



NOAA WEEK

U.S. DEPARTMENT OF COMMERCE National Oceanic and Atmospheric Administration

Pamela R. Chelgren Is First Woman in the NOAA Corps

NOS, NWS Announce New Plans To Promote Safety of Boaters

Coinciding with the observance of National Safe Boating Week--July 2 to 8--the National Ocean Survey and the National Weather Service have announced new steps being taken to enhance the safety of the Nation's 46 million boaters. NOAA is a member of the National Safe Boating Committee which annually promotes the observance.

The new steps being taken by NOAA include:

--Major progress in computer-supported compilation of nautical charts, a long range program which promises the speedier production of improved nautical charts. The first charts utilizing maximum computer support techniques are expected to come off the presses by 1973, with the entire charting program coverage to receive computerized assistance by 1979.

--New hydrographic surveys using a ship-board computer-supported survey system in 11 areas of the nation in support of the chart production program which will result in the issuance of approximately 500 revised editions of existing charts in the coming year.

--The production during the next two years of 10 new or completely updated charts for the East and Gulf of Mexico coasts and Alaska.

--The addition of four National Weather Service VHF-FM radio stations for around-the-clock weather broadcasts in Baltimore and Eden, Md.; Rockland, Me.; and New Bern, N.C., bringing to 63 the number of stations in the national network. Radio weather transmissions are broadcast at frequencies of 162.55 MHz or 162.40 MHz from NWS offices 24 hours a day. The programs consist of taped weather observations, radar reports, forecasts and warnings. When dangerous weather threatens, routine transmissions are interrupted and an emergency warning is broadcast. The stations provide a detailed weather picture at all hours and thus assist contractors, campers, sportsmen and others, in addition to mariners.



Secretary Peterson swears in Pamela R. Chelgren as NOAA Corps' first woman ensign. Her father, Navy Captain John L. Chelgren, holds Bible.

Secretary of Commerce Peter G. Peterson yesterday administered the oath of office as a temporary ensign in the NOAA Commissioned Corps to the first woman appointed in the Corps--Pamela R. Chelgren. She will now attend the customary nine-week orientation course at the NOAA Officer Training Center at the U.S. Merchant Marine Academy in Kings Point, N.Y.

A June 1972 graduate of the University of California at Berkeley, where she majored in bio-engineering, Ms. Chelgren was a member of the Tower and Flame Honor Society and the Sailing Club. During her senior year she worked part-time as a statistical clerk in the University's Space Sciences Laboratory.

Born at Annapolis, Md., she attended schools in New Mexico, Maryland, Washington, and California, completing high school at Point Mugu, Calif., in 1968. She was designated as a California State Scholar and also won a Bank of America achievement award, the Elks' most valuable student award, and a life membership in the California Scholastic Federation--the State's honor society.

Ms. Chelgren is the daughter of U.S. Navy Captain and Mrs. John L. Chelgren of Hyatts-

(Continued on page 6)

Proposed Weather Modification Reporting Regulations Published

Proposed regulations for reporting weather modification activities to NOAA were published June 10, 1972, in the Federal Register.

When they become effective, the regulations will implement Public Law 92-205 of December 18, 1971, requiring all non-Federal weather modification activities in the United States and its territories to be reported to the Secretary of Commerce. Federal agencies are expected to be included in the requirement by Executive Order. NOAA is carrying out the reporting program on behalf of the Secretary.

The reporting requirement will, among other things, increase expertise in the field of weather modification, and scientists and other concerned persons will have access to scientific information about past and ongoing efforts at weather modification, can avoid unneeded and wasteful duplications of effort, can check both desirable and undesirable atmospheric changes against records of weather modification, and can prevent territorial overlappings of weather modification operations.

The regulations are expected to become effective late in 1972. During the 90 days after publication in the Federal Register, interested persons are invited to submit written comments to the NOAA Administrator. These comments will be considered for incorporation in the regulations, and the final regulations then will be published in the Federal Register.

The reporting program will be administered by the new Office of Environmental Modification, headed by Donald F. Moore, NOAA Assistant Administrator. The records of weather modification activities will be made publicly available to the fullest extent practicable. The Public Law requires publication of summaries of these records from time to time. NOAA intends to publish an annual summary.

Under proposed regulations, weather modification projects and activities must be reported to NOAA before they are initiated. Interim and final reports are also required, including details on the number of days of field operations, the number of storms, clouds, or other weather phenomena on which modification attempts are made, the number of modification missions carried out, number of hours each type of modification equipment was operated, and total amount of each modification agent used.

The penalty for conviction of violating Public Law 92-205, and rules adopted under its authority, is a fine of not more than \$10,000.

NOTE: For the next few months, space that ordinarily would be devoted to Length of Service Awards will be devoted to retirements. Award columns will be resumed as soon as possible.

Dr. Brian J. Rothschild Is Named Director of Fisheries Center

Dr. Brian J. Rothschild, former Deputy Director of the National Marine Fisheries Service Northwest Fisheries Center, is the new Director of the NMFS Southwest Fisheries Center in La Jolla, Calif. He succeeds Dr. Alan R. Longhurst, who resigned to accept a high-level fisheries post in England.

From 1962 to 1968, Dr. Rothschild served at the NMFS Honolulu laboratory. From 1968 to 1971, he taught fisheries subjects at the University of Washington, returning to NMFS in September 1971. He is the author of 45 publications covering many aspects of fisheries and fishery management.

A native of Newark, N.J., Dr. Rothschild earned his B.S. at Rutgers University, his M.S. at the University of Maine, and his Ph.D. and Post Doctoral degrees at Cornell University. He also has taught at the University of Hawaii and served as a consultant to several international organizations.

He is a member of 11 professional societies and has served as a member of numerous working groups and committees affiliated with fishery research and oceanography.

NGS Begins Two-Year Survey in New York

A 20-man National Geodetic Survey field party, headed by Harold L. Miller, has begun a two-year, \$470,000 survey in Erie County, N.Y. The survey, a cooperative project of Erie County and NOAA, will provide a geodetic control network, the need for which has been accentuated by rapidly rising land values and commercial and government requirements for planning, construction and tax mapping. It will furnish precise geographic positions (latitude and longitude) throughout the county's 1,058 square miles.

While in the vicinity, cooperation and coordination will also be effected with the U.S. Geological Survey for topographic mapping and with Federal and State agencies concerned with the International Field Year for the Great Lakes.

R.A. Wood Selected OIC at Winnemucca, Nev.



Richard A. Wood, former Weather Service Specialist at the Weather Service Forecast office in Denver, Colo., is the new Official in Charge of the NWSO in Winnemucca, Nev.

He served earlier in Washington, D. C., Texas, and North Carolina, and was in the U.S. Navy from 1950 to 1953.

ERL Begins Worldwide Program To Monitor the Atmosphere

NOAA research scientists and meteorologists are designing an extended worldwide observing program to measure trace constituents in the atmosphere that could affect climatic change and to determine their trends over long periods of time. To accomplish the trend determination, they plan to measure such elements as carbon dioxide, fine particles, other trace materials in relatively clean air, and solar radiation attenuation.

The keystone of this new global operation is NOAA's Mauna Loa Observatory, which has been in operation on the island of Hawaii since 1956. The observatory location, at 11,200 feet on Mauna Loa's broad lava flank, has two major meteorological characteristics -- a low-level inversion below the observatory and a westerly flow of "clean" air that has moved thousands of miles across the Pacific.

Additional stations will be added in appropriate locations to sample "global air." Among the sites to be instrumented are Barrow, Alaska; South Pole, Antarctica; a southwestern Pacific location; and possibly, a South American location on the Pacific coast.

The new observing program, named Geophysical Monitoring for Climatic Change (GMCC), is headed by Donald H. Pack, deputy director of the Environmental Research Laboratories' Air Resources Laboratory, in Silver Spring, Md.

Air Resources Laboratories scientists stationed in Boulder, Colo., are working on the problems of establishing and maintaining the exacting instrumental accuracies needed to measure trace constituents in concentrations that may often be well below one part per million. The atmospheric background of fine particulates against which any changes must be measured is about 100 per cubic centimeter of air. By way of comparison, car exhaust gases may contain as many as a hundred million such particles per cubic centimeter. Measurements of specific elements must be even more sensitive. Any changes in lead, for example, must be compared with lead backgrounds as low as a millionth of a billionth of a gram in one cubic centimeter.

The data from the GMCC observatories and other measurements made by the United States and other nations will be evaluated to determine the transfer of material between hemispheres, the rates of removal, seasonal changes, and any other relevant changes in the character or behavior of the global atmosphere. These studies will relate climate variability to the trace content of the atmosphere and evaluate the possible changes brought about by both natural and man-made events. For example, the 1963 Mt. Agung eruption caused a precipitous drop in solar radiation received at the Mauna Loa Observatory. The radiation values slowly returned to normal after seven years.

(Continued on page 7)

NWS Cooperates in Providing Daily Evaporation Reports

The National Weather Service's Agricultural Service Office at Lubbock, Tex., and the Texas A&M University Agricultural Research and Extension Center at Lubbock are now cooperating to supply irrigation farmers in the South Plains of Texas with a new management tool--daily evaporation reports.

Surface water evaporation readings taken every 24 hours at five locations in the area are averaged and the data disseminated through the NWS weather wire service to mass media outlets on the South Plains.



Mr. Newton

and how much water is needed, and help them make sure they are not wasting any water.

The evaporation pan readings are taken at Lubbock, Locketville, Needmore, Plainview, and Spur, and the information is reported as losses from evaporation during the past 1,3,5,7,10 and 15 days.

The data are most useful in arid areas where crops must be irrigated, and where the water used by plants is determined more by soil moisture conditions than by weather conditions.

Mr. Newton explained further that not only will the reports enable the farmers to save money through lowered costs of irrigating, there also will be highly significant savings of the diminishing water supply. Since the water used for irrigation is being pumped from a depletable water supply underground, any saving of this supply will extend the productivity years of the area.

B.W. Amann Becomes OIC at Rochester, Minn.

Blaine W. Amann, Weather Service Specialist at the National Weather Service Office in Rochester, Minn., has been selected to be Official-in-Charge of the office.



He has served at Rochester since his entry into the NWS in 1956, after serving approximately four years as a weather observer with the U.S. Air Force.

He has attended Oregon State University and Pennsylvania State University.

Employee Rights in Union Activity

Union activity in the Federal Government continues to grow. As more employees are being affected by labor management relations, they raise many questions concerning their rights in this rapidly expanding area. Executive Order 11491, signed by President Nixon on October 19, 1969, (amended on August 26, 1971) outlines the role of the Federal employee in labor management relations.

The order states that the well-being of employees and efficient administration of the Government are benefited by providing employees an opportunity to participate in the formulation and implementation of personnel policies and practices affecting the conditions of their employment. This sets the tenor of the executive order and, thus, the tenor of labor relations in the Government. Employees are encouraged to voice their opinions for the benefit of all and one avenue for this voice is union participation.

Every Government employee has certain rights, guaranteed by E.O. 11491, in regard to labor relations. These include the right, freely and without fear of penalty or reprisal, to form, join, and assist a labor organization or to refrain from any such activity. Non-supervisory employees have the further right to participate in the management of a labor organization and act for the organization in the capacity of an organization representative, including presentation of the union's views to agency officials. Supervisors have the right to join a labor organization but they may not participate in the management of the organization as this would conflict with their role as agency managers.

The thrust of Federal labor management employee rights is toward freedom of choice. Unlike private industry, where closed shops exist, the Government, through E.O. 11491, protects its employees from coercion from both the unions and management. Employees must weigh the benefits and detriments of union affiliation and decide for themselves. In this manner Federal unionism exists solely on its merit as the employee's representative.

Military Leave

During the summer months, many NOAA employees will be requesting military leave for National Guard and Reserve Summer Camps. Full-time NOAA employees who belong to the National Guard or one of the Armed Forces Reserves are entitled

to 15 calendar days of authorized military leave per year, as prescribed in Chapter 12, Section 8 of the NOAA Personnel Handbook.

Authorization for military leave must be supported by properly endorsed military orders or other official evidence that military duty is to be performed during this period. Leave is computed on a calendar-day basis. This means that if an employee is to be on military leave from Monday of one week to the Friday of the following week, the intervening Saturday and Sunday will be charged to military leave. However, the non-work days (Saturday and Sunday) before and after the leave will not be charged to military leave.

If an employee is on military leave on a regularly scheduled overtime day, he is entitled to overtime compensation on that day if he has been in a pay status 40 hours of the basic workweek. Employees are also entitled to any other premium pay due them from their regular duty status while on military leave.

Acceptance of Voluntary Services

From time to time the question has been raised as to the propriety of accepting voluntary services. Students and others occasionally volunteer their services at weather stations, on NOAA vessels, at laboratories and other NOAA installations.

As a general rule, the acceptance of such services is not permitted; however, voluntary services may be accepted if they do not constitute an employer-employee relationship and if there is a discernible purpose to the service over and above the mere rendering of services. For example, if it can be shown that the person volunteering services would profit educationally or scientifically by the experience, then the accepting of his service is entirely appropriate.

To prevent a claim against the Government for rendering services without compensation, it is imperative that the volunteer execute a waiver of compensation. This waiver must preclude any future claim against the United States for the accepted service.

In accepting such service, the main concern is that it is clearly in the best interests of NOAA. This decision obviously must be made by local officials. When there is doubt as to the propriety of accepting volunteer services, local officials are urged to consult their Personnel Office before accepting service.

Career Counseling Workshop



NOAA Personnel recently conducted a Career Counseling Workshop for eight supervisors of the National Weather Service's Central Region. With emphasis on supervisory counseling functions, the workshop included specialized instruction, simulated counseling situations and audio-video tape aids. The Central Region Director and Personnel Officer attended the luncheon and presented the workshop certificates. Similar workshops will be conducted throughout NOAA with the intent of strengthening the overall effort in career counseling.

Shown above are, left to right; Guy H. Gray, Clyde H. Downes, Charles Knudsen, Harold M. Gibson, Frank Christhilf, Doyle Cook, Bill Waldheuser, Norman Prosser, Dick Lumokin, Wallace Okazaki, Ken Hoss and Jim Taylor.

American Indian Program

In August, 1970, an inter-agency training agreement was consummated between the Bureau of Indian Affairs (BIA), Department of the Interior, and the National Weather Service. This agreement provided for the establishment of a host-enrollee program to provide elementary meteorological training for selected Indians at specified weather stations in the Central, Southern and Western Regions of the National Weather Service. Training under this program may be completed in one year or less, after which successful trainees are assured of appointment to meteorological aid positions within the region where they were trained.

The initial appointment is in grade GS-2 or GS-3, depending on the trainee's qualifications. The lowest journeyman level for meteorological technicians is currently GS-7. Successful trainees will advance to this level, consistent with Civil Service Commission regulations, as fast as their ability and performance dictate.

BIA identifies probable candidates who should have: (a) Graduated from high school or possess the GED high school equivalency certificate; and (b) been educated in a least one year of algebra or more advanced math, and two and one-half years' courses in other math, natural or physical sciences and/or technology.

BIA provides transportation costs to the training site and up to one year's subsistence expenses for those program participants selected by the National Weather Service. To date, seven trainees have participated in the program.

Equal Employment Opportunity

In recent issues of "Personnel Perspective" we have featured discussions of the various "Special Programs" that are designed to improve employment and advancement of the underutilized and disadvantaged. This issue will attempt to inform you of some of the employment patterns within NOAA that necessitate continuing efforts to improve the status of groups that have traditionally not shared equally in the American dream.

Recently the NOAA EEO Committee and the Personnel Division presented to the Administrator the statistical picture of female and minority employees in NOAA as of March 1, 1972. Following are some of the more significant findings of the survey:

- The average grade for non-minority employees was 10.3; for minority, 7.2.
- The average grade for men was 10.5; for women, 5.7.
- The median grade for non-minorities was GS-10; for minorities, GS-7.
- The median grade for men was GS-11, for women, GS-5.
- Minorities comprise less than 3% of the professional, scientific and engineering staffs in NOAA; women comprise less than 1% of these staffs.
- Minorities are over-represented in the lower pay rates of our various ungraded pay systems and under-represented at the higher pay levels.
- Despite the success of many of NOAA's Special Interest Programs, most statistical indicators of progress in the EEO area remained stable for the one-year period ending March 3, 1972.

C. Doyle Innis Retires, Receives Commerce Bronze Medal



C. Doyle Innis, Executive Officer of the National Marine Fisheries Service, received a Bronze Medal at his recent retirement party. He was recognized for his service to the NMFS and its predecessor agency, the Bureau of Commercial Fisheries.

A veteran of 31 years' Federal service, in 1958 Mr. Innis became the first personnel officer of BCF. After serving in that capacity for 12 years, he was named Deputy Assistant Director for Administration, and in 1970 was assigned as Executive Officer.

ER-NWS Flood Relief Fund Is Established

To assist National Weather Service Eastern Region personnel who sustained very substantial personal losses in the Agnes flood, ERH has established an ER-NWS Flood Relief Fund.

Checks payable to this fund may be sent to:

National Weather Service Eastern Region
585 Stewart Avenue
Garden City, New York 11530
Attention: James Whelan, Personnel Div.

To date it has been determined that Edward Sherry of the Weather Service Office at Dulles International Airport sustained a loss of approximately \$3,000 in personal property and structural damage. Leo Brozyna of the Wilkes-Barre - Scranton, Pa., Weather Service Office had his home almost totally submerged and his extensive loss in property and structural damage is estimated at \$15,000.

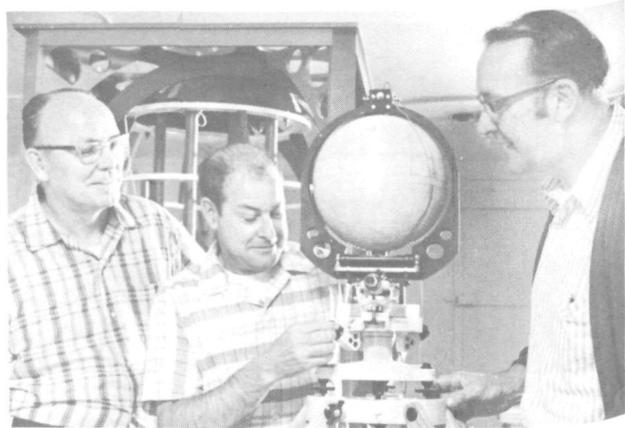
Pamela Chelgren (Continued from page 1)

ville, Md. Captain Chelgren is presently with the Naval Ships Systems Command.

Rear Admiral Harley D. Nygren, Director of the Corps, stated that recruiters have been actively seeking qualified women applicants for some time, and will continue to do so.

Qualifications for appointment in the NOAA Corps include being a citizen of the U.S.; being between 20 and 26 years old (exceptions to this limit may be made in the case of candidates with related experience in the armed forces); meeting certain rigid physical standards; and holding a baccalaureate or higher degree in engineering, mathematics, physics, oceanography, meteorology, or other physical, geophysical, or biological science discipline from an accredited college, maritime academy, or university. Regardless of the field of specialization, an applicant must have completed at least 48 semester (72 quarter) hours of NOAA-related science.

Fredericksburg Employees Given Special Achievement Awards



Engineering Technician Casper S. Salisbury (left), Geophysicist Harold E. Kaufmann (center), and Supervisory Geophysicist Clyde J. Beers (right), of the Fredericksburg Geomagnetic Center in Corbin, Va., recently received Special Achievement Awards in recognition of their contributions to geomagnetic survey instrument development. They were cited for their role in designing and developing two instruments that have led to significant improvements in the accuracy, reliability, and efficiency of geomagnetic measurements made in the field.

The Center is a facility of the Environmental Research Laboratories' Earth Sciences Laboratories.

Nebraska Scouts Visit NMFS Gloucester Lab



Members of Boy Scout Troop 175 from Wayne, Nebr., are shown sampling ocean perch puffs, squid strips, and marinated squid at the Atlantic Fishery Products Technology Center in Gloucester, Mass. The 42-member troop was shown how to handle live crabs and how to clean squid on their recent visit to the NMFS facility.

NOIC Evaluates New Equipment To Be Used in IDOE Program

A new Salinity, Temperature and Depth System (STD) developed at the Woods Hole Oceanographic Institution has arrived at the National Oceanographic Instrumentation Center for evaluation tests.

The system (built for the Scripps Institution of Oceanography) is to be used in the Geochemical Oceans Sections Study (GEOSECS) portion of the International Decade of Ocean Exploration (IDOE) program sponsored by the National Science Foundation. NOIC is performing the evaluation tests to determine the field performance accuracy of the system for NSF.

The STD system is designed to obtain continuous profiles of ocean conductivity and temperature as functions of depth. One of the significant milestones in the design of this system was the development of a small electrode cell to sense conductivity. The inside dimensions of the cell are 2 mm in diameter and 8 mm in length. Conductivity, temperature, and pressure are sensed underwater and the data is transmitted in digital form by frequency shift key to the deck terminal via electrical cable at the rate of ten times per second.



Neil Brown (center) designer and developer of the STD system at Woods Hole Oceanographic Institution, explains its operation to Eugene Russin (left), Acting Chief of the NOIC Evaluation Branch, and James Boyd (right) NOIC Electronic Engineer.

Harold C. Long Is Lost at Sea

Harold C. Long, 21-year veteran of the Atlantic Weather Project, was lost at sea on June 29, 1972, while the U.S. Coast Guard Cutter CAMPBELL, on which he was serving as Official in Charge of the National Weather Service's weather team, was returning from Atlantic Ocean Station "D". Despite a long search by the CAMPBELL and the Coast Guard ship, the VIGOROUS, no trace of Mr. Long was found. Everything possible is being done to assist his wife, Sylvia, and his two children.

aboard NOAA's ships...

- The NOAA Ship FAIRWEATHER assisted in the nighttime rescue last month in southeast Alaskan waters of a fishing troller which had run aground on rocks about three miles from the ship's anchorage. Through the combined efforts of the FAIRWEATHER and the Coast Guard Cutter ROMAIN the boat was refloated and grounded on a beach where repairs could be made. The FAIRWEATHER is commanded by Captain R.H. Houlder.

- The officers and crew of the NOAA Ship Mt MITCHELL have begun an extensive hydrographic survey of a 400-square-mile area off the South Carolina coast. The three-month project will result in up-to-date navigational information for seagoing commerce and recreational boating in Long Bay, between Little River and Murrells Inlet. The ship is commanded by Captain Edwin K. McCaffrey.

- The NOAA Ships McARTHUR and DAVIDSON recently held open house in Port Townsend, Wash., the home of the Oceanographic Institute of Washington. The McARTHUR, commanded by Commander George M. Poor, attracted over 500 people, 10 percent of the population of Jefferson County. A subsequent open house by the DAVIDSON, commanded by Commander Gerald C. Saladan, attracted 200 people.

Monitoring Program (Continued from page 3)

Over the centuries, nature has been able to cope with its own sources of pollution, but man is artificially polluting the atmosphere at an increasing rate, creating additional possibilities of inadvertently modifying the environment. The GMCC benchmark program is an essential early step in the fight against undesirable changes in the global climate.

notes about people...

George Berberian of the Atlantic Oceanographic and Meteorological Laboratories, Environmental Research Laboratories, has been commended officially by the Florida State University System for his processing and analysis of estuarine and offshore samples as part of NOAA's cooperation with the State of Florida in its coastal environmental quality baseline studies of Escambia and Santa Rosa Counties. Samples were processed by him at AOML for inorganic phosphate, nitrite and nitrate, total nitrate, and total silica.

Fred Hodo, Chief, Base Compilation Section, Visual Chart Branch, Aeronautical Chart Division, National Ocean Survey, has been commended by an administrator of the District of Columbia school system for initiating and donating his time to teach a class in photography to students of Shepherd school during after-school hours.

Seward VHF-FM Broadcast Station Opens in Home of the Observer

The first National Weather Service VHF-FM broadcast installation in Alaska is, indeed, a "first" for the NWS, because the equipment is not located in an NWS office, but is located in the home of the contract observer who mans the equipment.



Adrian Schroeder is shown here making a broadcast of the marine forecast and general weather information for Seward and Resurrection Bay from the basement office in his Seward home. Mr. Schroeder and his wife, Mary, tape the broadcasts, which are prepared at the Weather Service Forecast Office in Anchorage and transmitted via teletypewriter circuit.

The broadcasts, which began March 1, are aired daily on the common weather frequency 162.55 megahertz from 6:30 a.m. until 8 p.m. They will serve a particular dissemination need to the public, since commercial broadcasts are difficult to receive in Seward, some 130 miles south of Anchorage. Starting in April and extending through October, boating activity picks up and may reach as many as 500 boats each day on Resurrection Bay. The new service will help remedy the problem in the past of getting weather information to these boaters.

Shown in front of the antenna installation of the new Seward station are (from left) Harold A. Scott, Public Weather Services, NWSH; Mr. Schroeder; James DiFalco, Chief, DATAC, at the NWS Alaska Region Headquarters; and Stuart G. Bigler, Director, NWS Alaska Region.

Alaska's second VHF-FM system is scheduled to be in operation within a few weeks in Anchorage. It will be operated from the WSHO, Anchorage.



Scientists Establish Background Levels of Atmospheric Particles

Sudden catastrophic occurrences such as the March 1963 eruption of Mt. Agung on Bali provide natural variations in the particle concentrations in the stratosphere to which the impact of man's activities on the environment can be compared, according to Environmental Research Laboratories' scientists.

A paper presented by Dr. Rudolf F. Pueschel, Director of the Air Resources Laboratories' Mauna Loa Observatory, outlined the manner in which over 14 years, the scientists analyzed the record of direct solar radiation at Mauna Loa to determine the concentration of atmospheric particles, and have established an accurate reading of the amount of particulate inherently present in the atmosphere there.

The investigation began five years before the 1963 eruption, which forced particles into the stratosphere and resulted in a decrease in direct solar radiation. The atmosphere over Mauna Loa appears now to have cleansed itself and returned to pre-Agung levels of solar insolation.

Future changes in the population of particles in the atmosphere in the Central Pacific Area will--in the absence of a catastrophic natural event--indicate man's impact on the environment, the paper states.

The paper, presented at the International Radiation Symposium in Sendai, Japan, was co-authored by Dr. Lester Machta, Director of Air Resources Laboratories; Dr. J. T. Peterson, and E. C. Flowers, of NOAA's Air Resources Laboratory on assignment to Environmental Protection Agency; Howard T. Ellis of Mauna Loa Observatory; and Gerald F. Cotton, of the Meteorology Statistics Group.

The symposium was sponsored by the International Association of Meteorology and Atmospheric Physics; World Meteorological Organization; the American Meteorological Society; and the Meteorological Society of Japan. It was also supported by the Japan Meteorological Agency.

Crabs Tagged 13-18 Years Ago Are Recovered

National Marine Fisheries Service scientists, who formerly regarded 13 years as the maximum life span for the king crab, have reported recovery of 22 tagged crabs, all older than 13, including one 18 years old.

Between 1957 and 1959, the NMFS released more than 32,000 tagged kings (four to eight years old at the time) in the eastern Bering Sea off Alaska. Of 23 tagged crabs captured by Japanese and Soviet Union fishermen, one was 18, two 17, three 16, ten 15, six 14, and one 13.

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

ERRATA NOTICE

One or more conditions of the original document may affect the quality of the image, such as:

Discolored pages
Faded or light ink
Binding intrudes into the text

This has been a co-operative project between the NOAA Central Library and the Climate Database Modernization Program, National Climate Data Center (NCDC). To view the original document, please contact the NOAA Central Library in Silver Spring, MD at (301) 713-2607 x124 or Library.Reference@noaa.gov

HOV Services
Imaging Contractor
12200 Kiln Court
Beltsville, MD 20704-1387
July 23, 2010