

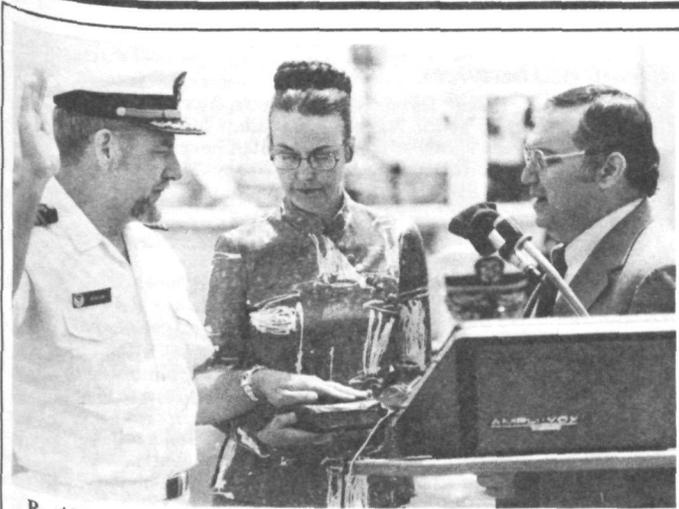


noaa week

Volume 7

Number 19

May 7, 1976



R. ADM. ROBERT C. MUNSON was sworn in as Director of the National Ocean Survey's Atlantic Marine Center in Norfolk, Va., last Friday by Dr. Robert M. White, NOAA Administrator. Among the 200 people who witnessed the ceremony, which was held on the fantail of the NOAA Ship Peirce, were Mrs. Munson, who held the Munson family Bible for the swearing-in, NOS Director R. Adm. Allen L. Powell, other NOAA Corps officers, and the personnel of the AMC. Adm. Munson succeeds R. Adm. A. C. Holmes, who is retiring after 29 years of active service, the last five as AMC Director.

Owlie Skywarn Is New Weather Safety Advocate

Owlie Skywarn, a weatherwise owl who knows—and tells—about the dangers of severe storms, is the main character in a new NOAA weather safety campaign. Owlie's first appearance is in a booklet provided to all fourth grade teachers through the school systems of the Nation's 27 most tornado-prone states. It describes in words and pictures how tornadoes form, the chief dangers from these powerful storms, and how a school child should behave in a tornado emergency. The 16-page, two-color booklet was designed and written for the National Weather Service by Dr. Franklyn M. Branley, Nature and Science Advisor to the American Museum of Natural History in New York and chairman of the museum's Hayden Planetarium. It is illustrated by Leonard Kessler, also well known in the field of elementary science education books. According to Herbert S. Lieb, who heads the NWS Disaster Pre-

(Continued on page 4)

Michigan Institute Is Awarded Satellite Oceanography Contract

The feasibility of mapping water characteristics such as sediment, pollution, algae, and the like, using instruments aboard spacecraft, will be studied under a series of contracts awarded by NOAA to the Environmental Research Institute of Michigan (ERIM). The contracts, totaling \$93,493, also will support further study on how best to utilize a multispectral scanner—an instrument which measures radiation in the various wavelengths of the electromagnetic spectrum—for improving the ability to measure water depths from satellites. The research will contribute to the selection of appropriate spec-

435 Foreign Fishing Vessels Sighted Off U.S. in March

Puget Sound Circulation Is Studied

A search for clues to the uncommon ability of Puget Sound and other deep, cold-water estuaries to digest pollutants—and the limits of that capacity—is being conducted by Environmental Research Laboratories scientists in Seattle, Wash. Using a moored string of seven current-meters suspended beneath a subsurface buoy, they are developing the first detailed three-dimensional view of water circulation in the Sound. From (Continued on page 4)

Foreign fishing and fisheries support vessels sighted operating within 200 miles of U.S. coasts during March totaled 435, and came from 12 foreign nations, according to preliminary reports. The sightings were made by fisheries agents of the National Marine Fisheries Service and by personnel of the U.S. Coast Guard, conducting joint fisheries enforcement patrols from Coast Guard cutters and aircraft. The number was down from 505 foreign fishing vessels sighted the previous month and from the 502 sighted in March 1975, NMFS figures show. The drop in the number can be attributed, in part, to the closing of the mackerel fishing season off New England and the mid-Atlantic coasts by the International Commission for the North-west Atlantic Fisheries. Of the foreign vessels, 255 were from the Soviet Union—which had 126 ships operating off Alaska, 74 off New England, 45 off the mid-Atlantic States, and 10 off the West Coast. Second was Japan with 79—69 (Continued on page 2)

Dr. Norman Phillips Is Elected to NAS

Dr. Norman A. Phillips, Principal Scientist at the National Weather Service National Meteorological Center in Suitland, Md., has been elected a member of the National Academy of Sciences (NAS). The NAS is a private organization of scientists and engineers dedicated to the furtherance of science and its use for the general welfare. It was established in 1863 by a Congressional Act of incorporation, signed by Abraham Lincoln, which calls upon the NAS to act as an official advisor to the Federal Government, upon request, (Continued on page 2)



Dr. Phillips

About NOAA Week

A sample survey of NOAA offices has been conducted to determine if there was a need to distribute a personal copy of this publication to each member of the NOAA family. The results indicated this was not necessary to insure the publication was readily available to everyone. The practice of distributing only the number of copies requested by each organization will be continued. Any NOAA organization desiring a change in its number of copies may request it of the Administrative Operations Division (AD1), 6010 Executive Boulevard, Rockville, Md. 20852.

NOAA Participates in Boat Shows

A display of National Ocean Survey Storm Evacuation Maps of the Tidewater Area attracted the most attention at the NOAA booth at the eight-day Mid-Atlantic Boat Show in Norfolk, Va. Many of the 25,000 who attended were interested also in the display commemorating the earliest survey of the Elizabeth River along with the latest NOS nautical chart of the same area. The booth was manned by Allan Shugeld, Page Douros, William Jonns, and Al Rauck.

NOAA's booth at the nine-day Detroit Boat Show was visited

by many thousands of people interested in Great Lakes weather, nautical charts, water levels, and related subjects. The Lake Survey Center's participation was coordinated by Walter Carpus and Richard Buszka, and others who manned the booth were Richard VanEss from the Detroit National Weather Service Forecast Office and Robert Goodnough, William Monteith, Arthur Christenson, Donald Rondy, Dennis Lakomy, Edward Gurche, Joseph Wolny, John Hanna, Frederick Lindsey, Edward Iwasko and Harry Lippincott, from LSC.

MANNING NOAA's EXHIBIT at the recent Richmond, Va., Boat Show when this photo was taken were (from left) Alfred Lundberg, of the Marine Chart Division in the National Ocean Survey Office of Marine Surveys and Maps, Rockville, Md.; Edward Coulter, of the Distribution Division in the NOS Office of Aeronautical Charting and Cartography, Riverdale, Md.; and John Welch, of the National Weather Service Office in Richmond, Va.

Others who worked at the booth during the four-day show included Meteorologist in Charge Hurtes Smith, Dolph Kipps, Leo Coro, and Arthur Sharman of WSO Richmond.



Foreign Fishing Ships Off U.S. (Continued from page 1)

off Alaska, two off the Mid-Atlantic States, three off the Gulf Coast, and five off New England. Third was Spain, with 36-15 off New England and 21 off the mid-Atlantic States.

Also sighted were vessels from Poland, Bulgaria, Romania, the German Democratic Republic (East Germany), Italy, Ireland, Cuba, the Republic of Korea (South Korea), and the Republic of China (Taiwan).

Canadian fishing vessels were not counted because of the long history of cooperation between fishermen of the two nations, who have traditionally shared many fishing grounds off the coasts of both Canada and the U.S.

NMFS agents report that the East European vessels off the New England and Atlantic coast fished primarily for hake. The U.S.S.R. ships also fished extensively for squid, which is used primarily for export. The Mediterranean and Oriental nations' ships fished generally for squid, with the Spanish ships also fishing for cod.

Off the West Coast, the East Europeans and Soviets fished largely for groundfish such as hake and pollock, and the Orientals chiefly for black cod.

The three Japanese ships in the Gulf were tuna longliners.

Two foreign fishing vessels were seized during March. The Japanese Eikyu Maru #81 was

seized for violating the contiguous fisheries zone off Alaska and was fined a total of \$580,000. The Soviet vessel Anton Tammsaare was seized and fined \$410,000 for catching and retaining lobsters caught on the Continental Shelf off the New England coast.

Dr. Phillips Elected to NAS (Continued from page 1)

in any matter of science or technology.

Election to membership in the NAS is considered to be one of the highest honors that can be accorded to an American scientist or engineer. The 75 new members elected at its 113th annual meeting last week, in recognition of their distinguished and continuing achievements in original research, bring the total present membership to 1,190.

Dr. Phillips had been an occasional consultant to the NMC for many years before assuming his present position in 1974. The four previous years he had been head of the Department of Meteorology at the Massachusetts Institute of Technology, where he had served since 1956, first as a Research Associate and then as a Professor.

He received his B.Sc., M.Sc., and Ph.D. from the University of Chicago.

During World War II he was a Forecaster in the U.S. Air Force, and from 1951-1956 he was a Meteorologist at the Institute for Advanced Studies, in Princeton,

obituaries

Joseph W. Berry

Joseph W. Berry, former National Weather Service Climatologist for Colorado, died on April 30 in Denver, Colo. He had retired in 1972, after serving in that position for 16 years.

He is survived by his wife, Iris, of 950 South Ogden St., Denver, Colo. 80209, and a son, Wendell.

Wilfred B. Harrison

Wilfred B. Harrison, former Administrative Officer at the National Ocean Survey's Atlantic Marine Center in Norfolk, Va., died on April 18. He had retired to a farm near Waynesboro, Va., in 1971 after 34 years of service with the NOS and its predecessor, the Coast and Geodetic Survey. He spent more than four years aboard C&GS ships before transferring to the Norfolk office in 1941. In 1958 he received a Commerce Silver Medal for designing and developing a tide-measuring device that provided a 1 1/2-hour advance warning of high water to area residents.

His survivors include his wife, Margaret; three sons—Kelly, of Afton, Va., David, of Norfolk, and Bruce, of Virginia Beach, Va.; and a daughter, Priscilla Williams, of Virginia Beach.

Capt. Gilbert C. Mast

Capt. Gilbert C. Mast, of Bethesda, Md., former Chief of the Operations Division in the Office of Oceanography of the U.S. Coast and Geodetic Survey (predecessor of the National Ocean Survey), died on April 30. He had retired in 1963 after 34 years' Federal service.

N.J., except in 1953, when he was a Docent at the University of Stockholm, Sweden.

Dr. Phillips has been active on national and international scientific committees, including the Atmospheric Science Panels of the President's Science Advisory Committee and the National Science Foundation, the Evaluation and Goals Committee of the University Corporation for Atmospheric Research, the Mid-Ocean Dynamics Experiment Scientific Panel, Project Stormfury Advisory Panel, and the U.S. Panel for the First GARP Global Experiment.

Recently he was elected a Councilor of the American Meteorological Society, which he has served in various capacities through the years. He has received the AMS Meisinger Award, Editor's Award, and its highest honor, the Rossby Medal.

He has been Associate Editor of the scientific journal *Tellus* and received, in 1956, the Royal Meteorological Society's first Napier Shaw Award.

He joined the C&GS in 1928 after receiving his civil engineering degree from Virginia Polytechnic Institute. He served as chief of various C&GS field parties and on survey ships throughout the Atlantic and Pacific, through 1959.

His shipboard assignments included commanding the Parker Lester Jones, Hodgson, and Explorer.

His survivors include three daughters, Mrs. Richard Hahn of Kingsville, Tex.; Mrs. James E. Farr of Chevy Chase, Md.; and Mrs. Nancy M. Durham of Kensington, Md.

Joseph H. Strub, Jr.

Joseph H. Strub, Jr., Meteorologist in Charge at the National Weather Service Forecast Office at Minneapolis, Minn., died on May 3. At Minneapolis since 1953, he had served as a Meteorologist, Principal Assistant, Hydrologist, and State Climatologist before being named MIC in 1968. He received a Commerce Silver Medal in 1966, the Civilian Service Medal of the Department of the Army in 1967, and, in 1969, a Commerce Gold Medal for working as a member of a "highly effective team in issuing and coordinating very timely, accurate and highly useful river stage outlooks, forecasts and flood warnings in connection with the widespread Upper Midwest snowmelt floods during the spring of 1969."

He joined the NWS in 1947 and served at Dubuque, Iowa, the Kansas City River Forecast Center, and Des Moines, Iowa, before being recalled to serve with the Air Force in Europe from 1951-1953. Upon his return, he served as Principal Assistant at Omaha, Nebr., before going to Minneapolis.

He is survived by his wife, Ann, of 7614 Oliver Ave., S. Richfield, Minn. 55423; three sons—Joseph, Jeffrey, and Gregory; and a daughter, Cynthia Busian.

noaa week

Published weekly at Rockville, Md., by the Office of Public Affairs for the information of employees of the Commerce Department's National Oceanic and Atmospheric Administration.

Articles to be considered for publication should be submitted at least a week in advance to NOAA Week, Room 221, WSC 5, Office of Public Affairs, National Oceanic and Atmospheric Administration, Rockville, Md. 20852.

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

Catherine S. Cawley, Editor
Warren W. Buck, Jr., Art Director

Recent Congressional Activity of Interest to NOAA Personnel

Early in April, the House and Senate passed authorization appropriations for \$135 million to be used for a crash program to protect the country against an outbreak of swine influenza next winter. The total included \$100 million to pay for production of a vaccine against the disease and about \$26 million to help state and local governments operate community immunization programs that may be based in schools and places of employment. The President signed the bill on April 15 and the Congress on its rapid response on this crucial measure.

Earlier in the year, the House and Senate approved a bill, dubbed with Hatch Act Revision, that for the first time in decades would allow Federal employees to participate in partisan elections and run for Federal office. President Ford, on April 12, vetoed the bill indicating that it would deny the lessons of history by politicizing the Civil Service. Late in April, the House voted to overturn the President's veto of the Hatch Act Revision. The final vote was 243 in favor of overriding the veto and 160 to sustain it. A veto override requires a two-thirds margin.

Late in March, the President signed a science and technology bill to Congress. The measure had two major themes: It urged Congress to approve the Administration's budget request of about \$25 billion to support the R&D activities of various Federal agencies in fiscal year 1977. It also urged Congress to pass legislation to establish a new Office of Science and Technology Policy in the Executive Office of the President, as requested by the Administration last June. The office would be a successor to the Science Advisory Office that was abolished by the former President.

Late in April, the Senate unanimously endorsed a compromise version of a science advisory bill that had been carefully

drafted to meet White House approval. On the 29th of April, the House agreed to the Conference Report and sent the bill to the President.

—In mid-April, the Senate voted to authorize up to \$5.2 billion over the next 15 months for special job-creating public works projects and extra water pollution funds. The bill was passed after an amendment more than doubled its initial \$2.5 billion spending limit by adding additional employment and water pollution money. Earlier this year, Congress approved and the President vetoed a similar bill at a higher dollar level.

—In March, the House and Senate approved a bill requiring child day-care centers to have a minimum number of adult workers per specified number of children between the ages of six weeks and six years. The bill postponed until July 1 of this year a requirement of a 1974 social service law that standards be set by last October. The bill went to the President, but was vetoed April 16. Mr. Ford urged Congress to pass instead an Administration program under which states would establish and enforce their own day-care staffing standards. The House voted on May 4 to override the veto, but the Senate sustained the veto on May 5.

NMFS Census Finds Gray Whale Population Remains About 11,000

A recent count of California gray whales, conducted at observation points off California indicates the total population of the species is still about 11,000. The census was conducted by the Marine Mammal Division of the National Marine Fisheries Service Northwest Fisheries Center, Seattle, Wash., where the whale experts are Dale Rice and Allen Wolman.

NMFS observers watched between the daylight hours of 7 a.m. and 5 p.m. from their vantage points at Granite Canyon in Monterey County and at Point Loma in San Diego County. At Granite Canyon, 3,797 gray whales were counted during the December-February census period—more than in any other year during the same season for the past nine years. Observers at Point Loma saw 2,821, more than during any other of the seven census periods over the past 23 years. The increase of gray whales sited is believed to be due largely to better weather conditions for observing whales rather than to a marked increase in the population.

Almost all the migrating gray whales, which prefer shallower waters, pass within two miles of Granite Canyon, but many are farther offshore when passing Point Loma—possibly avoiding

3rd International Chart Published

Publication of the third of five international nautical charts has been announced by the National Ocean Survey.

The chart, INT 513, covers the southern portion of the Bering Sea, including the Aleutian Islands, and is issued as part of a

New Research Paper Competition Announced

The Sea Grant Association has announced that it is inaugurating an Annual Graduate Student Research Paper Competition designed to recognize outstanding contributions made to the Sea Grant concept by graduate students. Three winning authors will be invited to attend the Association's 9th Annual Meeting, scheduled for November 8-10 in Los Angeles, Calif., and present their papers at a dinner in their honor. In addition, each will be awarded \$100.

The theme for this year's competition is "The Decade Ahead." An 800-word abstract is to be submitted, via the local Sea Grant Director, no later than June 1. The paper should focus on original research significant in its potential or actual contribution to the marine resource needs of the Nation, should follow thesis format, and be easily understood by a diversified audience.

Further information is available from local Sea Grant Directors.

multination program sponsored by the Monaco-based International Hydrographic Organization (IHO).

The IHO program will provide a standard series of charts for the entire world which can be used by all nations. Each IHO member nation is authorized to reprint charts in its own language, but must employ the same form of navigational information, such as depth curves, sounding spacing, aids to navigation, and nautical symbols.

Published by the NOS office of Marine Surveys and Maps, the new chart is 1:3,500,000 scale, and is the third metric nautical chart issued by the NOS.

It was compiled in accordance with IHO specifications and shows elevations as well as depths in metric units. Loran-C lines of position for electronic navigation are shown in addition to the usual nautical chart information.

The new chart, International Chart INT 513 (NOS Chart 513) is priced at \$3.25, and may be obtained from the NOS Distribution Division (C44), Riverdale, Md. 20840.

A BICENTENNIAL SERENADE—a musical montage—will be presented on May 14 from 11:30-12:30 on the steps of WSC-1. Bring your lunch and listen to the 60-member Kensington Junior High School band play music from the American Revolutionary period.

Best fish buys

According to the NMFS National Fishery Education Center in Chicago, the best fish buys for the next week or so are likely to be fresh cod and frozen fish sticks along the Northeast Seaboard; bluefish and croakers in the Middle Atlantic States, including the D.C. area; king mackerel and whole mullet in the Southeast and along the Gulf Coast; fresh lake trout and dressed smelt in the Midwest; Dungeness crab and red snapper in the Northwest; and snow crab and turbot fillets in the Southwest.

the nearshore boat traffic—and cannot be seen. The number of whales passing per hour during darkness and periods of bad weather when visibility is poor is assumed to be the same as during daylight hours, based on available evidence.

The nine annual counts at the Granite Canyon site indicate that the stock has remained fairly stable over the past nine years.

This mammal, whose body is gray with white mottling (covered by barnacles and whale lice), migrates farther (up to 11,000 miles each year) than any

other species. From the end of May through September, the California stock feeds in the northern and western Bering Sea, Chukchi Sea, and the western Beaufort Sea. From October through January, they move south, probably through Unimak Pass in the Aleutian chain, following the coastline through the Gulf of Alaska, down to the lagoons of Baja California. They are sexually mature around eight years; at age 40, when physically mature, the average male is 43 feet long and the female, 46 feet.



CALIFORNIA GRAY WHALES, photographed from a helicopter by J.S. Leatherwood, Naval Undersea Center, San Diego.

notes about people

Dr. Joseph Caponio, Director of the Environmental Data Service's Environmental Science Information Center, has been appointed chairman of the Federal Library Committee's special technical group. The group's mission is to work toward integration of libraries and other information centers within the Federal Government in order to reduce duplication of effort and also to enhance the efficiency of the total information system. The study is based on recommendations by the General Accounting Office.



Dr. Caponio



Mr. Josephs Mr. Shimp

George L. Josephs, who has been Official in Charge at the National Weather Service Office in Marquette, Mich., for the past two years, has been named OIC at International Falls, Minn. He replaces Earl E. Belanger, who has retired.

Mr. Josephs entered the NWS in 1969, and served at Minneapolis, Minn., until his transfer to Marquette.

Marvin D. Shimp has replaced Mr. Josephs as OIC at WSO Marquette. Mr. Shimp entered the NWS at Sioux Falls, S. Dak., in 1957 as a Meteorological Aide, and has been serving as a Weather Service Specialist at Lansing, Mich., since 1972.

Capt. James P. Randall, Associate Director of the National Ocean Survey's Office of Aeronautical Charting and Cartography, recently announced the selections for two key positions on his staff:



Mr. Gossage Mr. Cardascia

The new Chief of the Program, Production and Resource Management Staff is Walter W. Gossage, a Physical Scientist with 24 years' service that includes programming and related matters dealing with mapping, charting and geodesy activities. He previously held key staff positions in Headquarters, Defense Mapping Agency (DMA), Washington, D.C., and in the DMA Aerospace Center, St. Louis, Mo.

He is a graduate of Washington University, in St. Louis, with a degree in mathematics and industrial management and received his Master's Degree in public administration from Auburn University, Montgomery, Ala.

Puget Sound Water Circulation Being Measured

The information collected, they expect to learn why the Sound, although bounded by large population centers, remains relatively pristine.

They also expect to be able to develop and refine models used in predicting circulation in Puget Sound, which, with modifications, could be applied to other deep, cold-water estuaries.

The year-long current-measuring effort is being conducted by ERL's Pacific Marine Environmental Laboratory as part of a new Marine Ecosystems

Owlie Skywarn Promotes Weather Safety

(Continued from page 1)

paredness Staff, "it is essential that schools have a plan to cover tornado emergencies and that the children know what to do if such a storm approaches.

"Tornado drills such as those



mandatory in the states of Alabama, Illinois, Indiana, Iowa, Kansas, Mississippi, Ohio, and Tennessee are one important part of our drive to promote tornado safety in schools. Another is Owlie, a feathered friend who talks to the kids on their level, explaining why a tornado is dangerous, how to recognize one, and what to do if one threatens. We'd like to see these Owlie booklets in every classroom in the country."

Owlie Skywarn takes his name from Project Skywarn, an annual NWS effort to promote tornado safety.

The Owlie Skywarn booklet is available through the U.S. Government Printing Office, Washington, D.C. 20402, for 30 cents per copy. A 25 percent discount is allowed on 100 or more copies shipped to the same address.

Birta Johnson, an Accountant in the Finance Division at NOAA Rockville, Md., headquarters, is congratulated for winning the Western Maryland Division of the Toastmasters International Speech Contest by Robert Grace, President of the NOAA Science Center. This is the first time a member of the NOAA Club has achieved this distinction. She previously had won the NOAA Club contest and of the Washington Metropolitan Area contests. On May 15, she will be one of four speakers competing in the finals of District 36, which comprises over 120 clubs in Maryland, Virginia, and the Washington, D.C. Area, whose memberships total more than 2,000.

Ms. Johnson became a member of the NOAA Club while she was participating in the NOAA Administrative Trainee Program. Membership in the Club, which now meets at noon every other Wednesday, alternating between NBOC-1 and the Gramax Building, is open to all employees of NOAA.



Raymond Cardascia has been named Chief of the Requirements and Technology Staff. He was previously Chief of AC&C's Research Group. Since beginning

his career with the NOS in 1958 as a Cartographic Aid, he has acquired an extensive background in cartography and aeronautical data.

He received his degree in mathematics from Lycoming College, Williamsport, Pa., and has attended management and computer courses through the years.

He received his degree in mathematics from Lycoming College, Williamsport, Pa., and has attended management and computer courses through the years.

Analysis (MESA) Puget Sound project. The MESA program seeks to determine the impact of human activities on marine life and environment.

The current-meter mooring, deployed in the central basin of Puget Sound in 650 feet (200 meters) of water north of West Point last September, will obtain data at two-to-three-month intervals until September 1976.

During one month this summer, five moorings will be deployed in the central Sound to study spatial variations in circulation, and present plans call for additional studies at other Sound locations through next year.

Vessel support for this work comes mainly from the NOAA ship Mc Arthur, based at the National Ocean Survey's Pacific Marine Center in Seattle.

"We're mainly concerned with determining behavior of the Sound and the impact of wastes," explained Dr. Glenn Cannon, who is directing these field studies. "The current-meter mooring is near the largest of four sewer outfalls entering the Sound from the greater Seattle area. This is an area where we've made measurements previously, so that we have some continuity."

The Sound is deep, and its circulation is complicated by rapid tidal currents, relatively high tides, and changing winds, Dr. Cannon said. "Based on our ear-

(Continued from page 1)

lier studies of circulation in the West Point, it looks as though the deep water in the Sound will mix itself in about a month, at least in winter. This rapid mixing means the Sound can handle a large amount of waste, but there's bound to be a limit. We want to determine these mixing mechanisms, and their limitations."

Seasonal changes play a dominant role in the way Puget Sound water moves through the deep estuary and its complex inter-island channels, he said. As the study progresses, the investigators will obtain the longest and the first full-year set of circulation measurements at a location in the Sound.

Understanding how Puget Sound removes pollutants and how mixing will do much to help environmental managers preserve this unique, comparatively unpolluted estuary. It will also provide a useful tool for local government as they make the cost-effective decisions on how to bring the waste-treatment systems up to present Federal standards.

The Puget Sound study has special implications for Alaska where oil exploration and development will bring increasing pollution—and increasing environmental pressures—on northern state's deep bay inlets.

National Oceanic and Atmospheric Administration

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July 23, 2010