

# noaa week

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## U.S. Savings Bond Campaign Message From the Administrator

Ask a NOAA employee who started buying bonds early in his or her career and continued the practice over the years whether it has been worth it. Allotments as small as \$3.75 have a way of resulting in substantial accumulations of bonds worth thousands of dollars. More than half of the NOAA workforce buys bonds regularly. These people enjoy the security of a well-planned, effective savings program. The time to start is now, if you are not already a participant.

There are many advantages to buying bonds. The interest rate is 6% compounded semiannually when held to maturity. Interest earned is exempt from state and local income and personal property taxes. Payment of Federal income tax may be deferred until the bond is cashed or reaches final maturity. Federal employees have the attractive option of paying little or no tax by cashing in their bonds soon after retirement, when their annuities consist of money they paid into the retirement fund, and thus are not taxable.

Interest can be exempt from taxation when bonds are bought in children's names to pay for their future education. If lost or stolen, bonds will be replaced at no cost.

During May, each of you will be contacted and given the opportunity to initiate a new bond allotment or increase your present allotment. The decision is yours. Individuals who started this program last year during the bond drive even at the lowest reduction level of \$3.75 a pay period, have already accumulated five \$25 Savings Bonds.

Try it—you'll like it.

*Robert M. White*  
Dr. Robert M. White  
NOAA Administrator

## Effects of Fertilizer on Ozone Weighed

Nitrogen fertilizers on the ground may be affecting the ozone layer at the top of the atmosphere—but not very much, a scientist reported at the recent meeting of the American Geophysical Union in Washington, D.C.

Dr. Paul J. Crutzen of the Environmental Research Laboratory said he believes the projected use of nitrogen fertilizer presents little immediate danger of large ozone reductions. The real problem, he said, is human ignorance.

Dr. Crutzen used a numerical model of the atmosphere to calculate the effects on the ozone layer of increased input of fixed (chemically combined) nitrogen to the soil. He works in ERL's Aeronomy Laboratory and at the National Center for Atmospheric Research, which is funded by the National Science Foundation.

Ozone, a form of oxygen that might manufacture out of the atmosphere in a variety of ways, floats in a tenuous layer in the stratosphere that shields earth from hazardous levels of ultraviolet radiation. At

the same time that it creates ozone, the sun also creates its chief destroyer, nitric oxide, from nitrous oxide. Microbes in soils and ocean waters convert fixed nitrogen—the kind in nitrogen fertilizer—to nitrous oxide and exude it into the air. In this way, nature returns the fixed nitrogen to the atmosphere.

*(Continued on page 4)*

## Washington Awarded CZM Grant

The Department of Ecology in Washington has received a \$150,000 grant to study the on-shore impacts of offshore oil and gas development, and to incorporate the new data into its Statewide coastal zone management program.

The grant was awarded to help the State analyze and predict current and future impacts caused along the Washington coast by offshore oil activities in Alaska and in Washington.

To accomplish this, Washington planners will study the extent to which oil development in

## Sirens' Use for Natural, Other Disasters Urged

### IATTC To Make Satellite Study Under Contract

A \$50,000 contract has been awarded the Inter-American Tropical Tuna Commission (IATTC) of LaJolla, Calif., by NOAA to correlate data from satellites with color and thermal properties of the ocean that relate to areas where certain types of fish are most likely to be caught.

Under the contract, IATTC, in cooperation with the National Marine Fisheries Service, will collect ocean surface data such as temperature, chlorophyll concentration, and atmospheric soundings during a research cruise this summer in known high tuna catch areas off California's coast.

This data will be related to information collected by two NOAA satellites (NOAA-4 and GOES-1) and NASA's LANDSAT spacecraft.

A prime goal of the project, coordinated by the National Environmental Satellite Service, is to ascertain whether information on ocean color and temperature measured by satellite instruments can be applied to fisheries research and resource management.

Alaska has affected Washington's coast; compare, on the basis of volume, employment, and transportation, the level of Alaska's oil activities over the past five years or so; decide whether exist-

*(Continued on page 3)*

The Defense Civil Preparedness Agency and NOAA are urging communities throughout the nation to use sirens for both natural and man-made disasters.

"The DCPA and NOAA fully support a policy for maximum use of sirens for disaster warning purposes," states a joint position paper signed by DCPA Director John E. Davis and Dr. Robert M. White, NOAA Administrator.

"Authorities and procedures for using sirens for natural disaster warnings should be specifically documented in community preparedness plans," according to the position paper, which also declares that the wailing siren tone should be used only as an attack warning signal, while a steady siren tone would be used to indicate the threat of natural disasters such as tornadoes and

*(Continued on page 4)*

## California Firm Will Develop "Conshelf Drifter"

The National Ocean Survey has awarded an \$80,000 contract to the Polar Research Laboratory, Inc., Santa Barbara, Calif., to develop low-cost, expendable, drifting buoys for ocean current measurements in continental shelf regions.

Designated the "Conshelf Drifter," the system is designed to track ocean current circulation at a prescribed depth, according to the NOAA Data Buoy Office. Information obtained from the system will assist in offshore oil and gas exploration and determining the movement of pollutants and biological organisms along the coast.

The buoys also may be programmed to give surface and sub-

*(Continued on page 3)*

## EEO Awareness Day Luncheon

A NOAA EEO Awareness Day Luncheon will be held at the Officers' Club at Bolling Air Force Base on Friday, May 28. Guest Speaker will be John A. Buggs, Staff Director, United States Commission on Civil Rights. Tickets may be purchased in all of NOAA's Washington, D.C., area locations for \$5.00.

Names of persons designated to sell tickets may be found on bulletin boards in the various locations.

# personnel perspective

## Current Vacancies in NOAA

To insure that NOAA employees are aware of job possibilities throughout the agency, a list of current NOAA-wide vacancies is published below. Employees interested in any of the listed vacancies

should contact their servicing personnel office for information on where to apply.

Announcement Number	Position Title	Grade	MLC	Location	Issue Date	Closing Date
455-76	Economist	GS-12	HDQS	Washington, D.C.	4-16-76	5-7-76
547-76	Meteorologist	GS-9	ERL	Princeton, N.J.	4-16-76	5-7-76
548-76	Meteorologist	GS-7	ERL	Princeton, N.J.	4-16-76	5-7-76
553-76	Physical Scientist	GS-15	HDQS	Rockville, Md.	4-16-76	5-7-76
555-76	Personnel Management Spec. (2 vacancies)	GS-9	NWS	Honolulu, Hawaii		
				Anchorage, Alaska	4-19-76	5-10-76
574-76	Statistician (Biology)	GS-11	NMFS	Miami, Fla.	4-26-76	5-10-76
576-76	Supv. Meteorologist	GS-13	NWS	Oklahoma City, Okla.	4-26-76	5-10-76
559-76	Computer Specialist	GS-7	ERL	Oak Ridge, Tenn.	4-20-76	5-11-76
560-76	Meteorologist	GS-11	ERL	Boulder, Colo.	4-20-76	5-11-76
579-76	Meteorologist	GS-12	NWS	Cleveland, Ohio	4-27-76	5-11-76
575-76	Meteorologist	GS-14	NWS	Camp Springs, Md.	4-26-76	5-17-76
578-76	Biologist	GS-13	ERL	Boulder, Colo.	4-27-76	5-18-76
564-76	Graduate Scientist Prog. (up to 15 positions)	GS-4 and above	HDQS	Washington, D.C. and field locations	4-20-76	5-31-76
565-76	Science Intern Prog. (5 positions)	GS-4-9	HDQS	Washington, D.C. and field locations	4-20-76	5-31-76
567-76	Scientific 20/20 Work Study (20 positions)	GS-4-9	HDQS	Washington, D.C. and field locations	4-20-76	5-31-76
446-76	Supv. Meteorological Tech. Electronics Tech.	GS-11	NWS	Swan Island, Honduras	3-26-76	6-30-76
	Meteorological Tech.	GS-11	NWS	Swan Island, Honduras	3-26-76	6-30-76
558-76	Admin. Tech. (10 positions)	GS-2-5	HDQS	Swan Island, Honduras	3-26-76	6-30-76
566-76	Scientific Tech. (50 positions)	GS-2-7	HDQS	Washington, D.C. and field locations	4-20-76	6-30-76
561-76	Admin. Tech. (8 positions)	GS-4-8	HDQS	Washington, D.C. and field locations	4-20-76	6-31-76
562-76	Admin. Fellowship Program (4 positions)	GS-9-12	HDQS	Washington, D.C. and field locations	4-20-76	6-31-76
563-76	Admin. 20/20 Work Study Prog. (8 positions)	GS-4-9	HDQS	Washington, D.C. and field locations	4-20-76	10-31-76

### Vacation Plans

Once again, it is time for employees to plan their vacation schedules. It is sometimes overlooked that while annual leave is a right of employees, supervisors are responsible for controlling and approving the specific times of such leave.

The most important leave to schedule is that which would be above the normal ceiling and, if not used, subject to forfeiture at the end of the 1976 leave year. There is a two-year period in which restored leave must be used. Therefore, employees who had 1974 leave restored must use both the current year's leave and the 1974 restored leave. The 1974 restored leave will be permanently forfeited if not used by the end of this year.

Employees who plan to retire or resign from the Federal service in 1976 may receive a lump-sum payment for all leave to their credit at the time of their separation. Therefore, these employees may not wish to schedule leave. It is important to remember, however, that an employee's subsequent change of plans concerning leaving the Federal service will not be a sufficient justification for restoring leave in excess of the ceiling at the end of the leave year.

NOAA Personnel Handbook Chapter 12, "Leave," Section 12-02.3c, should be referred to when requesting scheduled leave. In addition, Form CD-101, "Leave Chart," is prescribed for posting leave schedules. Both the CD-101, and SF-71, "Application for Leave," may be used as proof that forfeited leave had been scheduled.

### Dues Withholding Reminder

NOAA employees who have authorized allotments for the payment of union dues are reminded that their allotments may/will be terminated for, among others, the following reasons:

1. When requested by an employee; effective twice a year, at the beginning of the pay period following either March 1 or September 1. Requests for termination must be received in advance of these dates.
2. Movement to an organizational component not represented by

### NOAA Women Honored



On Wednesday, March 31, 1976, fifteen NOAA employees were honored by the Department of Commerce for their outstanding contributions toward the success of International Women's Year, 1975. Pictured above with Robert M. White, NOAA Administrator, are: (first row) Wanda Frye, Dorothy Brown, Hale Lopes, Madeline White, Margaret Barnes, Ola Watford, and Edna Ross; (second row) Margaret Hare, Sylvia Harris, Loretta Thompson, Dr. White, Doris Brown, and Rosalyn Ebenholtz. Honorees not shown in the picture are: Rosa Hill, Bonita Dobbins, and Nancy Ford.

the union to which an employee is currently paying dues; effective immediately. Action will be initiated by Personnel Division (AD44).

3. Promotion to a supervisory position; effective immediately. Action will be initiated by Personnel Division (AD44).

4. Notice to Personnel Division (AD44) by the union that the employee is no longer a member in good standing.

# NOAA To Participate in Bicentennial Exposition

NOAA is one of 16 Federal agencies and about 12 industries that will participate in the U.S. Bicentennial Exposition on Science and Technology at NASA's John F. Kennedy Space Center, Fla., from May 30 through Labor Day.

The Exposition, the only Federal government-sponsored exposition scheduled for 1976, has as its theme "Third Century America." It will offer a wide variety of exhibits on the Nation's space program, and show the role science and technology are playing in improving the quality of life in America.

President Ford has envisioned it as an opportunity for Americans "to see the best in America," not only from the past, but what is to come in the future.

Robert L. Carnahan, Deputy Assistant Administrator for Administration, was designated Program Manager for NOAA's 35 x 50-foot exhibit, which is being developed under general direction of John Smiles, Chief of the Publication Services Branch of the Administrative Operations Division.

The first exhibit on the right inside the Vehicle Assembly Building, where the Apollo space vehicles were prepared for journey to the Moon, it will feature the Geostationary Operational Environmental Satellite (GOES). As designed by Ted Butts, the NOAA Exhibits Officer, the exhibit will have five centers of interest:

—A tape slide show will explain the functions and features of the GOES system and how it provides accurate "weather pictures."

—Satellite photos enlarged to four feet square will show the progress of Hurricane Eloise between September 16 and 23, 1975.

—A closed circuit television system with monitors will display the actual GOES pictures as they are being received from the satellite. According to Ralph P. Corbell, Deputy Chief of the National Environmental Satellite

Service Field Services Division, who is NESS Project Officer for the Exhibit, the pictures will be received by a laser-fax from the NESS Satellite Field Services Station in Miami, Fla., and a NESS Meteorologist will explain what the photo is showing.

—A movie screen will show the previous day's weather by time lapse photography on a continuous loop film furnished by the SFSS in Miami.

—Sixteen years of progress of meteorological satellites will be shown by models of the TIROS, TOS/ESSA, ITOS/NOAA, and SMS/GOES satellites.

Outside the NASA Command Building, near the 15 geodesic domes that will house some of the exhibits, a 40-foot diameter NOAA data buoy will be displayed. O. Jay Howe, Program Analyst on the Program Manage-

ment Staff of the National Ocean Survey's Data Buoy Office and NDBO Project Officer for the Exhibit, explained that the buoy will be towed from NDBO at Bay St. Louis, Miss., along the coast of Florida, lifted from the water by crane, and trucked to the Cape.

On display with the buoy will be a chart outlining the buoy's specifications and capabilities, including its communications system. In the future, buoys will communicate with GOES and transmit data to NESS for further distribution to appropriate users.

The display board also will depict the history of the buoy, outlining its past projects in the Gulf of Mexico, and the history, current missions, and other programs of NDBO.



RECENT GUESTS ABOARD THE NOAA SHIP TOWNSEND CROMWELL in San Diego, Calif., were members of the family of oceanographer Townsend Cromwell, for whom the ship was named following his death in 1958 in a plane crash in Mexico while en route to a scientific expedition. Mr. Cromwell discovered an equatorial undercurrent in the Pacific Ocean (which also bears his name) that proved to be as large as the Gulf Stream and thousands of miles greater in length.

From left in the photo are Mr. Cromwell's daughters—Kim Doyle, Vicki Denson, and Carol Damen; Cdr. Merrit Walter, Captain of the ship; Mrs. Walter; Mrs. Richard Cromwell; Richard Cromwell, the oceanographer's brother; and Kay Cromwell, his widow.

The Cromwell, based at the National Marine Fisheries Service Southwest Fisheries Center's Honolulu Laboratory, had joined the David Starr Jordan, assigned to the La Jolla Laboratory, for porpoise distribution studies and assessment of California Current fisheries resources. The ships are operated by the National Ocean Survey's Pacific Marine Center in support of NMFS programs.

# Serials Held by 57 Libraries Are Listed

The Environmental Data Service Environmental Science Information Center, Commerce's Office of Patents and Trademarks, and the Environmental Protection Agency recently published a joint *Union List of Serials*. A total of 57 participating libraries listed their serials holdings.

A serial is defined as a publication issued in successive parts, bearing numerical or chronological designations and intended to be continued indefinitely. Not only periodicals, but numbered reports, yearbooks, memoirs, proceedings, bulletins, and transactions are included.

The new list references 11,715 titles and 20,767 holdings. It will facilitate the sharing of literature-based information resources within NOAA and among collaborating libraries. Nineteen NOAA libraries, thirty-two EPA libraries, and six Office of Patents and Trademarks libraries participated in this joint project, which may represent the first inter-agency listing of serials holdings in the Federal library community.

## Buoy (Continued from page 1)

surface current data during severe weather events in order to establish survival design criteria for offshore structures, as well as information useful to the scientific community in validating water circulation models.

The Conshelf Drifter will operate initially with NASA's NIMBUS-6 polar-orbiting satellite, providing position-fixing information for tracking purposes. Subsequent development may include the addition of environmental sensors, and the capability to operate with the TIROS-N polar-orbiting satellite system scheduled for launch in 1978.

Twelve of the buoys are being purchased for several engineering and scientific experiments. Initial engineering tests of prototype units are planned during the early summer of 1976 in the Bering Sea. Extensive engineering testing is planned on the East Coast continental shelf regions during the fall of 1976 through the summer of 1977.

## (Continued from page 1)

ment, transportation, agriculture, mineral mining, power plants, conservation, energy production, and other competing uses.

To develop its program, Washington has received over \$1 million in grant funds from the Office of Coastal Zone Management, which also provides states with specialized technical assistance.

The latest grant to Washington supplements an earlier program development grant awarded in July 1975, under terms of the Coastal Zone Management Act of 1972.

# Washington State Awarded CZM Grant

ing facilities along the Washington coast are sufficient to meet the oil needs of Alaska and Washington; and analyze the ability of potentially affected areas to support expansion or introduction of oil-related activities.

State officials stated that development of Alaska's oil fields has visibly affected the waterfront use in several Washington coastal communities, and that much of the equipment for the Alaska pipeline and temporary housing either passed through Washington ports or was con-

structed along the Washington coast. These impacts are viewed as similar to those anticipated from Outer Continental Shelf exploration and development.

The new studies will enable Washington to determine what new facilities will be needed along the coast to sustain offshore production in the Northwest region.

Data from the studies will also be woven into the State's developing coastal zone management program, designed to preserve coastal ecosystems while allowing the coast to be used for recreation, housing, economic develop-

## noaa week

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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

## New Texas Gulf Estuarine Study Now Available

A comprehensive description of the natural and man-made features of the Texas coast has been published by the National Marine Fisheries Service in cooperation with the Gulf States Marine Fisheries Commission. Member states include Alabama, Florida, Louisiana, Mississippi and Texas.

Authored by NMFS Fishery Biologist Richard A. Diener, the 129-page document contains newly developed tables and maps depicting estuarine dimensions, submerged vegetation and tidal marshes, public oyster beds, leased oyster rearing areas, sources of pollution, navigation channels, and filled areas on the Texas coast. Published and unpublished information on geology and bottom sediments, temperature and salinity, artificial reefs, clam beds, stream discharges, commercial and sport fishing, hunting, population growth, and economic development is presented in new form.

The study is a part of the Cooperative Gulf of Mexico Estuarine Inventory initiated by the Gulf States Marine Fisheries Commission through its Estuarine Technical Coordinating Committee because of the accelerated competition the member states were experiencing between their fishery and wildlife interests on one hand and industrial and municipal growth on the other. In addition to Texas, the NMFS inventoried the Gulf coast of Florida while Alabama, Louisiana and Mississippi prepared inventories of their coasts under PL88-309.

NOAA Technical Report NMFS CIRC-393, "Cooperative Gulf of Mexico Estuarine Inventory and Study, Texas: Area Description", is available from DB25, Services Branch, Environmental Science Information Center, NOAA, Washington, D.C. 20235.

## DCPA and NOAA Urge Use of Sirens for Both Natural and Man-Made Disasters

flash floods, or other events that may have a serious impact on the community.

The statement proposes that authority to sound warning sirens be given to more than one local government office to insure 24-hour coverage. It also describes conditions under which National Weather Service offices will accept responsibility as one of the offices authorized to sound warning sirens for weather emergencies.

The joint statement emphasizes that sirens should not be the sole means of disaster warning. Community preparedness plans should include utilization of television, radio, and other communication systems. Warnings to specific individuals and



**PARTICIPANTS IN THE 15th MEETING OF THE U.S./CANADA CHARTING ADVISERS**, held recently at National Ocean Survey Headquarters in Rockville, Md., were (from left) Capt. John O. Boyer, Office of Marine Surveys and Maps (NOS); Alfred Pittman, Canadian Hydrographic Service; R. Adm. Allen L. Powell, NOS Director; Adam J. Kerr, Canadian Hydrographic Service; William J. Montieth, Lake Survey Center (NOS); Robert K. DeLawder, Marine Chart Division (NOS); and Capt. Richard H. Houlder, Marine Chart Division (NOS).

The work of the advisers is directed at coordinating and preventing duplication of effort in Great Lakes surveying and charting activities.

## Possible Fertilizer Effects on Ozone (Continued from page 1)

A report by the Council for Agricultural Science and Technology states that the worldwide use of industrial nitrogen fertilizers in 1974 amounted to 40 million tons of nitrogen, and predicts that by the year 2000, this will increase to between 100 million and 200 million tons.

Some researchers have predicted dire consequences to this increased use of fertilizer, envisioning reductions of the ozone layer by as much as 30 percent. Dr. Crutzen reported he had found little evidence to support such fears. There are already about 1400 million tons of nitrogen in the form of nitrous oxide in the atmosphere, he pointed out, and the 40 million tons of fertilizer now annually spread on the soil add only about two million tons of nitrous oxide to the atmosphere. The remaining 38 million tons of nitrogen are returned as inert molecular nitrogen. "On this basis, man would be able to affect the nitrous oxide content of the atmosphere only over a period of several hundred years," he said.

Dr. Crutzen estimated that, if use of nitrogen fertilizers increases by about six percent an-

nually until the year 2000, and levels off, by 2035 it will cause a decrease in ozone of somewhere between one and 10 percent. And, he emphasized, these are upper limits, based on the assumption that fixed nitrogen added to the soil is within a few years converted to nitrous oxide and molecular nitrogen and released into the air. In reality, the nitrogen may remain in the soil for hundreds of years, or be washed into the waters.

"It does not seem likely that there will be an imminent danger of serious ozone depletions due to an increase in the application rate of fertilizer in the soils," he concluded. But he added there could be long-term effects.

Perhaps the main point his studies demonstrate, Dr. Crutzen said, is how little is known about the global aspects of the nitrogen cycle. For example, he explained, oceanographers' estimates of how much fixed nitrogen is added to the oceans by natural processes differ by a factor of a thousand. He said that to assess the impact on ozone more reliably than can now be done, many questions need to be answered.

such large-scale protective actions as evacuation of an area remain the responsibility of local authorities.

A statement on National Policy for the Use of Telecommunications to Warn the General Public issued in January 1975 by the Office of Telecommunications Policy in the Office of the President established that NOAA and DCPA would develop plans and procedures for incorporating the civil defense siren system into the consolidated warning system.

DCPA and NOAA fully support a policy for maximum use of sirens for disaster warning purposes. Joint policies for action in furtherance of this position have been developed and will be carried out in concert

with the June 1973 agreement between DCPA and NOAA for joint participation in the management and operation of a National Program for Community Preparedness. Authorities for these actions derive from longstanding authorities of the Agencies for warning preparedness assistance programs and the Disaster Relief Act of 1974. These policies include the following:

1. All communities exposed to the threat of tornadoes, flash floods, or tsunamis will be urged to use sirens as an integral part of local warning plans and systems.
2. Communities will be urged to educate the public as to the meaning of the siren signal used for disaster warning and actions

## EDS Publishes 11 Climate Brochures

As part of its contribution to the Nation's Bicentennial, the Environmental Data Service has published four-page color brochures describing the climates of 11 regions of the United States. The regions are Northeastern, Mid-Atlantic, Southern Mountain, Southeastern, North Central, South Central, Mid-Western, Rocky Mountain, Northwestern, Southwestern, and Hawaii.

Each guide contains an outline map of the states it includes and a climatic data table for a number of representative cities. Topographic and climatic descriptions, as well as visitors' information, are also included. A capsule story on weather science and the founding fathers is featured on the back page.

Copies of the brochures may be obtained from the EDS; telephone 634-7306.

## Whiting Rescues Four

The NOAA Ship WHITING rescued four passengers in a disabled 18-foot open boat three miles off the west end of St. Thomas, Virgin Islands, on March 25.

Cdr. Robert A. Trauschke reported that Lt. David Yeager, while calibrating instruments, observed what appeared to be a man waving a shirt in a small boat between Salt Cay and Kalkum Cay west of St. Thomas. When it was determined that the boat was in fact in distress, the Coast Guard in San Juan was notified, and it requested that the WHITING take necessary action.

The ship's launch was dispatched with Ens. David M. Goodrich, Boatswain's Mate William L. Sanders, and Ordinary Seaman Olvin M. Santiago to tow the vessel to Charlotte Amalie, the nearest refuge.

Cdr. Trauschke said that the small boat had experienced engine failure and that her radio was inoperative.

## (Continued from page 1)

to be taken.

3. Development of siren warning systems will be given priority attention in the DCPA/NOAA programs for community preparedness. Planning and technical assistance will be furnished to State and local governments to the maximum extent possible with available resources.

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# **National Oceanic and Atmospheric Administration**

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