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National Weather Service Urges Caution as Winter Approaches

Make no mistake: Winter weather can kill you!

NOAA statistics show that of several thousand people killed by winter storms over a 30-year period, about a third died of heart attacks induced by overexertion in heavy snow, a third died in storm-related accidents (mostly in cars), one-tenth froze to death, and the remainder died from a variety of mishaps including falls, home fires, and carbon-monoxide poisoning.

This tragic death toll could be brought to near-zero, according to NOAA's National Weather Service experts, if citizens would heed weather warnings and obey a few simple, common-sense safety rules.

Now is the time to prepare for winter weather, if you haven't already done so. There is much that one can do.

In the home:

The theme should be self-sufficiency--getting ready to live without normal utilities and services. Assume there will be no electricity, no central heating, no deliveries, no way to get groceries, no way to get out for a day or two--and plan accordingly.

Check your battery-powered equipment such as flashlights and radios; make sure batteries are fresh. Have an emergency heating system. Stock extra food, including some that requires no cooking. Look for potential fire hazards from prolonged use of stoves, fire-places, space heaters.

If you're not in the pink of condition, keep in mind that heart failure from shoveling snow is a major cause of death in winter storms. Remember that mittens are warmer than fingered gloves, that several layers of loose-fitting clothing provide better protection against cold than tight-fitting garments; that outer wear should be tightly woven, water repellent and hooded.

On the road:

Winterize the family car in advance. Have ignition, fuel, antifreeze, and exhaust systems checked. Make sure the heater is working, that brakes are tight and in adjustment, tires in good condition, windshield wiper and lights working properly.

In rural areas or when extended travel is planned, be ready for the worst. Have a car kit ready. Among items to consider are tire chains, tow chains, snow shovel, sack of sand, flashlight or signal light, flares, extra gasoline, fire extinguisher, booster cables, axe, windshield scraper, external heater, first-aid kit, knife, compass, road maps, blankets or sleeping bags, paper towels, matches, candles, extra clothing, pliers, screwdriver, and adjustable wrench.

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Lack of Accord With Japan On Fisheries Causes Concern

Claiming that the sockeye salmon resource in Bristol Bay, Alaska, has decreased so drastically during recent years as to jeopardize the traditionally abundant stock, and that halibut stocks in the eastern Bering Sea are on the brink of extinction as a commercial resource, National Marine Fisheries Service Director Robert W. Schoning this week criticized the Japanese for their failure to respond adequately to the two crucial conservation problems.

Mr. Schoning recently attended a meeting in Tokyo of the International North Pacific Fisheries Commission as a representative of NOAA and as an alternate Commissioner of the INPFC. Other Commissioner representatives on the U.S. delegation in Tokyo were Elmer E. Rasmuson, Donald L. McKernan, and Chairman Milton E. Brooding. Member nations are Canada, Japan, and the United States.

Two of the U.S. delegation's basic objectives in an effort to resolve urgent conservation problems confronting U.S. fishermen in the North Pacific were:

--To seek adequate protection for Bristol Bay sockeye salmon in 1974. (The Japanese

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ERL and City of Boulder Begin Computerized Car Pool Study

The first steps toward designing an effective, computerized car pool system have been announced by the Environmental Research Laboratories and the City of Boulder, Colo.

The system, which would ultimately be administered by the city government, would use ERL's electronic computers to match rides and riders in the Boulder area.

Following preliminary discussions between J.A. Kemper, Director of ERL's research support services, and City Manager Archie Twitchell, a joint task group has been established to begin designing a car pool system that could be in operation early next year, to ease the effects of local gasoline shortages in the event of rationing this winter.

"What we hope to accomplish," Mr. Kemper says, "is a maximum-convenience system which would be connected to NOAA's computer facilities here, and accessible, possibly by telephone terminal, from the city man-

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Contract Awarded For Operation Of Pribilof Island Schools

Secretary of Commerce Frederick B. Dent has announced the award of a contract to the State of Alaska school system for providing education on the Pribilof Islands during the 1973-74 school year. The reimbursable contract is not to exceed $379,308.00, Secretary Dent said.

The Pribilof Islands, land habitat of the world's largest herd of fur seals, are administered by NOAA through the National Marine Fisheries Service. Since 1962, the State of Alaska school system has operated the islands' schools for NMFS on a reimbursable basis.

The two inhabited Pribilofs, located in the Bering Sea about 900 miles southwest of Anchorage, now have some 600 Aleut residents, approximately 400 on St. Paul and 200 on St. George Island. About 140 Aleut children study at the newly constructed school on St. Paul Island, and 50 at the school on St. George. The St. George school has eight grades, while the one on St. Paul was expanded this year to nine. For further education, students must go to the mainland.

Sealing has been the major source of employment for the islands' inhabitants. The Pribilof Island fur seal program--carried out in accordance with the terms of the 1957 Interim Convention on Conservation of North Pacific Fur Seals, between the United States, the Soviet Union, Canada, and Japan--was excepted from regulations implementing the 1972 Marine Mammal Protection Act, with the proviso that studies be conducted to improve the program.

In March 1973, the Commerce Department ended the commercial fur seal harvest on St. George Island, and began a major research program to identify the principal factors governing seal population levels. Changes in the St. George Island seal population will be compared to those on St. Paul Island, where the harvest continues. NMFS is locating other employment for the St. George residents, and seal meat is provided for them from the harvest on St. Paul Island.

Lack of Accord With Japan (Continued from page 1)

response to suggested restrictions merely noted an awareness of the problem but declined any assurance of positive action on the proposal that Japanese fishing practices be altered.)

--To substantially reduce the incidental catch of juvenile halibut by Japanese trawlers in the eastern Bering Sea. (Japan said, however, that it would not agree to minimum conservation proposals because a substantial reduction in the halibut catch by trawlers also would result in a large decrease in trawl catches of other species.)

The INPFC meetings ended on a note of impasse with respect to the halibut issue, inasmuch as a unanimous vote is a requisite to the adoption of new conservation measures. The U.S. and Canada may--as they have done in the past--adopt halibut conservation measures through the International Pacific Halibut Commission.

Dr. Angelovic Is Named To Head Gulf Coastal Fisheries Center

Dr. Joseph Angelovic has been appointed Director of the National Marine Fisheries Service's Gulf Coastal Fisheries Center at Galveston, Tex. He formerly was Chief of the Research Management Division in Washington, D.C., where he served under the Associate Director for Resource Research.

The Center comprises a headquarters and three laboratories at Galveston, Panama City, Fla., and Port Aransas, Tex.

Dr. Angelovic earned his B.S., M.S., and Ph.D. degrees in fisheries biology at Utah State University in Logan.

Dr. Angelovic entered the Federal service in 1963 at Beaufort, N.C., and when assigned to Washington in 1971, was chief of the menhaden program and served as an adjunct member of the faculty of North Carolina State University in the Department of Zoology.

Fifth Data Buoy in Series Being Deployed

The fifth in a series of large experimental data buoys is being deployed about 300 miles east of Charleston, S.C., and 150 miles south southeast of Cape Hatteras, N.C., somewhat east of the Gulf Stream. It was towed from Gulfport, Miss., by the U.S. Coast Guard Cutter Acushnet, to be anchored in 2100 fathoms of water (almost 2 1/2 miles deep).

Designated EB-13, the 100-ton, 40-foot, discus-shaped buoy will furnish vital meteorological and oceanographic information from an area which frequently generates "Hatteras" lows and severe weather affecting the eastern United States. Engineering and environmental data will be transmitted routinely every three hours by EB-13 to its Shore Collection Station at Miami, Fla., thence to the National Weather Service at Suitland, Md., and the NOAA Data Buoy Office at the Mississippi Test Facility near Bay Saint Louis. High-frequency communication services are being provided by the Coast Guard, which will also furnish necessary ship servicing support for the buoy at sea. Maintenance will be accomplished by the NOAA Data Buoy Office, augmented by contractor support.

EB-13 and EB-01, a sister buoy anchored in the Atlantic 125 miles southeast of Norfolk, Va., will provide environmental data needed by the NWS for winter storm and hurricane forecasts and warnings, as well as for daily forecast operations.

The buoy program is being conducted under the direction of the National Ocean Survey by the Data Buoy Office, which is headed by James W. Winchester.

Survey in Saratoga County, N.Y., Is Completed

An 18-man National Geodetic Survey field party headed by Ivan L. Crabbe has completed a six-month geodetic survey of Saratoga County, N.Y.

ERL Scientists Study Hurricane "Cold Wake" Phenomenon

Recent airborne measurements of a peculiar, possibly beneficial phenomenon--the cold sea-surface temperature wake left by some hurricanes--taken by the Environmental Research Laboratories should help scientists explain where and why cold wakes occur, and what their consequences are.

They should also improve scientific understanding of how much heat flows from the sea into a hurricane, and how these great storms manage their budgets of heat energy.

Research flights conducted by the Miami, Fla.-based National Hurricane Research Laboratory and Research Flight Facility sampled two autumn hurricanes--Ellen in the Atlantic and Irah in the eastern North Pacific.

"Cold wakes may be beneficial in certain areas," NHRL meteorologist Peter G. Black says. "Cold water brought to the surface may be rich in nutrients which may attract enough marine life to create a kind of transient fishery behind the hurricane."

Hurricanes are giant heat engines, he explains, driven by heat carried into the storm by evaporation and conduction from the warm tropical ocean. This upward heat transfer into the hurricane, caused by the violent surface interactions beneath the storm, should result in a somewhat deeper mixed layer (the upper constant temperature layer of the ocean) and a somewhat cooler sea-surface temperature over the areas affected by the storm. But there have been indications from computer models and measurements made in 1971's Hurricane Ginger that changes in sea surface temperature and mixed layer structure beneath a hurricane are much greater than can be explained by evaporation alone.

Because a cold wake behind a hurricane can persist for several weeks, it may affect the motion and intensity of other hurricanes approaching or crossing the wake. According to Mr. Black, the position and temperature of a cold wake could be of importance to hurricane forecasters.

The NOAA scientists met Hurricane Ellen in late September, 650 miles northeast of Bermuda, and made a series of low-level penetrations through the storm at altitudes ranging from 400 to 1,500 feet, measuring winds up to 95 knots--the highest ever recorded by an aircraft flying that low in a hurricane.

To measure the upper ocean temperature structure to a depth of 1,000 feet within the high energy core of Ellen, as well as in her wake, the C-130 dropped 18 bathythermographs. Continuous sea-surface temperatures beneath Ellen were also measured with two different infrared thermometers on the DC-6 research aircraft at an altitude of 500 feet above the ocean surface.

Results of the Ellen experiments appeared to confirm the existence of internal gravity waves in the wake of the storm and revealed only a one-to-two-degree Celsius cooling of the sea surface mostly to the right of the storm track, a result consistent with the fast forward speed of the storm at the time of the flight (nearly 20 knots).

Initial results from Irah, a slower moving storm than Ellen, indicate only a slight cooling of 0.5 to one degree Celsius to the right of the storm tracks with some indication of an as yet unexplained warming over the center of the storm track of from one to two degrees.

NOAA Supervision and Group Performance Course Is Held at Danvers, Mass.

Participants in the NOAA Supervision and Group Performance course held recently at Danvers, Mass., were (front row, from left) Michael Corbett and Edward Handy, Northeast Fisheries Center; Dr. J. Perry Lane, Regional Extension Division; John Kirby, NOAA Field Finance Office; Dr. Robert Murchelano, Middle Atlantic Coastal Fisheries Center; Robert Cannon, Regional Procurement and General Services Division; Dr. Arlene Mazzone, Milford Laboratory; Vaughn Anthony, Northeast Fisheries Center; Marvin Boussu, Regional Water Resources Division; (standing, from left) Earl Johnston, Regional Inspection Division; Dr. Emory Anderson, Northeast Fisheries Center; Brian Kinnear, Regional State-Federal Relationships Division; Dr. David W.K. Au, Northeast Fisheries Center; Clarence Carlson, Atlantic Fishery Products Technology Center; Edmund Wright, Regional Employee Development Specialist; Stuart Wilk, Middle Atlantic Coastal Fisheries Center; Bori Olla, Middle Atlantic Coastal Fisheries Center; Robert Harris, Instructor, NOAA Personnel Office; Burton Tinker, Atlantic Fishery Products Technology Center; Ronald Neitz, Northeast Fisheries Center; Lawrence Couture, Regional State-Federal Relationships Division; Kevin Allen, Regional Marketing Services Division; and Rod Winslow, National Weather Service Forecast Office, East Boston, Mass.

NWS Substation Network Specialists Meet in Kansas City

Substation Network Specialists (SNSs) of the National Weather Service have a lonely job while traveling to visit and inspect climatological and hydrologic substations, and it is unusual for two or more of them to get together.

For the first time, 23 of the 49 Substation Network Specialists for the entire country met at the National Weather Service Technical Training Center in Kansas City on November 15. Substation Network Specialists for the Central Region joined with those attending the Operations and Maintenance of Substations class to hear George W. Bryant, factory representative of the Fischer & Porter Company, Warminster, Pa.; and Program Manager William I. Pogerman and W. Keith Shoun of the Substation Management Program, Silver Spring, Md.

Participants were (front row, from left) John P. Hennek, SNS Indianapolis, Ind., Mr. Bryant; Tom P. Clarke, SNS Lakeland, Fla.; Bruce R. Leslie, SNS Cheyenne, Wyo.; Curtis J. Smith, SNS Kansas City, Mo.; Robert L. Gill, SNS Fort Worth, Tex.; J. Tabonair, SNS Pacific Region Headquarters; (middle row, from left) Dave Gallivan, Instructor, NWSTTC; Richard N. Cook, SNS Brookings, S. Dak.; Felix Flara, SNS Juneau, Alaska; Gene Remington, SNS Springfield, Ill.; Norman Carroll, SNS Minneapolis, Minn.; Allen Marechale, SNS Lincoln, Nebr.; Jerry W. Kirk, SNS Denver, Colo.; Mr. Pogermon; Mr. Shoun; M. Oliver Asp, Chief, Substation Management, Central Region, Kansas City, Mo.; (back row, from left) Perry L. Steinman, SNS Fargo, N.Dak.; Stanley E. Baldwin, SNS East Lansing, Mich.; E. L. Sessions, SNS Los Angeles, Calif.; Jack W. Kepner (partly hidden), SNS Topeka, Kans.; W. B. Chapman, SNS Des Moines, Iowa; Donald R. Whitman, Assistant Superintendent, NWSTTC; H. N. Wolcott, SNS Boise, Idaho; W. B. Downs, SNS Helena, Mont.; Michael F. Orgish, SNS Denver, Colo.; Edgar W. Theisen, SNS Louisville, Ky.; Fred Cherry, Instructor, NWSTTC; Donald L. Quick, SNS Albany, N.Y. Not shown is Louis O. Withrow, SNS Kansas City, Mo., who took the picture.

Heating Degree-Day Information Available

Information on the heating degree-day situation in the United States is now being published in the Weekly Weather and Crop Bulletin. Daily degree-day figures are used by fuel companies in scheduling oil and gas deliveries. The Bulletin contains maps showing the percentages of the 30-year normal for the current week and for the cumulative seasonal total. In addition, a degree-day table shows actual weekly accumulation and departure, seasonal accumulation and departure, and departure of the 1973 cumulative total from 1972. Subscriptions to the Bulletin are available from the Agricultural Climatology Service Office, South Building Mail Unit, U.S. Department of Agriculture, Washington, D.C. 20250. The cost is $5.00 in the U.S. and possessions, $6.50 for airmail, and $11.25 for foreign airmail.

Harry M. Gerber Dies

Harry M. Gerber, Chief Airport Meteorologist at the Allegheny County and Greater Pittsburgh Airports for 25 years prior to his retirement in 1964, died on November 29. He served the National Weather Service for 46 years. He is survived by his wife, Helene, of 1940 Spring Valley Road, Pittsburgh, Pa. 15243, two children, James and Judy, and several grandchildren.

Great Lakes Pollution Study Discussed

Dr. Arthur P. Pinsak, Chief of the Lake Survey Center's Water Characteristics Branch, recently attended a progress meeting of the International Joint Commission Upper Lakes Reference at the University of Manitoba. The IJC Reference to study pollution in the upper Great Lakes, which will be completed in 1975, is a part of the 1972 International Water Quality Agreement.

Dr. Pinsak discussed results of Lake Survey's participation with other representatives engaged in this joint U.S. and Canadian multi-organizational study. The Center has been involved in field investigations in the Straits of Mackinac concerning the currents and composition of water flowing easterly from Lake Michigan into Lake Huron.

Survey Underway Along Florida's West Coast

A six-man National Ocean Survey hydrographic field party, headed by Lieutenant Richard K. Muller, is investigating numerous navigational hazards along a 200-mile stretch of Florida's west coast from Venice to the Suwannee River.

The investigation, which will continue until about April 1, is a continuation of a project which began at Fort Myers in 1971 and will result in the updating of eight nautical charts.

NMFS Negotiating To Increase Porpoise Observer Program

Negotiations are under way with owners and managers of U.S. fishing vessels of the Pacific tuna fleet to enlist their cooperation and support in a stepped-up program of carrying Federal observers aboard on regular fishing trips.

Dr. Brian Rothschild, Director of the National Marine Fisheries Service's Southwest Fisheries Center at La Jolla, Calif., said the reason for placing government observers on tuna vessels is to enable the observers to conduct research and observe operations with a view toward assisting in developing improved fishing methods and gear which will, in turn, reduce porpoise mortality as required by the Marine Mammal Protection Act of 1972.

NMFS has placed primary responsibility for the tuna-porpoise rescue program at the Center, while other functions dealing with the Marine Mammal Protection Act, such as administration and enforcement of the tuna-porpoise aspects of the Act, lie with the NMFS Regional Office at Terminal Island, Calif., headed by Gerald V. Howard, and the NMFS Central Office in Washington, D.C.

Federal officials are currently working to complete arrangements for assigning between 25 and 38 observers aboard various categories of tuna vessels randomly chosen by a lottery conducted by NMFS. All preparations for the observer program must be complete when the yellowfin tuna fishing season opens January 1, 1974. The season continues until a quota (to be determined at a meeting of the Inter-American Tropical Tuna Commission at San Diego, Calif., December 6-8) has been taken by all member nations--Canada, Costa Rica, France, Japan, Mexico, Panama, and the U.S.

The observer program will operate mainly in that part of the eastern tropical Pacific that is under the supervision of IATTC. The program is administered by the Southwest Fisheries Center, and observers will come from that Center and other NMFS facilities. Some will be hired from among qualified university students.

Comments Invited on Proposed Interim Tuna Fishery Regulations

NOAA is inviting comments from all interested persons regarding proposed interim regulations dealing with commercial fishing operations under the Marine Mammal Protection Act of 1972, sections of which, dealing with seals, sea lions, porpoises, and whales, are administered by the National Marine Fisheries Service. The proposed interim regulations were published in the Federal Register on Monday, November 12, 1973 (Volume 38, Number 217, pages 31180 and 31181).

The proposed interim regulations include requirements that all U.S. tuna fishing vessels over 300 tons carrying capacity (about 100 vessels) be equipped with a porpoise safety panel and that a maneuver known as "backing down" be used during fishing operations. The panel consists of a small mesh insert into the usual net which will help prevent porpoises from entangling their fins or snouts causing them to drown because they are mammals and must breathe air. The net adaptation was invented by a commercial fisherman and further refined and tested by industry and the NMFS in conjunction with the "backing down" maneuver. "Backing down" involves carefully timed movements of the vessel which affect the huge trailing net in such a way that porpoises can escape over the far end of the net as it dips beneath the surface during the maneuvers.

The proposed interim regulations requiring the use of the net adaptation will be effective March 1, 1974, and continue until October 20, 1974, when NMFS plans to implement final regulations. The timing is planned to coincide with the expiration of the two-year exemption specified in the Act permitting the taking of marine mammals incidental to commercial fishing operations, provided that techniques and equipment are used which will produce the least practicable hazard to marine mammals.

Written comments, views or objections concerning the proposed regulations may be made to the Director, National Marine Fisheries Service, NOAA, Washington, D.C. 20235, until the close of business December 10, 1973.

National Weather Service Urges Caution as Winter Approaches (Continued from page 1)

Many drivers carry a spare set of wheels equipped with chains. It's often easier to change wheels than it is to install chains when a car is stuck.

In addition to public watches and warnings, the NWS issues travelers' advisories when winter weather conditions are expected to make traveling difficult.

Before setting out, check the latest weather information. On the road keep the radio on for storm bulletins and travelers' advisories. Maintain as much gasoline in your tank as you can, stopping frequently to refill. In remote areas, travel in convoy with another vehicle if you can; try not to be caught alone. When conditions worsen rapidly, seek refuge immediately.

If a blizzard traps you on the road, try to stay in the car. This is where rescuers are likely to find you soonest. If you're in deep, don't try to push two tons of car out of a drift or risk a heart attack by frantic shoveling. Don't try to walk out through a blizzard. Getting lost can be almost certain death.

While waiting for help, keep the passenger compartment ventilated by opening a window just a bit. Run the motor and heater sparingly. Carbon monoxide is a stealthy killer. Try not to remain motionless for long periods. Exercise by clapping hands and moving arms and legs vigorously. At night turn the dome light on so work crews can spot you easily. Keep a continuous watch. Never allow all occupants of the car to sleep at once.

Employees of the National Ocean Survey's Pacific Marine Center who received Length of Service Awards in July were: 25 years - Rear Admiral Herbert R. LIPPOLD, Jr. 20 years - Henry L. SHEK, Jose M. BALETO, and Hannah KELLY.

National Weather Service Eastern Region employees who received Length of Service Awards in July were: 35 years - Joseph CINEX, WSFO New York, N.Y. 30 years - Luella M. MAXWELL, WSFO Pittsburgh, Pa.; Theodore WALTERS, WSO Washington, D.C. (Dulles); Harry TEMPLE and Donald A. ROWLEY, WSFO Albany, N.Y.; Paul J. ROMANO, ERH, Garden City, N.Y.; and Joseph H. BREWTON, WSSF Wallops Island, Va. 25 years - John L. COSTELLO, WSSF Wallops Island, Va.; Melvin R. SUMMER, WSO Dayton, Ohio; Melvin STRICKER, WSO Hartford, Conn.; Dale N. ELLIS, WSFO Raleigh, N.C.; and Richard A. COLWELL, Jr., WSO Greensboro, N.C. 20 years - Allen D. TUSING, AWP Norfolk, Va.; Kenneth R. GIBSON, WSO Syracuse, N.Y.; and Everette M. MEDEIROS, WSO Providence, R.I.

National Weather Service Western Region employees who received Length of Service Awards in July were: 35 years - Philip WILLIAMS, Jr., WRH, Salt Lake City, Utah. 30 years - Donald R. HARDY, WSO Flagstaff, Ariz.; Gordon HUNDEBY, WSFO San Francisco, Calif; Roland L. RAETZ, WRH, Salt Lake City, Utah; and Goodwin P. TAYLOR, WSFO Boise, Idaho. 25 years - Bill B. ANDERSON, WSO Elko, Nev.; Loren F. BEDFORD, WSFO Seattle, Wash.; Donald BILLMAN, WSO Glasgow, Mont.; Robert B. CALDWELL, WSFO San Francisco, Calif.; and George V. DUNMIRE, WSFO Salt Lake City, Utah.

National Weather Service Central Region employees who received Length of Service Awards in July were: 35 years - Lewis P. HAHN, RFC Kansas City, Mo. 30 years - William A. BARTH, WSTTC Kansas City, Mo.; Henry W. CHIDLEY, WSFO Denver, Colo.; Pedro D. GONZALEZ, WSO Colorado Springs, Colo.; Jack W. Kepner, SNS Topeka, Kans.; Thomas H. MacKENZIE, WSO Grand Junction, Colo; Paul L. NAYLON, WSFO Omaha, Nebr.; John J. PARRY, WSFO Minneapolis, Minn.; and Raymond A. PEDERSEN, WSFO Des Moines, Iowa. 25 years - Keith J. BLESSUM, WSO Fargo, N. Dak.; Marguerite R. DALE, WSFO Topeka, Kans.; Robert D. GROVER, WSO North Platte, Nebr.; and Herbert J. TAYLOR, WSO Casper, Wyo. 20 years - Daina J. SCHMIDT, WSFO Denver, Colo.

National Weather Service Southern Region employees who received Length of Service Awards in July were: 30 years - Davis BENTON, WSO Galveston, Tex.; Basil A. NIDY, Jr., WSO Montgomery, Ala.; James C. HICKS, WSFO Memphis, Tenn.; Harry WEBER, WSFO New Orleans, La.; Charles R. HAYS, WSO Shreveport, La.; and Clarence E. VICROY, Jr., RFC Slidell, La. 25 years - Robert E. SHIRTUM, WSFO San Antonio, Tex. 20 years - Carl L. PHIPPS, WSRH, Fort Worth, Tex.; Clement A. ROCHAT, WSO Brownsville, Tex.; Warren L. WALKER, WSO Amarillo, Tex.; Carl R. PERKINS, Jr., WSO Lake Charles, La.; Eugene E. WOODS, Jr., NHC Miami, Fla.; Claude D. PROST, WSO Nashville, Tenn.; David P. COWLES and Oscar W. OSCARSON, WSFO Oklahoma City, Okla.

NOAA headquarters employees who received Length of Service Awards in July were: 35 years - Lynn MEANS. 30 years - George HATZENBUHLER, Jay GUMMOW, Robert DELAWDER, Mildred PRICE, Daniel KLEIN, William BUGBEE, Ernest THOMAS, Oliver GORDEN, Leopoldo GARCIA, Robert DICKSON, Robert ROSS, Melvin JOHNSON, Clarence SMITH, and Jane VIOLETT. 25 years Catherine BROOKE, Bertram ROTHENBERG, Clifton PRICE, Essix DANIEL, Margorie GREGORY, Harold HAGWOOD, Paul NICHOLS, Manley MALPHRUS, George ALWARD, Herbert THOMPSON, and Hazel MARSHALL. 20 years - George BALL, Clementine EDWARDS, Donald KELLER, Raymond FRITZ, John OURS, and David VOLZ.

Supervision and Group Performance Course Conducted at NWS Western Region Headquarters

Participants in a Supervision and Group Performance Course conducted at the National Weather Service Western Region Headquarters in Salt Lake City, Utah, November 12-16, by Jack Wiley of the Northwest Administrative Service Office in Seattle, Wash., were (front row, from left) Barry Aronovitch, Ron Hamilton, Matt Kulawiec, Mr. Wiley, Regional Director Hazen Bedke, Jim Wakefield, Vail Schermerhorn, (back row, from left) Nelson Fox, Ray Hall, Bob Lord, Bob Vaughan, Tony Lentini, Larry Zimmerman, Eldon Beals, Charles Haas, Russ Knierim, Bob Haynes, Dan Riedy, Bernie Spittler, Jim Tyrrell, Ken Keeney, Bruce Carter, Richard Wood, and Bob Ingram.

Fisheries Experts Represent U.S. At International Tuna Meeting

Fourteen members of the U.S. fisheries community, including representatives of the National Marine Fisheries Service, sport fishing organizations, conservation interests, and commercial fisheries establishments attended the third regular meeting of the International Commission for the Conservation of Atlantic Tunas in Paris, France, from November 19 to December 4,1973.

The U.S. delegation was led by W.G. Van Campen, Assistant to the Coordinator for Ocean Affairs and Special Assistant to the Secretary for Fisheries and Wildlife of the U.S. Department of State. Serving as delegates were August J. Felando, General Manager of the American Tunaboat Association, and Charles R. Carry, Executive Director of the Tuna Research Foundation.

NMFS was represented by Dr. Brian J. Rothschild, Director of the Southwest Fisheries Center (La Jolla, Calif.), the headquarters of the NMFS Global Tuna Program; Dr. Steven Schanes, Special Assistant to the NMFS Director; Gerald V. Howard, Director of the Southwest Regional Office (Terminal Island, Calif.); Dr. William Fox, a population dynamics expert stationed at the La Jolla Center; Brian Hallman, on the staff of the NMFS Office of International Affairs; Dr. Grant Beardsley, billfish and tuna biologist on the staff of the NMFS Southeast Fisheries Center (Miami, Fla.), in charge of sport fish programs; and Frank J. Mather, III, a scientist on the staff of the Woods Hole (Mass.) Oceanographic Institution, but under contract to the NMFS for sport fish investigations, particularly those related to bluefin tuna.

Other members of the ICCAT--an organization associated with the Food and Agriculture Organization of the United Nations--are: Brazil, Canada, France, Ghana, Ivory Coast, Japan, Korea, Morocco, Portugal, Senegal, South Africa, and Spain. The Commission was formed in 1969, as a means of continually investigating and assessing harvestable yields of Atlantic tunas through an international approach.

Auke Bay Men Win Conkle Award

A paper by H. Richard Carlson and R. E. Haight of the National Marine Fisheries Service Auke Bay Fisheries Laboratory in Auke Bay, Alaska, has been awarded the 1972 Conkle Award. The award is presented each year by the Laboratory in recognition of excellence in presenting the results of original research. The paper selected over all others published by Auke Bay staff members last year, "Evidence for a home site and homing of adult yellowtail rockfish, Sebastes flavidus," appeared in the Journal of the Fisheries Research Board of Canada.

The selection was made on the basis of originality, impact on the field of fishery research, clarity of presentation, suitability of experimental design, and justifiability of conclusions.

Mr. Carlson's and Mr. Haight's names will be inscribed on a permanent plaque in the Laboratory's library.

Automated Remote Wind Equipment Installed on Buoy at Blunts Reef

An automated remote wind speed and direction system provided by the General Dynamics Corporation of San Diego, Calif., was recently installed aboard a U.S. Coast Guard Large Navigational Buoy at Blunts Reef, Calif. This LNB, which replaced the Blunts Reef manned lightship several years ago, is located five miles offshore from Cape Mendocino, one of the western-most points of the 48 contiguous states. The coastline of northern California, Oregon, and Washington, is frequently struck by some of the Nation's severest storms moving inland from the Pacific. During the passage of these storms, the adjacent coastal waters become very hazardous to marine activities. The installation of this wind system will be followed by the automating of other LNBs replacing manned lightships from which the National Weather Service received valuable observations for many years.

The project was initiated by the NWS Office of Meteorological Operations at the request of the NWS Western Region, and implemented by the NOAA Data Buoy Office Electronics and Data Processing Division at the Bay St. Louis, Miss., Test Facility with Coast Guard cooperation. A requirements statement for the equipment, written by the NWS Data Acquisition Division, was used as the basis for contractual specifications prepared by the NDBO. The project was jointly funded by NWS and NDBO. Robert H. Cassis, Lieutenant Commander,USCG, was project leader for NDBO and John Harrell of the NWS Data Acquisition Division was the NWS focal point and coordinator.

The LNB wind observation is transmitted over the Coast Guard LNB radio control link to its monitor station located at Humboldt Bay, Calif. The wind values displayed on a digital readout in the Humboldt Bay Coast Guard Office are automatically updated every five minutes. At three-hourly intervals, Coast Guard personnel transmit the data over their communications circuits to NWS in San Francisco for entry and distribution on the environmental data network circuits.

Computerized Car Pool Study (Continued from page 1)

ager's office. We will help design the car pool system, and contribute time on our computers to support the system once it is in operation."

According to Mr. Twitchell, the benefits of a properly designed system might go beyond this winter. He says"...we hope to start something here that will foster more of a car pool mentality in this area.

"Our present, very preliminary view of this system is of a computerized car pool, easy for citizens to reach and use, and able to accommodate everyone who lives or works within the City of Boulder. We expect to offer this service at relatively little cost to the city budget. And we hope to develop a system for Boulder that will provide a model for communities around the nation."

A Message From NOAA's Energy Conservation Project Manager

The need for energy conservation has sparked the imagination of many in NOAA. Eight communications conveying 19 suggestions were received from employees during the past week. All were acknowledged, and the ideas were referred to appropriate offices. Proposals are solicited and welcomed. Here are some that can be implemented by all of us as individuals:

1. Reach for the cold water faucet when cold water will do the job.
2. Turn off lights and tilt or raise blinds to get the most light and/or heat out of the sunshine or bright daylight. Dispense with any unnecessary overhead lighting.
3. Do not work nights or weekends unless it is absolutely necessary.
4. When absent from the office for a prolonged time (during luncheon for instance), turn off the lights and electrical equipment.
5. Instead of taking the elevator for short trips, walk UP one floor or DOWN two. Every elevator stop requires extra electricity.

Of special interest is a move by NOAA to participate in demonstration projects related to solar heating of buildings in various parts of the country under the aegis of the National Science Foundation's Office of Public Technology Projects.

Harley D. Nygren
Rear Admiral, NOAA

Regional Hydrologists Meet in Silver Spring

Attendees at a National Weather Service Regional Hydrologists' Conference at the Office of Hydrology in Silver Spring, Md., November 12-16 were (front row, from left) Bill Raetz, Western Region; Ralph Kresge, O/H; Max Kohler, Associate Director, O/H; (back row, from left) Elroy Balke, Central Region; Glenn Audsley, Southern Region; John Thomas, Eastern Region; Tom Bowers, Alaskan Region; and Dr. Robert Clark, O/H.

Robert Appleton Dies

Robert Appleton, former Weather Service Specialist at the National Weather Service Office in Wilmington, Del., died on November 13. He retired last January after 33 years' service. His widow resides at Seymour Avenue, Fairwinds, Bear, Delaware 19701.

recipe of the week

FISH PARMIGIANA

6 frozen breaded fish portions (4 ounces each)

1/3 cup cooking oil

1/2 cup thinly sliced onion

1 jar (15 to 15-1/2 ounces) meatless spaghetti sauce

6 slices (3 by 4-1/2 or 5-inches each) mozzarella cheese (about 3 ounces)

2 tablespoons grated Parmesan cheese

Arrange fish portions on greased, shallow baking pan. Drizzle 3 tablespoons of oil over portions. Bake in very hot oven, 500° F., until lightly browned, 15 to 20 minutes. Cook onion until tender in remaining oil. Add spaghetti sauce; heat. Pour 1/2 of the sauce over bottom of shallow 2-quart casserole. Arrange fish portions in a row down center of casserole overlapping portions slightly. Pour remaining sauce over fish. Top with mozzarella cheese slices and sprinkle Parmesan cheese over top. Return to oven until cheese melts, 5 to 8 minutes. Makes 6 servings.

Items to be considered for publication in NOAA WEEK should be submitted to:
Office of Public Affairs, NOAA, Room 221, Bldg. 5, Rockville, Md. 20852. Phone (301) 496-8243.

National Oceanic and Atmospheric Administration

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