



NOAA WEEK

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

Executive Order Raises Pay of Government Employees

As a result of President Nixon's Executive Order, rates of basic pay for NOAA employees paid under the General Schedule will be adjusted, effective January 7, 1973, as follows:

GENERAL SCHEDULE

Grade	ANNUAL RATES AND STEPS									
	1	2	3	4	5	6	7	8	9	10
GS1	\$4,798	\$4,958	\$5,118	\$5,278	\$5,438	\$5,598	\$5,758	\$5,918	\$6,078	\$6,238
GS2	5,432	5,613	5,794	5,975	6,156	6,337	6,518	6,699	6,880	7,061
GS3	6,128	6,332	6,536	6,740	6,944	7,148	7,352	7,556	7,760	7,964
GS4	6,882	7,111	7,340	7,569	7,798	8,027	8,256	8,485	8,714	8,943
GS5	7,694	7,951	8,208	8,465	8,722	8,979	9,236	9,493	9,750	10,007
GS6	8,572	8,858	9,144	9,430	9,716	10,002	10,288	10,574	10,860	11,146
GS7	9,520	9,837	10,154	10,471	10,788	11,105	11,422	11,739	12,056	12,373
GS8	10,528	10,879	11,230	11,581	11,932	12,283	12,634	12,985	13,336	13,687
GS9	11,614	12,001	12,388	12,775	13,162	13,549	13,936	14,323	14,710	15,097
GS10	12,775	13,201	13,627	14,053	14,479	14,905	15,331	15,757	16,183	16,609
GS11	13,996	14,462	14,928	15,394	15,860	16,326	16,792	17,258	17,724	18,190
GS12	16,682	17,238	17,794	18,350	18,906	19,462	20,018	20,574	21,130	21,686
GS13	19,700	20,357	21,014	21,671	22,328	22,985	23,642	24,299	24,956	25,613
GS14	23,088	23,858	24,628	25,398	26,168	26,938	27,708	28,478	29,248	30,018
GS15	26,898	27,795	28,692	29,589	30,486	31,383	32,280	33,177	34,074	34,971
GS16	31,203	32,243	33,283	34,323	35,363	36,403*	37,443*	38,483*	39,523*	
GS17	36,103*	37,306*	38,509*	39,712*	40,915*					
GS18	41,734*									

*The rate of basic pay for employees at these rates is limited by section 5308 of title 5 of the United States Code to the rate for level V of the Executive Schedule (as of the effective date of this salary adjustment, \$36,000).

COMMISSIONED CORPS (MONTHLY SALARY)

The rates of monthly basic pay for members of the Commissioned Corps will be adjusted, effective January 1, 1973, as follows:

Pay Grade	Commissioned Officers						Over 10	Over 12
	Years of service computed under section 205							
	2 or less	Over 2	Over 3	Over 4	Over 6	Over 8		
0-10 ¹	\$2,415.00	\$2,500.20	\$2,500.20	\$2,500.20	\$2,500.20	\$2,595.90	\$2,595.90	\$2,794.80
0-9	2,140.50	2,196.90	2,243.70	2,243.70	2,243.70	2,300.40	2,300.40	2,395.80
0-8	1,938.60	1,996.80	2,044.50	2,044.50	2,044.50	2,196.90	2,196.90	2,300.40
0-7	1,610.70	1,720.80	1,720.80	1,720.80	1,797.30	1,797.30	1,902.00	1,902.00
0-6	1,194.00	1,312.20	1,397.70	1,397.70	1,397.70	1,397.70	1,397.70	1,397.70
0-5	954.90	1,121.70	1,198.80	1,198.80	1,198.80	1,198.80	1,235.70	1,301.40
0-4	805.20	979.80	1,046.10	1,046.10	1,064.70	1,112.10	1,187.70	1,254.90
0-3 ²	748.20	836.40	893.70	899.40	1,036.50	1,073.70	1,131.30	1,187.70
0-2 ²	652.20	712.50	855.90	884.40	903.00	903.00	903.00	903.00
0-1 ²	566.10	589.50	712.50	712.50	712.50	712.50	712.50	712.50

(Continued on page 8)

NOAA Is First Federal Agency To Use Enclosed Electric Car

The first enclosed electric car obtained for use by a Federal agency was delivered to the National Weather Service's Test and Evaluation Laboratory at the Sterling Research and Development Center, Va., on December 14.



Because of his interest in ecology, Maryland Congressman Gilbert Gude was on hand for the delivery. The car, obtained under special permission by the General Services Ad-

ministration, is a two-seater to be used by T&EL personnel to transport themselves and tools over the 400-acre tract.

During the winter months at the Sterling R&D Center, T&EL personnel will check the car to determine if it meets their requirements; if it does, the NWS hopes to acquire additional cars for the facility in the future.

(From left) Transportation Assistant Edward Lee Jordan, Jr., of the NOAA Administrative Operations Division's Travel and Transportation Branch; William E. Eggert, Director of the T&EL; Congressman Gude; and Charles B. Ratcliffe, Chief of the Travel and Transportation Branch, have just affixed the NOAA emblem on the new car.



NOAA To Participate in AAAS Exhibit, Meeting

NOAA scientists who will be presenting papers at the American Association for the Advancement of Science's meeting next week in Washington, D. C., are Robert Edwards, Marvin D. Grosslein, William F. Royce, and A. Calabrese of the National Marine Fisheries Service; Grant Gross and William O. Davis of the Office of Environmental Monitoring and Prediction; and Thomas S. Austin, Director of the Environmental Data Service. In addition, NOAA Corps Ensign Pamela Chelgren is co-author of a paper to be given at the meeting.

A NOAA display will be included in the AAAS exhibit, which focuses on the application of science and technology to the needs of the Washington, D.C., area.

Experiment Off False Cape, Va., Probes Origin of Undersea Ridges

Are the ridges of sand on the sea bottom near the Atlantic Coast the ancient remnants of a shoreline which existed during the period of rising sea level that started about 15,000 years ago? Or were they formed by storms, and then stabilized as the shoreline receded inland when the glaciers which had engulfed a good part of North America melted?

Dr. Donald J.P. Swift, of Miami, Fla., has spent the past four years studying the problem. During the past year, he has been researching it for the Atlantic Oceanographic and Meteorological Laboratories, and for the three previous years he conducted research of a submerged sand ridge off False Cape, near the Virginia-North Carolina border, for Old Dominion University, Norfolk, Va.

Based on his studies, he designed and coordinated an experiment conducted recently off False Cape, which may provide some information ocean engineers must have before they can design offshore structures, such as atomic plants, floating airports, and platforms for giant oil tankers. Knowledge of the stability, or instability, of the sea bottom is essential to a firm anchoring of these structures and to their ability to withstand storms at sea.

The experiment was designed to test Dr. Swift's theory that the sand ridges--up to 30 feet high, about two miles apart, and extending 10 to 15 miles from the shore--resulted from storm-created ocean currents. He said his studies suggest that "ridges are presently forming as a response to storm currents on the inner shelf just seaward of the shore and that ridges on the rest of the shelf were similarly formed, but have since been abandoned by the retreating shoreline." He said the Virginia shoreline some 15,000 years ago was perhaps 90 miles further east.

The experiment was completed in late November, and the data are now being processed. When this is completed, some of the answers may be forthcoming.

Cooperating in the False Cape experiment were three NOAA agencies--the Atlantic Oceanographic and Meteorological Laboratories, National Ocean Survey, and National Weather Service; NASA; Old Dominion University's Institute of Oceanography; the Army Corps of Engineers' Coastal Engineering Research Center; Westinghouse Electric Corporation's Ocean Science Research Laboratory; and the Virginia Institute of Marine Science.

The experiment involved a two-part attack on the problem. In one, three current meters were anchored on the sea bottom at depths of 40, 60, and 80 feet. They were placed in a trough between three major ridges. Positioned in October by the NOAA Ship FERREL, commanded by Lt. Cdr. Karl W. Kieninger, the meters were designed to

(Continued on page 6)

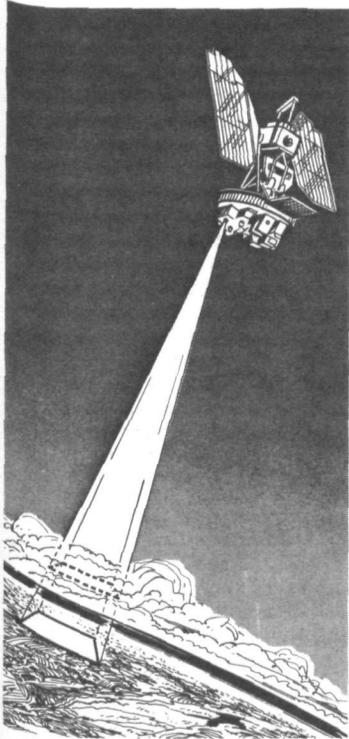
Measurements Through Clouds To Be Made by New Satellite

The National Aeronautics and Space Administration's experimental satellite Nimbus-5, launched late December 10 (Pacific Standard Time), carries an infrared temperature profile radiometer developed under the direction of W.L. Smith and D.W. Wark of the National Environmental Satellite Service. Designed to sound atmospheric temperatures to cloud tops or the ground, the ITPR is similar to the vertical temperature profile radiometer on NOAA-2, but has a smaller field of view and higher resolution.

Other experiments on Nimbus-5 are an electrically scanning microwave radiometer and the Nimbus-E microwave spectrometer which will penetrate thin clouds and stratus to measure temperatures in the atmosphere and at the earth's surface; the selective

chopper radiometer, a British experiment to observe the global temperature structure of the atmosphere from cloud tops to an altitude of 31 miles; the temperature humidity infrared radiometer which provides cloud pictures and water vapor data; and the surface composition mapping radiometer which measures differences in the thermal emission characteristics of the earth's surface.

One of the principal objectives of the Nimbus-5 mission is to provide data and develop advanced sensors needed for the Global Atmospheric Research Program and the World Weather Watch.



Sensors on Nimbus-5 penetrate thin clouds to sound earth and atmospheric temperatures.

Scientists Find Canyon Currents Carry Sediments to Deep Sea

The Hudson Canyon, lying more than 120 miles southeast of New York City, may well serve as a conduit carrying pollutants out to ocean depths, say scientists studying the area from a small research submersible.

On-the-spot evidence collected by a scientific team led by Dr. George H. Keller, Director of the Marine Geology and Geophysics Laboratory of the Atlantic Oceanographic and Meteorological Laboratories, Miami, Fla., indicates that sediments, including pollutants dumped in relatively shallow water, are carried down the canyon by currents of more than 1/2 knot (about 1/2 mile per hour).

"We are very excited about our findings in the canyon," Dr. Keller said. "It is far from a 'dead' canyon, as had previously been thought. Actually there are currents flowing both up and down the canyon, and our work indicates that fine material, probably from the Hudson River or the offshore dump sites, moves across the continental shelf and out to the deep-sea basin via the Hudson Canyon."

The Hudson Canyon, one of the most prominent seafloor features on the American continental margin, cuts about 2500 feet into the continental margin and extends out to deep oceanic depths. It is the outer portion of the Hudson sea valley, which extends from the Hudson River to the edge of the continental shelf.

"We know that New Jersey, for example, has been considering piping wastes out to one of the offshore canyon heads," Dr. Keller points out. "It is best that we know more about the dynamic processes in the canyons if people are planning to use them as a pipeline to the deep sea."

Chemical and biological studies conducted during the two series of dives supported the findings of the marine geologists and biologists. The bottom organism-food relationship found in the sediments revealed a much higher concentration of organisms living in the bottom of the canyon than has been reported elsewhere in the North Atlantic or Gulf of Mexico. This is apparently caused by the greater abundance of nutrients (pollutants) flowing from the near shore out through the canyon.

A deep-water crab population was found, and in one case where a ridge was examined in detail it was found to be honeycombed with small caves that housed a community of large crabs (2 to 2.5 feet across) and fish, at depths of 2500 to 2800 feet. These findings are of interest for potential commercial fisheries.

Other members of the team were Dr. Gilbert Rowe, a biologist from Woods Hole Oceanographic Institution; Dr. Wesley Van Sciver, physicist, Lehigh University; Robert Ballard, marine geologist, Woods Hole Oceanographic Institution; Douglas Lamber, marine geologist, AOML; and Gordon Callender, civil engineer, Georgia Institute of Technology.

SIDIMI Visit to Seattle Is a Soviet First

The Soviet stern trawler SIDIMI entered the Port of Seattle on December 8, 1972, for supplies and shore leave--the first time a fishing vessel from the U.S.S.R. has ever entered a West Coast port for logistics purposes. The National Marine Fisheries Service Regional Office at Seattle assisted with the arrangements; entrance permission came under the terms of the U.S.-U.S.S.R. bilateral fisheries agreement.

Ceremony Marks Collocation of Seattle Area Commerce Elements

Guy W. Chamberlin, Jr., Acting Assistant Secretary of Commerce for Administration, was the principal speaker at the recent ceremony marking the collocation of Department of Commerce elements in Seattle, Wash. A total of 210 employees of the Economic Development Administration, Census, National Weather Service, National Marine Fisheries Service, Northwest Administrative Service Office, Office of Minority Business Enterprise, and Office of Business Services now occupy offices at 1700 Westlake Avenue North in Seattle.

C. Mark Smith, Regional Director of EDA,



was master of ceremonies at the dedication, and other speakers included King County Executive John Spellman and representatives of Seattle Mayor Wes Uhlman and Washington Governor Daniel J. Evans.

Following the ceremony, an open house and guided tours were held for the approximately 200 guests, who included representatives from key industries, Federal agencies, and institutions in the Seattle area.

Commerce officials and tour guides shown here are (seated from left) Marilyn Carr, NMFS; Dee Duval, Seattle Field Office; Juanita Kuhse; OMBE; Bonnie Wilson, Census; Christina Crawford, NASO; Jacque Castle, EDA; Paula Rebar, NASO; Vida Smith, NASO; (standing, from left) Mike Chen, Census; Ted Pursley, representing Judson Wonderly, Seattle Field Office; Jim Pittmon, Field Representative, OMBE; C. Mark Smith, Regional Director, EDA; Donald Johnson, Regional Director, NMFS; Howard Spicer, Chief, Property Management and Records Division, DOC; Guy W. Chamberlin, Jr., Acting Assistant Secretary for Administration, DOC; A.L. Zimmerman, Meteorologist in Charge, NWS; and John M. Patton, Jr., Director, NASO.

notes about people...

Fishery biologist Jay C. Quast of the National Marine Fisheries Service Auke Bay (Alaska) fisheries laboratory recently received the 1971 C. Y. Conkle Publication Award for his scientific paper "Sebastes variegatus, sp. Scorpaenidae." The award is presented "in recognition of excellence in presenting the results of original research." Mr. Quast's work was published in Volume 69 of the U.S. Fishery Bulletin series.

James R. Neilon, Technical Assistant to the Chief of the National Weather Service Communications Division, is in Geneva, Switzerland, conferring with the World Meteorological Organization in connection with the Operations Manual which he is preparing on the operations of the Global Telecommunications System. Earlier he was participating in WMO's Informal Planning Meeting on New Codes Implementation.

James E. Caskey, Environmental Data Service's Director of the Environmental Science Information Center, recently attended a Committee on Scientific and Technical Information (COSATI)-sponsored demonstration of an entirely new approach to microfiche publication. The inventors of the new system, which they hope to market in about a year, claim that the small size of the pocket-sized reader, the high density of information, and the low production cost of their microfiche will make large volumes of information accessible to mass audiences. Retail cost of the reader is expected to be between \$25 and \$30.

Dr. James H. Wakelin, Jr., Is Named To NOAA's Sea Grant Advisory Panel

Former Assistant Secretary of Commerce for Science and Technology, Dr. James H. Wakelin, Jr., has been named to NOAA's Sea Grant Advisory Panel. He is currently associated with the Research Analysis Corporation of McLean, Va.

The panel, formed earlier this year, assists the Office of Sea Grant by reviewing and evaluating institutional proposals and the results of site visits (approximately six each year) to universities for program reviews. Also, the Advisory Panel meets twice each year to provide advice to NOAA in determining National Sea Grant programs and operational adequacy and to recommend candidates for Sea Grant College designation.

Other Sea Grant Advisory Panel members are Dr. Sanford S. Atwood, Emory University, Atlanta, Ga.; Dr. George S. Benton, Johns Hopkins University, Baltimore, Md.; Dr. Lynton K. Caldwell, Indiana University, Bloomington, Ind.; Jacob J. Dykstra, Point Judith Fishermen's Cooperative Association, Inc., Narragansett, R.I.; Phillip Eisenberg, Hydronautics, Inc., Laurel, Md.; Dr. J. Osborn Fuller, Fairleigh Dickinson University, Rutherford, N.J.; Dr. Joseph E. Henderson, Seattle, Wash.; Chalmer G. Kirkbride, Elkton, Md.; Otto Klima, General Electric Co., Philadelphia, Pa.; Harold E. Lokken, Fishing Vessel Owners' Association, Seattle, Wash.; Dr. Athelstan Spilhaus, Smithsonian Institution, Washington, D.C.; Dr. H. Burr Steinbach, Woods Hole Oceanographic Institution, Woods Hole, Mass.; and M. Harvey Weil, Kleberg, Mobley, Lockett, and Weil, Corpus Christi, Tex.

Hurricane Warning Service Evaluation Conference Is Held

The NOAA/NWS Hurricane Warning Service Evaluation Conference for the 1972 hurricane season was held at the National Hurricane Center in Miami, from November 29 - December 1. Present were representatives of the National Environmental Satellite Service; the Environmental Research Laboratories' Research Flight Facility and National Hurricane Research Laboratory; the National Ocean Survey's National Data Buoy Center; NOAA's Office of Environmental Monitoring and Prediction and Office of Public Affairs; and the NWS.

Various sessions were chaired by Karl R. Johannessen, Associate Director of the NWS for Meteorological Operations; H.H. Bedke, Director of the NWS Western Region; Silvio G. Simplicio, Director of the NWS Eastern Region; and Dr. Robert E. Helbush, Chief of the Operations Division of the NWS Southern Region.

Changes to operational procedures for the 1973 hurricane season were discussed also, and these changes will be reflected in the next issuance of WSOM C-41. Certain changes must be coordinated with other Federal agencies at the Interdepartmental Hurricane Conference, scheduled to be held January 24-25, 1973.

One of the most important changes for the 1973 season will be the issuance of advisories at 0300, 1100, and 1800 EDT with special advisories as required. This change will be coordinated with the military at the Interdepartmental Hurricane Conference. Under this system, more detailed local statements will be required from coastal Weather Service Offices, and a workshop is planned for the MICs and OICs of these WSOs.

Details will appear in the minutes of the conference, which are expected to be available soon.

Baskin Named Operations Chief at NWS CRH

Robert C. Baskin, who has been Chief of the Weather Analysis and Prediction Branch of the National Weather Service Central Region for the past eight years, is the new Chief of the Operations Division of that Region. He joined the Weather Service at North Platte, Nebr., after serving as a U. S. Army Weather Officer during World War II. Subsequently he has held forecaster and supervisory positions

at the Kansas City Weather Service Forecast Office. He is a graduate of Hastings College in Nebraska, attended the University of Nebraska, and has done graduate work in meteorology at the University of Chicago and the University of Michigan. He has received a Department of Commerce Silver Medal.



NWS Contributes To Success Of Final Apollo Moon Shot

Apollo 17 returned safely to earth on Tuesday, December 19, and, as usual, the National Weather Service played a part in both the launch and splashdown preparations. The Spaceflight Meteorology Group at Cape Kennedy, under Meteorologist in Charge Ernest Amman, supplied forecasts up to the final moment before liftoff; and for several days prior to the launch James Nicholson, Meteorologist at the Cape Kennedy SMG, and Kenneth M. Nagler, Chief of the Space Operations Support Division, NWSH, briefed Astronaut Dr. Jack Schmitt as to the type of weather systems he would likely see on his way towards the moon. A special forecast map was prepared by Richard Brintzenhofe, MIC of the Suitland, Md., SMG, showing the weather systems expected over the South Atlantic Ocean and South America on December 7. The NOAA-2 and ATS-3 depictions were the main sources of weather information in the Southern Hemisphere.

Following the launch, Alan Sanderson, Chief, SMG, and his Houston staff kept the Capsule Communicators informed as to the weather systems which were occurring so that they could better follow the comments of the flight crew. Also, the SMG meteorologists provided forecasts and briefings to the NASA Manned Spacecraft Center, Houston, for various possible emergency landing areas which might have been used in the event of an early termination of the mission.

The NWS has expressed appreciation for the extra efforts of the National Environmental Satellite Service in producing Southern Hemisphere NOAA-2 mosaics and nighttime infrared depictions of the Pacific area for transmission to Houston.

About 3:30 p.m. EST on December 12, Astronaut Schmitt gave what might be considered the first cooperative weather observation from the lunar surface when he described the cloud patterns over North America as seen from the lunar module.

As forecast, the actual weather and sea conditions in the landing area southeast of American Samoa were excellent.

Jeffries Is FAIRWEATHER's Executive Officer

Commander Freddie L. Jeffries is the new Executive Officer of the NOAA Ship FAIRWEATHER. He held a similar post on the NOAA Ship McARTHUR. Both craft engage in hydrographic surveys. Cdr. Jeffries has been with the Commerce Department since 1961, and became a commissioned officer in 1965. He holds a bachelor's degree in civil engineering from Tennessee State University and a master's degree in geodetic engineering from the University of Michigan.



NMFS Personnel To Participate In Prison Rehabilitation Program

Beginning in January, marketing and technology personnel at the National Marine Fisheries Service Regional Office in Gloucester (Mass.) will take part in a unique prison rehabilitation program--a 16-week training course in food preparation by prison inmates. NMFS fish experts will assist by presenting lectures, live and photo demonstrations of fish preparation, and cooking instructions at the Middlesex County House of Correction in Billerica, Mass. Prisoners who successfully complete the training program will be given additional on-the-job training with participating commercial firms, then given the opportunity for job placement upon release.

San Fernando Earthquake Data Now Available

Digitized accelerogram data (uncorrected vibration measurements) for 65 of the locations that generated records during the San Fernando earthquake are now available from the Environmental Data Service. These data, which represent parts C, D, E, and F of Volume I in the California Institute of Technology series of strong motion data publications, are available on two magnetic tapes at \$60 per tape. Other data on the San Fernando earthquake will be added to the tape files and announced as they become available.

False Cape Experiment (Continued from page 2)

furnish data on bottom current velocities.

They were recovered by the FERREL in late November, and their data are being analyzed by Ann Hall of the National Ocean Survey's Oceanographic Division in Rockville, Md.

The second part of the experiment involved the use of four radar-equipped drogues dropped into the sea by NASA from a helicopter. The drogues, current-measuring assemblies consisting of a submarine sail area and an attached surface buoy, were equipped to furnish information on the speed and direction of currents on the surface and at six and eighteen feet below. They were dropped in a row from near the beach to a distance of 1-1/2 miles from shore and tracked for up to six hours and up to five miles by NASA radar tracking equipment. The current speed and direction were determined by tracking and timing the surface buoys.

A dry run of the drogue experiment was held November 20 to evaluate the system and to establish the current's speed and direction. The winds proved sufficiently intense during the test to count as a storm run. Participants in the experiment were then placed on a "red alert" while they waited for additional foul weather conditions, with 30-knot gusts. This phase of the experiment was carried out November

Great Lakes-St. Lawrence Seaway Winter Navigation Seminar Held

NOAA was well represented at the Great Lakes-St. Lawrence Seaway Winter Navigation Seminar held in Detroit earlier this month. Among those who attended were Rear Admiral Harley D. Nygren, Director of the NOAA Corps; Captain Kenneth A. MacDonald, Director of the National Ocean Survey's Lake Survey Center, and his Operations Officer, Commander Sigmund R. Petersen; Dr. Frank H. Quinn and Charles E. Adams of the LSC Limnology Division; Frank A. Blust, Chief of the LSC Marine Mapping and Charting Division; and John E. Hanna of the Reports and Information Section, who acted as LSC press representative.

The meeting, which generated a great deal of interest throughout the area, related to the feasibility of extending the shipping season on the Great Lakes beyond its usual closing date of about December 15. The seminar, with almost 400 attendees, was led by the Corps of Engineers--Major General Ernest Graves, Division Engineer of the North Central Division, COE, is Chairman of the Winter Navigation Board--and included numerous local and Federal agencies, both U.S. and Canadian, as well as representatives from shipping and other interests. It was part of a three-year demonstration program (now in its second year) to determine whether an extended shipping season on the Great Lakes is economically and technically feasible.

24, 27, and 28 on the basis of forecasts furnished by the National Weather Service.

Dr. Swift said the data obtained in the experiment will enable scientists to determine whether storms at sea cause ocean bottom sediments to move. "We need answers to at least two questions," he stated. "Is the bottom current during a storm strong enough to cause the sediment to move? Is the current pattern of a nature which causes the moving sediment to form ridges?" Dr. Swift thought the currents were sufficiently strong and of such a nature as to cause the sediments to be swept out of the troughs and obliquely up the ridges, generally with the same effect as desert storms, forming dunes or ridges.

Swift emphasized the significance of the experiment, whose results, he stressed, may be applicable elsewhere along the coast. "If the ridges are ancient beaches," he pointed out, "then there is little sediment movement on the sea floor; if they are active, dune-like features, then there is much."

"The issue is an important one," he added, "because it involves solutions for the problems of waste disposal in the ocean and the protection of beaches against erosion, as well as the building of offshore structures."

Phaseout of EPA's Raleigh EOCC Means Changes in NWS Program

The Emergency Operations Control Center (EOCC) of the Environmental Protection Agency at Raleigh, N.C., is being phased out. Concurrently, the 10 EPA regional offices have been given responsibility for monitoring air quality nationally and for taking enforcement actions under the provisions of Section 303 of the Clean Air Act as amended. Examples of such actions, where the National Weather Service was heavily involved, included the Birmingham, Ala., and Wheeling/Weirton, W. Va., episodes.

EPA has advised the NWS that the meteorological "backup" for enforcement actions will no longer be available from the EPA/NOAA Division of Meteorology and that the NWS Air Stagnation Advisories (ASA's) and dispersion outlooks will be the sole source of weather support to the EPA regional office episode control actions and plans (including legal activities).

According to Burton H. Kirschner, NWS Environmental Quality Service, "Shortly, EPA will advise the NWS in writing of the changes in the NWS program that are required to support this shift in responsibilities." This will mainly involve the establishment of communications between NWS ASA offices and the EPA regional offices. In this regard, Mr. Kirschner expects that EPA will request from the NWS Office of Meteorological Operations permission to establish receive-only drops on RAWARC so that it can receive the ASA's. There will also probably have to be a change in the current arrangements that NWS has made with the NOAA General Counsel for representing NWS employees who are required to testify in court actions involving enforcement procedures.

When the NWS is formally apprised of these and other potential changes, instructions will be issued to the NWS regional offices.

With the activation of the Interdepartmental Committee for Meteorological Services Subcommittee for Atmospheric Quality Meteorological Services, there will no longer be scheduled meetings of the NOAA/EPA Coordination Group, which has met periodically to work out interagency programs in air pollution meteorology. However, the Group will maintain its viability and may hold future meetings if problems occur that are internal to the two agencies.

Chart Sales Office Adds Self-Service

Something new has been added to the distribution of navigational charts: self-service.

Chart users who come to the public sales counter of the National Ocean Survey Distribution Division's new location at 6501 Lafayette Ave., Riverdale, Md. can now make their own selections from shelves where the products are displayed. Payment is made at the sales counter.

Fisheries Agreement Is Signed By U.S., Republic of Korea

Three NOAA employees were members of the U.S. Delegation which recently met with a delegation from the Republic of Korea concerning fishing in the North Pacific and the marketing of certain shellfish products. The U.S. delegation was headed by Ambassador Donald L. McKernan and included Nels E. Johnson, Deputy Director, Office of International Affairs; Larry L. Snead, Foreign Affairs Officer, Marine Resource Division, Office of International Affairs; and Robert C. Wilson, Chief, International Activities Staff, National Marine Fisheries Service. The agreements were effective December 12, 1972.

The first of the agreements provides for continued cooperation in fisheries between the two countries, including fisheries research and exchange of data, continuation of U.S. technical advice and assistance concerning shellfish and salmon, and measures for dealing with potential conflicts between fishing vessels of the two countries in the Northeastern Pacific and Bering Sea. Korean fishing vessels will be allowed to transfer their cargoes in certain areas of the U.S. contiguous fisheries zone in the eastern Bering Sea, but will refrain from fishing for salmon and halibut in the Northeastern Pacific and Bering Sea. The agreement has an initial term of five years.

The second agreement applies the sanitation principles of the U.S. national shellfish sanitation program of the U.S. Public Health Service to frozen oysters and to fresh or frozen clams and mussels intended for shipment between the two countries. It further provides for exchanges of information on compliance with these principles and for cooperation in observations of shellfish production areas or handling facilities. This agreement will enable the importation of such shellfish from Korea under the same production and handling standards as are required in the U.S. Similar arrangements are in effect between the U.S. and Canada and the U.S. and Japan.

NMFS Helps Tribe Begin Seafood Business

Following the lead of other Indian reservations in the Northwest and Alaska, the small Skokomish Tribe of Puget Sound, Wash., has begun a seafood processing and marketing enterprise in an attempt to reduce the tribe's 30-percent unemployment figure. Tribal leaders sought and received the advice and assistance of the National Marine Fisheries Service Pacific Fishery Products Technology Center in planning stages of their commercial venture. The Skokomish Indians are building a plant to process salmon catches. They plan to smoke and package the fish.

Solar Wind, Planet Interactions Modeled for Deep Space Missions

As Pioneer 10 coasts toward its 1975 rendezvous with Jupiter, earthbound scientists are completing plans to send Mariner space probes to Jupiter and Saturn, and designing the deep space missions that will give us our first close look at remote Uranus, Neptune, and Pluto.

These robot Columbuses and Magellans will look for more than sun-orbiting spheres and their satellites; they will also be sensing the ionized eddies, radiation belts, shock waves, magnetic fields, and energetic wakes of the planets. And they will not be set adrift with the 20th century equivalent of "beyond this point are monsters" locked into their navigating memories. Because each expensive ounce of sensor carried into deep space anticipates some measurable planetary characteristic, the spacecraft will be programmed around an estimate of the expected space environment.

Dr. Murray Dryer, a physicist with the Environmental Research Laboratories' Space Environment Laboratory, working with Dr. Arthur W. Rizzi of the National Aeronautics and Space Administration's Ames Research Center, and Dr. Wen-We Shen of Texas Instruments, Inc., is developing such an estimate for the interactions between these unvisited planets and the solar wind, the continuous flow of energy that "blows" spaceward from the sun.

These investigators are concerned with such largely invisible portions of a planet's space environment as magnetic field, ionized regions of the atmosphere, radiation belts, and the like, for these tell much about a planet's vital signs--for example, whether its intrinsic magnetic field

originates in the dynamo action of a molten core. A series of preliminary models, reported at the December meeting of the American Geophysical Union in San Francisco, described these processes in terms of the planets' interactions with the solar wind in which they are all immersed.

"What we are doing," Dryer says, "is taking what we know about Earth, Mars, and Venus, and extending models that have worked well for these cases to the cases of Jupiter, Saturn, Uranus, Neptune, and Pluto.

"The main difference between the solar wind-flow fields around non-magnetic and magnetic planets," he notes, "is the size of the cavity carved in the solar wind. Some of these are shaped like the Earth's --that is, they have a large, blunted bow shock-wave pointing 'upwind' toward the sun with the magnetosphere trailing off into a comet-like tail. The nose of our magnetopause is at an altitude of about 60,000 kilometers because we have a fairly strong magnetic field. For highly magnetized planets like Jupiter and possibly, Saturn, the magnetopause nose could extend to altitudes of 3 to 4 million kilometers. On the other hand, planets with very weak magnetic fields, like Mars and Venus, typically have a rather streamlined ionopause bow wave instead of a big magnetospheric one."

By superimposing proposed Jupiter-Saturn-Pluto and Jupiter-Saturn-Uranus, Neptune probe fly-by trajectories, the scientists determined the time of spacecraft penetration into the planet's plasma environment, the time available for sensings, and the intensities likely to be encountered there.

Pay Tables (Continued from page 1)

Pay Grade	Commissioned Officers Years of service computed under section 205						
	Over 14	Over 16	Over 18	Over 20	Over 22	Over 26	Over 30
O-10 ¹	\$2,794.80	\$2,994.90	\$2,994.90	\$3,195.00*	\$3,195.00*	\$3,394.20*	\$3,394.20*
O-9	2,395.80	2,595.90	2,595.90	2,794.80	2,794.80	2,994.90	2,994.90
O-8	2,300.40	2,395.80	2,500.20	2,595.90	2,700.30	2,700.30	2,700.30
O-7	1,996.80	2,196.90	2,347.80	2,347.80	2,347.80	2,347.80	2,347.80
O-6	1,445.10	1,673.70	1,759.20	1,797.30	1,902.00	2,062.50	2,062.50
O-5	1,388.40	1,492.50	1,578.30	1,625.70	1,683.00	1,683.00	1,683.00
O-4	1,312.20	1,369.20	1,407.30	1,407.30	1,407.30	1,407.30	1,407.30
O-3 ²	1,216.80	1,216.80	1,216.80	1,216.80	1,216.80	1,216.80	1,216.80
O-2 ²	903.00	903.00	903.00	903.00	903.00	903.00	903.00
O-1 ²	712.50	712.50	712.50	712.50	712.50	712.50	712.50

¹ While serving as Chairman of the Joint Chiefs of Staff, Chief of Staff of the Army, Chief of Naval Operations, Chief of Staff of the Air Force, or Commandant of the Marine Corps, basic pay for this grade is \$3,745.20* regardless of cumulative years of service computed under section 205 of this title.

² Does not apply to commissioned officers who have been credited with over 4 years' active service as enlisted

members.

* The rate of basic pay for military personnel at these rates is limited by Section 5308 of title 5, United States Code, as added by the Federal Pay Comparability Act of 1970, to the rate for level V of the Executive Schedule (\$36,000 per annum, or \$3,000 per month as of the effective date of this adjustment).

**Items to be considered for publication in NOAA WEEK should be submitted to:
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National Oceanic and Atmospheric Administration

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