent more than the post-1950 average of 662. But the death toll, Allen Pearson, director of the Weather Service's National Severe Storms Forecast Center, points out, was 43, well below the 114 average since 1950.

Tornadoes form so suddenly and are often so short-lived—sometimes lasting only a few minutes—that the best way to deal with them is with a well-rehearsed plan for quick action when one approaches. The basic rule is to seek shelter in a sturdy building, preferably in the basement. An interior hallway or closet is next best, away from possible flying glass. It's wise to get down on knees and elbows, with hands shielding the head.

College Credit Given For Another NWSTTC Course

The National Weather Service Technical Training Center in Kansas City, Mo., has another of its courses now eligible for college credit.

The American Council on Education (ACE) has announced a credit recommendation for the Instructor Training Course, subject to the conditions applied to previous recommendations.

The recommendation is for one semester hour of credit in Education in the lower division (freshman and sophomore) baccalaureate/associate degree category. The recommendation is retroactive to January 1974.

Tornado Safety Rules

A **TORNADO WATCH** means weather conditions are ripe for tornadoes to develop. Stay tuned to radio or television and listen for weather bulletins, even if the sky overhead is blue. Occasionally scan the horizon for the approach of dark, threatening clouds. There may not be time for an official tornado warning.

Stay alert for the abrupt onset of violent wind, rain, hail, or a funnel-shaped cloud. Listen for a sudden increase in wind noise. When in doubt, take cover. Tornadoes are often obscured by rain or dust. Some occur at night.

A **TORNADO WARNING** means a tornado actually has been sighted or indicated by radar. If the twister is nearby, seek inside shelter immediately, preferably in a storm cellar, underground excavation, or steel-framed or concrete reinforced building. **STAY AWAY FROM WINDOWS!**

In office buildings, go to an interior hallway on the lowest floor, or to a designated shelter area.

In factories, workers should move quickly to the section of the plant offering greatest protection, in accordance with advance plans.

In homes, the basement offers the greatest safety. Seek shelter under heavy furniture if possible. In homes without basements, take cover in the center part of the house on the lowest floor, in a small room such as a closet or bathroom, or under sturdy furniture.

Mobile homes are particularly vulnerable to destructive winds. Proper tie-downs to prevent overturning will minimize damage. (A warden should be appointed in mobile-home parks to scan the skies and listen to radio and television for warnings. There should be a designated community shelter where residents can assemble during a tornado warning.) Do not stay in a mobile home when a tornado is approaching. Seek refuge in a sturdy building or, as a last resort, in a ditch, culvert, or ravine.

In schools, wherever possible, follow advance plans to an interior hallway on the lowest floor. Avoid auditoriums and gymnasiums or other structures with wide free-span roofs. If a building is not of reinforced construction, go quickly to a nearby reinforced building, or to a ravine or open ditch and lie flat.

In open country, if there is no time to find suitable shelter, lie face down in the nearest depression, such as a ditch or ravine, and protect your head with your arms.

Shrimp May Die From Too Much Ultraviolet Light

Some shrimp near Seattle are getting sunburns, as part of a study to determine the effects that thinning of the atmospheric ozone layer might have on terrestrial and aquatic life.

"Scientists as well as the public are increasingly concerned that pollutants in the upper atmosphere may deteriorate the protective ozone layer and therefore allow dangerous ultraviolet radiation to reach the earth's surface," Dr. David Damkaer of NOAA's Environmental Research Laboratories said. "But there is very little information on the effects of ultraviolet radiation on living creatures, particularly its effects on marine life."

With funds from the Environ-

mental Protection Agency, Damkaer is studying the effects of varying levels of ultraviolet radiation on zooplankton—tiny drifting animals—that live in the upper layers of the sea. So far, the scientist and his colleagues at the Pacific Marine Environmental Laboratory have found that ultraviolet radiation can have dramatic, even lethal, effects.

Although it has not yet been possible to determine exact subsurface ultraviolet light levels, Damkaer speculates that shrimp larvae may already be living near their tolerance limit for ultraviolet, and that a slight increase could be damaging.

NOAA NEWS

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NOAA News reserves the right to make corrections, changes or deletions in submitted copy in conformity with the policies of the paper or the Administration.

Nancy Pridgeon, Editor
Warren W. Buck, Jr., Art Director

ADMIN Week -- Prize-Winning Essays, O

First Prize Winner

"One Interpretation of EEO Programs"--By Jose Acevedo, Jr.

To better understand the intent and scope of Equal Employment Opportunity policies, one must be cognizant of our past. Often one hears questions or comments concerning the necessity of "special" minority-oriented programs. It should be known that our government, at all levels, has denied certain segments of our population the basic civil liberties enjoyed by the majority of the people. Some of us are aware of the plight of Black Americans, in terms of slavery, the disruption of the family unit, the oppression and cruelty of local statutes and vigilante groups. However, a quick survey of our national history reveals that other ethnic and racial groups have also suffered legal and social indignities. The various Indian nations and tribes were subjected to alternating patterns of military campaigns and domination, coerced relocations and the imposition of a federal bureau known for its lack of advocacy for the very people they were to assist.

The Spanish settlers began populating what is today Florida and the southwest portion of the United States a century before the establishment of the first

English colony. It is estimated there were over 100,000 people of Spanish descent living in the aforementioned areas when the Pilgrims arrived at Plymouth Rock. Yet in these same areas people have been denied employment because of their Hispanic name, their color, and other displays of similar prejudices.

The Japanese and Chinese immigrants came mainly to work on the transcontinental railroad. They suffered the ineligibility to become American citizens though they had two or more generations born and raised in the U.S. World War II saw the illegal internment of over 100,000 Japanese Americans because of their national origin. These people were forced to sell their homes and properties at a fraction of their costs so that they could be quickly transferred to the various relocation camps.

Women also have suffered through practices that sought not to allow them any legal or economic autonomy but rather dependence on a man (i.e., a father, husband, or a male administrator of a will). Employment opportunities were limited

to clerical support, teaching, libraries, and nursing. The shortage of white men during World War I and II provided employment opportunities hitherto denied to blacks and women. Yet these opportunities quickly disappeared as the nation reverted to a peace-time economy.

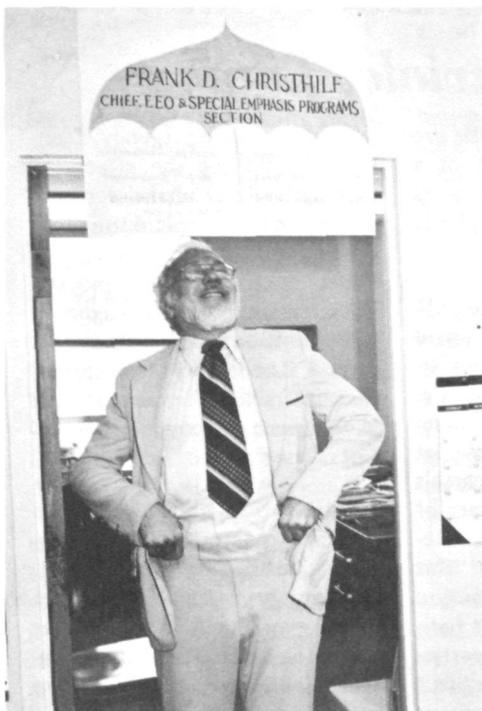
During the past fifteen years, great strides were made by a Congress forced to eradicate blatant racist and sexist laws and policies. Laws were passed to make equal employment a reality and not a theory. Through Federal statutes, Executive Orders, and court rulings, a clearer definition emerged of what employment policies were illegal.

Despite the passage of many laws aimed at eliminating employment discriminations, these practices still exist. The continuing employment prejudices are an affront to minorities and women as they are to all of society. It is an ongoing attempt by some to maintain the obsolete and illegal employment status quo. It is also an attempt to oppress segments of our population from their full potential as individuals; to prevent people from rising to the socio-

economic levels all strive for their families; to keep future generations tied within the senseless boundaries that were determined somewhere in our past.

This author sees equal employment opportunity programs from two perspectives—a process and a promise. The effort to eliminate discrimination is an ongoing process. As additional equal employment opportunities laws are passed (e.g., handicapped, age discrimination), more and more areas of illegal employment practices and policies will be defined and proscribed. The court rulings will then be responsible for clarifying any ambiguities between the spirit and the letter of the law.

The promise is what gives meaning to all of these efforts. The promise of any individual, regardless of race, ethnic origin, or gender, to be evaluated objectively on his/her abilities, merit and potential is the goal to be obtained. This will ultimately be achieved but only after previous employment decisions and options based upon prejudice, ignorance, and intolerance are replaced by sound personnel policies that acknowledge the dignity of all people.



Houses, A Time to Tell the Admin Story



Second Prize Winner

"What EEO Means to Me" -- By Meredith Beeg

EEO means never having to hear, "I'm sorry . . . we have to pay men more because they have families to support . . . we've never had blacks on our sales-force because our customers would turn to our competitors . . . your accent disqualifies you for a job as an accountant but there's an opening in our file room . . ."

Statements such as these may no longer be heard in the workplaces of this country but the underlying attitudes they express still sit behind many managerial desks masked in more socially acceptable terms.

For EEO to be a reality instead of an unfulfilled ideal, those attitudes which focus on irrelevant criteria for employment instead of on ability need to be turned around. The responsibility for doing so rests not only with management but with employees.

Management needs to realize that EEO is not simply a statistical game in which increased numbers of minorities in the workforce or promotions of women, deserved or not, are proof that the spirit of EEO prevails. Employees need to realize that being female or a member of a minority group is not a substitute for qualifications and on-the-job effort.

To be truly equal, an opportunity for a job or a promotion must be extended with an equal offer of management support toward achieving successful performance. Support must be offered in terms of assuring complete understanding of the requirements of the job; providing training opportunities to assist in overcoming deficiencies in skills as well as those which might be culturally based; creating a climate of interest in the employee as a person with some-

thing of interest to contribute to the work group; giving honest praise and constructive criticism when warranted; and in making contact for no reason other than to let the employee know that his or her presence is recognized and valued.

To be truly equal, a job opportunity must be received with the understanding that it has been earned through preparation and must be accepted with the attitude that it will be deserved through continuing and diligent effort.

EEO means equal treatment of all employees by management and equal effort on the part of employees to meet management expectations. Unequal treatment such as weak discipline, easier work loads, faster promotions, or unwarranted praise leaves employees confused about their abilities and causes peer resentment of both favored employees

and EEO programs. Lack of effort on the part of employees selected under special EEO programs has a divisive effect in work groups.

At its worst, EEO is a game in which all the players are victims of statistical improvements at the expense of meaningful opportunity and morale. At its best, it is a joint venture between management and employees in achieving a system of employment and advancement in which everyone has a chance at job opportunities based on meaningful job-related criteria.

EEO does mean never having to hear discriminatory remarks in the workplace but, more importantly, it also means a gradual eradication of discriminatory attitudes and building a climate in which the basis for affording employment opportunity is merit.

Within Grade Increases (GS) -- When Are They Due?

Employees paid under the General Schedule (GS) are due regular within grade salary increases at the end of one year (in steps 1, 2, 3), two years (in steps 4, 5, 6), or three years (in steps 7, 8, 9), except where such increase would result in a salary rate in excess of \$47,500, which is the current limit for the General Schedule pay system. Within grade increases are approved if the employee's supervisor and next higher supervisor make the determination that the employee's work is at an acceptable level of competence during the waiting period and, therefore, merits the increase. NOAA Form 54-3 is then properly certified and forwarded to the servicing personnel officer for approval and certification.

At least 60 days before the employee's within grade increase is due, a supervisor, who feels that he cannot certify that an employee is entitled to an increase and contemplates withholding the within grade increase, must discuss with the

employee those work factors which raise the question about the employee's performance being of an acceptable level of competence. This discussion should be summarized in writing, noting the date of discussion and providing warning that failure to improve could result in denial of the employee's within grade increase. A copy must be given to the employee and to the servicing personnel office.

When the employee's performance does not sufficiently improve, at least 2 weeks prior to the end of the waiting period, the immediate supervisor, following discussion with the reviewing official (usually the next higher supervisor), forwards an uncertified NOAA Form 54-3 (with specific information relating to employee performance) to the servicing personnel office. Ordinarily the servicing personnel officer will concur with supervisory recommendations and certify to the nonacceptable level of competence. However,

the servicing personnel officer may reverse a negative determination on the basis of facts not considered by or unknown to the supervisor.

When a personnel officer agrees to and certifies that an employee's work is not of an acceptable level of competence, he/she must so inform the employee in writing, not later than the date of completion period, of the basis for the negative determination; the employee's right to reconsideration of the determination; and the time limit within which reconsideration may be requested.

An employee who has been notified of a final negative determination may request reconsideration by the servicing personnel officer within 15 calendar days of receipt of the unfavorable decision. If the employee requests reconsideration, the case is reviewed. The review process provides the employee and a representative the opportunity to contest, personally and

in writing, the basis for the negative determination. A decision is rendered by an official who took no part in the original decision.

If the original negative determination is reversed, the within grade increase is effective on the date it would have been effected without question. If the negative determination is sustained, the employee is entitled to appeal that decision by writing to the CSC Federal Employees Appeal Authority (FEAA) within 15 calendar days of receipt of the final decision. Whether or not the employee pursues an appeal to the CSC, a new determination as to the employee's acceptable level of competence is made within 52 calendar weeks of the date when the employee's regular within grade increase was due. A favorable determination results in immediate granting of the within grade increase. A negative determination reinitiates the reconsideration and appeal process.

NOAA Personnel Division Lists Current Vacancies

Announcement Number	Position Title	Grade	Major Line Component	Location	Issue Date	Closing Date
321-78	EEO Specialist (Employment)	GS-12	ADMIN	Rockville, Md.	3/16/78	4/6/78
322-78	Trade Specialist	GS-11/12	NMFS	Washington, D.C.	3/16/78	4/6/78
323-78	Librarian or Technical Information Specialist	GS-9/11	EDS	Silver Spring, Md.	3/16/78	4/6/78
324-78	Supervisory Meteorologist	GS-14	NESS	Camp Springs, Md.	3/16/78	4/6/78
325-78	Supervisory Fishery Marketing Spec.	GS-13	NMFS	St. Petersburg, Fla.	3/16/78	3/30/78
326-78	Research Chemist	GS-12	NMFS	College Park, Md.	3/16/78	4/6/78
327-78	Research Animal Husbandman	GS-7	NMFS	College Park, Md.	3/16/78	4/6/78
328-78	Supervisory Research Animal Husbandman	GS-12	NMFS	College Park, Md.	3/16/78	4/6/78
330-78	Geodetic Technician	GS-12	NOS	Baton Rouge, La.	3/21/78	4/11/78
331-78	Meteorological Technician	GS-11	NWS	Garden City, N.Y.	3/21/78	4/4/78
332-78	Electronics Technician	GS-11	NWS	Los Angeles, Calif.	3/21/78	4/4/78
333-78	Meteorologist	GS-12	NWS	Topeka, Kans.	3/21/78	4/4/78
334-78	Meteorologist	GS-12	NWS	Cheyenne, Wy.	3/21/78	4/4/78
335-78	Meteorological Technician	GS-10	NWS	Chicago, Ill.	3/21/78	4/4/78
336-78	Fishery Management Specialist	GS-12	NMFS	St. Petersburg, Fla.	3/23/78	4/6/78
337-78	Supervisory Physical Scientist	GS-12	NMFS	Bay St. Louis, Miss.	3/24/78	4/14/78
338-78	Position Classification Specialist	GS-15	NOS	Rockville, Md.	3/24/78	4/7/78
339-78	Computer Systems Analyst	GS-12	NESS	Camp Springs, Md.	3/24/78	4/14/78
340-78	Hydrologist	GS-13	NWS	Slidell, La.	3/24/78	4/7/78
341-78	Meteorologist (Leading Forecaster)	GS-12	NWS	Pittsburgh, Pa.	3/24/78	4/7/78
344-78	Electronics Technician (Senior)	GS-11	NWS	Omaha, Neb.	3/24/78	4/7/78
345-78	Electronics Technician	GS-10	NWS	Sioux City, Iowa	3/24/78	4/7/78
346-78	Electronics Technician	GS-10	NWS	Omaha, Neb.	3/24/78	4/7/78

CALENDAR OF EVENTS

- April 17-21
Miami Beach, Fla. 1978 Spring Meeting of American Geophysical Union, at the Deauville and Carillon hotels in Miami Beach, Fla. (Contact: Meetings Registration, AGU, 1909 K St., NW, Washington, D.C. 20006.)
- April 27-28
Williamsburg, VA. Shoreline Erosion in Bays, Sounds, and Estuaries; The Problem and Solutions workshop, sponsored by NOAA Sea Grant, at the Bonhomme Richard Inn, Williamsburg, Va. (Contact: Marine Advisory Services, Virginia Institute of Marine Science, Gloucester Point, Va. 23062; phone: (804) 642-2111.)
- May 2-5
Los Angeles Calif. Conference on Flash Floods, sponsored by American Meteorological Society, supported by AGU, Army Corps of Engineers, NOAA, University of Colorado, State of California, at Airport Marina Hotel. Two conferences will be held: one on the hydrometeorological aspects and one on the human aspects of flash floods. (Contact: Dr. Eugene L. Peck, Hydrologic Research Laboratory W23, National Weather Service, Silver Spring, Md. 20910; phone: (301) 427-7619.)
- May 9-11
Windsor, Ont. 21st Annual Conference of International Association for Great Lakes Research. (Contact: Marie Sanderson, Conference Chairman, Dept. of Geography, University of Windsor, Windsor, Ontario N9B 3P4.)
- May 22-25
Norfolk, Va. Sanitation Conference for the Seafood Industry, sponsored by NOAA Sea Grant and National Fisheries Institute, at Omni Hotel, Norfolk, Va. (Contact: George J. Flick, Dept. of Food Science and Technology, Virginia Polytechnic Institute and State University, Blacksburg, Va. 24061; phone: (703) 951-6965.)

OBITUARIES

Helmut A. Fusch

Helmut A. Fusch, retired Weather Service meteorologist, died February 15 in Florida. Retired about nine years ago, Fusch's last duty station was WSFO Columbia (S.C.). Other duty stations included Tampa, Fla., San Juan, P.R., Hatteras, N.C., and Florence, S.C., where he was MIC. He is survived by his wife Sue, 4021 Ibis Rd., Orlando, Fla. 32803, and two sons.

"E.L." Haynes

"E.L." Haynes, Steward Department of the NOAA Ship Ferrel (and a Navy retiree) died March 8, after a short illness, at the Public Health Service Hospital in New Orleans, La. Haynes had been with NOS for eleven years. He served aboard the Explorer, the Mt. Mitchell, and the Ferrel in the Steward Department. He is survived by his wife Lucille and two daughters.

Wayne E. Hillman

Wayne E. Hillman of the WSFO Sioux Falls, S. Dak., died March

1. He joined the NWS in 1955 at Suitland, Md., and transferred to Sioux Falls in 1956. He is survived by his wife, Helen, and two daughters at Canova, S. Dak., 57321.



These NOAA employees participated in the Supervision and Group Performance course conducted in Rockville, Md., January 23-27: Seated (left to right) Harry Oakley, Al Lane, Fay Robusto, Ola Watford, Jackie Spahn, John Gergen, Cathy Hiland, Dave Shimomura, Gale Haggard, Libby Wade, Al Feemster; standing Chuck Whalen, Dan Bella (Instructor), Bob Geiman, Sarah McMahan, Fred Weldon, Gene O'Reilly, Charles Moose, Joan Wilson, and Carol Denison.



Receiving the blessing at the dedication of the Mauna Loa Observatory, performed in the Hawaiian language, are (foreground) MLO Director Dr. John M. Miller and ARL Director Dr. Lester Machta.

Dedication Ceremonies Held At Mauna Loa Observatory

On January 28, more than 80 invited guests and distinguished visitors attended dedication ceremonies at ERL's 11,150 foot Mauna Loa Observatory in Hawaii. The ceremonies also marked the observatory's 20th anniversary. Mauna Loa is the oldest observatory in the Geophysical Monitoring for Climatic Change (GMCC) network, headed by Dr. Kirby Hanson.

The changes at Mauna Loa included a complete renovation of the main building to install the new intake system for sampling aerosols and gases. Other improvements completed were a new solar radiation tower, new living facilities, and a parking lot

for visitors.

The dedication ceremonies were conducted by Dr. John M. Miller, director of Mauna Loa Observatory. Among the speakers were Daniel K. Akaka, U.S. Representative to Congress; Herbert Matayoshi, mayor of the Island of Hawaii; and Dr. Lester Machta, director of ERL's Air Resources Laboratories, Silver Spring, Md.

The Mauna Loa Observatory was founded jointly by the National Weather Service and the National Bureau of Standards. Ralph Staire, 77, one of the founding scientists from NBS, also was present for the ceremony.



COD IN TOMATO-ONION SAUCE

- 2 pounds cod or other fish fillets, fresh or frozen
- 1 can (8 ounce) tomato sauce
- 1 cup sliced onion
- 2 tablespoons lemon juice
- ½ teaspoon oregano

- ½ teaspoon sugar
- 1 chicken bouillon cube, crumbled
- ½ teaspoon salt
- Fresh cucumber, sliced (optional)

Thaw fish, if frozen. Combine tomato sauce, onion, lemon juice, oregano, sugar, and bouillon cube in saucepan. Bring to simmering stage. Cover and cook over low heat 15 minutes or until onion is tender. Spoon 1/3 of the sauce over bottom of shallow 2-quart baking dish. Cut fish into 6 equal portions. Ar-

range fish on sauce in baking dish. Sprinkle with salt. Spoon remaining sauce over fillets. Bake in moderate oven, 350°F., for 25 to 30 minutes or until fish flakes easily when tested with a fork. Garnish with thin cucumber slices, if desired. Makes 6 servings.

Employees who are subject to city tax withholdings for the City of Harrisburg, Pa.; may notice a minor change in their city tax for salary checks dated on or after March 22, 1978.

BEST FISH BUYS

According to the NMFS National Fishery Education Center in Chicago, the best fish buys for the next week or so are likely to be frozen fish sticks and frozen dressed smelt along the Northeast Seaboard; fresh whole fluke and fresh sea bass in the Middle Atlantic States, including the D.C. area; fresh rock shrimp and fresh whole speckled trout in the Southeast and along the Gulf Coast; frozen fish portions and frozen pan-dressed whiting in the Midwest; fresh cod fillets and fresh steamer clams in the Northwest; and frozen turbot fillets and frozen butterfish fillets in the Southwest.

Doppler Radar

Lead Time Added to Warning

A powerful Doppler radar in Norman, Okla., detected tornadoes in severe thunderstorms more than 20 minutes before they became visible to ground observers, and added at least 10 minutes to the lead time possible in tornado warnings.

In a study conducted by Donald W. Burgess, of ERL's National Severe Storms Laboratory, Donald R. Devore, a forecaster from the Oklahoma City Weather Service Forecast Office, and Air Force Captain Joel D. Bonewitz, from the Air Weather Service, the Doppler radar and its high-technology data handling and display systems also showed unexpected promise in detecting conditions associated with the heavy thunderstorm rains that can produce lethal flash floods.

The experiment is a cooperative effort by NOAA and the Air Weather Service, to test the tornado-detecting performance of an experimental Doppler radar

in an operational warning mode. The two-year experiment resumes in April.

If the evaluation is positive, the National Weather Service, possibly in conjunction with the Air Weather Service and the Federal Aviation Administration, will develop a prototype Doppler radar facility, and continue to push this new technology towards operational use sometime in the 1980's.

Income Taxes

Owe Federal taxes? Better pay them. Commerce Department payroll and personnel offices (and that includes NOAA) have been reminded that the procedure for handling Notice of Levy forms will be strictly enforced. This means that Payroll can withhold full salary checks until the amount you may owe Internal Revenue Service is paid in full.



The National Data Management Committee met at the Southwest Fisheries Center in La Jolla, December 6 and 7. This group is responsible for providing advice on the technical aspects of information and data systems development to the NMFS Office of Information Systems (OIS). Committee members include representatives appointed jointly by each Center/Regional Director, and a representative of Environmental Data Systems. Committee Chairman is Dr. Hoyt Wheeland, OIS.

Shown left to right: James DeLine, Vice President of DBD Systems, Inc., guest speaker; Eric Gross, Southeast Fisheries Center, Miami; Fred Brooks, OIS, Washington, D.C.; David Mackett, Southwest Fisheries Center; Richard Heimann, California Department of Fish and Game, Menlo Park, Calif.; Raymond Tillery, OIS, Washington, D.C.; Fred Kellenberger, Southwest Fisheries Center; Robert Reimann, Northwest and Alaska Fisheries Center, Seattle, Wash.; Dr. Wheeland; Eugene Heyerdahl, Northeast Fisheries Center. Newton Page, EDS, was absent from the picture.

National Oceanic and Atmospheric Administration

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