

SPECIAL  
COLLECTIONSA UNITED STATES  
DEPARTMENT OF  
COMMERCE  
PUBLICATION

# ANNUAL REPORT of the SECRETARY OF COMMERCE



*Fiscal Year Ended June 30, 1972*

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# Letter of Transmittal

December 29, 1972

Dear Sirs:

I have the honor to transmit to you the annual report of the activities of the Department of Commerce for the fiscal year ended June 30, 1972. In the interest of economy, we have eliminated the printing of the usual number of copies necessary for distribution as authorized by 44 U.S.C. 1117. Arrangements have been made with the Superintendent of Documents to place a limited supply on sale and to provide the number needed for depository libraries.

Copies have been made available to the Committees of Congress which are regularly concerned with the work of the Department of Commerce. A limited number of additional copies will be furnished to other Committees or individual Congressmen upon request, and, of course, a copy will be maintained on file in the Department for public inspection as required by law.

Sincerely yours,

A handwritten signature in cursive script that reads "Peter G. Peterson". The signature is fluid and elegant, with the first and last names being more prominent than the middle initial.

Peter G. Peterson  
Secretary of Commerce

The President of the Senate  
The Speaker of the House of Representatives



## **Foreword**

This is the 60th Annual Report of the Secretary of Commerce. It is prepared under Title 15, United States Code, Section 1519, which provides that the Secretary of Commerce shall make an annual report to the Congress on the finances and activities of the Department of Commerce. Separate annual reports are made to the Congress by the Economic Development Administration, the Patent Office, the Maritime Administration, and the United States Travel Service as required by the statutes authorizing these activities. Also, each of the Regional Commissions publishes an annual report. In the area of "export control," the Department publishes a quarterly report as required by statute.

The annual reports, in addition to meeting the administrative requirements of the law, serve valuable research and reference purposes, and provide a permanent historical record of the Department and its major activities. In order that this Annual Report may better serve those purposes, the constructive comments and suggestions of its readers will be appreciated.

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## Introduction and Highlights

Fiscal 1972 was a year for design of new programs and for important and dramatic shifts in the ongoing activities of the Department of Commerce.

### International Trade

Major trade talks explored the possibilities for increased commerce between the United States and the Union of Soviet Socialist Republics. A Joint U.S.-U.S.S.R. Commercial Commission, of which Secretary Peterson was chairman and Under Secretary Lynn vice-chairman, traveled to Moscow in June 1972 to lay the groundwork for the subsequent maritime and trade agreements. The rationale for the agreements, their potential benefits, and the obstacles which had to be overcome were all spelled out in detail by the Secretary in his report, entitled *U.S.-Soviet Commercial Relations in a New Era*.

Elsewhere in the foreign trade area, the Secretary and the Department's trade specialists conducted negotiations with Poland. Taken together, the Soviet and Polish agreements for mutually beneficial commercial relationships were part of the President's broader foreign policy initiatives. The negotiations signaled the beginning of a new era in East-West relations.

In the trade area, the Department also published a comprehensive study of the internal Japanese commercial environment entitled *Japan: The Government-Business Relationship—A Guide for the U.S. Businessman*.

### International Competitive Assessment

Fiscal 1972 also witnessed an innovation which could improve the effectiveness of many government programs and benefit the private sector directly. Known as *competitive assessment*, the effort is intended to measure the competitive position of the U.S. economy vs. other economies of the world. Competitive assessment data—new plant and equipment investment, R&D expenditures, export performance, etc.—will permit both private decision-making and public policy-making to reflect the realities of world trading competition. Such information and its effective use cannot be ignored if this country is to remain vigorous in a free and open economic world.

### Conservation of the Environment

In Fiscal 1972, the Department undertook several measures to assure that certain species of wildlife will not be imperiled by commercial activity. The Department has proposed that signatories of the Fur Seal Treaty observe an experimental ban on fur seal harvesting on one of the Pribilof Islands. In another case, the National Oceanic and Atmospheric Administration undertook research to develop and require the use of tuna fishing equipment which would not be dangerous to the porpoise population. These are examples of firm, constructive action by the Department of Commerce, where preservation of the natural environment is at stake.

### Technology Initiatives

In his Science and Technology message of March 16, 1972, President Nixon announced new programs to apply government-sponsored research to U.S. industry and improve the climate for innovation. During 1972 the Department has actively pursued these goals.

In a measure closely related to increasing international competitiveness, the President asked the Department to explore incentives for private-sector R&D investment, as well as new patent and R&D contracting policies. In this connection, the Department has been moving actively to classify, identify, evaluate and make available the technology contained in government patents. The National Technical Information Service (NTIS) is now publicizing all new patent applications and a newly-issued government information file. Reports will be prepared on selected patents to be circulated to industry. Work is underway to explore the most effective and prudent ways of selling or licensing these existing patents. The objective is to ensure that government-held technology works for the people who paid for it—the U.S. public.

Looking to the future, the National Bureau of Standards has begun an Experimental Technology Incentives Program (ETIP) to find effective Federal policies, programs or procedures which will further the application of scientific and technological capabilities. The program is designed to identify Federal actions which hold potential for improvement in productivity and enhancement of U.S. industry's competitive position. Experi-



ments will be conducted in cooperation with industry, other Federal agencies, and other organizations. The ETIP program will test the impact of specific incentives upon acceleration of the innovation process.

### Minority Business Development

The Office of Minority Business Enterprise (OMBE) turned in a record year in almost every respect—most notably in minority procurement, in the generation of minority business debt and equity, and in the growth of deposits in minority banks. Important also, the OMBE program has been fitted to a performance measurement system, with an emphasis on specific project outputs. As the OMBE program is evaluated, the performance measurement system focuses not only on expenditures, but on results as well—in terms of jobs, projects, and growth of the minority economic role.

### Consumer Protection

The National Business Council for Consumer Affairs (NBCCA) began operation early in Fiscal 1972. In the course of the year, NBCCA began studies which resulted in seven advisory reports containing recommendations to the business community for greater consumer protection in the areas of advertising, packaging and labeling, tire safety and consumer credit.

The objective of the consumer protection program is to strike a rational balance between the valid concerns of the consumer and the equally valid interests of industry.

### Energy

The Department has been closely involved in an inter-agency planning effort to develop national energy policies and to minimize the adverse effects of future domestic energy shortages. In addition to these cooperative efforts, the National Bureau of Standards has

conducted independent research on conservation, efficient storage, and transport of energy. Similarly, the Maritime Administration was involved in the energy question through construction of bulk vessels for the carrying of energy products.

### Maritime Program

The Maritime Administration has completed a major overhaul of the nation's merchant marine assistance policy. The new programs provide for construction of technologically-advanced ships, including large crude-oil and LNG carriers. Government assistance programs have been streamlined to further assist the U.S. maritime industry in replacing aging tonnage. Federal assistance is now available to bulk-carrier operators and to shippers operating in the domestic trades. The maritime program is aimed at increasing the health and productivity of this vital industry.

### Statistical Programs

The Social and Economic Statistics Administration (SESA) was organized on January 1, 1972, to improve the data collection and analysis capabilities of the Department. SESA has overall management responsibility for planning of the departmental statistical program. Within this organization, the newly-designated Bureau of Economic Analysis (BEA) has responsibility for measures essential to the formulation and execution of national economic policy—growth, stability, and an equitable distribution of income. The Bureau of the Census (Census) is now more truly a data collection and processing center for all of the Department. Many surveys and reports previously undertaken by other departmental operating units have been transferred to Census.

Other highlights from the Department's record for Fiscal Year 1972 follow:

## BUSINESS ECONOMICS AND STATISTICS

- *We, the Americans*, a special series of popular reports on the 1970 census, was initiated by Census. The first in the series, a booklet titled *Who We Are*, presents a summary of important 1970 results in an easily understood manner.
- The Census Survey of Minority-Owned Business Enterprises was completed. The report of the survey offers the first set of comprehensive statistical data compiled in the area of minority ownership of businesses in this country.
- Census has initiated a Consumer Expenditure Survey to provide the necessary information to update the Bureau of Labor Statistics' Consumer Price Index.
- Census published a book titled *The Methods and Materials of Demography*. This two-volume compendium gives a comprehensive exposition of the methods used by technicians in dealing with demographic data.
- The National Industrial Pollution Control Council

established a Technical Assistance Service—an organized locator system to identify and make available to environmental agencies senior technical people employed by the companies with which Council members are chiefly affiliated.

- BEA compiled and published detailed balance of payments data for U.S. international transactions with

Belgium, Luxembourg, France, Germany, Italy, Netherlands, and Mexico.

- BEA published State projections to 1980 and 1990 of population, employment and income by industrial source in the April 1972 issue of *Survey of Current Business*.

## ECONOMIC DEVELOPMENT ASSISTANCE

- The Economic Development Administration (EDA) approved \$189,969,000 for 472 public works projects. These funds include the Public Works Impact Program, which amounted to \$47,659,805 for 203 projects in 49 States, the District of Columbia, Puerto Rico, and American Samoa.
- EDA reserved \$4.4 million for collateral protection and guarantees of associated working capital loans for EDA borrowers.
- EDA approved \$12,463,000 for 373 technical assistance projects and \$1,409,662 for 21 research studies.
- EDA approved \$5,486,236 to support the planning

program of 119 multicounty economic development district organizations. During the year, EDA formally designated 8 new districts, increasing the number of designated districts to 116.

- EDA approved \$24,121,424 in support of Indian projects and programs. Dating from its inception, total EDA aid in this area has exceeded \$100 million.
- The Secretary of Commerce designated two new economic development regions: the "Old West" (Montana, Nebraska, North Dakota, South Dakota, and Wyoming), and the "Pacific Northwest" (Idaho, Oregon, and Washington).

## PROMOTION OF INDUSTRY AND COMMERCE

- The first U.S. Trade Center in Latin America was established in Mexico City and the first U.S. Regional Trade Development Center in South America was opened in Buenos Aires.
- Liberalized export control policy on East-West trade was reflected in the dollar volume of licenses to export U.S. goods to Eastern Europe. Volume rose to a record high of almost \$1.7 billion.
- The Office of the Assistant Secretary for Domestic and International Business (DIB) initiated, helped plan and provided support for the White House Conference on the Industrial World Ahead: A Look at Business in 1990.
- DIB participated in the successful negotiations of wool and man-made fiber textile agreements with the leading Far Eastern textile exporting nations.
- A mission from Japan, sponsored by the National Export Expansion Council and the Japan-U.S. Economic Council, visited six U.S. cities offering seminars and consultations promoting U.S. exports to Japan. The Bureau of International Commerce developed the

mission program in cooperation with the Department's Field Offices, Regional Export Expansion Councils and various State and private business agencies.

- The Bureau of Domestic Commerce undertook a series of analyses of the health and international competitiveness of selected key industries—machine tools, telephone and telegraph equipment, office machines and computers, tires and tubes, paperboard, and medical, botanical and pharmaceutical products.
- The U.S. Travel Service mounted a \$1.4 million advertising campaign in principal markets in Western Europe, Canada and Mexico.
- Under the provisions of the 1970 amendment to the International Travel Act, \$570,000 was awarded for matching grants. Recipients included States, cities, regional organizations and associations.
- The Office of Foreign Direct Investments reported that approximately 2,000 direct investors making less than \$500,000 of direct investments annually and holding no more than \$95,000 of liquid foreign



balances at the end of any month were relieved of the need to file annual reports, thereby reducing the number of annual reporters to around 1,000 direct investors.

- The Office of Minority Business Enterprise reported that Minority Enterprise Small Business Investment

Companies now total 50 and are capitalized at over \$16 million.

- From its inception March 26, 1971, to June 30, 1972, the Office of the Ombudsman handled more than 3,600 cases.

## SCIENCE AND TECHNOLOGY

- The National Bureau of Standards (NBS) used a helium-neon laser to produce a uniform wavelength with extreme accuracy. This development could provide a 30-fold improvement in the determination of the speed of light, ultimately opening new communication channels, and having other applications.
- A new Federal standard for flammability of children's sleepwear, sizes 0 to 6X, was issued. A new, virtually foolproof Federal standard for mattress flammability was published. NBS also is working on a standard for flammability of children's sleepwear sizes 7 through 14.
- The National Technical Information Service introduced a new publication, *Weekly Government Abstracts*, and a new service, *NTISearch*, which, for a fee, will search the Government-wide bibliographic data files.
- The Office of Telecommunications evaluated the eight commercial satellite systems proposed to the Federal Communications Commission (FCC). The ultimate FCC decision to permit multiple domestic satellite systems was in accord with the evaluations.
- The National Severe Storms Laboratory in Norman, Oklahoma, has added doppler radar capability, which is used to study severe storm and tornado characteristics.
- An Office of Fleet Operations was established in July 1971 as a separate organizational entity within Headquarters National Ocean Survey to manage the entire fleet of the National Oceanic and Atmospheric Administration.
- The International Field Year for the Great Lakes began on April 1, 1972. This is a joint United States/Canadian effort in a comprehensive study of Lake Ontario and its watershed.
- During the winter of 1971-72, the Environmental Data Service worked with the Office of Emergency Preparedness, Office of the President, to help prepare weekly briefs for the President regarding potential fuel or power shortages in Eastern and North Central United States.
- National Environmental Satellite Service personnel participated as members of joint working groups of U.S. and U.S.S.R. scientists interested in achieving cooperation between the two nations in scientific matters of space and the natural environment.
- The National Marine Fisheries Services cooperated with the Public Health Service in studies in the vicinity of the offshore New York dump site areas. The data already in hand justify strong resistance to continuation of ocean dumping.
- Environmental Research Laboratories staff assigned to the Environmental Protection Agency began initial planning and deployment for a major urban regional study in the St. Louis area. The experiment will represent a comprehensive effort to understand the details and dynamics of pollution generated within and crossing large urban areas.
- The first Sea Grant Colleges, Oregon State University, Texas A&M University, University of Rhode Island, and University of Washington were officially designated by the Secretary of Commerce.

## OCEAN SHIPPING

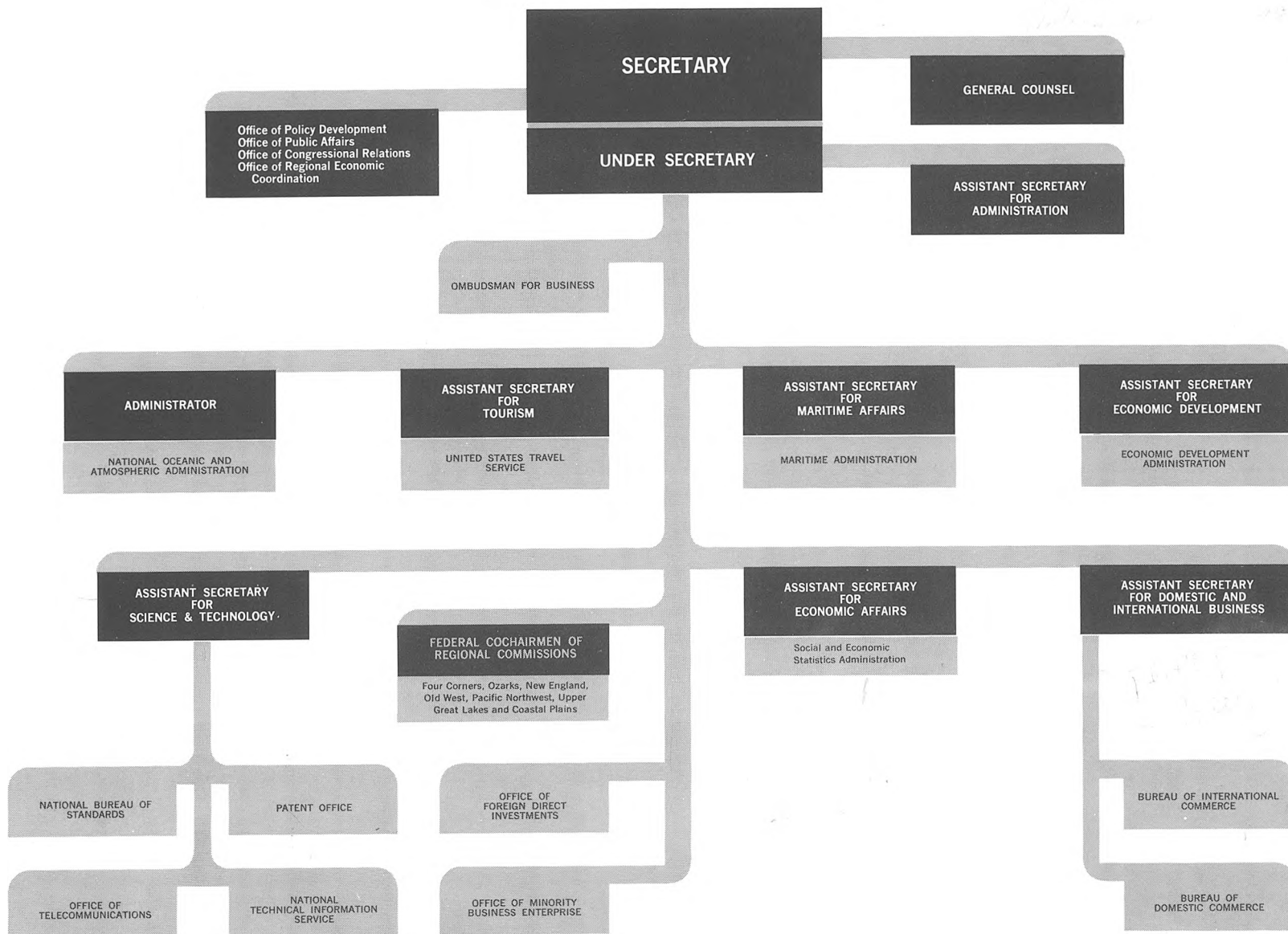
- The Maritime Administration (MarAd) subsidized shipbuilding contracts covering 21 new ships and five conversions were awarded during the year. The award of these contracts brings the total volume of ship-

building generated by the President's Maritime Program to 30 new ships and 13 conversions, with a total value of over \$1.1 billion.

- The subsidized ships ordered during the year included 16 tankers, among them the three largest (at 265,000 deadweight tons each) to be ordered in the U.S.
- MarAd promoted a broad program to develop a U.S.-built and operated fleet of advanced cryogenic liquified natural gas carriers.
- MarAd awarded five new operating-differential subsidy contracts during the year. One of these was the first to cover ships in the U.S.-Canada trade across the Great Lakes.
- An Office of Domestic Shipping was established during the year by MarAd. This Office sponsored the National Planning Conference on Domestic Shipping, which brought together nearly 200 leading representatives from the industry to discuss how the Maritime Administration can best assist them in improving their future growth potential.
- During the year, new applications were approved for ship mortgage and/or loan insurance totalling \$647.3 million, representing a better than 200 percent increase above last year's record \$280.7 million.
- MarAd awarded over \$22 million in research contracts. During the year, this investment was increased by the addition of \$9 million in industry funds and support services for specific projects.



# U.S. DEPARTMENT OF COMMERCE



JUNE 30, 1972

**LIST OF KEY OFFICIALS**  
**DEPARTMENT OF COMMERCE**  
**June 30, 1972**

Secretary of Commerce . . . . .	Peter G. Peterson
Under Secretary of Commerce . . . . .	James T. Lynn
Deputy Under Secretary . . . . .	Calvin J. Collier
Executive Assistant to the Secretary . . . . .	Brandon W. Sweitzer
Special Assistant to the Secretary for Policy Development . . . . .	James L. Mitchell
Special Assistant to the Secretary for Congressional Relations . . . . .	Sol Mosher
Special Assistant to the Secretary . . . . .	George J. Pantos
Special Assistant to the Secretary for Regional Economic Coordination . . . . .	Robert E. Ruddy
Director, Office of Public Affairs . . . . .	Basil R. Littin
Ombudsman for Business . . . . .	Thomas E. Drumm, Jr.
Assistant to the Secretary . . . . .	Robert F. Higgins
Director, Executive Secretariat . . . . .	Evelyn F. Roche
General Counsel . . . . .	William N. Letson
Deputy General Counsel . . . . .	Karl E. Bakke
Special Assistant to the General Counsel . . . . .	Paul E. Arneson
Administrator, National Oceanic and Atmospheric Administration . . . . .	Robert M. White
Deputy Administrator . . . . .	Howard W. Pollock
Associate Administrator . . . . .	John W. Townsend, Jr.
Assistant Secretary of Commerce for Domestic and International Business . . . . .	Andrew E. Gibson, Actg.
Deputy Assistant Secretary for International Economic Policy . . . . .	Lawrence A. Fox
Deputy Assistant Secretary for Resources . . . . .	Stanley Nehmer
Deputy Assistant Secretary for Business Policy and Executive Director, National Business Council for Consumer Affairs . . . . .	William D. Lee
Deputy Assistant Secretary for International Economic Research and Analysis . . . . .	Edward L. Allen
Deputy Assistant Secretary for Business Development . . . . .	Robert P. Beshar
Executive Assistant to the Assistant Secretary . . . . .	Judith S. Chadwick
Director, Office of Textiles . . . . .	Arthur Garel
Director, Office of Import Programs . . . . .	Seth M. Bodner
Deputy Assistant Secretary and Director, Bureau of Domestic Commerce . . . . .	Hudson B. Drake
Deputy Assistant Secretary and Director, Bureau of International Commerce . . . . .	Marinus van Gessel, Actg.
Assistant Secretary of Commerce for Economic Development . . . . .	Robert A. Podesta
(Administrator, Economic Development Administration)	
Deputy Assistant Secretary for Economic Development . . . . .	William W. Blunt, Jr.
Deputy Assistant Secretary for Policy Coordination . . . . .	Richard L. Sinnott
Deputy Assistant Secretary for Economic Development Planning . . . . .	Joseph G. Hamrick
Deputy Assistant Secretary for Economic Development Operations . . . . .	Thomas P. Dunne
Special Assistant to the Assistant Secretary . . . . .	Thomas F. Upson
Assistant Secretary of Commerce for Economic Affairs . . . . .	Harold C. Passer
(Administrator, Social and Economic Statistics Administration)	
Deputy Administrator for Management . . . . .	Joseph R. Wright
Deputy Assistant Secretary for Economic Affairs . . . . .	Peter C. Manus
Deputy Assistant Secretary for Industry Economics and Executive Director, National Industrial Pollution Control Council Staff . . . . .	Vacant
Special Assistant to the Assistant Secretary . . . . .	Adren Cooper

# LIST OF KEY OFFICIALS—Con.

Director, Bureau of Economic Analysis . . . . .	George Jaszi
Director, Bureau of the Census . . . . .	George H. Brown
Assistant Secretary of Commerce for Maritime Affairs . . . . . (Administrator, Maritime Administration)	Robert J. Blackwell
Assistant Secretary of Commerce for Science and Technology . . . . .	James H. Wakelin, Jr.
Deputy Assistant Secretary for Science and Technology . . . . .	Robert W. Cairns
Deputy Assistant Secretary and Director, Office of Product Standards . . . . .	Richard O. Simpson
Deputy Assistant Secretary for Environmental Affairs and Director, Office of Environmental Quality . . . . .	Sidney R. Galler
Special Assistant to the Assistant Secretary . . . . .	David J. Eden
Executive Director, Commerce Technical Advisory Board . . . . .	Frank Cacciapaglia, Jr.
Commissioner of Patents . . . . .	Robert Gottschalk
Director, National Bureau of Standards . . . . .	Lawrence M. Kushner, Actg.
Director, Office of Telecommunications . . . . .	John M. Richardson, Actg.
Director, National Technical Information Service . . . . .	William T. Knox
Assistant Secretary of Commerce for Administration . . . . .	Larry A. Jobe
Assistant to the Assistant Secretary for Administration . . . . .	Guy W. Chamberlin, Jr.
Director, Office of Administrative Services . . . . .	Donald B. Moore
Director, Office of Audits . . . . .	Sidney S. Baurmash
Director, Office of Budget and Program Analysis . . . . .	Charles H. Alexander
Director, Office of Emergency Readiness . . . . .	J. Terence McCracken
Director, Office of Financial Management Services . . . . .	Clyde E. Ahrensbrak, Actg.
Director, Office of Investigations and Security . . . . .	Harry C. de Venoge
Director, Office of Organization and Management Systems . . . . .	Joseph O. Smirolodo, Actg.
Director, Office of Personnel . . . . .	John Will
Director, Office of Publications . . . . .	Herbert L. Brown, Jr.
Director, Interagency Auditor Training Center . . . . .	Elwood A. Platt
Chairman, Appeals Board for the Department of Commerce . . . . .	Nathan Ostroff
Special Assistant for Civil Rights . . . . .	Luther C. Steward, Jr.
Assistant Secretary of Commerce for Tourism . . . . . (Director, United States Travel Service)	James L. Hamilton, III, Actg.
Deputy Assistant Secretary for Tourism . . . . .	James L. Hamilton, III
Director, Office of Foreign Direct Investments . . . . .	William V. Hoyt
Director, Office of Minority Business Enterprise . . . . .	John L. Jenkins
Federal Cochairmen:	
Coastal Plains Regional Commission . . . . .	G. Fred Steele, Jr.
Four Corners Regional Commission . . . . .	Stanley Womer
New England Regional Commission . . . . .	Chester M. Wiggin, Jr.
Ozarks Regional Commission . . . . .	E. L. Stewart, Jr.
Upper Great Lakes Regional Commission . . . . .	Thomas F. Schweigert
Old West Regional Commission . . . . .	Robert L. McCaughey



# DEPARTMENT OF COMMERCE

## Summary of Employment and Financing—1968 to 1972

	End of year employment					Obligations (in thousands)				
	1968	1969	1970	1971	1972	1968	1969	1970	1971	1972
General Funds:										
GENERAL ADMINISTRATION:										
Office of the Secretary .....	290	312	287	305	299	\$4,528	\$5,168	\$6,070	\$6,896	\$7,484
BUSINESS ECONOMICS AND STATISTICS:										
Office of Business Economics .....	232	233	225	243	253	2,919	3,075	3,505	4,096	4,482
Bureau of the Census .....	4,895	4,116	31,409	5,211	4,321	36,025	43,633	150,859	80,513	52,175
Total, Business and Economics and Statistics ..	5,127	4,349	31,634	5,454	4,574	38,944	46,708	154,364	84,609	56,657
ECONOMIC DEVELOPMENT ASSISTANCE:										
Economic Development Assistance <sup>1</sup> .....	1,082	1,032	1,001	1,041	970	274,203	273,703	271,765	289,500	321,853
PROMOTION OF INDUSTRY AND COMMERCE:										
Domestic Business Activities .....				757	690				14,122	15,373
Business and Defense Services Administration ...	430	428	389			5,956	6,308	7,144		
Office of Field Services .....	411	399	368			4,703	5,059	5,788		
Trade Adjustment Assistance .....										5,319
International Activities .....	961	1,005	1,122	1,079	1,012	17,517	21,551	25,530	29,051	28,637
Participation in U.S. Expositions .....	110	13	11		3	3,140	721	204	104	75
Foreign Direct Investment Regulation .....		196	144	113	100		4,441	3,153	2,846	2,546
Minority Business Enterprise .....			79	78	258			1,200	2,084	43,519
National Industrial Pollution Control Council ..				11	9				298	312
United States Travel Service .....	86	85	107	123	108	2,910	3,285	4,525	4,546	6,377
Total, Promotion of Industry and Commerce ..	1,998	2,126	2,220	2,161	2,180	34,226	41,365	47,544	53,051	102,158
SCIENCE AND TECHNOLOGY:										
National Oceanic and Atmospheric Administration .....				12,170	12,532				287,686	338,422
Environmental Science Services Administration ..	9,085	9,231	9,123			164,859	167,207	179,219		
Patent Office .....	2,794	2,698	2,785	2,682	2,692	38,713	42,500	48,594	56,063	62,294
National Bureau of Standards .....	2,004	2,326	2,104	2,196	2,161	36,756	38,118	42,446	45,923	50,261
Office of State Technical Services .....	24	14				6,407	5,298	290		
Office of Telecommunications .....				172	207				2,424	4,934
Total, Science and Technology .....	13,907	14,269	14,012	17,220	17,592	246,735	253,123	270,549	392,096	455,911
OCEAN SHIPPING:										
Maritime Administration .....	1,784	1,957	1,596	1,458	1,564	387,506	401,814	303,833	478,759	516,670
Total, General funds .....	24,188	24,045	50,750	27,639	27,179	986,142	1,021,881	1,054,125	1,304,911	1,460,733
Total, Other funds <sup>2</sup> .....	14,270	12,450	7,037	6,770	6,846	292,728	271,194	195,578	152,587	146,626
Grand Total, All funds .....	38,458	36,495	57,787	34,409	34,025	1,278,870	1,293,075	1,249,703	1,457,498	1,607,359

<sup>1</sup> Includes employment and funds for Economic Development Administration and Regional Action Planning Commissions.

<sup>2</sup> Other funds include public enterprise funds, intra-governmental funds and trust funds. Included is employment, but not funds, for allocation accounts carried in the budget schedules of other agencies. Amounts for advances and reimbursements have been adjusted to exclude reimbursements between Commerce appropriation accounts as follows: 1968—\$11,343,000; 1969—\$11,237,000; 1970—\$14,229,000; 1971—\$33,367,000; 1972—\$38,966,000.

## THE DEPARTMENT OVERALL

### INTRODUCTION

**Creation and Authority.**—The Department of Commerce was so designated by the Act of March 4, 1913 (37 Stat. 736; 15 U.S.C. 1501), which reorganized the Department of Commerce and Labor created by the Act of February 14, 1903 (32 Stat. 825; 15 U.S.C. 1501), transferring the labor activities into a separate department.

**Mission and Functions.**—The primary statutory mission of the Department is “to foster, promote and develop the foreign and domestic commerce” of the United States. This has evolved, as a result of legislative and administrative additions, to encompass broadly the responsibility to foster, serve and promote the Nation’s economic development and technological advancement. The Department seeks to fulfill this mission through:

- Participating with other Government agencies in the creation of national policy, through the President’s Cabinet and its subdivisions.
- Promoting progressive business policies and growth.
- Assisting States, communities and individuals toward economic progress.
- Strengthening the international economic position of the United States.
- Improving man’s comprehension and uses of the physical environment and its oceanic life.
- Assuring effective use and growth of the Nation’s scientific and technical resources.
- Acquiring, analyzing and disseminating information concerning the Nation and the economy to help achieve increased social and economic benefit.

The specific functions and programs of the Department that make up these broad activities are authorized by the Department’s organic act (Act of February 14, 1903, 32 Stat. 825) or by other legislation. They also include responsibilities transferred from other agencies by Presidential Reorganization Plans, as well as responsibilities assigned to the Secretary of Commerce or the Department

by Executive Order or other actions of the President. The Department’s responsibilities include the Secretary’s assigned function of coordinating and of providing guidance and policy direction to the Federal Cochairmen of Regional Commissions.

**Organization Structure.**—The chart on page x of this Report depicts the Department organization structure which has been established through Department Organization Orders issued for each of the principal organizational components or officers of the Department. The chart reflects the following general organizational plan for the Department.

*Office of the Secretary.* The Office of the Secretary is the general management arm of the Department and provides the principal support to the Secretary in formulating policy and in providing advice to the President. It provides program leadership for the Department’s functions and exercises general supervision over the operating units. It also directly carries out program functions as may be assigned by the Secretary from time to time, and provides, as determined to be more economical or efficient, administrative and other support services for designated operating units.

The Office of the Secretary consists of the Secretary and the Secretarial Officers, designated staff immediately serving these officials, and a number of “departmental offices” which have Department-wide functions or perform special program functions directly on behalf of the Secretary. The Secretarial Officers are:

Under Secretary  
 Assistant Secretary for Domestic and International Business  
 Assistant Secretary for Economic Affairs  
 Assistant Secretary for Science and Technology  
 Assistant Secretary for Economic Development  
 Assistant Secretary for Maritime Affairs  
 Assistant Secretary for Tourism  
 Assistant Secretary for Administration  
 General Counsel

The Under Secretary serves as the principal deputy to the Secretary in all matters affecting the Department

and performs continuing and special duties as the Secretary may assign from time to time, including, as may be specified by the Secretary, the exercise of policy direction and general supervision over operating units not placed under other Secretarial Officers.

The Assistant Secretary for Administration and the General Counsel are the Secretary's principal assistants on administrative management and legal matters, respectively, of the Department.

The other Secretarial Officers (referred to as Program Secretarial Officers) are the Secretary's principal assistants on program matters, each being responsible for a particular program area of the Department. This responsibility may include exercising policy direction and

general supervision over prescribed operating units charged with carrying out programs, or, instead, serving as the head of a primary operating unit.

The *Operating Units* of the Department are organizational entities outside the Office of the Secretary charged with carrying out specified substantive functions (i.e., programs) of the Department. The heads of some operating units are Program Secretarial Officers; in other cases, they are separate officers who report to and are responsible to a Program Secretarial Officer or directly to the Secretary or Under Secretary, as may be designated. The operating units constitute the components of the Department through which most of its substantive functions are carried out.

## ADMINISTRATIVE MANAGEMENT

### Auditing

Fifty-five thorough evaluations of departmental programs comprised the major audit activity during Fiscal Year 1972. Audit reports were designed to pinpoint problems in program performance and to specify corrective measures which are appropriate to attainment of program goals. Along this same line, "problem-oriented" reviews, requested by top management, were the year's other high-priority accomplishment. The Office of Audits provided management with timely information and constructive recommendations for improvement of management effectiveness in such areas as: (1) Trade Adjustment Assistance processing procedures, (2) Department of Commerce-Office of Management and Budget Review of Selected Field Offices, (3) Operating Units' Directives Systems, (4) Activities of Regional Commissions, and (5) the Patent Office's Data Base Activities.

Auditing methods were further upgraded to effect improved quality and increased economies. During FY 1972, as during FY 1971, 55 internal audit reports were issued. However, the direct man-years of audit effort for internal audit activities actually decreased from 35.3 man-years in FY 1971 to 31.6 man-years in FY 1972. These economies allowed the temporary transfer of auditors to perform high-priority audit evaluations of the Office of Minority Business Enterprise (OMBE) contracts and grants. The survey method of review continues to enable broader coverage of the Department's activities. Audit effort is directed to the more productive areas of inquiry, those which yield concrete ideas for improved program management effectiveness and agency operations. The Office of Audits has identified potential annual savings of about \$1.1 million and one-time savings of about \$0.4 million during the fiscal year.

The number of external audit reports issued during the fiscal year and the savings attributable to audit significantly increased, as compared to FY 1971. In FY 1972, 418 external audits were completed, of which 93 were performed by the Office staff. FY 1972 savings attributable to audit amounted to about \$3.5 million. This FY 1972 workload and total savings compare favorably with the record of FY 1971, when the staff of the Office of Audits performed 58 of the 414 external audits completed during the year, yielding a total savings of \$900,000.

### Budget and Program Analysis

Appropriations for Fiscal Year 1972 totalled \$1,515,463,000. Of this amount, \$1,431,218,000 was contained in the regular appropriation act, \$77,785,000 was in the first supplemental appropriation act, and \$6,460,000 was in the second supplemental appropriation act, covering pay increase requirements. Obligations for the year totalled \$1,607,359,000, \$1,460,733,000 from general funds and \$146,626,000 from other funds.

A great emphasis has continued toward development and application of the evaluative capacity of the Office of Budget and Program Analysis. Standards and criteria were further refined for periodic review and assessment of programs, as well as for analysis of major budget issues. Working with bureaus and offices within the Department, the central budget staff developed 24 complete studies of program activity. Many of these studies were used subsequently in review of budgetary requirements for FY 1973.

In addition, a Budget and Program Analysis Handbook was formally established, with periodic issuances throughout the year covering budget policies and procedures.

Progress has continued on the Department's management and financial information system. An automated system designed to measure progress against annual program and financial plans has been developed and partially implemented. Complete implementation plans were prepared for FY 1973.

### Financial Systems

The on-going program to modernize the Department's accounting and reporting systems was continued during FY 1972. A significant measure of progress in this modernization is the fact that new accounting systems approved by the Comptroller General were implemented in departmental operating units this year. Accounting and payroll for the Patent Office were transferred to the computer used by the Office of the Secretary in order to take advantage of the programming already available on that facility.

The Department of Commerce initiated and provided Government-wide leadership for the first Conference on Financial Management Improvement, sponsored under the Joint Financial Management Improvement Program. The Maurice H. Stans Awards for Distinguished Federal Financial Management were presented at that conference.

The Financial Systems Staff merged with the Office of Organization and Management Systems, and has taken on additional responsibilities for integration and coordination of the various administrative systems of the Department, i.e., accounting, budgeting, personnel, procurement, property, and work measurement.

The Financial Systems Staff studied the methods used by the National Oceanic and Atmospheric Administration to price the maps and charts sold to the public. The recommendations resulting from that study have led to a better method for the establishment of selling prices and for the recovery of costs.

### Organization and Management Systems

On March 19, 1972, a new Office of Organization and Management Systems (OOMS) was created, reporting directly to the Assistant Secretary for Administration. This Office provides a new focus for, and a performance capability in, the following areas:

- Management consulting
- Management improvement
- Automated data processing
- Directives management
- Financial systems management

OOMS comprises the former Office of Management and Organization, the Financial Systems Staff, and the Data

Processing Division of the Office of Financial and Computer Services.

The year was again an active one in the area of organizational planning and assistance. Of major significance was the establishment of the Social and Economic Statistics Administration, combining the Bureau of the Census and the Office of Business Economics in one organization designed to effectively plan and carry out the statistical programs of the Department. Additionally, the Office of Minority Business Enterprise was established as a primary operating unit of the Department.

The Department's management improvement program, another responsibility of OOMS, reported attributable cost savings of \$24.2 million during the year. This compares to savings in Fiscal Year 1971 of \$14.1 million.

Other projects undertaken during Fiscal Year 1972 include: (1) simplification of procedures for handling Trade Adjustment Assistance applications; (2) participation in the OMB/GAO/CSC program to develop productivity indices for the federal sector of the economy; (3) review of all advisory committees and Commerce-chaired interagency committees to determine the need for each; (4) development of the Departmental Project Control System used to control projects of special significance to the Secretary; and (5) review of recurring reports addressed to the Secretary.

In collaboration with officials of departmental operating units, the ADP Management staff developed and published a plan for improving the management and planning of the Department's ADP resources. This action was prompted by the increased number of computers, from 95 to 130 in Fiscal Year 1972, and the rising cost of computer personnel and services. Action has now been taken on this plan, which provides for longer-range planning of computer systems and equipment requirements, more compatibility of hardware and software, and consolidation of the Department's data processing requirements to provide the highest levels of service at reasonable cost.

### Personnel

Department employment from all funds was 34,025 persons at the end of Fiscal Year 1972. This represents a decrease of 334 persons from Fiscal Year 1971, as follows:

	<i>June 1971</i>	<i>June 1972</i>	<i>Change</i>
Full-time permanent . .	28,471	28,453	— 18
Temporary and other . .	<u>5,888</u>	<u>5,572</u>	<u>— 316</u>
Total . . . . .	34,359	34,025	— 334



The slight decrease in total Department employment is significant in view of the fact the new Office of Minority Business Enterprise (OMBE) experienced a sharp increase in employment during Fiscal Year 1972. OMBE's employment level rose from 78 to 258. The other components of the Department experienced relatively minor adjustments in employment levels.

As in past years, the Department placed special emphasis on programs designed to assure that members of racial minority groups and women will receive equal opportunity with respect to hiring, training, advancement, and recognition. Overall, the Department's percentage of members of minority groups in the work force rose from 18.4 to 19.0. Moreover, the Department continued to participate fully in the Public Service Careers Program, which helps to bring the disadvantaged into the Federal work force. Under this Program, a total of 267 people were hired during Fiscal Year 1972 and placed in entry-level positions. These individuals were placed in the printing, custodial, clerical, secretarial, and other trades. Additionally, 192 lower-level employees were advanced in grade through specialized training and counseling offered by the Office of Personnel, as a part of the Careers Program. The figures for the employment and advancement of people under the Public Service Careers Program for Fiscal Year 1972 are almost twice as large as those for the preceding year.

The Department's administrative trainee program opened its second year. The objective of the program is to provide greater opportunities for members of racial minority groups and women. The program's target is professional positions in the administrative field. Approximately 70 percent of the trainees in last year's group of 45 were placed in professional positions in administration during Fiscal Year 1972. Fifty-one new people were selected and enrolled in the next administrative trainee class. Approximately 65 percent of this group are racial minority group members and about 55 percent are women.

### **Publications and Printing**

Sales of printed materials sold by the Department of Commerce and for the Department by the Superintendent of Documents increased by 13 percent in Fiscal Year 1972 to a new record of \$14,667,000. Included in that total were receipts by the Department for sales of charts and maps, patents and trademarks, and technical reports, in addition to \$4,531,000 in publications sold through the Superintendent of Documents system. Supporting the sales of such publications, the Department produced 170 fliers and other promotional pieces. At the end of the year, 63 cross-ads were in use in other publications.

The Office of Publications, which produced most of the Department's in-house printing, turned out 158 million

pages in its main plant and provided related services for which combined billings totalled \$2.8 million. At Springfield, Virginia, site of the Office's Micrographics Division, serving the National Technical Information Service, 76 million pages were printed, and microfiche duplicates produced there totalled 3.5 million. Billings for work at the Washington and Springfield sites totalled \$4.6 million, up two percent from the previous year.

Having taken the lead in establishing a new Government standard of a 24-to-1 reduction ratio for microfiche, the Office put this standard into effect at the Springfield plant. By increasing the number of pages reproduced on a microfiche card from 57 to 98, there is a savings of \$80,000 per year. An additional \$72,000 savings has resulted from conversion of offset presses from sheet to roll stock.

The 465,000 pages of Commerce publications composed electronically, utilizing magentic tape supplied by the Department and by the Government Printing Office's Linotron system, tripled the number composed in this manner in the previous fiscal year. Commerce publishing accounted for two-thirds of all pages composed on Linotron in Fiscal Year 1972, as compared to two-fifths the year before.

### **Investigations and Security**

During Fiscal Year 1972, the Office of Investigations and Security expanded its functions to include investigative services for the Office of Minority Business Enterprise in connection with contracts and personnel. The Office also undertook responsibility for investigation of equal employment opportunity complaints. Three new special agents and one investigative clerk were added to the staff to meet these obligations.

In the area of personnel security, Departmental clearance procedures were updated, which resulted in more routine compliance with the full-field personnel investigation requirement established under Executive Order 10450. In compliance with White House directives, the number of persons holding Top Secret clearances were reduced by 50 percent.

The Department administrative order governing security regulations and procedures has been revised, in accord with the recent Executive Order regulating classification and declassification of national security information and material. The Office of Investigations and Security trained and armed special agent personnel to provide protection for the Secretary of Commerce and foreign dignitaries, plus security service during special conferences and civil disorders.

### **Administrative Services**

Procurement by the Department during Fiscal Year 1972 totalled approximately \$504.2 million, which

represents an increase of more than 60 percent over the previous fiscal year.

	<i>Fiscal</i> 1971	<i>Fiscal</i> 1972
Maritime Ship Construction Program . . . . .	169.1	337.3
All Other Procurement . . . . .	144.5	166.9
Total . . . . .	313.6	504.2

Of the \$166.9 million, awards to small businesses amounted to \$59.6 million, including \$25.7 million in set-asides. Also included was \$4.2 million in contracts awarded to assist in the development of minority business enterprises. This figure represents nearly three times the Department's original goal for such minority business assistance. Not included in the above procurement figures were grant awards totalling \$6.1 million.

Under the Materiel Management Program, surveys of all of the Department's supply activities and facilities throughout the continental United States have been completed. Upon implementation of survey recommendations, Departmental supply inventories, equipment, and space occupied have been reduced. Some excess property has been transferred out of the Department for possible use by other Federal agencies, State and local governments, and educational and charitable institutions. Additionally, excess property sales to the general public amounted to \$16.3 million. Streamlined administrative procedures resulted in cost savings estimated at \$19.6 million for the fiscal period.

The Department's field office consolidation program has encompassed four more cities—Atlanta, Boston, New York, and Portland, Oregon. The roster now totals 22 consolidated field offices. Collocation at the remaining seven cities in the program awaits completion of construction.

A Department-wide Occupational Safety and Health Program, including the appointment of a safety council to provide advice and direction, was fully implemented by January 1, 1972, under Executive Order 11612 of July 26, 1971. The Department's accident experience for calendar year 1971 showed a 48 percent decrease in the injury rate over 1970. In the President's Annual Safety Awards Competition, the Department was awarded an Honorable Mention for its safety program accomplishments.

Another annual savings of \$24,000 was secured by review of requests for telephone services and elimination of unnecessary equipment. Records management services of the Department removed by disposal and transfer more than 7,250 cubic feet of records.

### Emergency Readiness

In Fiscal Year 1972, a significant effort was directed

toward expansion of emergency readiness planning programs to provide for a wide range of contingencies. Readiness planning in the past had been geared to wartime emergencies; however, under leadership provided by the Office of Emergency Readiness, plans are being broadened to provide for the Department's emergency responsibilities under contingencies involving natural disasters and various types of domestic crises.

To support the emergency readiness program at the field level, a Memorandum of Understanding was negotiated between the Assistant Secretary for Administration and the Assistant Secretary for Domestic and International Business, designating 10 Business Service Directors to represent the Office of the Secretary on emergency preparedness and other contingency planning matters in the 10 Federal Regional Council Cities.

The Department began implementation of a new planning concept issued by the Office of Emergency Preparedness (OEP), Executive Office of the President, to assure the continuity of the Federal Government under all emergency conditions including attack on the United States. The new guidance calls for categorizing Federal agencies, as well as organizations within agencies, based upon their essential functions and the degree of need for immediate capability to operate continuously. The Department of Commerce is one of the agencies which requires a capability for uninterrupted emergency operations.

Other highlights of activities in Fiscal Year 1972 include: (1) arranging for the development of a Plan for Import Controls under a national defense emergency; (2) coordination of the Department's supporting plans to the OEP "Outline Plan for Federal Response to a Major Earthquake"; (3) issuance of the Department's policy on "Care of Dependents in an Emergency"; and (4) development of a regional training program on emergency matters. Also, during the year, the Department updated its Civil Defense "Self Protection Plan" and revised its emergency space and relocation assignments.

### Civil Rights Compliance

The Civil Rights Compliance staff from the Office of the Secretary began a follow-up audit of the Title VI Compliance Program of the Economic Development Administration (EDA). In 1970 and 1971, EDA developed and issued comprehensive guidelines and orders to ensure that EDA loans and grants were made without regard to race, color, or national origin. The year's survey is to ascertain if these EDA guidelines have been fully implemented.

New procedures for processing of Department employees' equal employment opportunity discrimination complaints were established to meet and deal fairly with an increased number of discrimination complaints.

## Appeals Board

The Appeals Board has responsibility for consideration of private contractors' protests regarding decisions made by bureau officers under any contracts which provide for an appeal to the Secretary. By bureau regulation, the Board also handles appeals concerning specified administrative actions in the fields of export control, regulation of imports of foreign excess property, and foreign direct investments.

In addition, the Board may be assigned individual review responsibilities as they arise on a case-by-case basis, such as under the Patent Secrecy Law and in connection with petitions to the Secretary for extraordinary relief, as permitted under Public Law 85-804. Two such cases of considerable significance arose and were disposed of during Fiscal Year 1972. Currently, the Board Chairman has a continuing assignment under the General Counsel's supervision relating to maritime subsidy determinations, which are subject to ultimate review by the Secretary.

The Board's role is quasi-judicial in nature and serves a desirable trade-relations as well as legal purpose, by providing an independent review of public complaints within its assigned areas of responsibility. The Board's usefulness depends on its ability to handle appeals cases expeditiously as well as fairly. While the Board cannot control the number of cases presented, the goal is to dispose of cases on a current basis and, insofar as possible, in a manner to forestall litigation in court. At the beginning of the year, there were no pending maritime subsidy cases, and thereafter six new cases were received, all of which were disposed of by the end of the year. There were four contract dispute cases pending at the beginning of Fiscal Year 1972, and one new case was received. Three were disposed of, leaving

two pending disposition at the end of Fiscal Year 1972. In the export control area, no cases were pending at the beginning of the year, five new cases were received; and all but one were disposed of before the close of the year.

## Interagency Auditor Training Center

The Interagency Auditor Training Center became operative on August 12, 1968. Its objectives were approved on May 13, 1968, by the U.S. Civil Service Commission, pursuant to the Government Employees Training Act of 1958. This Act encouraged the establishment of interagency training as one of the most effective means of providing developmental opportunities to the Federal employees.

The Center is the only Federal facility with the mission of conducting interagency training oriented to the needs of the Government auditor. It is organizationally located in the Office of the Assistant Secretary of Commerce for Administration. Participating agencies annually contract to contribute funds in payment for anticipated enrollments. Such commitment of the sponsors covers the minimum operating expenses of the Center. Additional funds from non-sponsors permit improvement and expansion of the Center's capabilities.

During Fiscal Year 1972, in comparison with the previous year, the number of courses increased by 33 percent, enrollments increased by 30 percent, and revenues increased by 79 percent. Training opportunities were extended to State and local governments pursuant to the Intergovernmental Cooperation Act of 1968. Students from foreign countries were also welcomed. Out-of-town courses were conducted in eight locations and preliminary plans have been formulated for conducting eight courses in Germany in Fiscal Year 1973.

## PUBLIC AFFAIRS

The Department's Office of Public Affairs (OPA) disseminated public information on Departmental activities through many media channels. News was generated during 22 Washington press conferences called by the Secretary of Commerce, as well as by more than 2,000 press releases, over 200 tapes made for the Department's broadcast service, and briefings, interviews, and articles handled by OPA. Other major events of the year included the first National Conference on Business Opportunities for Women and inspection tours by the Secretaries of Commerce and Labor to areas left crippled and in ruin by Tropical Storm Agnes.

The year's newsmaking events were as diversified as is the Department, from the Secretary's trade talks with

the Soviet Union to the swearing-in of the first woman officer in the National Oceanic and Atmospheric Administration's Commissioned Corps. OPA scheduled periodic reports on the Gross National Product and on the development of packaging and labeling guidelines to aid consumers. Major announcements ranged from a new research program to protect porpoises to an award of \$660 million in construction contracts to provide 16 new ships for the country's merchant fleet.

### Press Releases

The Departmental News Room issued 2,734 press releases, compared with 2,374 in the preceding fiscal



year. In addition, it handled distribution of over 500 recurring releases, such as foreign trade and statistical reports of the Bureau of the Census, overseas business information reports of the Bureau of International Commerce, and economic reports of the Bureau of Economic Analysis. The News Room also processed nine Sunday Feature articles, and prepared and distributed 253 issues of the *Commerce News Digest*.

### Broadcast Service

The Department's broadcast service was considerably expanded. This service provides broadcasters with current news announcements and statements by Department officials. Items are tape recorded for telephonic transmission to broadcasting newsrooms, which rebroadcast them during scheduled news programs. The national service, previously offered on an occasional basis, is now available every working day, supplemented by weekend feature reports. Additional telephone lines and associated broadcasting equipment were installed for use in providing regionalized news reports and minority-oriented news and features.

### Publications

The Department continued publication of *Commerce Today*, a bi-weekly magazine for businessmen. Paid

subscriptions continued high, reflecting the interest of both domestic and foreign subscribers.

Two special editions were produced: "World Trade Outlook" and "The White House Conference on the Industrial World Ahead: 1990."

### Minority Press

OPA has developed a special mailing for press releases, speeches, and articles of interest to minority group publications. The Commerce Broadcast Service reaches this audience with recordings of special interest to minorities; news of special interest to Spanish-speaking people is specially recorded in that language. Minority news releases are currently mailed to 916 publications.

### Special Projects

As examples of many special projects, OPA handled press arrangements for the President's Flood Rehabilitation Task Force trip to flood-devastated areas in Pennsylvania and New York; rendered special assistance to the Cost of Living Council when that group was formed; helped with press and protocol arrangements for the Secretary's U.S.-Soviet Commercial Commission talks both in Washington and in Moscow; handled media arrangements for the White House Conference on the Industrial World Ahead: A Look at Business in 1990.

## OFFICE OF THE GENERAL COUNSEL

### Legislation

The General Counsel is responsible for the preparation or review of all departmental legislative proposals, expressions of official opinion as to the merits of proposed or pending legislation, statements concerning proposed or pending legislation to be made before Committees of the Congress, and advice to the President with respect to enrolled enactments.

During the year, the Department received requests for comment on almost 850 items of legislation and related matters, such as agency regulations to implement legislation enacted, including approximately 400 requests from the Congress. Departmental witnesses testified at about 90 Congressional Committee hearings (exclusive of appropriation hearings). The Department initiated over 20 detailed legislative proposals.

Laws enacted during the year, which involved significant new programs or administrative responsibilities of the Department, included the following:

Amendment of the Northwest Atlantic Fisheries Act, P.L. 92-87.

Establishment of the National Advisory Committee on the Oceans and Atmosphere, P.L. 92-125.

Authorization for domestic and international studies and programs relating to patents and trademarks, P.L. 92-132.

Reporting of weather modification activities to the Department of Commerce, P.L. 92-205.

Conservation of North Atlantic salmon, P.L. 92-219.

### Administration

Legal services were provided in support of Department-wide personnel, appropriations, equal opportunity, claims, organizational and other administrative and housekeeping activities.

Included within the approximately 1,335 procurement and other grant documents reviewed by the Office of General Counsel, were 175 contracts and eight grants negotiated under the programs of the Office of Minority Business Enterprise.



Extensive legal opinions were provided in the areas of census law, freedom of information, and committee management. A difficult and sensitive area concerned a dispute between the Archivist and the Bureau of the Census over the confidentiality of data gathered during the 1900 Decennial census. Opinions and counsel rendered concerning the public information section of the Administrative Procedure Act led to development of a broader interpretation of what information is disclosable in keeping with the spirit of the legislation. In a related matter, legal and policy advice was also furnished as a basis for guidelines under Section 13 of Executive Order 11671, stating procedures to be followed in opening advisory committee meetings to public attendance.

### **Domestic and International Business**

Legal services were provided to the Bureau of International Commerce, the Bureau of Domestic Commerce, the Office of Import Programs, the National Industrial Pollution Control Council, the National Business Council for Consumer Affairs, the Office of Textiles, the United States Travel Service and the Office of Business Economics.

Counsel was provided to the Interagency Committee for the Implementation of Textile Agreements in connection with the Long-Term Arrangement Regarding International Trade in Cotton Textiles and other textile programs.

Legal advice was given in the preparation of two Departmental missions to the U.S.S.R. in connection with developing trade between the United States and the U.S.S.R.

Consumer and environmental issues continued to receive considerable attention, including review and drafting of legislation, preparation of Congressional testimony for departmental witnesses, and critique of regulations proposed by other departments.

The Office of General Counsel provided extensive legal services to the trade adjustment assistance program under the Trade Expansion Act of 1962, including drafting of implementing regulations and detailed review of adjustment assistance proposals and related documents and files. There was also active involvement in matters relating to the Export Administration Act of 1969, particularly extension of the Act itself and the

imposition of export controls on cattlehides under the short supply provision of the Act. Also, with respect to enforcement of the Act, 15 charging letters were issued against 22 parties, 19 denial orders were issued against 55 parties, and 3 cases were referred to the Department of Justice.

Extensive counsel was provided in connection with the dock strike which occurred in the late fall of 1971. Amendments to the regulations under the Foreign Trade Zones Act and the Educational, Scientific, and Cultural Materials Importation Act of 1966 also were prepared.

### **Science and Technology**

Legal services were provided to the National Bureau of Standards, Patent Office, National Technical Information Service, Office of Telecommunications, Office of Product Standards, and Office of Environmental Affairs.

Legislation was drafted on international standards and conversion of the United States to the metric system of measurement.

Legal support was provided to facilitate the Department's increased environmental efforts, by assisting in departmental implementation of the National Environmental Policy Act, participating in the comments on environmental impact statements submitted for departmental review, and assisting in the drafting of comments on environmental legislation reviewed by this Department.

In connection with the Department's authority under the Flammable Fabrics Act, assistance was provided in the preparation of the final flammability standards both for children's sleepwear, in sizes 0 through 6X, and for mattresses. A proposed sampling plan amendment for the children's sleepwear standard was prepared and proceedings were initiated to determine whether a need exists for (1) a flammability standard for children's sleepwear in sizes 7 through 14, and (2) a sampling plan for the carpet and rug flammability standard.

Legal services were also provided in the Department's efforts toward the stimulation and enhancement of technology. Foremost is the legal support of the Experimental Technology Incentives Program. Legal problems connected with government action, such as those in the fields of patents and antitrust, have been and are being reviewed to determine how best this experimental program can function.

## **POLICY DEVELOPMENT**

The Office of Policy Development is under the direction of the Special Assistant for Policy Development, who is

the Secretary's advisor on departmental policy. The Special Assistant aids in setting and monitoring policy

guidelines within the Department. His staff serves as a special problem-solving and study group on matters of direct concern to the Secretary.

During fiscal year 1972, the policy development staff provided support for several major Presidential initiatives. As part of the economic stabilization program, the Office first organized and coordinated departmental activities during Phase I and then prepared specialized

policy studies for the Cost of Living Council. Work begun in the previous year in the area of technology was significantly expanded with particular emphasis on technology enhancement. Having analyzed the impact of high technology on the balance of trade, the Office prepared testimony for presentation to Congress and developed organizational options for the President's review. The staff also undertook analytical work on aspects of U.S.-U.S.S.R. trade negotiations.

## BUSINESS ECONOMICS AND STATISTICS

### INTRODUCTION

The Assistant Secretary for Economic Affairs is the Chief Economist for the Department. He advises the Secretary and other Department officials on domestic and international economic policy and serves as the Department's liaison with the Council of Economic

Advisers. He also serves as Administrator of the Social and Economic Statistics Administration and provides policy direction to the staff of the National Industrial Pollution Control Council.

### OFFICE OF THE ASSISTANT SECRETARY FOR ECONOMIC AFFAIRS

The Assistant Secretary participated with the Administration's other top economic officials in monitoring and interpreting domestic and international economic developments under the President's New Economic Policy. In addition to issuing statements, taped commentaries, and a biweekly series of articles analyzing various aspects of the current economic situation and outlook for the Department publication *Commerce Today*, the Assistant Secretary delivered several major addresses before business organizations on economic policy. He represented the Secretary at meetings of the Cost of Living Council during the early stages of the economic stabilization program and was later delegated full responsibility for the operation of the dividend restraint program. Under this voluntary program, dividend payments by all corporations increased only 2.6 percent during the first half of 1972 over the previous-year level, well under the 4 percent guideline established by the Committee on Interest and Dividends.

In the field of international economic affairs, the Assistant Secretary served as the Commerce delegate to the Economic Policy Committee of the Organization for Economic Cooperation and Development.

As part of a joint project undertaken by the U.S. and Canadian Governments to reconcile differences in their statistical measures of merchandise trade between the two countries, the Assistant Secretary for Economic Affairs and the Chief Statistician of Canada co-chaired a U.S.-Canadian Trade Statistics Committee. The Committee was formed in December 1971 to oversee a trade reconciliation study scheduled for completion by December 1972.

As chairman of the Secretary's Economic Advisory Board, the Assistant Secretary held three meetings with the leading business economists who comprise the Board to examine major economic developments and obtain their views on Government policies and programs. In addition, the Assistant Secretary for Economic Affairs continued to chair the Foreign Direct Investment Appeals Board and to serve as the Secretary's alternate on the Cabinet Committee on Economic Policy, the Cabinet Committee on Construction, and the National Commission on Productivity. He also participated in the Regulations and Purchasing Review Board formed by the Office of Management and Budget to study Government actions that directly or indirectly affect prices.

### SOCIAL AND ECONOMIC STATISTICS ADMINISTRATION

#### Functions

The Social and Economic Statistics Administration

(SESA) serves as a primary center for collecting, compiling, and publishing a broad range of general-purpose statistics dealing with economic, social and demo-

graphic data. SESA is the Federal agency responsible for the preparation, interpretation, and projection of aggregate measures of economic activity. In carrying out these responsibilities, SESA conducts censuses and surveys to collect data on social and economic activities and publishes the resulting statistics; maintains the economic accounts of the United States; serves as the central economic research organization of the Department on the functioning of the economy; provides special analyses to Government officials on the effects of alternative economic policies; and conducts special statistical studies on various segments of the economy.

### Formation

SESA was formed on January 1, 1972, bringing together the Bureau of the Census and the Bureau of Economic Analysis (formerly the Office of Business Economics). Certain programs were shifted between the two bureaus to strengthen further the concept of separating data collection from data analysis.

The newly-designated Bureau of Economic Analysis was broadened through the transfer from Census of the following analytic activities: the statistical indicators

program, including publication of *Business Conditions Digest*, and the special analyses of economic and social conditions in various foreign countries.

The reorganization also brought Census into closer conformity with the concept of a data collection and processing center, through the transfer of several activities from the Bureau of Economic Analysis: the manufacturers' inventory and sales expectations survey, and the travel and transportation survey. In addition, data collection activities from other units in Commerce were transferred to Census. The export-import index program and statistical reports on U.S. trade were transferred from the Bureau of International Commerce. The remaining industrial surveys were transferred from the Bureau of Domestic Commerce.

The reorganization of Department of Commerce statistical activities constitutes a significant improvement in statistical systems in the Department and in the Executive Branch. It strengthens both analysis and collection functions and brings these Commerce units into closer conformity with Office of Management and Budget guidelines for statistical agencies. Most important, it creates an organization that is more responsive to the statistical requirements of government, business, labor, and the general public.

## NATIONAL INDUSTRIAL POLLUTION CONTROL COUNCIL

### Functions

The National Industrial Pollution Control Council (NIPCC) was created by Executive Order 11523, April 9, 1970, to advise the Administration on environmental quality improvement policies and programs as they affect industry and to provide voluntary action program leadership in pollution clean-up by industry.

The NIPCC receives staff support from the Department of Commerce and furnishes its advice to the President and the Chairman of the Council on Environmental Quality through the Secretary of Commerce. The Deputy Assistant Secretary for Industry Economics serves as Executive Director.

The work of the NIPCC is carried out through Sub-Councils covering all areas of industrial activity and through special committees dealing with specific multi-industry problems. Each Sub-Council has a number of additional top corporate executives who have been chosen to reflect various facets of each industry grouping as well as geographic and size distribution.

### Activities in 1972

During Fiscal Year 1972 the NIPCC obtained specific

commitments from more than 110 companies to take action to maintain or improve the environment. As a result of discussions with other government agencies involved in the protection of the environment, the NIPCC established in FY 1972 a Technical Assistance Service, an organized locator system to identify and make available to environmental agencies senior technical people employed by the companies with which Council members are chiefly affiliated.

*The following reports were issued by the NIPCC in FY 72:*

- Airports and the Community
- Electric Power Industry (The)
- Fertilizers and Agricultural Chemicals
- Fluorescent Lamps
- Land and Water Pollution From Recreational Use
- Rubber
- Tobacco Industry and Pollution (The)
- Waste Disposal in Deep Wells
- Steel Industry and Environmental Quality (The)
- Railroads and the Environment in Rail Freight Operations
- Natural Gas Industry and the Environment
- Paper and Wood Packaging and Solid Waste



## BUREAU OF ECONOMIC ANALYSIS

### Functions

The Bureau of Economic Analysis (BEA) provides basic measures and analyses of the state of the U.S. economy. Specifically, it is the function of BEA to provide a clear picture of the state of the U.S. economy through the preparation, development, and interpretation of the national economic accounts. These accounts consist of the national income and product accounts, summarized by the gross national product; wealth accounts, which show the business and other components of national wealth; the input-output accounts, which trace the interrelationships among industrial markets; personal income and related economic series by geographic area; and the U.S. balance of international payments. The work on the national accounts is supplemented by the preparation and analysis of other measures of business activity, such as the Plant and Equipment Survey which provides information on business investment outlays and programs, econometric models of the U.S. economy, and a system of economic indicators. The data and analyses prepared by BEA are disseminated mainly through its monthly publications, the *Survey of Current Business* (including periodic supplements), *Business Conditions Digest*, and *Defense Indicators*.

### Estimates of Fixed Nonresidential Business Capital

A volume presenting annual estimates of the stock of fixed nonresidential business capital in the United States for the years 1925-70 was published in November 1971. This volume provides estimates of gross and net capital stocks, depreciation, discards, and average ages of gross and net stocks for major industries and detailed types of nonresidential structures and equipment, using alternative assumptions as to service lives, depreciation, and valuation of capital goods.

### Estimates of Residential Capital

Annual estimates of the Nation's stock of residential capital for the years 1925-70 were published in the November 1971 issue of the *Survey of Current Business*. Estimates were provided of gross and net stocks, depreciation, and average ages of gross and new stocks for various types of residential structures. These estimates were compared with data from the Censuses of Housing, Censuses of Governments, and the capital consumption estimates now in the national income and product accounts.

### Input-Output Transactions: 1966

The summary version of the 1963 input-output table was updated to 1966. The 1966 input-output table

incorporates a mixture of actual 1966 data and a summary updating of the relationships in the 1963 table. The total output of each industry and the final market purchases are based directly on 1966 statistics, while the intermediate inputs reflect primarily 1963 relationships. These relationships have, however, been modified to incorporate changes from 1963 to 1966 in the relative prices of the inputs and in the average use of products resulting from changes in technology, scale of operation, product mix, and other factors. This 1966 updating was published in BEA Staff Paper in Economics and Statistics, No. 19, in February 1972.

### Projections of Economic Activity

State projections to 1980 and 1990 of population, employment, and income by industrial source were completed and published in the April 1972 issue of the *Survey of Current Business*.

### Local Area Estimates of Employment

Annual estimates of employment by industry covering the years 1967 to 1971 were prepared for each State and county of the Nation. This series forms a new component of BEA's regional economic information system.

### New Balance of Payments Data

Detailed data for U.S. international transactions with Belgium-Luxemburg, France, Germany, Italy, Netherlands, and Mexico, for the years 1968 through 1971, were compiled and published for the first time in the June 1972 *Survey of Current Business*.

New data on transfers of goods and services under U.S. military grant programs and military grants of goods and services resulted in upward revisions of from \$1 to \$2 billion annually for the 1966-71 period. Estimates of the value of support in Vietnam furnished from annual Defense Department appropriations, previously not available for inclusion in the balance of payments accounts, were published for the first time in the June 1972 *Survey of Current Business*.

### Merchandise Trade Projections

An article discussing procedures used to prepare short-term projections of U.S. merchandise exports and imports was published in the May 1972 *Survey of Current Business*.

### Improving Foreign Trade Statistics

Extensive work on the identification of military ship-

ments previously included in commercial merchandise exports was undertaken. Results of this investigation led to revisions in trade data for 1966-71, published in the June 1972 *Survey of Current Business*.

### Foreign Investment

Part II of the Survey of U.S. Direct Investment Abroad for the year 1966 was published in three groups on a preliminary basis in supplements to the *Survey of Current Business*. The three groups cover U.S. reporters and their foreign affiliates in petroleum, manufacturing, and other industries, respectively.

### Plant and Equipment Expenditures Survey

In January 1972 BEA assumed full responsibility for the Quarterly Survey of Plant and Equipment Expenditures by Business. Prior to this, the survey was conducted jointly with the Securities and Exchange Commission. The capital expenditures survey, which obtains data on projected capital spending as well as actual outlays, provides one of the most important indicators used by both the business community and public officials in assessing near-term economic activity. These data are

also used in the development of the Gross National Product estimates. Consolidation of this survey provides the basis for improvements in comprehensiveness and timeliness of data on fixed investment.

### Long Term Economic Growth

A new volume in the *Long-Term Economic Growth* series was compiled and prepared for publication during the first half of FY 1972. This report presents a comprehensive statistical basis for the study of economic growth in the United States for the period 1860 to 1970. Historical data, descriptions, charts, tables, and growth rates are included for a broad range of annual time series. This volume updates a similar report issued in 1966.

### Business Statistics – 1971

The 1971 edition of *Business Statistics*, the biennial supplement to the *Survey of Current Business*, was published in March 1972. This supplement, the 18th in this series of basic reference volumes, contains about 400 pages of statistical information on the Nation's economy.

## BUREAU OF THE CENSUS

### Functions

The Census Bureau collects and publishes basic statistics about the people and the economy of the Nation in order to assist the Congress, the Executive Branch, and the public generally in the development and evaluation of economic and social programs. The Bureau publishes a wide variety of statistical data and provides special tabulations of statistical information to government and private users.

### Periodic Census Activities

**Population and housing.**—Processing and dissemination of data from the 1970 Census of Population and Housing continued throughout the fiscal year. A Demographic Census Staff was formed, comprising the 1970 Census Coordinator and his staff along with the population and housing census staffs, to complete the remaining 1970 census work, as well as to evaluate Bureau operations in that census with a view to planning for 1980.

In order to better serve the increasing number of census data users, and taking into account the growth of metropolitan areas, the 1970 census publication pro-

gram is much more extensive than the 1960 census program.

"We, the Americans," a special series of popular reports on the 1970 census, was initiated during the year. The first in the series, a booklet entitled "Who We Are," presents a summary of important 1970 results in an easily understood manner, utilizing text, tables, and pictorial representation.

To meet the growing needs for up-to-date population counts, approximately 50 communities arranged to have the Bureau conduct special censuses at their own expense.

**Agriculture.**—All the individual county reports from the 1969 Census of Agriculture were released, as were 20 of the State reports from Volume I.

Work is progressing on a number of special censuses and surveys taken in connection with the census of agriculture to obtain information on special topics for which more detailed data are desired. These include the Farm Enterprise Survey, new with this census; the Agricultural Services Census, also new; the Irrigation Census, taken every 10 years; the Agricultural Finance Survey; and the Census of Horticulture.

**Governments.**—Operations for the 1972 Census of Governments proceeded on schedule. The four phases of this census—the Governmental Organization Survey, the Taxable Property Values Survey, the Government Employment Survey, and the Governmental Finances Survey—are all in various stages of completion.

**Economic censuses.**—An Economic Census Staff was established to strengthen the planning and direction of the 1972 economic censuses. There will be little change in the subject matter for these censuses, which include the census of business (retail trade, wholesale trade, and selected services), the census of construction industries, the census of manufactures, the census of mineral industries, and the national transportation surveys. The primary goal is accelerated release of the results of the censuses. The 1972 census data will be based on the 1972 revised Standard Industrial Classifications.

### Current Surveys

In fiscal 1972, the Bureau began to implement changes in the design of the Current Population Survey, the source of the monthly official government estimates on employment and unemployment. Reflecting the results of the 1970 census, these changes will be accomplished in a series of stages between December 1971 and February 1973 and will result in more reliable estimates.

Publication of the advance estimate of monthly retail sales was resumed, after a lapse of almost 2½ years. At the time of suspension, a change in sample design had resulted in a modification of the past relationship between the advance (sub-) sample data and the full-sample data, making accurate forecasts more difficult. Enough experience has now been gained with the new sample design to resume publication of this series.

*Mergers and Acquisitions:* 1967, the first publication of its type to be issued in several years, was released. The report contains information developed from data collected as part of the 1963 and 1967 economic censuses.

### Special Surveys and Projects

The Survey of Minority-Owned Business Enterprises was completed and a report issued on survey findings. This report offers the first set of comprehensive statistical data compiled in the area of minority ownership of businesses in this country. It focuses on the economic characteristics of firms owned by members of the principal minority groups (Negro, Spanish-speaking, and other racial minorities) and covers the industrial activity, geographic location, employment, receipts, and legal form of organization of the enterprises.

The survey on Barriers to Employment, conducted subsequent to the 1970 census to examine more fully the employment-related problems of persons in low-

income areas in selected central cities, was successfully completed. A total of 76 reports detailing the findings in the 60 areas in 51 cities and seven rural areas were released.

The Bureau has undertaken a major survey for the Bureau of Labor Statistics (BLS) to determine where, on what, and how much the American public spends in the course of a year, against what it receives. Called the Consumer Expenditure Survey, the project will provide the information required to update the BLS Consumer Price Index. The survey is being conducted on a quarterly basis over a 2-year period.

A series of surveys was undertaken during the year for the Justice Department's Law Enforcement Assistance Administration (LEAA) as part of the concerted effort to obtain useful and accurate information on all factors related to crime. The Bureau's participation in this vital area ranged from collecting basic information about the Nation's State and local facilities for handling juvenile offenders, through providing a comprehensive description of the Nation's judicial system, to conducting studies of inmates, business victims of crime, and crime victimization among the general public.

At the request of the Department of the Treasury, the Census Bureau participated in development of plans and preparations for implementation of anticipated revenue sharing legislation. The Bureau's preparations included (1) developing a list of all recognized State and local government units, along with corresponding 1970 census population and income data; (2) bringing records of geographic changes up to date, reflecting all annexations, incorporations, and disincorporations in those government units; and (3) initiating a survey of all 38,000 governments to develop tax revenue information for FY 1971. Plans are also being made for all annual development of per capita income data and collection of revenue information and for the updating of boundary information.

The Census Bureau prepared special tabulations of data from the 1970 Census of Population on unemployment and related characteristics in selected areas at the request of the Bureau of Labor Statistics. These data were used by the Department of Labor in planning the distribution of \$250 million in special assistance to areas with substantial unemployment.

A weekly information reporting system on wages, prices, and rents, requiring the development and implementation of a complicated computer program within 10 calendar days, was set up by the Census Bureau for the Cost of Living Council during Phase I of the Wage-Price Freeze Program.

Obligations for reimbursable services during the year (preliminary figures) amounted to \$32.3 million, of which \$29 million were requested by other Federal

agencies and \$3.3 million by State and local agencies and private organizations or individuals.

A new series of annual reports on environmental quality controls was begun in August 1971. The reports, *Environmental Quality Control Expenditures for Selected Governmental Units*, present data on expenditures for water quality control, solid waste management, and air quality control by Federal, State, and selected local governments.

Fiscal 1972 saw the publication by the Bureau of a book entitled *The Methods and Materials of Demography*. Comprising two volumes, this compendium gives a comprehensive exposition of the methods used by technicians in dealing with demographic data. The work is intended as a text for courses on demographic methods and as a reference for professionals who work with population data.

## Other Activities

The Bureau continued its program for State and local government officials, conducting three weeklong Inter-governmental Seminars on Federal Statistics for State and Local Government Use during the year. Representatives from 70 State and local governmental units participated.

**International statistical programs.**—Under the sponsorship of the Agency for International Development, the Bureau continued to provide statistical and data processing advisory and training services to developing countries. Overseas technical advisory services were provided by 68 technicians in 20 different countries, while participants from 52 countries received approximately 1,000 man-months of training in the United States.

## SOCIAL AND ECONOMIC STATISTICS ADMINISTRATION

### BUREAU OF THE CENSUS

(Selected Workload Data)

#### REPORTS PUBLISHED

Item	Fiscal years				
	1968	1969	1970	1971	1972
<b>CURRENT PROGRAM;</b>					
Retail, Wholesale, and Service Trade Statistics . . . . .	122	115	80	108	111
Manufacturing and Industrial Statistics . . . . .	678	581	1,150	624	652
Current Population Survey . . . . .	48	74	71	57	52
Construction Statistics . . . . .	82	86	75	85	86
Housing Statistics . . . . .	3	5	17	8	7
Agriculture Statistics . . . . .	24	25	17	13	22
State and Local Governments . . . . .	15	22	25	22	27
Foreign Trade Statistics . . . . .	193	145	128	196	140
Statistical Abstracts and Special Reports . . . . .	141	75	123	184	183
Geography . . . . .	27	7	5	15	59
<b>CENSUSES:</b>					
Population and Housing: 1960 . . . . .	7	5	1	...	2
1970 . . . . .	...	...	33	533	327
Governments: 1967 . . . . .	7	9	62	...	...
Economic: 1963 . . . . .	37	...	...	1	...
1967 . . . . .	9	18	241	407	8
Agriculture: 1964 . . . . .	35	...	...	...	...
1969 . . . . .	...	...	...	159	3,138
Special Population Censuses . . . . .	19	18	14	...	...



## ECONOMIC DEVELOPMENT ASSISTANCE

### INTRODUCTION

The Assistant Secretary for Economic Development serves as the principal adviser to the Secretary on the economic development of States, regions, areas, districts, centers, and communities in the U.S. He represents the Department of Commerce and the Federal government in developing programs which assist economically under-developed areas to stimulate industrial and commercial growth. The Assistant Secretary is head of the Economic Development Administration.

The Special Assistant for Regional Economic Coordination, reporting directly to the Secretary of Commerce, assists him in carrying out his responsibilities toward Regional Economic Development Commissions, and promotes effective coordination of Federal activities involving regional economic development.

### OFFICE OF THE ASSISTANT SECRETARY FOR ECONOMIC DEVELOPMENT ECONOMIC DEVELOPMENT ADMINISTRATION

#### Mission

The mission of the Economic Development Administration (EDA) is to help local communities help themselves to overcome long-term unemployment and underemployment. Through its programs, EDA also seeks to alleviate the associated problem of population out-migration, by creating new jobs through industrial and commercial growth. EDA also responds to requests from communities suffering from a sudden rise in unemployment because of a closing of a major industry, as well as in areas where unemployment has had a special impact.

#### Basic Programs

(1) EDA makes public works grants and loans to help communities construct or modernize facilities so that industry and businesses may expand or locate in an area.

One example of the new type of projects in which EDA is participating is the development of a vertical industrial park in the Williamsburg section of Brooklyn, New York.

This prototype development, to demonstrate for New York and other cities how run-down, inner-city industrial areas may be revitalized, involves the conversion of a vacant six-story building for new

industrial uses. The multi-level industrial park will serve light manufacturing industry, thus complementing the heavy industry being established in the former Brooklyn Navy Yard with EDA assistance. Local officials estimate that when fully occupied as a vertical industrial park, the building will house firms employing 500 persons. They also expect to encourage minority-business activities in the Williamsburg area.

The President signed the Public Works Impact Program (PWIP) legislation August 5, 1971, authorizing EDA to begin its work immediately with local communities. The agency adopted a schedule requiring projects to be submitted by November 1, 1971. This deadline allowed a review of engineering and financial aspects and the number of new jobs that could be created at that time for the unemployed and underemployed.

The first PWIP project, approved December 8, 1971, was \$644,000 for street improvements in Buffalo, New York. The first groundbreaking for a PIWP project was on January 6, 1972, at Rosebud, Texas, for construction of a water transmission line.

At the end of the fiscal year, 171 projects were under construction and four had been completed. The PWIP projects had provided jobs for 3,655 unemployed workers. An additional 28 projects were ready to go into construction.

Overall, EDA provided 71 percent of the financing for PWIP projects. EDA's average cost per project was \$234,834.

(2) The Agency makes long-term, low-interest business development loans to industrial and commercial firms, local development companies, and Indian tribes. Loan funds may be applied to land acquisition and development, the purchase or construction of buildings, and the purchase and installation of machinery and equipment.

(3) Technical assistance and planning grants are made to communities to develop long-range programs to stimulate economic growth. Feasibility studies are conducted to establish new job-generating industries. Grants to train management and labor forces needed by industry and business are also approved.

Under the technical assistance program, EDA supports university research centers offering management assistance to small businesses and to local economic development organizations to stimulate growth.

EDA is sponsoring a Productivity Enhancement Program, now in operation in Illinois and Connecticut, to utilize the highly-developed talents of unemployed aerospace and defense scientists and to stimulate the development of unused resources. Scientists will be enlisted in the program to compile data on industries and resources for analysis in the light of new technological advancements. The goal is to increase production and employment.

Cities, too, will benefit from studies sponsored by EDA to improve municipal services. The Franklin Institute of Philadelphia is conducting a program of study with the City of Philadelphia to determine the use of technology in the procurement of goods and services. In addition to helping the City strengthen its procurement expertise, the program is expected to identify new products that can be manufactured in the Greater Philadelphia area.

EDA technical assistance supports the efforts of public and private groups to advance local and regional growth. An example of this type of cooperative effort is the Seattle-King County Economic Development Council, which is conducting research on new ways to diversify the area's aerospace economy and planning for long-range diversified growth. The council, composed of leading businessmen and local public officials, is undertaking projects such as: (1) the development of the Duwamish Waterway as a major industrial section of the area; (2) promotion of Seattle as an industrial center for foreign investment; and (3) a \$2 million fund-raising campaign to stimulate the economy through creation of additional jobs by 1975.

Technical assistance has helped finance management programs for black insurance companies and savings and

loan associations. Aid to Opportunities Industrialization Centers has helped produce such results as an increase in income for trainees in San Jose from \$2,245 to \$6,172 for men and from \$1,809 to \$5,220 for women.

### Qualified Areas

Effective July 1, 1972, a total of 1,613 areas were qualified for participation in the EDA programs. These included 1,235 areas qualified as redevelopment areas for the full range of EDA benefits. The remaining 378 areas were qualified as Title I areas eligible only for public works grants.

EDA qualified areas generally are individual counties. The agency also qualified Indian reservations, major cities and areas within cities.

As of July 1, 1972:

—Major cities designated were:

Cleveland, Detroit, Newark, Oakland, Providence, San Juan, Seattle, Tacoma, and Washington, D.C.

—Special areas within metropolitan areas designated were:

The Brooklyn Navy Yard, Lower East Side and South Bronx areas of New York; the stockyards area and the west side of Chicago; the Omaha stockyards area; south central Los Angeles; and inner city areas of Buffalo, Kansas City, and Portland, Oregon.

—A total of 134 Indian reservations were qualified.

EDA's technical assistance program may be put to use in any area of the Nation where there is a substantial economic need.

### Development Districts

The aim of the EDA district program is to encourage adjacent communities to pool their talents and resources in a coordinated effort to overcome mutual area-wide problems of unemployment and lagging economic growth. A district must contain at least two counties designated as redevelopment areas because of high unemployment or low family income. It may include economically healthy counties, and it must have at least one growth center—a community which can help provide jobs and services for residents of lagging areas. A typical economic development district includes 8 counties and two growth centers.

Districts are governed by representatives of the member counties. Governing boards must be broadly based, including in their membership local elected officials and representatives of business, labor, minority groups and other elements of the communities served.

At the close of fiscal 1972, EDA had designated 116

economic development districts, which included 332 growth centers. Financial assistance was also being provided to 7 additional multi-county organizations working to establish districts.

State governors had selected 84 EDA-assisted districts to serve as regional clearinghouses in their States for coordination of Federal programs.

EDA approved \$39,181,973 in public works funds and

business development loans for growth center projects in fiscal 1972.

By encouraging adjacent communities to work toward common goals, the district program helps strengthen local government. It also offers private enterprise and the Federal Government an opportunity to join as partners in a coordinated plan to stimulate economic growth.

## SPECIAL ASSISTANT FOR REGIONAL ECONOMIC COORDINATION

### Mission and Organization

The Office of Regional Economic Coordination (OREC) assists the Secretary of Commerce in carrying out his responsibilities with respect to the regional development program, which addresses itself to promoting economic development in those multi-state regions of the country experiencing economic distress. The states, upon being designated as an "economic development region" by the Secretary, can establish a regional economic development commission consisting of the Governors of the States involved and a Federal Cochairman appointed by the President. The commission is authorized to engage in planning, investigations, studies, demonstration projects, and training programs for the purpose of evaluating the needs of the region and developing its resources for growth, as well as supplemental and basic grant funding for public works facilities.

Under provisions of Title V of the Public Works and Economic Development Act of 1965, as amended, and Executive Order 11386, the Secretary is required to provide policy direction to the Federal member of the commission; to promote effective coordination of the activities of the Federal Government as they relate to regional economic development; to obtain a coordinated Federal review of regional plans and recommendations developed by the commissions before they are transmitted to the President; and in cooperation with the commissions, make recommendations to the President and Congress regarding annual funding requirements for the regional commission program.

### Program Elements

Prior to fiscal year 1972, six Regional Commissions involving thirty states participated either on a partial or whole-state basis in one of the two Regional Commission programs created by Congress. Of these thirty states, thirteen are included in the Appalachian Regional Commission established under the Appalachian Regional Development Act of 1965, as amended.

The five Title V Regional Commissions established under the Public Works and Economic Development Act and designated by the Secretary include the Coastal Plains (parts of North Carolina, South Carolina, and Georgia); Four Corners (parts of Arizona, Colorado, New Mexico, Utah); New England (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont); Ozarks (parts of Arkansas, Kansas, Missouri, Oklahoma); and Upper Great Lakes (portions of Michigan, Minnesota, Wisconsin). In FY 1972 the Secretary designated two new economic development regions: the Old West (Montana, Nebraska, North Dakota, South Dakota, and Wyoming) and the Pacific Northwest (Idaho, Oregon, and Washington).

### Representative Activities and Accomplishments

#### *General*

—The Ozarks, Four Corners, and New England Regional Commissions completed their long-range comprehensive development plans and submitted them for review and evaluation to the authorized Cabinet-level committee, the Federal Advisory Council for Regional Economic Development. The Ozarks and Four Corners development plans were approved by the Secretary and forwarded to the President, as were the development plans of the Upper Great Lakes and Coastal Plains Regional Commissions during the prior year. The New England development plan will be ready for transmittal to the President in the near future.

—On January 25, 1972, the Secretary designated a new Title V economic development region consisting of the States of Montana, Nebraska, North Dakota, South Dakota, and Wyoming. The Governors of those States have recommended that the region be named the Old West Economic Development Region. The President appointed a Federal Cochairman. The Regional Commission will hold its first organizational meeting in early FY 1973.

—At the National Governors' Conference on February

23, 1972, the Vice President invited states not now participating in regional commissions to consider jointing, on a whole-state basis, either existing commissions or forming new ones. States already participating in commission programs on a partial basis were invited to expand to a full-state basis for planning purposes.

- With the concurrence of the Governors of Idaho, Oregon, and Washington, on May 25, 1972, the Secretary designated the Pacific Northwest Economic Development Region. Upon appointment of a Federal Cochairman, the Pacific Northwest Regional Commission will become operational.

#### *Coastal Plains Regional Commission (CPRC)*

- CPRC approved a \$2.4 million grant to help finance construction of physical facilities to support a model State-Federal marine resource development program in three areas in North Carolina. These three facilities will devote their efforts to applied research, public education, and extension activities. The State of North Carolina will provide \$1.2 million to support the construction of the facilities, as well as land valued at \$2.3 million for sites.
- A \$2.6 million Marine Resources Center of South Carolina Wildlife and Marine Resources Department was dedicated. The commission invested nearly \$1 million in the facility, which serves as headquarters for marine resource activity in South Carolina.
- In fiscal year 1972 CPRC invested \$4,048,771 in technical assistance and demonstration projects and \$3,704,353 in public facilities.

#### *Four Corners Regional Commission (FCRC)*

- FCRC, in association with OREC, made a grant to the State of Arizona for an economic development/environmental impact analysis to help measure tradeoffs involved in public or private development. The project is scheduled to be completed early in February 1973.
- Over a year ago the Federal Cochairman, his staff, and the General Services Administration explored the possibility of setting up a mechanism to obtain excess and surplus Government equipment for Indian tribes and communities which could utilize such material. This program has provided towns, counties, Indian reservations and other communities in the region with vital goods in the amount exceeding FCRC's appropriation for programs this year.
- In FY 1972, FCRC helped fund 95 public works projects in the amount of \$5 million, and an additional \$1,577,486 for technical assistance and demonstration projects. Eleven of these grants were applied to the

human resources area; six to health care facilities; and five to vocational schools.

#### *New England Regional Commissions (NERC)*

- Growth Center Demonstrations have been launched by the NERC in St. Albans, Vermont; Bangor, Maine; and Pittsfield, Massachusetts. The Growth Center Program is designed to test the possibility of creating self-sustaining economic activity in communities outside the major metropolitan corridor. NERC has also implemented Center City Demonstrations in Woonsocket, Rhode Island and Lowell, Massachusetts. The program will test the ability of center cities currently experiencing decline to sustain new economic activity. On a combined basis, a total of \$2.3 million was expended for both the Growth Center and Center City programs in fiscal year 1972, representing the largest allocations made by the Commission to a single activity.
- In cooperation with Region I of the Office of Economic Opportunity, NERC helped fund the New England Non-Profit Housing Development Corporation. This corporation will accelerate the production of low-income housing in rural areas and urban communities of less than 30,000 population by providing technical assistance and start-up loans to sponsors of non-profit housing through a revolving fund.
- During fiscal year 1972, NERC invested \$1,835,600 in public facilities and \$9,042,168 in technical assistance in the form of demonstration, training, and research projects.

#### *Ozarks Regional Commission (ORC)*

- In an effort to capitalize on the leisure market, whose potential has been identified in recent studies as possibly having an enormous impact on new annual personal income, ORC began implementation of a regionwide tourism promotion and development program.
- Responding to the Vice President's invitation of February 23, 1972, ORC undertook studies of the region and determined that the boundaries should be changed to meet the needs of the areas not currently within the region. On April 13, 1972, the Secretary approved the request of the Commission to include the entire State of Missouri within the region. On June 28, 1972, ORC passed resolutions recommending to the Secretary the designation of the entire State of Louisiana and the inclusion of those counties in Oklahoma and Arkansas which are currently not in the region. For the time being the State of Kansas will continue within the region on a partial-State basis.
- ORC invested \$4,770,801 in public works facilities



with a total cost of \$22,264,000, and \$1,858,608 in technical assistance and demonstration projects.

*Upper Great Lakes Regional Commission (UGLRC)*

—In an effort to demonstrate that cost-saving methods could lead to the reopening of copper mines in northern Michigan and restore the area to economic health, inasmuch as the resource is available, UGLRC, in cooperation with the Bureau of Mines and Michigan Technological University, has funded a research project aimed at more efficient utilization of low-grade copper ore.

—In a joint effort with the Corps of Engineers, UGLRC funded a pollution control demonstration on the Duluth-Superior Harbor. This project, which holds far-reaching implications for other major Great Lakes ports, is the first phase in the formulation of a detailed pollution control program to be developed in conjunction with local, state, and Federal agencies. It will focus upon disposal of shipboard wastes.

—In fiscal year 1972 UGLRC invested \$2,151,757 in 44 technical assistance projects, and \$5,388,450 in 71 public facility projects whose total cost amounted to \$32,240,673.

# ECONOMIC DEVELOPMENT ADMINISTRATION

Table 1.—SUMMARY OF EDA OBLIGATED PROJECTS, BY STATE, BY PROGRAM

For Fiscal Year Ending June 30, 1972

(Amounts in thousands of dollars)

States	Public Works		Business Development			Technical Assistance		Planning Grants		State Total	
	No. of projects	Amount	No. of projects	Loans	Working capital	No. of projects	Amount	No. of projects	Amount	No. of projects	Amount
Alabama . . . . .	21	\$8,082	4	\$3,250	\$63	5	\$205	2	\$130	32	\$11,667
Alaska . . . . .	6	4,740	.....	.....	.....	5	173	2	60	13	4,973
Arizona . . . . .	9	4,672	.....	.....	.....	9	183	1	247	19	5,102
Arkansas . . . . .	24	8,063	4	1,978	90	8	127	8	401	44	10,569
California . . . . .	31	10,070	8	6,246	2,520	45	1,530	2	72	86	17,919
Colorado . . . . .	6	1,588	1	715	.....	7	71	1	60	15	2,435
Connecticut . . . . .	4	3,400	.....	.....	.....	1	3	.....	.....	5	3,403
Delaware . . . . .	1	350	.....	.....	.....	.....	.....	.....	.....	1	350
District of Columbia . . . . .	1	1,600	3	373	191	11	507	.....	.....	15	2,480
Florida . . . . .	3	1,348	.....	.....	.....	2	32	1	44	6	1,424
Georgia . . . . .	11	2,967	1	487	.....	15	266	12	478	39	4,198
Hawaii . . . . .	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Idaho . . . . .	6	1,847	.....	.....	.....	4	142	2	86	12	2,075
Illinois . . . . .	11	6,257	2	2,647	.....	14	476	3	151	30	9,532
Indiana . . . . .	7	2,931	2	1,311	.....	4	152	1	33	14	4,428
Iowa . . . . .	1	119	.....	.....	.....	2	5	.....	.....	3	124
Kansas . . . . .	5	2,311	.....	.....	.....	2	163	.....	52	7	2,526
Kentucky . . . . .	17	7,333	3	200	332	5	148	5	229	30	7,909
Louisiana . . . . .	12	4,369	1	265	.....	2	46	5	224	20	4,903
Maine . . . . .	4	1,343	.....	.....	.....	3	36	2	93	9	1,472
Maryland . . . . .	2	798	.....	.....	.....	.....	.....	1	23	3	817
Massachusetts . . . . .	7	2,045	.....	.....	.....	14	666	3	95	24	2,806
Michigan . . . . .	21	8,856	1	531	540	1	90	7	315	30	9,792
Minnesota . . . . .	13	4,083	.....	.....	.....	8	94	1	61	22	4,238
Mississippi . . . . .	20	8,920	4	1,755	675	4	195	7	398	35	11,269
Missouri . . . . .	10	3,100	1	1,021	.....	3	47	4	204	18	4,372
Montana . . . . .	8	4,818	.....	.....	.....	10	37	5	233	23	5,089
Nebraska . . . . .	3	490	.....	.....	.....	1	98	1	32	5	619
Nevada . . . . .	6	1,001	.....	.....	.....	1	3	1	43	8	1,047
New Hampshire . . . . .	1	564	.....	.....	.....	4	60	.....	.....	5	623
New Jersey . . . . .	6	964	3	1,825	518	10	310	.....	.....	19	3,098
New Mexico . . . . .	8	3,991	1	1,300	.....	4	10	4	145	17	5,445
New York . . . . .	8	9,531	5	1,087	11,700	19	573	4	146	36	11,337
North Carolina . . . . .	9	3,167	1	.....	225	5	72	5	173	20	3,413
North Dakota . . . . .	2	1,110	.....	.....	.....	3	158	1	102	6	1,369
Ohio . . . . .	12	4,057	.....	.....	.....	7	460	2	135	21	4,651
Oklahoma . . . . .	12	3,557	.....	.....	.....	7	15	6	293	25	3,865
Oregon . . . . .	5	2,349	1	5,000	.....	2	12	2	75	10	7,435
Pennsylvania . . . . .	5	1,831	2	2,367	223	6	83	4	148	17	4,429
Rhode Island . . . . .	1	363	.....	.....	.....	.....	.....	.....	.....	1	363
South Carolina . . . . .	15	6,511	5	4,381	720	1	75	5	219	26	11,186
South Dakota . . . . .	7	1,602	.....	.....	.....	3	144	3	143	13	1,889
Tennessee . . . . .	12	5,206	2	1,219	270	3	144	3	125	20	6,695
Texas . . . . .	27	6,735	4	2,309	400	10	444	9	337	50	9,825
Utah . . . . .	11	2,808	.....	.....	.....	2	163	1	78	14	3,049
Vermont . . . . .	2	873	.....	.....	.....	.....	.....	.....	.....	2	873
Virginia . . . . .	3	1,940	2	910	900	2	5	5	180	12	3,035
Washington . . . . .	20	12,930	1	325	.....	14	586	1	66	36	13,907
West Virginia . . . . .	14	5,537	1	.....	194	8	67	1	44	24	5,648
Wisconsin . . . . .	9	2,679	.....	.....	.....	5	145	1	62	15	2,885
Wyoming . . . . .	2	746	.....	.....	.....	.....	.....	.....	.....	2	746
American Samoa . . . . .	2	1,510	.....	.....	.....	.....	.....	1	46	3	1,556
Puerto Rico . . . . .	5	910	3	4,051	.....	3	240	1	39	12	5,239
Virgin Islands . . . . .	1	1,000	.....	.....	.....	1	3	.....	.....	2	1,003
Totals . . . . .	469	189,969	66	45,552	*19,561	373	12,463	140	6,573	1,048	254,557

\*Agency exposure for guarantee of 90% of unpaid balance of loans.

Table 2.—SUMMARY OF EDA OBLIGATED PROJECTS, BY STATE, BY PROGRAM

Cumulative to June 30, 1972  
(Amounts in thousands of dollars)

State	Public Works		Business Development		Technical Assistance			Planning Grants		State Total	
	No. of projects	Amount	No. of projects	Loans	Working capital	No. of projects	Amount	No. of projects	Amount	No. of projects	Amount
Alabama .....	82	\$30,956	11	\$14,897	\$493	24	\$797	7	\$361	124	\$47,012
Alaska .....	42	25,262	.....	87	135	31	1,500	6	224	79	27,074
Arizona .....	53	24,367	5	5,492	.....	40	1,246	6	643	104	31,749
Arikansas .....	127	48,194	8	2,842	720	31	634	44	2,256	210	53,927
California .....	128	96,526	23	18,164	2,664	204	9,529	8	273	363	124,493
Colorado .....	15	4,883	1	715	.....	13	286	8	403	37	6,287
Connecticut .....	9	8,814	2	1,883	.....	7	335	1	26	19	11,058
Delaware .....	4	2,560	1	738	.....	2	30	.....	.....	7	3,329
District of Columbia ...	4	12,795	4	828	191	23	1,983	.....	.....	31	15,606
Florida .....	10	7,763	9	2,019	765	26	754	5	213	50	10,750
Georgia .....	75	37,773	9	20,023	.....	.....	.....	.....	.....	.....	.....
Hawaii .....	2	797	1	66	.....	3	38	3	73	9	974
Idaho .....	29	5,909	4	1,155	360	7	173	6	255	46	7,492
Illinois .....	50	40,391	9	11,228	.....	60	2,970	18	657	137	55,245
Indiana .....	15	9,945	6	2,538	180	23	471	5	143	49	13,096
Iowa .....	7	908	.....	.....	.....	3	24	.....	.....	10	932
Kansas .....	13	6,197	.....	.....	.....	7	324	5	289	25	6,810
Kentucky .....	163	80,815	15	6,183	1,644	45	1,551	18	903	241	89,453
Louisiana .....	53	26,131	4	1,394	.....	25	821	24	1,156	106	29,503
Maine .....	26	6,696	14	17,703	4,410	29	526	13	565	82	25,490
Maryland .....	9	2,680	3	5,154	180	13	726	4	88	29	8,649
Massachusetts ..	22	17,548	4	1,157	.....	62	3,286	14	416	102	22,407
Michigan .....	95	38,710	4	4,473	540	40	1,236	32	1,725	171	46,143
Minnesota .....	80	28,287	21	4,886	1,080	66	911	8	391	175	34,475
Mississippi .....	168	70,176	12	14,626	840	33	1,770	42	2,035	255	88,607
Missouri .....	60	17,058	2	1,411	.....	39	728	20	822	121	20,019
Montana .....	42	17,502	4	1,566	.....	36	541	33	1,314	115	20,924
Nebraska .....	11	5,949	.....	.....	.....	11	387	2	63	24	6,398
Nevada .....	13	2,158	1	299	.....	3	45	4	175	21	2,677
New Hampshire ..	10	5,025	3	1,300	270	11	167	.....	.....	24	6,492
New Jersey .....	16	16,393	13	13,527	878	33	1,392	.....	.....	62	31,312
New Mexico .....	58	30,424	10	3,952	999	46	779	12	496	126	35,650
New York .....	39	21,087	22	17,095	9,228	87	3,938	23	842	171	42,963
North Carolina ..	78	41,663	9	6,320	293	22	1,017	21	823	130	49,822
North Dakota ...	22	8,989	.....	.....	.....	10	373	5	450	37	9,812
Ohio .....	61	35,322	6	2,822	.....	62	4,012	9	401	138	42,558
Oklahoma .....	106	36,122	12	13,635	315	36	903	38	1,827	192	52,487
Oregon .....	20	14,747	1	5,000	.....	14	210	3	120	38	20,078
Pennsylvania .....	31	20,853	9	6,406	225	60	4,026	20	775	120	32,059
Rhode Island ...	13	15,390	.....	.....	.....	8	335	.....	.....	21	15,725
South Carolina ...	69	25,088	11	10,607	810	8	320	18	761	106	36,777
South Dakota ...	29	3,994	.....	.....	.....	14	223	18	632	61	4,849
Tennessee .....	97	44,938	13	15,337	540	23	1,286	19	753	152	62,315
Texas .....	112	48,970	14	6,867	400	58	2,114	40	1,612	224	59,562
Utah .....	34	12,704	.....	.....	.....	5	241	7	294	46	13,239
Vermont .....	7	3,327	.....	.....	.....	5	20	1	50	13	3,397
Virginia .....	24	9,841	3	2,640	900	16	381	19	727	62	13,589
Washington .....	66	43,396	12	20,285	720	38	2,037	5	223	121	65,941
West Virginia ...	101	56,406	12	5,667	855	47	706	10	520	170	63,300
Wisconsin .....	38	9,593	3	2,919	.....	32	1,308	8	257	81	14,077
Wyoming .....	9	1,321	.....	.....	.....	5	46	.....	.....	14	1,367
American Samoa ..	2	1,510	2	260	135	3	132	3	140	10	2,042
Guam .....	1	60	.....	.....	.....	.....	.....	.....	.....	1	60
Puerto Rico .....	53	41,014	19	15,054	.....	27	1,514	6	363	105	57,945
Virgin Islands ...	2	1,251	.....	.....	.....	3	63	1	30	6	1,343
Totals .....	2,505	1,227,181	351	291,220	30,870	1,820	76,987	707	31,933	5,383	1,627,320

## PROMOTION OF INDUSTRY AND COMMERCE

### INTRODUCTION

This chapter summarizes the activities of those organizations within the Department of Commerce which function to promote the industry and commerce of the United States. These organizations, all reporting directly to the Secretary of Commerce, are as follows:

Office of the Assistant Secretary for Domestic and International Business  
Office of the Assistant Secretary for Tourism  
Office of Foreign Direct Investments  
Office of Minority Business Enterprise  
Office of the Ombudsman for Business

### OFFICE OF THE ASSISTANT SECRETARY FOR DOMESTIC AND INTERNATIONAL BUSINESS

The Assistant Secretary of Commerce for Domestic and International Business is the Secretary's principal advisor on U.S. industry, international trade and investment, export promotion, export control, defense production, industrial preparedness, and related economic matters. He supervises the Bureau of International Commerce, the Bureau of Domestic Commerce, the Office of Import Programs, and the Office of Textiles. The executive secretariats of the Foreign-Trade Zones Board as well as the staff of the National Business Council for Consumer Affairs and the National Export Expansion Council are also within the domestic and international business area.

#### OFFICE OF IMPORT PROGRAMS

##### Function

The Office of Import Programs (OIP) is the principal point of contact within the Department for special problems involving key industries affected by import competition (other than textiles) and matters involving international trade in primary commodities.

##### Import Impact

The Office assisted in the formulation of Departmental policy on a variety of import-related problems affecting such sensitive areas as the steel, footwear, oil, and consumer electronic industries. In the case of steel imports, the Office monitored imports in light of the

Voluntary Restraint Arrangement on steel exports to the United States. OIP published a detailed statistical series on steel imports which formed the basis for monthly reports to key Congressional committees analyzing developments in the steel trade.

##### Petroleum Imports

Direct staff support was provided for Commerce participation on the Oil Policy Committee and the Oil Import Appeals Board (OIAB). The OIAB, through its regular proceedings, reviewed 137 petitions filed by companies claiming: (a) exceptional hardship as the result of the Mandatory Oil Import Program, or (b) error in the administration of the Program.

The intensive efforts of the Department to modify petroleum import regulations so as to place domestic petrochemical producers on a basis of parity with their foreign competition resulted in the adoption of two key provisions which should improve the competitive position of U. S. companies in foreign markets.

##### Foreign-Trade Zones

OIP assists the Secretary of Commerce, as Chairman of the Foreign-Trade Zones Board, in the administration of the Foreign-Trade Zones Act. There are 10 foreign-trade zone sites presently in operation. During the fiscal year, the recently approved Hawaiian oil refinery foreign-



trade subzone located near Honolulu commenced operations.

During the year, merchandise valued at some \$112,000,000 was received at zones and some \$133,000,000 in goods were shipped. At the end of the year, merchandise valued at about \$56,000,000 remained in zones for storage, processing, and manufacture.

### Special Import Programs

OIP administers the function vested in the Secretary of Commerce, under the Educational, Scientific, and Cultural Materials Importation Act of 1966, to authorize the duty-free entry of scientific instruments by non-profit institutions, established for educational or scientific purposes, conditioned upon the determination that an instrument of equivalent value, for the intended purposes, is not manufactured in the United States. Of 604 applications processed in FY 1972, 368 were approved, 217 were denied without prejudice (DWOP) to resubmission, 9 were denied and 10 were rejected for technical reasons. In addition, 121 outstanding DWOP's were finally denied when the applicants failed to resubmit new applications. The primary sources of instruments covered by FY 1972 applications were Japan (161), Sweden (105), West Germany (110) and the United Kingdom (102). Approximately one-third of all applications received related to electron microscopes and accessories thereto.

During the year, OIP conducted a study comparing U. S. procedures for implementation of the Florence Agreement with those of other signatory countries which have important domestic scientific equipment industries. The study confirmed that the procedures employed in the U.S. were no less stringent in safeguarding the interests of domestic producers than those of the other major sources of scientific instruments and apparatus.

Public Law 89-805, which limits the number of watches and watch movements that may be imported duty-free from U. S. Insular Possessions (Virgin Islands, Guam, and American Samoa), vests the Departments of Commerce and the Interior with joint responsibility for allocating territorial quotas among individual producers. In the administration of this program, those factors which foster economic contribution to the territories are emphasized in making quota allocations. Approximately 900 permits and 50 licenses were issued to 22 quota holders during the reporting period assigning quotas for about 5 million units. In FY 1972 the Bulova Watch Company established the first watch assembly operation in American Samoa. During the reporting period approximately \$3.2 million in salaries/wages and \$2.7 million in taxes were generated by Territorial watch assembly operations.

OIP administers the Foreign Excess Property (FEP) Program. During FY 1972, 609 applications for FEP import determinations were approved for importation, 27 approved for extension of time, 23 disapproved for importation and four were closed through correspondence. The total value (usually the purchase price) of property authorized entry into the U.S. was \$2,469,830.

## OFFICE OF TEXTILES

### Function

The Office of Textiles is concerned with problems affecting the economic well-being of the textile and apparel industry, the largest employer in U.S. manufacturing. The Office of Textiles' priority responsibility is the textile import program.

### Wool and Man-Made Fiber Textile Agreements

The most profound action affecting the well-being of the U.S. textile and apparel industry in Fiscal Year 1972 was the negotiation of wool and man-made fiber textile agreements with Japan, Hong Kong, and the Republics of China and Korea. The agreements limit the rate of growth of man-made fiber textile exports to the U.S. market to between 5 percent and 7.5 percent per annum. This is about one-tenth of the growth rate for imports of man-mades from these four countries for the year preceding the agreement. The agreements also limit the rate of growth of wool textile exports to the U.S. market to 1 percent. With a more orderly trade in textiles and apparel products, the American industry and its workers can look to the future with increasing confidence.

### Long-Term Cotton Textile Arrangement

In Fiscal Year 1972, the Office of Textiles helped develop the negotiating authorities and participated in the successful negotiation of four new cotton textile agreements and the renegotiation of five expiring agreements. These bilateral agreements were among 29 bilateral cotton textile agreements negotiated by the United States pursuant to the GATT Long-Term Arrangement Regarding International Trade in Cotton Textiles (LTA). The LTA offers cotton textile exporting countries growing access to world markets on an orderly basis. Today, about 85 percent of U. S. cotton textile imports are governed by either the terms of these bilateral agreements or unilateral restraint actions under the LTA.

### Committee for the Implementation of Textile Agreements

The President established this interagency committee on

March 3, 1972 to implement the growing number of cotton, wool and man-made fiber bilateral textile agreements. The Committee is chaired by Commerce and is comprised of representatives from the Departments of State, Treasury and Labor. The Committee, in conjunction with the Department of Agriculture and the Office of the Special Trade Representative, is also responsible for taking unilateral action under Article 3 of the LTA on imports of disruptive cotton textiles from countries with which the United States does not have a bilateral cotton textile agreement. The Office of Textiles per-

forms all staff work to administer the Committee and to implement its program.

### **Promotion of Textile Exports**

A comprehensive study was prepared and published on foreign regulations affecting U. S. textile and apparel exports. The Office also participated in highly successful trade missions to Scandinavia and the Far East and prepared and distributed reports alerting U. S. textile and apparel producers to select foreign market opportunities.

## **BUREAU OF INTERNATIONAL COMMERCE**

### **Functions**

The Bureau of International Commerce (BIC) promotes United States foreign trade, assists U.S. business in its operations abroad, and administers the U.S. export control program. Activities and programs designed to advance U.S. foreign trade interests in FY 1972 were expanded during the fiscal year.

### **Capital Project Assistance**

BIC's Office of International Business Assistance (OIBA) continued to assist U.S. firms to compete for major foreign projects. At the close of FY 1972, OIBA had contributed significantly to the satisfactory conclusion of cases involving \$1.1 billion in direct exports and was actively assisting in 111 additional cases with export potential over \$28 billion. Information on 525 new, major projects was disseminated to U.S. industry. BIC expanded services to exporters by establishing a Foreign Projects Reference Room where U.S. businessmen can review information on major foreign projects. In the first six months of operation, 500 businessmen utilized this service.

### **East-West Trade**

The trend toward a more liberal export control policy on East-West trade continued to bear fruit in FY 1972. Dollar volume of licenses to export U.S. goods to Eastern Europe rose to a record high, \$1.7 billion compared to \$259.4 million the previous year. (The previous high was in FY 1964, \$474 million.) Of the \$1.7 billion licensed in FY 1972, \$1.3 billion was for technology and equipment related to the U.S.S.R.'s Kama River truck plant project.

Termination of the embargo on direct trade with the People's Republic of China showed its first significant results. Licensing agreements were concluded for a communications earth satellite station valued at \$2.281

million and for the proposed sale of \$150 million worth of commercial aircraft, parts and accessories. East-West trade is expected to be eased further by decontrol during the past year of individual commodities to Eastern Europe and by extension to the People's Republic of China of the same general licensing privileges as those already accorded the U.S.S.R. The number of export license applications to all destinations decreased from 107,615 in FY 1971 to 78,561 in FY 1972.

### **Trade Talks**

Major trade talks were held on three separate occasions to discuss all basic aspects of present and potential commercial relationships between the United States and the Soviet Union. Commencing with Secretary Stans' trip to Moscow in November, the discussions were continued in Washington in January and again in May, when U.S.S.R. Foreign Trade Minister Patolichev met with Secretary Peterson for week-long talks prior to President Nixon's visit to the U.S.S.R. A Joint Commercial Commission was established to discuss, on a continuing basis, trade between the two countries; and Secretary Peterson was appointed by the President to head the U.S. delegation to the first meeting in Moscow. ✓

### **U.S.-U.S.S.R. Commercial Commission**

A U.S.-U.S.S.R. Commercial Commission was formed during President Nixon's visit to Moscow in May. Its purpose is to negotiate an overall trade agreement which would include most-favored-nation (MFN) tariff treatment, arrangements for availability of government credits, provisions for the reciprocal establishment of business trade promotion facilities, and the establishment of an arbitration mechanism for settling disputes. The Commission is also studying possible U.S.-U.S.S.R. participation in the development of resources, as well as in monitoring the spectrum of U.S.-U.S.S.R. commercial relations. ✓

## Review of Commodity Control List

BIC continued its review of the Commodity Control List, with a view toward removing as many controls as possible, consistent with the requirements of the Export Administration Act. In this activity, the Office of Export Control (OEC) reviewed and decontrolled 500 individual commodities to Eastern Europe, including 26 types of machine tools, numerous chemical and metal products, certain electronic equipment and parts, and ball and roller bearings. In addition, free-world controls were reduced on approximately 80 commodities, including molecular sieves, aircraft tires, and petroleum exploration and extraction equipment.

## Overseas Commercial Representation

During FY 1972, BIC developed extensive data for the use of the Office of Management and Budget in its study of economic/commercial operations overseas. That study was prompted by the need for an Administration position on the Magnuson Bill (S. 2754), which would authorize an International Commerce Service of the United States under the Secretary of Commerce.

At the same time, BIC continued efforts to strengthen commercial representation abroad. BIC processed more than 1.7 million messages to and from U.S. overseas posts.

## Export Awareness

Utilizing a full service advertising firm, BIC began a multimedia campaign to increase awareness and interest in exporting within the business community. As major themes, advertisements publicized the benefits of exporting and new promotional services available through the Department of Commerce. During FY 71 more than 19,000 inquiries resulted from 13 different ads that appeared a total of 70 times in the national business press and news weeklies.

## Japanese Mission

A mission from Japan, sponsored by the National Export Expansion Council and the Japan-U.S. Economic Council, visited six U.S. cities offering seminars and consultations promoting U.S. exports to Japan. BIC developed the mission program in cooperation with the Department's Field Offices, Regional Export Expansion Councils and various State and private business agencies. More than 800 U.S. businessmen attended the mission sessions.

## DISC

With enactment of the DISC export tax deferral legislation (Public Law 92-178) in December 1971, the

Commerce Department launched a major campaign to publicize the DISC and explain its benefits to exporters. Informational materials were prepared and distributed, and a series of DISC workshops were held across the country in cooperation with the Treasury Department and local trade groups. Approximately 10,000 representatives of firms exporting, and those interested in exporting, have attended the 75 workshops which have taken place to date. Information about DISC has been supplied to an additional 1,000 inquirers. As a result, the DISC program has been brought to the attention of thousands of smaller companies which may not previously have given serious consideration to selling abroad.

## Trade Promotion

Consonant with suggestions and recommendations of the General Accounting Office in its report to the Congress during FY 1972 on the subject of overseas trade promotion, and organizational recommendations of a management study commissioned by the Department of Commerce, BIC has undertaken a realignment of overseas business assistance activities and export expansion activities. A more specific, country-program orientation is the result.

Simultaneously, revised priorities have been established for emphasis on these activities in the developing countries. In this regard, of particular interest and importance is the redirection of business assistance to provide U.S. businessmen with an integrated service both domestically and abroad.

This re-direction includes substantial effort to increase export awareness and enthusiasm among the U.S. business community. During FY '72 this effort was greatly enhanced by the cooperation of public and private organizations such as the Export-Import Bank, the National Association of State Development agencies, the National Federation of Export Management Companies and a large number of banks and business schools throughout the country.

## "Invest in the U.S.A." Program

The "Invest in the U.S.A." program demonstrated strong influence with potential investors in Europe and with the States during the year. More States up-graded their international departments with active programs to attract foreign direct investment and 32 states sent industrial development representatives to the Commerce-initiated "Invest in the U.S.A." Conferences held in Dusseldorf and Stockholm. During the year a second Industrial Development Attache was assigned to Europe.

## Multinational Corporation Study

Research resulted in the publication of three staff

studies which received wide distribution and a very favorable reception from the news media, business, government and academic groups. The three studies have been compiled in one volume, *The Multinational Corporation: Studies on U.S. Foreign Investment, Volume I*. A census of approximately 500 major firms was completed which will serve as the basis for subsequent analytical work.

### Japan Study

A study of the nature of the government-business relationship in Japan was published by the Department of Commerce and the U.S. Government Printing Office (GPO) in February 1972. The study has been much in demand by the U.S. business community and a second printing of the book, *Japan: The Government-Business Relationship—A Guide for the U.S. Businessman*, has been completed by the GPO.

### Exhibitions and Missions

In FY 1972, BIC staged 19 commercial exhibitions at Trade Fairs in Europe, Latin America, and the Near and Far East, and 62 exhibitions at U.S. Trade Centers in Tokyo, London, Frankfurt, Milan, Paris, Stockholm, Sydney and Bangkok. A total of 3,681 exhibitors took part. They reported \$399.4 million in sales and added 1,451 new agents and distributors. There were 227 special exhibitions between the regularly scheduled promotions at the Trade Centers.

During the year, BIC opened a new Trade Center in Mexico City, the first in Latin America, and a Regional Trade Development Center in Buenos Aires. The bureau

also concluded an agreement with the Polish Government to open a U.S. Trade Information Center in Warsaw in FY 1973. The Bureau sponsored 23 industry-organized Trade Missions and 23 specialized Trade Missions visiting 42 countries in which 421 U.S. businessmen took part.

### Export Information and Services

At the request of U.S. businessmen seeking export information and services, BIC supplied the following:

More than 48,000 *Trade Lists* containing names and addresses of foreign firms handling specific products in specific countries; 1,415 *Agent/Distributor Service* reports and 341 *Trade Contact Survey* reports identifying overseas agents and distributors; 48,592 *World Trade Directory* reports outlining the qualifications of foreign firms interested in dealing with U.S. firms, and 64,113 *Foreign Production and Commercial Reports* on developments affecting world trade.

An *Export Mailing List* service was established to help U.S. firms expand exports and promote new products abroad. More than 32,000 firms (an increase of 5,000 over last year) were listed on the *American International Traders Register* identifying commodity and trading interests of the companies. BIC's *Trade Complaints Adjustment Service*, assisting U.S. businessmen in the field of trade disputes and export travel, handled slightly more than 600 cases, of which 70 percent have been settled to the satisfaction of all parties involved. The *Foreign Travel Announcement Service*, designed to assist business travelers visiting U.S. Foreign Service Posts, provided more than 400 Travel Announcements for U.S. travelers to the various posts.

## BUREAU OF DOMESTIC COMMERCE

### Functions

The Bureau of Domestic Commerce (BDC) is responsible for aiding and promoting the development of domestic business. The Bureau monitors and analyzes trends and issues concerning the economy; disseminates information to the business community through 42 field offices throughout the United States and Puerto Rico; and administers the provisions of statutory programs for trade adjustment assistance and industrial mobilization readiness.

### New Initiatives

In FY 72, BDC undertook a series of analyses of the health and international competitiveness of selected key

industries, and reviews of major issues affecting the domestic economy, such as productivity and technology.

The machine tool industry was chosen for the first study because of its cyclical nature. The study sought to: (1) identify trends and relationships in world market share, financing, research and development, production and labor; (2) develop recommendations as to U.S. Government policy; and (3) predict likely results from recommended policy actions. With the research completed late in the fiscal year, work was underway to develop recommendations and assess the probable results.

Studies were initiated in five other key industries—telephone and telegraph equipment; office machines and



computers; tires and tubes; paperboard; and medical, botanical and pharmaceutical products.

### Research Analysis and Information Services

BDC assisted in administering the President's economic stabilization program. BDC industry specialists provided staff support to the Office of Emergency Preparedness and conducted surveys of business leaders on behalf of the Secretary. This staff participated in the planning for Phase II, and continued staff assistance to the Cost of Living Council and Price Commission. BDC also provided to the Cost of Living Council a Cost-Price Pressures Econometric Model.

The Bureau developed and published industry forecasts and analyses of trends in the private business sector, including a survey on the franchising business and a *Preliminary Staff Report on Crimes Against Business*. BDC also published the annual *U.S. Industrial Outlook*, containing forecasts for more than 200 Standard Industrial Classification (SIC) industries representing 85 percent of the value of manufacturing output in the nation. *The Economy at Midyear*, a companion to the *U.S. Industrial Outlook*, presented a GNP-based analysis of overall economic trends for the following year and a half, including individual analyses and projections for 23 of the nation's most important industries.

In support of the Commerce program to assist in the establishment of minority-owned businesses, the Bureau published the seventh edition of the *Franchise Opportunities Handbook*, a listing of more than 400 equal opportunity franchisors.

Other BDC reports and analyses included production estimates for major consumer durable items; production, consumption and foreign trade data for footwear, hides, skins and leather; trade statistics on coffee, cocoa and chocolate products, electronic and communications equipment, instruments, aluminum, copper, lumber, pulp, paper and other wood products, printing and publishing, construction, and other commodities and industries; foreign markets and international business opportunities; the economic effects of opening the oil reserves of Alaska through the trans-Alaska pipeline system, and economic and environmental aspects of a trans-Canadian pipeline.

### Policy Development

In FY 1972, BDC developed policy positions on approximately 500 legislative items. Legislation was drafted on five major issues, and 40 special legislative projects were completed. Issues included environmental matters, consumer affairs, corporate social responsibility, national transportation needs, energy and power requirements, health care and maintenance, social secu-

rity, international trade and investment, and mineral resources development. BDC also provided major support to the Secretary as a member of the National Commission on Materials Policy.

The Bureau participated in an interagency, long-range energy conservation study requested by the Energy Subcommittee of the Domestic Council and developed a voluntary program of electric energy conservation for industry. This work was completed for the President's Joint Board on Fuel Supply and Fuel Transport, of which the Secretary is a member. BDC prepared testimony for Congressional hearings on the future supply of minerals and energy and growing import dependence, as well as on specialty steels essential to the national security.

The Bureau initiated, helped plan, and provided support for the White House Conference on the Industrial World Ahead: A Look at Business in 1990, held in Washington in February 1972.

### Field Services

BDC maintained 42 field offices throughout the U.S. and Puerto Rico to provide American business with specialized information and assistance concerning foreign and domestic markets, foreign trade leads, export procedures (including export control transactions), export financing, domestic distribution problems, government procurement opportunities, new technology available for commercial exploitation, and data on the U.S. economy and the economies of America's trading partners.

The BDC field offices also serve as channels for distributing business reports, data and statistical information published by all operating units of the Department. The field staff, under agreements with other agencies, inform and counsel business firms about the programs of the Export-Import Bank, Foreign Credit Insurance Association and the Agency for International Development.

The National Export Expansion Council (NEEC), composed of 95 business, labor, and professional leaders, continued to serve the Secretary as the principal advisory group on policies and action to improve the U.S. balance of trade and balance of payments. The NEEC also provides leadership to the 42 Regional Export Expansion Councils (REEC's) which, with local chambers of commerce and others, support the Commerce field-office effort.

### International Expositions and Trade Fairs

BDC prepared, for transmittal by the Secretary to the President, a report concerning Federal recognition of the Spokane 1974 international exposition on the environ-

ment. Acting on the recommendations in the report, the President granted Federal recognition to the exposition in October 1971. In November 1971, the Bureau of International Expositions in Paris officially recognized the event as a Special Category exposition. A plan for Federal participation in the exposition is being prepared by BDC.

BDC submitted a report concerning Federal recognition of a Bicentennial exposition in Philadelphia. On the basis of this study and recommendations by the American Revolution Bicentennial Commission and OMB, the President determined not to grant Federal recognition and support to the Philadelphia exposition.

During the year, BDC also certified 52 trade fairs in the United States for the duty-free entry of exhibit items; assisted some 80 trade fairs and industry expositions in obtaining foreign exposure and publicity and attracting foreign buyers; and assisted in arrangements for participation in 13 industry expositions.

#### Trade Adjustment Assistance

Commerce administers a statutory program to assist business firms that the Tariff Commission has found are, or are about to be, seriously injured by increased imports of competitive products, under provisions of the Trade Expansion Act of 1962. Assistance may include Government loans, special tax refunds and technical aid.

At the beginning of FY 1972, 16 cases involving applications for certification of eligibility or of proposals for financial or technical assistance were on hand.

During the year seven new cases were received. Of 23 applications for eligibility, 20 have been certified eligible; two were still pending at the end of the year and one was denied. Eight adjustment proposals had been certified by the close of FY 72. These involve a total of \$14.1 million, including \$13.2 million in loan funds, \$500,000 in technical assistance and nearly \$400,000 in tax refunds. The eight firms to which commitments have been made under the program include two shoe manufacturing companies, two electronic firms and one company each in sheet glass, textiles, pianos, and barber chairs. At the end of the year, 12 cases were in various stages of processing.

#### Industrial Mobilization

Under the Defense Production Act of 1950, as amended, BDC continued to administer controls over the industrial sector of the American economy to ensure timely availability of supplies and equipment required by U.S. defense agencies. Activities include maintenance of the National Defense Executive Reserve, an organization of businessmen who would serve in Federal posts in time of emergency.

One means of assuring the availability of essential defense materials is through the establishment of "set-asides." In FY 1972, the aluminum set-asides for defense orders was reduced by about 37 percent—from 790 million pounds to 500 million pounds, representing approximately 5 percent of total U.S. aluminum industry shipments. Defense set-asides also were maintained during the year to control nickel, steel and certain types of copper and copper-base alloy products.

## OFFICE OF THE ASSISTANT SECRETARY FOR TOURISM THE UNITED STATES TRAVEL SERVICE

#### Introduction

The Assistant Secretary of Commerce for Tourism is the designated head of the United States Travel Service (USTS). USTS acts to strengthen the domestic and foreign commerce of the United States by promoting business and pleasure travel to this country from abroad. USTS serves as the focal point around which the U.S. travel industry and government agencies involved in international travel cooperate in shaping policies and operations in the VISIT USA program.

USTS' eight regional offices, serving more than 40 countries, are located in Frankfurt, London, Paris, Mexico City, Buenos Aires, Sydney, Toronto and Tokyo. An International Conventions Office is operated in Paris for the purpose of attracting a larger share of the international convention business to the United States.

#### Advertising and Sales Promotion

During FY 1972 USTS ran a \$1.4 million advertising campaign in principal markets in Western Europe, Canada and Mexico. Backing up this effort was a \$750,000 sales promotion program involving the distribution of some 2 million USTS-produced promotional brochures. In addition, the VISIT USA Mobile Exhibit, featuring Walt Disney Production's Circlevision film "America the Beautiful" was presented in Mexico City, Guadalajara and Leningrad; "A Festival of American Folklife" was sponsored at Montreal, Canada, in cooperation with Discover America Travel Organizations.

#### New Publications

USTS published a new edition of *Festival USA*, a listing

of more than 500 festivals and other events to be held in the United States during 1972. Prepared for the use of travel agents and tour operators abroad, the listing was offered for sale to the American public for the first time in 1971 through the U.S. Government Printing Office.

USTS published its 1972-73 edition of *U.S. Conventions and Trade Shows*, an annual directory of more than 250 U.S. conventions, exhibitions and trade and industrial shows that welcome foreign attendance.

### **Matching Grants**

Under the provisions of the 1970 amendment to the International Travel Act, \$570,000 was awarded for matching grants during fiscal 1972. Recipients include cities, States, regional organizations and associations. Project money was granted for joint advertising (with USTS) in Canada and Mexico, tourism-promotion films, travel research, and translation and interpreter service for international congresses meeting in the U.S.

### **Hotel/Motel Language Certification Program**

With the addition of 52 establishments, a total of 213 U.S. hotels and motels now have available personnel who speak French, Spanish, German or Japanese.

### **Port Receptionist Program**

More than 80 multilingual college girls now assist incoming foreign visitors at Kennedy International Airport in New York, and Seattle-Tacoma, Philadelphia and San Juan international airports, and help in clearing customs, health and immigration, and in making transportation connections. The program, conducted by USTS in cooperation with others, is now in its second year of operation. Additional participating airport authorities are joining the program annually.

### **Summer Hotel Special**

Last year's pilot program was expanded to offer reduced rates to foreign visitors at hotels and motels in 132 cities. The program is aimed at attracting more visitors to U.S. cities during July and August. Summer Hotel Special was conducted in cooperation with the Hotel Sales Management Association and was publicized abroad by USTS, Pan American World Airways, and Trans World Airlines.

### **Travel-Phone USA**

This nationwide, multilingual, toll-free telephone interpreter and information service, sponsored jointly by USTS and Travelodge International, continued in operation. It has been extremely helpful to non-English-speaking visitors and, in this vein, has also aided airlines, hotels and police when they encounter language problems with guests from abroad.

### **State-City Coordination**

Familiarization tours for foreign journalists, travel agents, and television personnel were arranged with the cooperation of tourism-promotion officials in cities and states around the country. As a result of these USTS-sponsored trips, participating journalists--through their media overseas--generated extensive publicity about U.S. tourist attractions.

### **World Tourism Seminars**

USTS scheduled 11 VISIT USA World Tourism Seminars during FY 1972, in Caracas, Sao Paulo, Lima, Buenos Aires, Mexico City, Paris, Berlin, Zurich, London, Rome and Madrid. Purpose of the seminars is to bring U.S. travel-sellers together with foreign packagers of tour components in their own countries, and to encourage them to develop and sell moderately-priced VISIT USA package tours.

## **OFFICE OF FOREIGN DIRECT INVESTMENTS**

### **Introduction**

The Office of Foreign Direct Investments (OFDI) was established in January 1968 to administer a temporary program to reduce the immediate impact of foreign direct investment on the U.S. balance of payments. The primary effect of the Program is to induce U.S. firms and other U.S. investors subject to its restrictions to borrow overseas a portion of the funds they use for foreign direct investment. While the Program does not restrict the total amount of overseas business invest-

ment, U.S. companies and individuals are limited in the use of U.S.-source funds and foreign earnings to invest or reinvest in foreign affiliates in which they have an interest of 10 percent or more.

The OFDI Regulations establish quotas for "direct investments," defined as the algebraic sum of new transfers of capital by U.S. persons to their incorporated and unincorporated affiliated foreign nationals and the direct investor's share in the reinvested earnings of such affiliates. The Program also limits the amount of foreign

balances or other foreign property that direct investors may hold in liquid form.

The Administration is committed to terminating capital controls as soon as balance of payments considerations permit. Consistent with this objective, OFDI has pursued a policy of gradually liberalizing the Program, reducing the paperwork burden and allowing investors greater flexibility in conducting their foreign business activities.

### The Program for Calendar Year 1971

In accordance with this general policy, the following modifications in the Program were introduced in January 1971:

- (a) The worldwide "minimum" annual allowable investment under OFDI Regulations was raised from \$1,000,000 to \$2,000,000;
- (b) The optional schedular earnings allowable was increased from 30 to 40 percent of foreign affiliates' earnings in the preceding year;
- (c) The maximum amount of liquid foreign balances that might be held at the end of each month by direct investors not having a larger quota based on historic experience was raised from \$25,000 to \$100,000;
- (d) The amount of cumulative direct investment before quarterly reporting would be required was increased from \$100,000 to \$2,000,000.

Changes (a), (c) and (d) were of primary benefit to the small and medium sized direct investors with limited activity and to new entrants in the area of foreign operations. The increase in the earnings allowable particularly aided those companies with rapidly growing foreign earnings.

On December 9, 1971, the following additional changes were introduced to provide greater flexibility in meeting the 1971 year-end compliance burden:

- (a) The repatriation requirement for certain proceeds of long-term foreign borrowing held abroad was eliminated for 1971. (In May 1972 this requirement was permanently revoked.)
- (b) Direct investors were permitted to use long-term foreign borrowing and repayment of certain obligations by affiliated foreign nationals made during the first sixty days of 1972 to reduce the amount of positive direct investment during 1971.

Preliminary estimates released in mid-1972 indicated that regulated direct investment (exclusive of direct investments in Canada) totalled \$4.9 billion in 1971

compared with \$3.8 billion in 1970. The figure for 1971 represents some \$6.2 billion of capital transfers and \$1.9 billion of reinvested earnings less nearly \$3.3 billion of long-term foreign borrowing proceeds. At the end of 1971 direct investors had approximately \$13 billion of foreign borrowing outstanding, most of it contracted after 1967 in connection with the Foreign Direct Investment Program.

### The Program for Calendar Year 1972

In view of the continuing sizeable deficit in the U.S. balance of payments and international monetary instabilities, no changes were made in the generally authorized allowables from 1971. However, the special features introduced in December 1971 were retained and to align OFDI policy in the export area with other actions taken in support of exports, OFDI liberalized its guidelines for issuing specific authorizations in cases where direct investors extend export credit to their foreign affiliates in the ordinary course of business. Several technical modifications were made in the Regulations relating to the holding and allocation of available proceeds of long-term foreign borrowing and to borrowings by overseas finance subsidiaries.

While other features of specific authorization policy continued essentially unchanged from 1971, provision was made to assure consistent treatment of expropriation losses under the Program and under carefully defined circumstances to give program credit for the sale of equity shares of the direct investor in an offering designed for and marketed exclusively in the security markets of a designated foreign country.

Approximately 2,000 direct investors making less than \$500,000 of direct investments annually and holding no more than \$95,000 of liquid foreign balances at the end of any month were relieved of the need to file annual reports, thereby reducing the number of annual reporters to around 1,000 direct investors.

As a result of the liberalizing steps taken in 1971 and the sustained capacity of the international financial community to meet the needs of direct investors, requests for specific authorizations dropped off in calendar 1971. Preliminary estimates are that applications will remain at about this level in 1972, but with some possibility of an increase due to the changes introduced in the specific authorization guidelines. To assure compliance with the Regulations, the Office continues to press an active enforcement program of investigation, audit and settlement of violations. The latter has been primarily accomplished through informal, voluntary exchange of letters rather than through formal administrative hearings.



## OFFICE OF MINORITY BUSINESS ENTERPRISE

### Introduction

The Office of Minority Business Enterprise (OMBE) administers a Department of Commerce program which is the focal point of the Administration's efforts to assist (a) the establishment of new minority business enterprises and (b) the expansion of existing ones by coordinating and concentrating public resources and obtaining the participation of the private sector.

### Mission and Organization

OMBE carries out a program which (1) coordinates the plans, programs, and operations of the Federal government that affect minority business enterprise; (2) promotes activities of state and local governments and private sector institutions that may facilitate the growth of minority business; and (3) develops and disseminates information helpful to those who would assist or engage in minority business development.

The OMBE program is accomplished through its five divisions--Government Programs, Private Programs, Community Programs, Field Operations, and the Information Center.

### Fiscal Year 1972 Activities and Accomplishments

- The Small Business Administration's 8(a) procurement program, supported by OMBE's interagency coordinating efforts, awarded 1,706 contracts totaling \$151,598,150 to minority firms in contrast to \$66,120,909 in fiscal 1971 and \$21,814,292 the year before.
- Minority Enterprise Small Business Investment Companies (MESBICs) now total 50 and are capitalized at over \$16 million. Despite their newness, they have made 440 financings, involving \$7.6 million in MESBIC capital and \$35.9 million in external capital for a total investment of \$43.5 million in minority business, which in turn employ over 4,400 people, and have annual sales of over \$84 million.
- One hundred twenty-three National and Local Business Development Organizations located in 76 cities have been financed to operate as organizations which function as "one-stop" business development centers to serve minority businessmen and women by providing business opportunity information, counseling services, business packaging and resource availability assistance, and business management assistance.
- The 29 Minority Business Opportunity Committees (MBOC) were organized as the standing committees of the local Federal Executive Board or Association. The MBOCs provide a regular forum for the exchange of information, develop new public programs which respond to local needs, focus support by Federal agencies on local projects, and implement plans developed by OMBE to make the minority enterprise effort a priority at the local level.
- Government grants, loans, loan guarantees, and purchases rose from approximately \$200 million in Fiscal Year 1969 to well over \$800 million in Fiscal Year 1972. More than \$2 billion has been expended in the minority enterprise effort over this three-year period.
- OMBE funded Local Business Development Organizations provided a variety of services to minority business aspirants, and obtained funding for more than 2,657 business ventures in the amount of \$130 million.
- The life insurance industry, through its Urban Investment Program, has placed a total of \$113.1 million in non-housing investments for minority enterprise.
- The Task Force on Minority Business Concessions, created to locate minority-owned concessions in Federal establishments, has filled 73 of the 144 sites identified for minority business use. This is up from 16 minority-owned concessions reported last year.
- The American Bankers Association, acting upon its \$1 billion, five-year investment program, increased its member banks' portfolio of minority business loans. Over \$400 million has gone into the program to date.
- In excess of \$200 million for deposit in minority banks has been secured in a joint public/private sector program.
- Minority-owned franchised businesses increased from 405 in 1969 to 1,695 in 1972.
- Minority-owned automobile dealerships have increased from 14 in FY 1969 to 145 in FY 1972.
- The International Council of Shopping Centers has provided substantial assistance to existing minority-owned shopping centers and to those under construction. The Council has also held an Executive Development Institute for minority businessmen to prepare them for shopping center ownership, management, and executive level positions.
- The National Minority Purchasing Council was formed to act as the catalyst to increase minority company purchasing opportunities throughout the private sector of the economy. Its membership consists of presidents and chief executive officers of major corporations.

## OMBUDSMAN FOR BUSINESS

### Introduction

In keeping with the Administration's desire to make government more responsive to the people, and in order to improve understanding between government and business and to facilitate the furnishing of government services to business, the post of Ombudsman for Business was created in the Department of Commerce in March 1971.

Each of 15 Federal departments and agencies having programs concerning business has appointed a senior official to serve in a liaison capacity.

### Functions

The specific functions and responsibilities of the Ombudsman for Business include:

- Receiving and answering questions on Federal programs of interest to business.
- Assisting business by providing a focal point for receipt and handling of communications involving information, complaints, criticisms, and suggestions about Government activities relating to business.
- Arranging conferences with appropriate officials within the Department and in other Federal departments and agencies, with follow-up on referrals to determine whether further assistance is necessary and appropriate.
- Developing suggested changes to remedy the causes of legitimate business complaints about the Federal Government, and referring them to the Secretary of Commerce for further action.

### Fiscal Year 1972 Activities and Accomplishments

In the period from inception to June 30, 1972, more than 3,600 cases were handled by the Ombudsman. The

inquiries were from the District of Columbia, all of the States, and also from firms in 22 foreign countries. On-the-spot service in follow-up and consultation is provided throughout the nation by the 42 field offices of the Department of Commerce, as well as by local offices of other departments and agencies, and overseas through U.S. Embassies and Consulates.

The wide range of Federal Government programs available for business have been the subject of inquiry to the Ombudsman. They have been concerned with Government procurement planning and practices; contract awards; how to sell to the U.S. Government; how to get on bidders' lists; industrial and economic development; Government loans, guarantees and grants; industrial pollution abatement; commodity standards; product safety; metrication; franchising; patents; marketing and distribution; economic stabilization measures; surplus property; truth in lending and advertising; foreign trade; non-tariff barriers; foreign market data; joint ventures and licensing abroad; import impact; trade with China, Russia, Eastern European and other countries.

Users of the service have included the business public, members of Congress, Washington representatives, minority enterprises, academe, manufacturers and other trade related associations and organizations, professional societies, students, attorneys, CPA's, economic and industrial development and other entities of Federal, state and local governments, banks, U.S. and other Chambers of Commerce.

The responses to inquiries through the Ombudsman and the liaison process have resulted in improved Government program performance and delivery of Government service. The "good offices" approach of the Ombudsman has resulted in clarification of misunderstandings and amicable adjustments of claims between Government agencies and the business public. Practices and procedures in the particular situations complained about have been corrected or explained. In given cases, obstacles to exports of U.S. goods have been removed or reduced.

# BUREAU OF INTERNATIONAL COMMERCE

(Selected Workload Data)

Table I.—INTERNATIONAL COMMERCIAL INFORMATION AND EXPORT CONTROL ACTIVITIES

	Fiscal years				
	1968	1969	1970	1971	1972
<b>INTERNATIONAL COMMERCIAL INFORMATION ACTIVITIES:</b>					
Overseas Business Reports Prepared .....	93	100	86	75	89
Market Share Reports Issued .....	1,178	1,178	1,151	1,182	1,189
Trade Lists Sold .....	43,400	39,140	47,727	50,645	48,036
World Trade Directory Reports Sold .....	43,093	42,706	41,331	45,721	48,592
Foreign Production and Commercial Reports Disseminated .....	45,966	58,663	52,780	61,429	64,113
<b>EXPORT CONTROL ACTIVITIES:</b>					
Export License Applications Received .....	139,648	145,369	132,498	107,615	78,561
Special Commodity Studies Initiated .....	450	838	790	705	713
Investigations Opened .....	308	242	283	252	196
Export Transaction Checks Required .....	755	665	457	498	463

Table II.—TRADE AND INDUSTRIAL EXHIBITIONS

	Exhibitions	Exhibitors	Trade visitors	12-month sales (000's)	Agency agreements established
FY 1968 .....	17	884	263,797	\$36,000	302
FY 1969 .....	20	974	108,460	79,000	338
FY 1970 .....	22	963	71,084	124,544	139
FY 1971 .....	22	896	208,154	155,592	309
FY 1972 .....	19	1,038	Not available	172,063	663

Table III.—TRADE CENTERS

	Between show promotions	Exhibitions	Exhibitors	12-month sales (000's)	Agency agreements established
FY 1968 .....	74	46	1,434	\$42,085	369
FY 1969 .....	101	46	1,487	78,973	384
FY 1970 .....	126	49	1,533	104,189	142
FY 1971 .....	241	55	1,875	177,632	445
FY 1972 .....	227	62	2,643	227,403	788

Table IV.—TRADE MISSIONS

	Missions	Mission members
FY 1968 .....	32	417
FY 1969 .....	30	233
FY 1970 .....	47	375
FY 1971 .....	43	332
FY 1972 .....	64	512

Table V.—FOREIGN COMMERCIAL SERVICE ACTIVITIES

	Fiscal years				
	1968	1969	1970	1971	1972
Personnel Selections and Placements . . . . .	194	350	352	362	358
Foreign Service Officers Participating in:					
Commerce Consultations . . . . .	183	240	189	174	175
Field Office Consultations . . . . .	101	50	50	41	48
Performance Evaluations:					
Annual End-User Evaluations . . . . .	307	402	345	331	250
Foreign Service Report Appraisals . . . . .	85	100	170	167	190
Experience Record Appraisals . . . . .	134	180	189	155	200
Briefings for Foreign Service Inspectors . . . . .	85	104	75	88	120
Training:					
Foreign Service Officers . . . . .	189	190	276	280	243
Foreign Nationals . . . . .	67	189	210	215	225
Communications Handled:					
Incoming Copies (in 000's) . . . . .	1,473	1,505	1,519	1,457	1,583
Outgoing (in 000's) . . . . .	77	164	160	169	170

**BUREAU OF DOMESTIC COMMERCE**  
(Selected Workload Data)

	Fiscal years		
	1970	1971	1972
<b>BUSINESS ASSISTANCE:</b>			
Industrial Outlook Reports . . . . .	175	201	209
Domestic Trade Publications . . . . .	125	219	210
Legislative Proposals Reviewed . . . . .	470	742	500
Business Impact Analyses Prepared . . . . .	40	39	40
Trade Opportunities Disseminated . . . . .	9,400	10,800	9,400
Business Opportunity/Federal Procurement Conferences:			
Number of Conferences . . . . .	39	49	40
Attendees . . . . .	9,650	15,965	10,537
Business Inquiries to Field Offices—visitors, letters and telephone calls (in 000's) . . . .	1,084	988	863
Out-of-Office Visits to Business Establishments . . . . .	28,092	30,778	39,313
Domestic Trade Seminars . . . . .	626	825	1,332
Export Seminars:			
Total number . . . . .	2,144	2,293	2,519
Attendance . . . . .	56,000	56,200	60,000
Regional Export Expansion Councils:			
Number of REEC's . . . . .	42	42	42
Membership . . . . .	1,500	1,500	1,500
Associate Offices (field) . . . . .	650	700	750
Publication Sales (in 000's) . . . . .	\$760	\$529	\$450
Foreign Trade Leads Disseminated . . . . .	83,000	92,736	114,542
Commerce Business Daily Subscriptions . . . . .	23,000	23,500	24,500
<b>DEFENSE PRODUCTION AND INDUSTRIAL READINESS:</b>			
Special Assistance and Authorization Cases Processed . . . . .	1,657	1,116	724
Estimates of Essential Civilian and War Supporting Requirements . . . . .	13	4	11
Special Supply-Requirements Studies . . . . .	12	120	13
Special Stockpile Studies . . . . .	85	17	18
National Defense Executive Reserve:			
Reservists . . . . .	1,422	717	600
Training Conferences Held . . . . .	29	26	30
Industrial Evaluation Studies . . . . .	164	145	151



# UNITED STATES TRAVEL SERVICE

## FOREIGN VISITOR ARRIVALS TO THE U.S. BY AREA OF PERMANENT RESIDENCE

CALENDAR YEARS 1969, 1970, 1971  
AND 1ST 6 MONTHS 1972

Country	1969	1970	1971	1st 6 months 1972
Europe . . . . .	886,948	981,610	1,112,683	565,180
South America . . . . .	282,869	319,022	312,650	136,663
Central America . . . . .	104,706	111,281	113,531	52,564
West Indies . . . . .	355,062	372,547	315,676	132,074
Asia . . . . .	256,986	357,494	485,321	271,890
Oceania . . . . .	98,792	120,882	124,106	67,072
Africa . . . . .	23,014	27,597	32,385	14,648
Other Overseas . . . . .	136	94	71	47
TOTAL OVERSEAS . . . . .	2,008,513	2,290,527	2,496,423	1,240,138
MEXICO . . . . .	1,033,075	1,085,772	1,170,583	646,514
CANADA . . . . .	9,400,000	9,800,000	10,100,000	N.A.
GRAND TOTAL . . . . .	12,441,588	13,176,299	13,767,006	N.A.

## OFFICE OF FOREIGN DIRECT INVESTMENTS

(Selected Workload Data)

	Fiscal year			
	1969	1970	1971	1972
Applications for specific authorizations . . . . .	715	382	208	186
Petitions for reconsideration of prior decisions . . . . .	62	104	50	31
Foreign borrowing certificates processed . . . . .	3,442	2,865	3,096	2,898
Special authorization letters issued . . . . .	746	285	135	193
Quarterly, annual and special reports processed . . . . .	12,000	10,000	9,550	9,561
Compliance investigations initiated . . . . .	(*)	438	312	448
Sections of regulations and general bulletin issued . . . . .	250	141	260	179
Legal interpretations or opinions rendered . . . . .	850	667	761	748

\*Compliance activity was initiated late in fiscal year 1969.

## SCIENCE AND TECHNOLOGY

### INTRODUCTION

The Assistant Secretary of Commerce for Science and Technology serves as the principal adviser to the Secretary, as well as adviser to all other Department officials, on matters of science and technology. He has cognizance over the research and development activities carried out in the fields of science and technology by all organizations of the Department. He also has responsibility for coordinating Department-wide environmental affairs. He directly supervises four primary operating units: Patent Office, National Bureau of Standards, National Technical Information Service, Office of Telecommunications. In addition, the Directors of the Offices of Product Standards and Environmental Affairs

report directly to the Assistant Secretary for Science and Technology.

Responsibility for the Department's activities in oceanic and atmospheric science and service rests with the Administrator of the National Oceanic and Atmospheric Administration (NOAA). The Administrator, assisted by special-area Associate Administrators, establishes program policies and priorities and formulates and evaluates program plans in Marine Resources development and management, Environmental Monitoring and Prediction, and Environmental Modification.

### OFFICE OF THE ASSISTANT SECRETARY FOR SCIENCE AND TECHNOLOGY

The Assistant Secretary, through the departmental operating units within his purview, has contributed significantly to the development of two of the President's major new initiatives in science and technology and in consumer affairs.

#### Science and Technology

In his Message to the Congress on Science and Technology, on March 16, the President directed the Secretary of Commerce to assume new responsibilities in the areas of:

- Licensing government-owned patents
- Obtaining domestic and foreign patent protection for government-owned technology
- Identifying legal and regulatory barriers to innovation, and
- Appraising the technological strengths and weaknesses of American industry

In connection with the fourth of those directives, the President also called on the Secretary to undertake,

through the National Bureau of Standards, a new Experimental Technology Incentives Program (ETIP). The President requested an appropriation of \$14.4 million for ETIP. A somewhat larger amount, \$25.6 million, was requested for a companion activity in the National Science Foundation. In cooperation with State and local governments and the private sector, ETIP will investigate the usefulness of a variety of incentives and mechanisms to stimulate the generation and application of private research and development. The objective will be to make our economy stronger and more competitive with other nations', to improve productivity, and to provide new technological solutions to pressing national problems.

#### Consumer Product Safety

Many technical problems in the safety of consumer products are common to several classes of products. Such problems can be studied independently of any specific product, and frequently the findings can be applied to the standards and methods of test which are being developed for a large number of applications.

The National Bureau of Standards is developing a set of safety standards or test methods with a broad spectrum of application. It is expected that when such a set of standards or tests has been developed, a new safety standard for a specific product can be produced simply by selecting an appropriate set of existing standards.

A new standard for the flammability of children's sleepwear went into effect on July 29. The Secretary decided to reject industry petitions to weaken or postpone the standard, which requires that all children's pajamas, nightgowns, and robes in sizes 0 through 6X must either pass a strict flame test or be permanently and conspicuously labelled "flammable." After July 29, 1973, all such sleepwear will have to pass the test or be barred from the market.

A new Federal standard for mattress flammability was published in the Federal Register in early June. It will take effect in June 1973.

### **Interdepartmental Activities**

The Assistant Secretary represented the Department and provided leadership on several intergovernmental committees, notably the Federal Council on Science and Technology and its Interdepartmental Committee for Atmospheric Sciences, of which he is chairman.

### **COMMERCE TECHNICAL ADVISORY BOARD (CTAB)**

CTAB, chaired by the Assistant Secretary for Science and Technology, its only government member, acts in an advisory capacity to the Secretary on scientific and technical matters. It consists of approximately 20 members, recognized leaders in science, engineering, education, or business. CTAB recommends measures to increase the value to business and industry of scientific and technical activities of the Department; advises on ways to stimulate private industrial research and development to promote economic growth, with due concern for environmental and social considerations; and provides liaison on technical matters between industry and Government.

One mechanism frequently employed is the establishment of expert panels. One such CTAB panel, on Supersonic Transport Environmental Research, completed an 18-month study and issued its report, "Environmental Aspects of the Supersonic Transport." During the course of the study, the panel informally apprised the Department of Transportation of the nature of its findings, conclusions, and recommendations. As a consequence, much of its advice was incorporated into DOT's Climatic Impact Assessment Program (CIAP). The final report showed that the plan to spend \$17 million over the next three years on CIAP, combined with related ongoing programs in other Federal agencies,

should be sufficient to provide the basis to determine the environmental consequences of commercial routine supersonic aircraft operations. The panel also recommended that CIAP be monitored routinely by a working panel of technically-oriented executives, scientists, and engineers. It was further recommended that this working panel should be responsible to the Council on Environmental Quality.

Because of the increasing numbers of military and commercial flights occurring in the stratosphere, the panel concluded that it is imperative that measurements of the trace constituents of the stratosphere and of the intensity of ultra-violet light reaching the earth's surface begin immediately.

### **Commerce Science and Technology Fellowship Program**

The Seventh Commerce Science and Technology Fellowship Program was conducted for 15 outstanding scientific and technical men and women, who participated in a nine-month program of advanced training, combined with specific work assignments. Each Com/Sci Fellow was assigned for a work period of approximately nine months, in either the Office of Emergency Preparedness, Food and Drug Administration, District of Columbia Government, Environmental Protection Agency, Department of Transportation, National Science Foundation, Department of Housing and Urban Development, and several organizations within the Department of Commerce.

### **OFFICE OF PRODUCT STANDARDS**

The Deputy Assistant Secretary for Product Standards, who is also Director, Office of Product Standards, is responsible for coordinating the Department's activities in product standards (domestic and international), packaging and labeling, flammable fabrics, building codes, and product safety. He provides Commerce liaison with other Federal agencies, private organizations, the Congress, and foreign governments on product and industry standards.

The Deputy Assistant Secretary for Product Standards also serves as chairman of the Interagency Committee on Standards Policy. This committee held a two-day public hearing for citizens and industry organizations to express their views on a prospective worldwide standards code. The Deputy Assistant Secretary is the U.S. delegate to working group 3 of the General Agreement on Tariffs and Trade (GATT), which last year held eight meetings. A treaty representing international consensus is expected to be signed in early 1973.

### **OFFICE OF ENVIRONMENTAL AFFAIRS**

In February, there was established an Office of Environ-

mental Affairs (OEA), with a supporting staff reporting to the Deputy Assistant Secretary for Environmental Affairs. Each staff member is responsible for an area of environmental technology, such as air, water, land use, solid waste, toxic substances, etc.

In Fiscal 1972, 775 draft environmental impact statements were received and circulated to the appropriate Departmental units for comment. These comments were then consolidated into a single Departmental response on each statement. Departmental agencies prepared four final environmental impact statements during the same period. In addition, comments were prepared on 89 pieces of proposed environmental legislation.

The Office of Environmental Affairs worked closely with the Department of State in the preparation of position papers and background documents for the United Nations Conference on the Environment. In addition, the Office was represented at a number of OECD (Organization for Economic Cooperation and Development) meetings involving the development of global environmental standards and criteria.

During fiscal 1972, the Office of Environmental Affairs initiated the following:

- Development of a program of energy conservation technology designed to examine one of the basic issues of the energy crisis;
- A cooperative program with several national education associations, leading to the development of improved environmental education curricula in teacher training and in public school education;
- A cooperative effort to establish a national network of regional scientific consultant teams to assist those who plan environmental assessment projects.
- Plans to appraise the commercial utilization of environmental technology patents; and
- A study on the technical status of beneficial uses for effluent heat (waste heat) in the cooling water of steam driven electric power plants.

## PATENT OFFICE

### Functions

The Patent Office administers the patent laws enacted by Congress (Title 35, United States Code) in accordance with Article 1, Section 8 of the Constitution, and the Federal trademark laws. In discharging its duties relating to patents, the Office examines applications and grants patents when applicants are entitled to them; publishes and disseminates patent information; maintains search files of the United States and foreign patents; maintains a scientific library and a public search room; supplies copies of patents, non-patent literature and related official documents to the public; and records assignments of patents. In discharging its duties pursuant to Title 15, Sections 1051 to 1127, United States Code, the Patent Office also examines, registers and maintains records of commercial trademarks which are qualified for protection under the Federal trademark laws.

### Patent and Trademark Examining Operations

Intensive work by the Examining Corps resulted in a reduction in the backlog of patent applications awaiting final action. This, coupled with accelerated activity in the issue and printing areas, resulted in reducing the pendency time from 29 to 25 months. A few years ago pendency was almost four years.

The practice under 35 U.S.C. 7 of designating acting members of the Board of Appeals was suspended on June 30, 1971. In view, however, of the rising number of appeals and the impending retirement on June 30, 1972, of three members of the board, the practice was resumed May 1, 1972, and subsequently six acting members have now been designated.

At the end of the fiscal year, the Trademark Examining Divisions were acting on new applications for registration of marks within 10 months from the date of filing.

### International Activity

Significant progress was achieved during the year towards an international trademark filing agreement. The proposed agreement, called the Trademark Registration Treaty, was drafted by the World Intellectual Property Organization, with the United States playing a leading role. A second formal draft of the Treaty was considered by a Committee of Experts that met in Geneva, Switzerland from May 2-8, 1972. This meeting narrowed the issues and perfected the draft in preparation for a Diplomatic Conference to negotiate the Treaty. This Conference is scheduled for April, 1973, in Vienna, Austria.



The United States ratified two treaties in the industrial property field on January 26, 1972. These were the Nice Agreement Concerning the International Classification of Goods and Services For the Purposes of the Registration of Marks, and the Locarno Agreement Establishing an International Classification for Industrial Designs. The Nice Agreement establishes an international trademark classification system used by over 60 countries as either their primary or secondary system. The Patent Office held a hearing on June 14, 1972, regarding the possible adoption of the classification established by the Nice Agreement as the primary classification for U. S. trademarks. The design classification of the Locarno Agreement is in use in the Patent Office as a secondary system.

### Solicitor

The U.S. Supreme Court granted the Government's petition for certiorari in *Gottschalk v. Benson*, a case involving patentability of computer software. (Following argument of the appeal in the fall term, the Court, in a 6-0 decision, held in favor of the Patent Office's ruling of unpatentability.) The Committee on Enrollment is preparing a revised edition of the Roster of Attorneys Registered to Practice Before The United States Patent Office, to be published on or before October 15, 1972. The Roster will incorporate in one volume listings of attorneys arranged alphabetically and by state and zip code. It is planned that a revised Roster will henceforth be published on an annual basis.

### Patent Office Academy

The Academy training program has been revised to operate on a schedule of five half-day sessions a week for six weeks, rather than the former two full-day sessions a week for eight weeks. This change will provide junior examiners with a daily mix of Academy and on-the-job training in the procedures and practices involved in effectively examining applications for U. S. patents.

### Technical Information Systems

An information retrieval and display system providing rapid response to queries concerning patent classification was approved for procurement. Facilities will be installed in the Public Search Room primarily to serve the public, while separate installations will serve patent examiners and others of the Patent Office. The system integrates computer and microfilm technologies providing a screen display of the desired information. The keyboard activates a mini-computer which stores indexed information and controls selection of the pertinent microfilm image to provide the user with direct and rapid access to the desired information.

In the process of recording photographic images of

classification data for use within this system, a current and up-datable 16mm microfilm is created. Copies of this film can also be used on conventional microfilm readers, and will be made available for sale through National Technical Information Services (NTIS).

Additional copying equipment was ordered for installation to serve the patent examining groups. This will facilitate the reproduction of unique materials from the search files for inclusion with Office mailings, will speed up such mailings and will reduce significantly the time that such materials are out-of-file, thus increasing the integrity of the files.

### Methods Improvement

Building upon recommendations of the Trademark Advisory Committee, a Patent Office team designed and implemented an improved system for processing new trademark applications. The system reduced the time for preparing and forwarding such applications to the examiners from more than 50 working days to about 20 working days. Drawings filed with the applications are now available in the Trademark Search Room within a few days after receipt.

### New Initiatives

*Parallel Application Branch.*—A Parallel Application Branch was established November 8, 1971, in an effort to reduce a backlog of newly-filed applications. At that time, approximately 60 calendar days elapsed between filing of an application and mailing of the Official Filing Receipt. The establishment and operation of the new branch enabled the Patent Office to significantly reduce the backlog of cases, moving applications forward for earlier examination by the professional Examining Corps. In doing so, the delay in mailing filing receipts to applicants was reduced by approximately 30 days.

*Inquiry Center.*—A new inquiry center was established near the public search room, for use by the public. The new facility enables the public to inquire at a central place about orders for patent copies and certified and non-certified copies of Patent Office documents. In addition, "while-you-wait" certification service is also offered to Patent Office customers.

### Operating Cost and Income

Funds available to the Patent Office for Fiscal Year 1972 were \$62,447,000, comprising \$59,250,000 regular appropriation, \$3,122,000 supplemental appropriations for pay act and increased printing costs, and \$75,000 received as a reimbursement. Program costs for this period were \$61,338,690. Total amount obligated during Fiscal Year 1972 was \$62,368,864, or 99.87 percent of new obligational authority.

Compensation and benefits for an average of 2,600 employees accounted for 70 percent of total operating expenses; printing and reproduction for 24 percent; and all other operating costs for 6 percent.

The Office received \$27,932,119 in fees and deposits

from all sources. Refund of \$87,869 and net decrease of \$38,679 in the deposit fund for unapplied receipts resulted in a net income of \$27,882,929. This exceeds by \$377,386 the previous record-high amount of \$27,505,543 for Fiscal Year 1971. Net income for 1972 was equivalent to 45 percent of operating costs.

## NATIONAL BUREAU OF STANDARDS

### Functions

The goal of the National Bureau of Standards (NBS) is to strengthen and advance the nation's science and technology and to facilitate their effective application for public benefit. To achieve this goal, NBS programs enhance the productivity of our total national technical activity by insuring compatible, reliable and meaningful physical measurements throughout the Nation. Its programs provide the technical basis for the thousands of standards which constitute the language of the marketplace and insure equity for consumer, distributor and manufacturer alike. Laws and regulations pertaining to public safety and the quality of life are often based on NBS work. Through all of these programs and through serving as a scientific and technical arm to many other government agencies, NBS contributes directly to achieving a variety of national goals.

### Measurement Science Breakthrough

Scientists at NBS/Boulder have made a major advance in measurement science. They developed a potential "yardstick" for the simultaneous measurement of length and time. A helium-neon laser was used to produce a uniform wavelength measureable with sufficient accuracy to serve as a standard of length and at the same time to produce a frequency that can be measured with sufficient accuracy to serve as a standard for regulating the world's most precise clocks.

This achievement will open new communication channels, relieving overloaded circuits; it could provide a thirty-fold improvement in the present determination of the speed of light.

### NBS Data for Air Pollution Studies

The National Standard Reference Data System (NSRDS) administered by NBS is producing scientific data essential to environmental improvement. The NBS Chemical Kinetics Information Center has issued two reports on evaluated rate constants of air pollution reactions, and is

preparing data sheets on the basic physical and chemical properties of a number of gaseous air pollutants. This information is essential to the national effort to reduce atmospheric pollution from a variety of sources. The NBS Chemical Thermodynamics Data Center, at the request of the Committee on Incinerator Design of the American Society of Mechanical Engineers, assembled a special compilation of data needed for the design of more efficient and lower-polluting incinerators. Data already evaluated as part of the ongoing NSRDS program proved to be a comprehensive source of the information needed, so that the compilation could be provided not only at minimum expense, but at a savings of time estimated to be more than two years.

### New Dental Restorative Materials

Under the sponsorship of the American Dental Association, a cross-fertilization of expertise has been marshalled at NBS in an effort to find new dental-filling materials to replace silicate cements, which have a good appearance but are mechanically weak and prone to early chemical disintegration in the mouth. One of the most dramatic developments in modern day dental research has been the development of filling materials composed of an organic resin and inorganic reinforcing fillers.

NBS experiments have provided the basis for private industry to produce seven new materials that are now commercially available and are finding steadily increasing use in the dental profession. Latest estimates reveal that the composite materials have replaced silicate cements to an extent of about 50 percent. NBS estimates that use of the newer, longer-lasting fillings could save the American public nearly a quarter-of-a-million dollars per day.

### New Checks on Health Measurements

NBS has developed the first national authoritative referee method to check measurements of calcium in

clinical laboratories. The work was done in cooperation with a team of experts from the clinical chemistry community and 8 practicing clinical chemistry laboratories. The resulting method is up to 10 times more accurate than existing methods used in clinical laboratories today. The determination of calcium in serum is one of the most common of the nearly one billion clinical measurements made each year. Accurate determinations of calcium in serum are needed so that physicians can properly diagnose and treat such diseases as thyroid malfunction and loss of calcium from the bones. Now doctors can diagnose and treat certain diseases involving calcium metabolism with much greater assurance than was formerly possible. The referee method will be used—in collaboration with the Center for Disease Control—to assess the accuracy of the many different field methods now used for calcium analysis in the nation's clinical laboratories. During the coming year NBS will also begin the development of a referee method for the determination of lead in blood, which is important for screening large numbers of children for lead poisoning.

#### **New Flammable Fabrics Standards**

The Flammable Fabrics Program, conducted by the newly formed NBS Fire Technology Division, serves as the technical base for the Secretary in developing flammability standards for clothing and interior furnishings. The strictest clothing flammability test in the world today was prepared by NBS for children's sleepwear sizes 0 through 6X in order to safeguard children under 6 years old who are the victims of more than one-third of all clothing fire accidents. (The flammability standard for children's sleepwear, including a sampling plan, took effect July 29, 1972.) On June 15, 1972, the Secretary published a finding of need for standards for children's sleepwear standards to cover the larger sizes 7-14. These standards are now under development. A flammability standard for mattresses was promulgated June 7, 1972. The mattress standard will assure that every mattress manufactured after that date will be fire-safe.

#### **Performance Designed Buildings**

The performance approach to building, long fostered by the Bureau, moved from the theory to application in

1972, with the construction of 2,800 housing units designed according to NBS-prepared performance criteria which permit innovation. The prototype housing, constructed under the Operation BREAKTHROUGH experimental program of the Department of Housing and Urban Development, is on nine sites throughout the Nation. The project is well along toward completion, and some units are now occupied.

#### **First Standard for Law Enforcement Equipment**

The NBS Law Enforcement Standards Laboratory, working under an agreement with the Department of Justice, has published the first voluntary performance standard for equipment used by Federal, state and local law enforcement agencies. The standard is for "Ballistic Resistance of Police Body Armor."

#### **New Measures for Product Safety**

NBS has developed new standards and tests to evaluate hazards from heat and sharp edges and points in various toys and other products. Criteria were developed to define dangerously hot surfaces such as occur in toy ovens. Standards derived from these criteria are now being used by household appliance manufacturers to reduce burn hazards in the home, especially from cooking ranges. NBS also developed criteria to rate the dangers from sharp points and edges in toys. A portable gauge was developed to measure the hazard of points and edges so that inspectors can make field checks.

#### **Cryogenic Technology**

Over the years, NBS-Boulder has been a leading center for cryogenic science and engineering. This field is devoted to the study of the phenomenon of the super-cold, namely, below about  $-400^{\circ}\text{F}$ . At such temperatures, the electrical resistance of metals drops abruptly. The President's Science Advisory Committee believes that a significant effort is justified to apply cryogenics in a practical way to the generation and transmission of electrical power. Consequently, the Secretary has assumed for the Department the lead agency responsibility within the Federal Government for working out means by which cryogenic technology can be developed and, as quickly as possible, turned over to the private sector for equipment manufacture.

## **NATIONAL TECHNICAL INFORMATION SERVICE**

#### **Functions**

The National Technical Information Service (NTIS) collects reports resulting from about 250 agencies'

federally-sponsored research and development; catalogs, abstracts, and indexes information (where not done by the agency); prepares microfiche or microfilm copies of

research materials; and provides promotion and distribution services to the general public.

NTIS also sells copies of bibliographic and data files in magnetic tape form, when they are made available to the public by the issuing agency.

### Federal Summary Statistical Data (Sumstat)

A pilot issue of a *Sumstat Catalog* was published which lists the Department's publicly available machine readable summary statistical data files. This pilot catalog will be used to determine the need and market for a Government-wide catalog of summary statistical data files that are available to the public.

### Marketing

A creative marketing program for NTIS information products and services has had the following results:

- Successful introduction of two major new products—(*NTISearch* and *Weekly Government Abstracts*).
- Initiation of cooperative computer searches with the Smithsonian Institution's Science Information Exchange.
- Increase in the number of subscribers to NTIS' abstract bulletins by over 5,000.
- Increase in awareness of NTIS products and services, through direct mail promotions to about one million new prospects.
- Growth in sales of "wide interest" reports from an average of 150 to an average of 450.

### New Products and Services

*Weekly Government Abstracts*, designed to meet the needs of the busy technical staff, began with five subject categories: "Computers, Control & Information Theo-

ry"; "Environmental Pollution and Control"; "Management Practice and Research"; "Material Sciences"; and "Transportation." At least two more will be published early in FY 1973: "Library and Information Sciences"; and "Building Technology."

*NTISearch* was established to respond to a public demand for a subject search service of the Government-wide bibliographic data files held by NTIS. This *fee search* service resulted in more than 1,600 paid search requests during the first year of operation. A contract awarded at the close of the year will convert the system to an improved on-line computer search during the early part of FY 1973.

NTIS became the principal marketing agent for the publications and services of nine DoD-sponsored Information Analysis Centers (IAC's). This program provides a mechanism for these centers to partially recover their operating costs through the NTIS public sales.

### Announcement of Government-Owned Inventions

The Federal Council for Science and Technology, Committee on Government Patent Policy, asked NTIS to assume a major Government-wide role in the announcement of Government-owned inventions that are available for licensing. These will be announced in its *Weekly Government Abstracts* and in *Government Reports Topical Announcements* as appropriate.

### Statistics

Total demand for paper and microfiche copies of reports available from NTIS increased by 23% during the fiscal year. A corresponding increase in sales income brought it to a new high of \$4,221,000, permitting NTIS to comply more nearly to its statutory requirement (15 USC 1151-1157) to be "to the fullest extent feasible, completely self-sustaining for each of its products and services."

## OFFICE OF TELECOMMUNICATIONS

### Functions

The Office of Telecommunications (OT)—

Conducts research needed in the evaluation and development of telecommunications policy;

Assists other Federal agencies, states, and communities in the use of telecommunications;

Conducts research, engineering, and analysis to advance the technology;

Serves as a source of information on telecommunications technology and services and stimulates the effective development and exchange of this information.



## Research and Analysis for Policy Formulation

In telecommunications, broad policies and regulations are determined primarily by the Congress through legislation; the Federal Communications Commission determines regulatory actions under that legislation. The Office of Telecommunications Policy (OTP), acting on behalf of the President, shapes intragovernmental directives and formulates policy of the Executive Branch.

Telecommunications (OT) provides research and analysis as required by the Director of OTP. This function was placed in the Department of Commerce because of the Department's primary responsibility to foster, serve, and promote the Nation's economic development and technological advance. It provides a close working arrangement, between the Department and the Executive Office, to deal with a complex and swiftly moving technology.

Since August 1971, OT has been developing a multidisciplinary team to help OTP define policy alternatives and to help provide the background required for policy decision.

A major effort of this group during 1972 was: (1) to evaluate the eight commercial satellite systems proposed to the Federal Communications Commission (FCC), (2) to monitor technical contracts which dealt with various questions concerning domestic satellite systems, (3) to analyze the spectrum requirements in relation to orbital position of the eight systems, and (4) to make a significant contribution to the statement of administration views prepared by OTP. The June 16th decision of the FCC to permit multiple domestic satellite systems was in close accord with OTP recommendations. The net effect of this decision is to provide the opportunity for any firm with resources to operate in the competitive market to obtain permission to use the necessary spectrum and satellite orbit space. It opens the way for development of a domestic satellite communications industry.

## Wideband Cable Systems

OT initiated a program to study the potential for a wideband cable television system in the United States and its economic and social implications.

Other reports prepared by OT define the standards needed to speed the development of a full-service, two-way broadband network. And a report prepared by a subcommittee (chaired by an OT staff member) of the Institute for Electrical and Electronics Engineers considers different techniques for standardizing frequency assignments in television cables.

In this program, OT is working closely with the Department of Housing and Urban Development and the

National Academy of Engineers on urban communication problems; with other agencies and the Office of Science and Technology on new Federal initiatives; and is providing staff support to the Secretary of Commerce as a member of the President's Cable Television Committee.

## Assistance to the States

To meet a request from the state of Hawaii, OT analyzed Hawaii's communication resources and needs and compared them with the characteristics of the eight proposed domestic satellite systems and a proposed trans-Pacific cable. Results of the study, described in the OT report "Telecommunications and the State of Hawaii," indicate millions of dollars in potential annual savings to the State.

During 1972, OT received many questions from the states concerning what actions other states have taken in statewide telecommunication planning, development, procurement, and management. To better meet these needs, OT arranged for a Conference of State Telecommunications Directors to be held in Washington in July of 1972. Purposes of the conference are to consider development of a program for the Department of Commerce and the states to share telecommunications information on a systematic basis and to identify State needs in telecommunications.

## Federal Frequency Management

OT supports OTP in the management of Federal use of the radio spectrum, both by providing methods to improve the sharing of the limited radio spectrum and by providing the Secretariat and technical support to the Interdepartment Radio Advisory Committee (IRAC). This committee serves in an advisory capacity to the OTP and achieves interagency agreement on the assignment of specific frequencies and the allocation of frequency bands for government use (such as for government satellites, air navigation, or marine communications).

Major matters currently being considered by IRAC include the planning required to implement 1971 international agreements on space telecommunications and preparation for the World Administrative Radio Conference to be held in Geneva in 1974.

During the past year, OT reviewed more than 45,000 frequency applications for compliance with policy and standards. Nonconforming applications were negotiated with Federal agencies, submitted to IRAC for review, or returned to the applicant. The semiannual, 20-volume list of current Federal frequency assignments was published and distributed to about 100 Federal users of the radio spectrum.

The ability to evaluate new systems proposed for the 1600 MHz (million cycles per second) region was strengthened. This region is of particular concern since it is already crowded and the proposed systems may well interfere with its existing use for aircraft altimeters. During the year, OT analyzed the compatibility of aircraft altimeters with proposed systems for collision avoidance and for maritime and aeronautical satellite navigation. Compatibility analysis of other proposed systems is continuing, and reports are being furnished to IRAC as they are completed.

OT designed the first Federal system to measure and monitor actual use of the radio spectrum from 50 kHz to 18 GHz (50 thousand to 18 billion cycles per second). This is scheduled for delivery in November 1972.

### Other Agency Support

The Institute for Telecommunication Sciences (ITS) assists other government agencies in the improvement and design of Federal communication systems, in the training of personnel, and by acting as an unbiased evaluator of designs, proposals, equipment, and systems.

The following are fiscal year 1972 highlights of services provided by ITS to other agencies:

- **System Performance and Design.** Developed computer models and methods to meet the following needs—for the Federal Aviation Agency: to design improved air traffic control and navigation systems; for the National Environment Satellite Service: to predict the performance of space-to-earth systems. Other studies yielded methods for speeding up interference analysis at the Army Electronics Proving Ground and provided models which function almost in real time to improve the performance of over-the-horizon radar systems.
- **Extension of the Usable Radio Spectrum.** With
- **Telecommunications Standards.** Helped the Department of Defense evaluate the performance of three commercial, pre-production radio sets designed to meet the common needs of the Army, Navy, and Air Force; prepared a set of magnetic tapes which the Navy is now using to test the performance of high-frequency systems—both shipboard and landbased.
- **Handbooks.** Prepared a set of four volumes which government and commercial agencies can use to estimate the best radio frequency for transmitting between various points on the earth.

only a few exceptions, the radio spectrum which is currently being used is that portion below 10 GHz (billion cycles per second), and most of this lower portion is crowded with users.

Transmission at higher frequencies offers great potential. For example, the frequencies from 10 to 40 GHz offer the potential of conveying three times as much information as all of the frequencies in use today below 10 GHz.

Thus, the demand for more radio communication—particularly for various satellite systems—is leading to the development of systems at frequencies higher than 10 GHz; and this is occurring even though there is incomplete understanding of how signals at these upper frequencies are transmitted by the atmosphere.

During fiscal year 1972, ITS surveyed critical industrial and government needs which could be satisfied by developing the technology to make use of frequencies above 10 GHz; developed guidelines for the transmission of data at high rates in the 10 to 18 GHz region; demonstrated that the region from 18 to 33 GHz is suitable for many applications.

## NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

### Functions

The mission of the National Oceanic and Atmospheric Administration (NOAA) is to further the Nation's safety, welfare, security, and commerce through increasing knowledge and rational use of the natural environment.

This involves: (1) the development of programs to assure that the ocean environment and its resources are wisely used in a balanced way to enable their development and

conservation for the national well-being; (2) the execution of such programs so that the oceans' resources can be effectively and economically developed by the private sector, providing an arena for the creation of new industries and the revitalization of existing ones; (3) the development and operation of systems to monitor and predict environmental conditions such as weather, ocean, earth and solar hazards so that through information, services and hazards warnings, life and property are protected and the efficiency of commercial, industrial

and agricultural activities improved; and (4) the exploration of the feasibility and, where warranted, the development of a national capability for beneficial environmental modification, and understanding the consequences of inadvertent environmental modification.

Rational use, development, and conservation of natural resources are promoted by scientific research and technological development. Continuous surveillance of the oceans and atmosphere permits NOAA to discharge its responsibility for predicting environmental changes, and for issuing warnings when hazardous conditions are expected. The living and mineral resources of the sea are explored, developed, and managed for the good of the Nation. Means are explored for using natural resources and for modifying the environment without causing deterioration or damage to either, and for developing methods to conserve or improve conditions. The Administration also provides environmental support to other Federal departments and agencies and coordinates with them national efforts directed toward protecting, maintaining, and improving all aspects of the environment.

#### **NOAA Office of the Administrator**

The Administrator represents the Department on a number of national and international bodies dealing with the development and application of environmental science and technology to meet national and social needs. The Administrator is the Permanent Representative of the United States to the World Meteorological Organization (WMO), an agency of the United Nations. He serves as the Chairman of the Marine Fisheries Advisory Committee, the Interagency Committee on Marine Science and Engineering, and the Federal Committee for Meteorological Services and Supporting Research. In addition, the Administrator serves as a member of the Committee on Water Resources Research, The Interagency Group on International Aviation, and the Advisory Committee on Aircraft Noise Abatement Program; as the alternate member on the Water Resources Council; as the U.S. principal in the U.S./French Cooperation in Oceanography; and as an invited participant and ex-officio member of the Executive Committee to the U.S. Committee for the Global Atmospheric Research Program. The Office of the Administrator is involved in the planning and implementation of U.S. international policies concerning living marine resources.

#### **Severe Storms Research**

Research on the physics of tornadoes and thunderstorms and on methods for early detection of these storms is centered at the National Severe Storms Laboratory (NSSL) in Norman, Oklahoma. Here, advanced techniques are developed, for probing the atmosphere and for

processing, displaying, and transmitting severe storms data. Instrumentation includes a special severe storm surface observing network, a 1,500-foot tower equipped at six different levels with meteorological instruments, and specialized radar systems. Doppler radar capability was added during the past summer to the system which observes and records data on internal storm circulations. This added a probing capability heretofore unavailable for studying the internal, three-dimensional air motion fields within thunderstorms. It is capable of observing and recording the circulation of a tornado.

This unique capability was demonstrated on a single occasion last year when the laboratory's scientists had the opportunity to watch a developing tornado with their Doppler radar. On June 2, 1971, a squall developed in the afternoon over southern Kansas and started moving south-southeastward through central Oklahoma, where it encountered the laboratory's radar and ground data collection network. The Doppler radar system data began to indicate a counterclockwise circulation associated with an indentation in the radar echo which formed part of a developing hook echo. Pronounced hook echoes—associated with tornadoes—can also be observed by conventional radar, but the Doppler method provides reliable measurement of the intensity of the associated wind field. In this case, a funnel cloud formed beneath the cyclonic storm vortex forty minutes after data indicating a vortex aloft were first recorded by the Doppler radar. Identification of the tornado-prone zone, long before birth of a tornado, indicates an extremely important and exciting future role for Doppler radar in severe storm research.

Using techniques developed by NSSL of the National Weather Service (NWS) has embarked on an experiment to improve the identification and the prediction of severe local storms. The tests utilize four established operational radars whose total area of surveillance extends from north-central Texas to northeastern Kansas/northwestern Missouri. Mini-computers are utilized to evaluate the electronic signals reflected from thunderstorms in terms of intensities in real-time at the four radar locations. These data are fed into a centralized, large computer where detailed analyses of the storm systems are prepared. Using this technique, quantitative estimates of storm intensities, extent and movement are made. Quantitative estimates of precipitation rates are also relayed to the River Forecast Centers for evaluation and use in flood and streamflow predictions. In addition, experiments are underway to produce composite mosaics of radar and satellite imagery.

For a second successive season, a field study was conducted jointly by NSSL and the Wave Propagation Laboratory aimed at identifying electromagnetic signals associated with tornadoes. The on-site research indicated that the electromagnetic field radiated by lightning

increased greatly during most tornadic conditions. The two years of observational research indicates that many tornadoes occur simultaneously with what seems to be a distinctive electrical signature that becomes easier to identify as the storm increases in severity. However, research is still in an early stage and further observations are necessary to establish the feasibility and reliability of using such an electrical precursor as a tornado detection technique. A more extensive field test study is now in progress in the Plains States.

Another effort of NWS is focused on the development of

automated dynamic and diagnostic techniques for predicting, up to 24 hours in advance, severe local storms—tornadoes and thunderstorms and associated wind gust, hail, and lightning. Working toward this goal, a computer program has been developed which generates predictions of three-dimensional air-parcel trajectories and which predicts the evolution of temperature and moisture fields at several atmospheric levels. Prognoses of these parameters are essential to the successful prediction of thunderstorms and related severe weather.

## **The Associate Administrator for Marine Resources**

### **Functions**

The Associate Administrator for Marine Resources has cognizance over and establishes policy for NOAA's marine resources, mapping, charting and geodetic programs and those closely related thereto, except for real time marine environmental predictions, which are assigned to the Associate Administrator for Environmental Monitoring and Prediction.

### **Accomplishments**

In the broad spectrum of Federal ocean programs, activity is channeled through the Federal Council for Science and Technology's (FCST) Interagency Committee on Marine Science and Engineering, of which the NOAA Administrator is Chairman. NOAA's reviews of Federal programs and deliberations on major issues within these programs have resulted in both programmatic and policy recommendations to the Chairman, FCST. Additionally, NOAA prepared for the Office of Science and Technology the 1972 Report of the President to the Congress on Federal Ocean Programs, formerly prepared by the National Council on Marine Resources and Engineering Development.

A major component of Federal efforts concerning the marine environment, that of mapping and charting, also is a specific coordinating responsibility of NOAA and is being performed through a recently designated Federal Coordinator. The Federal Coordinator has initiated efforts toward developing a preliminary report of Federal programs in mapping and charting. Activities included in this area, such as geophysical and geological mapping and nautical charting, are critical to safety at sea, to the development of offshore resources in advancing our economy, and in reducing our dependence on foreign resources.

NOAA exercises coordinating leadership in geodesy and related surveys through a Federal Coordinator. The national and subsidiary geodetic control networks are essential in coordinating and providing sound bases for engineering construction and planning over extended land areas, land acquisition, and urban development; in protecting the public and our natural resources through the monitoring of crustal movements and subsidence of lands, and for national defense.

At the request of the Office of Science and Technology in the Office of the President, NOAA participated in the preparation of a report dealing with the conservation and development of U.S. natural resources during the 1970's. Particular emphasis was placed on expanding U.S. fisheries, while assuring renewable ocean fish supply; providing for more effective use and continued existence of a productive coastal zone and ocean; and developing a national civil undersea technology capability.

NOAA continues to provide national leadership in the U.S./French Cooperation in Oceanography and in the Marine Resources and Engineering component of the U.S./Japan Cooperative Program in Natural Resources (UJNR). In May 1972, major steps were taken toward initiation of productive efforts in the U.S./French program by agreements reached in the following scientific endeavors at a joint meeting of scientific leaders in France:

- Man-in-the-Sea
- Instrumentation
- Buoy Technology and Air/Sea Interaction
- Marine Pollution/Sand and Gravel
- Fish Protein Concentrate
- Aquaculture
- Mid-Ocean Undersea Studies  
(Mid-Atlantic Ridge)



NOAA also participated in the Department's Committee on Law of the Sea, which assisted in preparations for the U. N. Law of the Sea Conference. Specific emphasis was on positions relative to fisheries, sea bed regimes and freedom of scientific research.

A NOAA Committee on Marine Mammals was organized to explore alternative plans for managing whales, to review current marine mammal research programs in the United States, and to develop a national program for marine mammal research. As a result of this study, the Committee recommended measures for strengthening the International Whaling Commission (IWC), to increase its effectiveness in managing the world stocks of whales. Most of the recommendations were adopted by the IWC at its annual meeting in June of this year, and plans are being prepared for their implementation.

During the closing months of the year, a program of marine advisory services was organized. The objective of this program is to assist those who are interested in and responsible for the development, utilization and management of the ocean and its resources. A system is to be developed whereby the results of research, availability of services, experience of industry and other sources of information are quickly made available to the users. The Marine Advisory Service involves close cooperation between the principal organizations in NOAA, Sea Grant Colleges and State programs. Responsibility for leadership of the Marine Advisory Service has been assigned to the Office of Sea Grant.

In the related area of State-Federal relations, NOAA is cooperating with the Coastal Plains Regional Commission to assist the State of North Carolina in furthering the development of its marine resources. An initial step

in this State-Federal effort is the development of an overall marine resource development plan for North Carolina, encompassing studies in aquaculture, commercial fishing, minerals, oceanographic research, recreation and tourism, resource conservation, transportation and waste disposal.

During FY 1972 two new areas of activity were commenced under the cognizance of the Associate Administrator for Marine Resources—the Manned Under-sea Science and Technology (MUS&T) program and the Marine Ecosystem Analysis (MESA) program.

The MUS&T program was created within the Office of Marine Resources to develop, promote and support a national civilian operational capability for man to work under the sea toward a better understanding, assessment, and use of the marine environment and its resources.

Operational research programs were conducted on all three U.S. coasts, in the British Honduras, in the Bahamas and the Bering Sea. Among these programs were: lobster and fish assessment in New England, where new untapped lobster beds were located; submarine canyon studies in the New York area to determine sediment drift and movement; basic reef ecology studies to identify biological indicators of pollution in Florida waters.

The MESA program was organized in early 1972, to describe, understand, and monitor the physical, chemical, and biological processes of marine environments; to provide information and expertise required for effective management of marine areas and a rational use of their associated resources; and to analyze impact on marine ecosystems of natural phenomena or man-made alterations.

## **Associate Administrator for Environmental Monitoring and Prediction**

### **Functions**

The Associate Administrator maintains cognizance over and establishes policy for environmental satellite, meteorological, hydrologic, marine environmental services, climatological, upper atmospheric and space, geomagnetic and seismological programs which entail monitoring and prediction of the environment. This office is the NOAA focal point for planning emergency readiness and preparedness against natural disasters.

### **Activities in Federal Coordination**

The principal work of coordinating the activities of the Federal Meteorological Services and of preparing and

maintaining related Federal plans is performed by the various interagency committees:

- Interdepartmental Committee for Meteorological Services.
- Interdepartment Committee for Applied Meteorological Research.
- Interagency Committee for the World Weather Program.
- Interagency Committee on Marine Environmental Prediction.

These committees and their subcommittees conduct systematic, continuous reviews of basic and specialized

meteorological and marine environmental prediction requirements and relevant supporting research.

The following Federal Plans were revised to provide better service to the public:

- The eighth Federal Plan for Meteorological Services and Supporting Research, transmitted to Congress.
- The fourth World Weather Program Plan, forwarded by the Secretary of Commerce to the President.
- The second Federal Plan for Marine Environmental Prediction, submitted to the Vice President by the Secretary of Commerce.
- The National Hurricane Operations Plan.
- The National East Coast Winter Storms Operations Plan.
- The National Severe Local Storms Operations Plan.

#### National and International Programs

During FY 1972, NOAA continued as the lead agency for coordinating the efforts in the International Field Year for the Great Lakes (IFYGL), the Global Atmospheric Research Program (GARP), the GARP Atlantic Tropical Experiment (GATE), and the World Weather Program.

IFYGL was originally conceived as a part of the International Hydrologic Decade. IFYGL is a bi-national, comprehensive study of Lake Ontario and its watershed. The "Field Year" itself—the period of intensive field data collection—began on April 1, 1972, after several years of feasibility studies. From that date until March 31, 1973, the Lake will be the scene of constant scientific activity. A U.S. IFYGL Field Headquarters was established in Rochester, New York to manage the operations activities.

GATE is continuing to generate momentum. Eleven nations, including the U.S., USSR, UK, France, Germany, Portugal, Senegal, Canada, Finland, the Netherlands, and Brazil, have made firm or highly probable commitments of substantial contributions to the experiment, and many other countries in Europe, South America, and Africa have expressed their interest in participating. The primary observational phase of GATE is scheduled to occur during June-September 1974 and is planned to deploy 20 to 30 ships and about 10 aircraft. The United States has pledged to provide at least five instrumented ships, four long-range and three short-ranged aircraft and polar orbiting and geostationary satellites.

The World Weather Program has three basic components: (1) the World Weather Watch (WWW), an international system for the acquisition, collection, processing, and distribution of world-wide operational meteorological data for use by all national weather services; (2) the Global Atmospheric Research Program (GARP), an international research effort to increase the accuracy and extend the time range of weather predictions; and (3) System Design and Technological Development, a program for providing the necessary tools for the advancement of WWW and the conduct of GARP. Senate Concurrent Resolution 67 of the 90th Congress urges U.S. participation in the World Weather Program and requires an annual report from the President describing the U.S. effort. A major thrust of the FY 1973 Plan was to assert the function of the World Weather Program as a vital component of the Global Environmental Monitoring System recently recommended by the UN Conference on the Human Environment held at Stockholm in June 1972.

In response to a request from the Department of State, the Department of Commerce, through NOAA as lead agency and in cooperation with 17 governmental and non-governmental organizations, prepared the U.S. Basic Paper on Monitoring of the Global Environment for the Conference on the Human Environment. This paper was presented at a meeting of the International Working Group on Monitoring or Surveillance held in Geneva during August, 1971.

NOAA has also assisted the Secretary-General of the UN Conference and his staff in the preparation of an Action Plan for activities to be undertaken following the UN Conference on the Human Environment. A major item in this plan is the creation of a global "EARTHWATCH" as recommended by the UN Conference. "EARTHWATCH" is a program to be coordinated by the United Nations to monitor and assess environmental trends in the atmosphere, oceans, land, and human health.

#### Emergency Services and Natural Disasters

The Office of Emergency Services in NOAA has been designated to coordinate the natural disaster aerial photography requirements of Federal departments and agencies. This Office has coordinated the NOAA participation in the National Oil and Hazardous Substance Pollution Contingency Plan.

The Black Hills flood of June 9, 1972, and Hurricane Agnes and the floods of June 21-24, 1972, were disasters of national concern. In each case, Disaster Survey Teams were dispatched to the scene to investigate the NOAA services provided during the events.

#### New Technology Opportunities

At the request of the Office of Science and Technology,

NOAA was assigned lead agency role to prepare a "Report on Protection from Natural Disasters," as part of the Administration's new initiative—New Technology Opportunities. The following agencies cooperated in developing the report: The Departments of Agriculture, Defense, Housing and Urban Development, Interior, and Transportation; the Atomic Energy Commission, the Environmental Protection Agency; the National Aeronautics and Space Administration; the National Science Foundation; the Office of Emergency Preparedness; and the Smithsonian Institution. The report achieved a substantial integration of Federal goals and programs

with the overall objective of protecting the Nation from natural disasters.

### **Data and Information Management**

The Office of Environmental Monitoring and Prediction has reviewed and published NOAA Program Plan 72-1 titled "Environmental Data and Information Management." The Plan describes the NOAA program for data and information products tailored to serve the needs of scientists, engineers, businessmen, legislators, and others—both nationally and internationally.

## **NOAA Office of Sea Grant**

### **Functions**

The National Sea Grant Program was created by the Congress in 1966 to accelerate the development, conservation, proper management and social and economic utilization of marine resources. The Office of Sea Grant provides financial support to individuals or institutions engaged in research, education and advisory services in the various oceanographic fields.

### **FY 1972 Activities and Achievements**

The University of Hawaii and the Oceanic Institute have cooperated in an engineering feasibility study of a floating community design concept. A one-twentieth model of what will one day be a "city in the sea" is now floating off the island of Oahu.

Ocean Systems, Inc., has cultivated, harvested and marketed pan-sized salmon (8-10 ounces) for the first time. Domsea Farms, Inc. (a subsidiary of Union Carbide Corporation) was significantly influenced by the success of this Sea Grant sea farming venture that they now market fresh and frozen pan-sized salmon to restaurants in the United States and abroad and plan to expand into other species.

A process developed by the University of Rhode Island Sea Grant program will enable American fisheries to use "trash" or under-utilized fish in the commercial produc-

tion of fish protein concentrate (FPC) at a price competitive in the "milk-replacer" market. This concentrate is used as milk-replacer supplement in feeding livestock and poultry.

The first Sea Grant Colleges, Oregon State University, Texas A&M University, University of Rhode Island, and the University of Washington, have been officially designated by the Secretary of Commerce. These institutions will receive priority to continue research, educational and advisory services in marine-related affairs. The Sea Grant College concept — which will be on a national basis similar to land grant colleges — will aid more effective development and conservation of the oceans.

Numerous reference documents prepared during the Sea Grant investigation were released. These include a publication on ocean zones and boundaries explaining legal concepts, such as internal waters, territorial sea and the high seas by Oregon State University. Contour charts of the North Pacific Ocean are available, prepared by Institute of Marine Resources, University of California at San Diego.

Sea Grant funded activities around the nation continue to be described in *Sea Grant 70's*, published by the Texas A&M University under a contract from NOAA. The publication documents the National Sea Grant Program and serves as a communication medium for the hundreds of individuals involved in Sea Grant activities.

## NOAA Corps

This has been a year of modest but significant growth in the NOAA Corps. The number of active duty officers has increased at an annual rate of nearly 6% to 339 as of June 30, 1972, which is within the authorized strength of 345 for the current year. Minority group representation within the Corps, which consists totally of scientists and engineering professionals, has now reached 3.5%.

A joint agreement has been reached between the Secretary of Commerce and the Secretary of Defense to provide for transfer, during emergencies declared by Congress or the President, of NOAA Commissioned Officers, equipment, or facilities to military units of DOD as the President may direct. Another new development in interagency cooperation has come about

through the assignment of a NOAA officer to the Office of the Oceanographer of the Navy, where he heads a staff of six professionals.

This, the 55th anniversary year of the Commissioned Officer Corps in the Department of Commerce, was marked by two firsts in recruiting. A member of the U.S. Merchant Marine Academy graduation class requested admission into the NOAA Corps and became the first individual to enter directly from the Academy. Similarly, as the result of applications actively sought from women graduates in science and engineering, its first woman officer entered from the University of California at Berkeley.

## NOAA National Weather Service

### Functions

The National Weather Service (NWS), through some 400 field office facilities, observes and reports atmospheric, river, and ocean conditions of the United States and its possessions and issues forecasts and warnings of weather, flood, and sea conditions that affect the Nation's safety, welfare, and economy. NWS also participates in international meteorological, hydrologic, oceanic and climatological activities; exchanges data and forecasts; and provides forecasts for domestic and international aviation and for shipping on the high seas.

### Severe Weather and Floods

The most destructive meteorological event in the United States during FY 1972 was Hurricane Agnes. After crossing the coast of the Florida Panhandle on June 19, 1972, Hurricane Agnes worked its way up through the Atlantic seaboard states into New York, bringing floods of historic proportions in terms of geographic extent, number of river basins with record flood levels, and destruction. Florida, Virginia, Maryland, District of Columbia, Pennsylvania, and New York were declared disaster areas. In spite of warnings, more than 123 persons lost their lives. The value of property destroyed was estimated at \$2.1 billion.

Hurricane Ginger, September 5-October 5, 1971, was noted chiefly for its longevity and circuitous track. It became the longest-lived tropical cyclone of record. The storm was tracked for 31 days, during 20 of which it was of hurricane proportions.

Apart from the floods resulting from Hurricane Agnes, some of the more severe floods of FY 1972 are listed below. NWS forecasts and warnings were generally timely and they are credited with saving many lives. The Buffalo Creek disaster in West Virginia was a notable exception. This was a man-made, rather than a natural disaster.

- Tropical Storm Doria floods during August 1971 caused \$138.5 million damage and 3 deaths in central New Jersey and Bucks County, Pennsylvania.
- A coal slag dam broke causing disastrous floods in Buffalo Creek Hollow of West Virginia on February 26. Some 16 mining towns in the Hollow were flooded, with some completely destroyed. At least 118 persons lost their lives. Flood damages were estimated in excess of \$10 million.
- Two hundred and thirty-six persons lost their lives in the devastating flash floods in the Black Hills of South Dakota, west of Rapid City, South Dakota, during June 1972. Record flooding occurred on streams in the area with the greatest damage and loss of life along Rapid Creek. The damages were estimated about \$100 million in Rapid City alone.

### Representative Activities and Achievements

Reorganization of Forecast Offices continued during FY 1972. Weather Service Forecast Offices (WSFO) became



operational in Lubbock, Texas; Jackson, Mississippi; Omaha, Nebraska; Louisville, Kentucky; and Sioux Falls, South Dakota. Also, eight new aviation forecast programs at forecast offices (WSFO) were implemented through reprogramming, enabling forecasters to devote more attention to smaller and more manageable areas and prepare forecasts for more airport terminals.

Twenty-six new very high frequency/frequency modulation (VHF/FM) direct radio-broadcast systems were installed during FY 1972, bringing the total to 57. Weather information, including forecasts and warnings, is broadcast continuously on these systems. Public acceptance of this medium of weather dissemination continues to increase. Radio manufacturers market low-cost receivers for "tuning in the weather."

Environmental Meteorological Support Units (EMSU) were established during FY 1972 in Boston, Massachusetts; Houston, Texas; San Francisco, California; Pittsburgh, Pennsylvania; and Seattle, Washington, bringing the total to 14. EMSUs issue air stagnation advisories whenever meteorological conditions are expected to cause excessive air pollution. Federal, state, and municipal control agencies use these advisories and other EMSU information to control and abate pollution before it seriously endangers public health and welfare. These EMSUs are established in cooperation with the Environmental Protection Agency to provide weather service in support of air pollution control.

The first Flash Flood Alarm (FFA) system was installed at Wheeling, West Virginia. Nine more such systems are available for installation at other locations. These FFA's are for locations on fast-rising streams where flooding occurs only a few hours after intense rainfall. They are also being tested for cold region operation in Alaska where glacier lake spilling causes sudden flooding. Also, NWS is assisting the establishment of community-sponsored flood warning services.

Twenty-six upper-air observing stations were converted to automated operation during FY 1972, bringing the total to 54. The program thus far has released 44 positions which are being used to augment staff where shortages exist.

During FY 1972, long-range WSR-57 network radars were commissioned at Medford, Oregon; Hondo, Texas; Bristol, Tennessee; Huron, South Dakota; Neenah, Wisconsin; and Grand Island, Nebraska, bringing the total number of NWS network radars to 49. These radars are used to monitor severe thunderstorms, tornadoes, and hurricanes and provide a basis for issuing warnings.

They are also used to obtain routine reports of precipitation for national dissemination.

After 26 years of cooperation with Canada, participation of the U.S. in operation of weather stations at Alert, Resolute, Eureka, Mould Bay, and Isachsen, in Canada's Northwest Territory, ended in August 1972. Canada will hereafter operate these stations without U.S. assistance and will continue to provide scientific data from them. Annual savings of about \$700,000 have been reprogrammed to improve domestic weather service.

In July 1971, the first of a series of storm evacuation maps for coastal areas, subject to inundation by hurricanes, was published by the National Ocean Survey. These special purpose maps, in color, were designed for use of the National Weather Service in its hurricane warning service and other agencies responsible for the evacuation of hurricane threatened areas. These maps include a delineation of areas of flooding at various heights of the storm tide, the main evacuation roads and feeder roads, low points along the roads that might be engulfed, and high spots which are likely to remain unaffected by flood waters. Civic leaders responsible for the evacuation of threatened areas can take these maps, correlate them to the NWS's forecasts and plan effective evacuation procedures. Maps were issued for two Gulf coast areas, New Orleans to Mobile and Galveston to Houston, Texas. Maps for the Corpus Christi, Texas, area were processed for later release.

NWS and the National Bureau of Standards (NBS) have jointly instituted a new storm information service for mariners in the North Atlantic and North Pacific Oceans. This service consists of hourly weather broadcasts by NBS time-signal stations WWV and WWVH. Mariners now receive up to 90 seconds of weather information each hour over each station.

NWS inaugurated a new system known as dial-in radar. In 100 seconds the system transmits a television picture showing outlines and locations of the precipitation echoes with geographical features superimposed and annotations of echo movement, intensities, and heights entered by a radar meteorologist. At the receiver site, through a business phone line and a data modem or a phone coupler, a television-monitor or hard copy picture may be reproduced. The service is available on a multiple dial-in access basis at approximately 29 sites in 21 states east of the Rocky Mountains. Non-NWS users may apply for this service.

A new level of forecast accuracy was achieved with the development of automated probability of precipitation (PoP) forecasts for the conterminous U.S., based on a

method called PEAT MOS (primitive equation and trajectory model output statistics). Since verification statistics showed these forecasts to be superior to PoP forecasts prepared manually at the National Meteorological Center (NMC), the new automated forecasts of PoP became operational on January 1, 1972, replacing the manually-prepared forecasts. The new automated forecast maps are sent from NMC to the field twice a day via facsimile.

### **Interagency Cooperation**

As part of the reimbursable weather support to other agencies, the NWS provided the forecasting and briefing to NASA for the Apollo 15 and Apollo 16 flights and for many missions in the Earth Observations Aircraft Program.

The NWS, in concert with other NOAA Components, the U.S. Coast Guard, the Environmental Protection Agency, and others, set up a system whereby agencies

requiring special environmental support for pollution control activities could obtain such upon request.

Special weather support was provided on a reimbursable basis to the FAA New York Air Traffic Control Center.

### **Future Improvements**

An overall, integrated system concept was developed for automating the data acquisition, handling, and communications functions of NWS field stations. This concept was named "Automation of Field Operations and Services" (AFOS). The objective of the AFOS Program is to provide NWS with an overall, integrated system design and implementation plan for achieving the maximum feasible automation of the data acquisition, handling, and communications functions of NWS field operations and services. The major goals are to increase the productivity and effectiveness of NWS personnel by automating routine clerical tasks and to improve services to users by enhancing the timeliness and quality of forecasts and warnings.

## **NOAA National Ocean Survey**

### **Functions**

The National Ocean Survey (NOS) mission is to conduct land and ocean survey and research operations which (1) promote commerce and transportation, (2) provide data for planning the rational use of the environment, (3) delimit regions where minerals of potential strategic or economic importance may be found, (4) contribute to the understanding and forecasting of hazards due to crustal motion as the consequence of either earthquakes or subsidence, and, (5) in general, lead to the enhancement of the quality of life. To accomplish this mission, the NOS conducts continuing programs in physical and geophysical oceanography, geodesy, aeronautical and nautical charting, technology, and engineering and scientific research. Data from these programs are disseminated in the form of maps, charts, data reports, and research and technical papers.

## **MARINE SURVEYS AND MAPS**

### **Marine Mapping and Charting**

During FY 1972, NOS issued 8 new nautical charts and 536 revised charts; published 2 new bathymetric maps, 1 surficial sediment map, 2 geophysical magnetic overlays, and 2 geophysical gravity overlays. NOS contributed 1,271 articles and 43 correction charts for publication in

the "Weekly Notice to Mariners." The Survey published a new edition of 4 U.S. Coast Pilots, annual supplements for 5, and 6 monthly supplements for the Great Lakes Pilot.

### **Oceanographic Accomplishment**

A new service for mariners has been inaugurated with the development of a Water Level Reporting and Forecasting Project. A joint undertaking of NOS/NWS, the service consists of reporting and forecasting the anomalous departures of the water levels from the predictions provided in tide tables for major ports and passes frequented by commercial shipping. Pilot projects have been instituted at New York Harbor and Anchorage, Alaska, and coverage will be expanded to include other areas as the need develops.

### **Photogrammetry Accomplishments**

About 15,000 linear miles of metric aerial photography were flown by the two NOAA photogrammetry aircraft during the fiscal year. Photogrammetric field survey units were assigned to coastal zone mapping, nautical chart maintenance, and tidal survey projects. Field survey units surveyed airports and located aids to air navigation for the Federal Aviation Administration. One

hundred and seventy-four airport obstructions charts were compiled and published. Approximately 150 shoreline surveys and chart topography drawings were completed for the marine charting program; and shoreline and photo-hydro signal location data were furnished in support of hydrography for 31 projects. Approximately 3,000 corrections were applied to 225 nautical charts.

**Flood Insurance Mapping.** — Operations on the reimbursable Coastal Inundation Mapping Program were accelerated. Twelve special flood study reports and accompanying map plates were delivered to the Federal Insurance Administration, Department of Housing and Urban Development.

**Storm Evacuation Mapping.** — The preparation of Storm evacuation Maps in cooperation with the National Weather Service covering the Gulf and SE Atlantic coasts continued and work on 18 maps was completed. The National Weather Service uses these maps and distributes them to state and local officials to facilitate the evacuation of people from endangered areas.

### **Field Operations**

Hydrography and oceanography investigations by NOAA ships are listed on the following table.

## **MARINE TECHNOLOGY**

In early FY 72, an Office of Marine Technology was created within the National Ocean Survey in order to give added focus to resolution of technical problems which limit national activities in the marine environment. This office was created by consolidation of existing technical activities, which include the National Data Buoy Project, the National Oceanographic Instrumentation Center (NOIC), the Marine Chart Automation Project, and the Engineering Development Laboratory (EDL).

### **Marine Chart Automation Project**

The program for application of modern automation technology to the production of marine charts has completed the development of required techniques and has demonstrated the feasibility of achieving a fully automated system. In 1972, the hardware was defined and procurement initiated.

Continuous area maintenance, which was established in Area IV (Gulf of Mexico) in FY 71, has been extended to Area I (New England), and a three-year program to convert the stored data base for marine charts to digital

format for fully automated processing has been started in the Environmental Data Service. Actions completed in FY 72 will permit the first fully automated chart production to take place in FY 73.

### **National Data Buoy Center**

The most significant activity in the National Data Buoy Center was preparation for deployment of the first engineering experimental buoy in the Gulf of Mexico at the year's end. Actual deployment took place on June 14.

### **National Oceanographic Instrumentation Center**

Major effort was directed toward establishment of regional calibration centers in order to improve calibration of instruments in the field.

### **Engineering Development Laboratory**

A major effort was mounted to provide instrumentation and techniques for the cooperative pilot project of the State of Maryland's investigation of the ecology of the Chester River. By year's end, the system was in full operation and the data-gathering phase will carry into FY 73, with minimal participation by NOS.

## **FLEET OPERATIONS**

The Office of Fleet Operations was established in July 1971 as a separate organizational entity within the headquarters of the National Ocean Survey. Under the centralized management concept, all NOAA ships are integrated into a single fleet operation in the interest of improved maintenance and greater operational efficiency and effectiveness. The Office of Fleet Operations maintains complete management control over 27 major ships and assumes responsibility for controlling policy procedures and factors relating to safety of numerous smaller vessels. The smaller vessels remain under the local administrative and operational control of individual laboratories and program managers.

At the beginning of FY 72 the first phase of centralized management of the NOAA Fleet was effected with the transfer of four ships from NMFS (National Marine Fisheries Service) to the NOS Pacific Marine Center. Nine additional NMFS ships will be transferred to NOS management by July 1, 1973.

## **AERONAUTICAL CHARTING AND CARTOGRAPHY**

NOS continued the production and distribution of

# HYDROGRAPHIC AND OCEANOGRAPHIC INVESTIGATIONS, BY SHIP AND AREA, FY 1972

NOAA ships	Type of survey	Area	For (other than NOS)
Davidson . . . . .	Wire Drag . . . . .	Rosario Strait, Wash.	
Do . . . . .	Hydrographic . . . . .	SE Alaska, Umpqua River, Calif., Lake Washington	
Fairweather . . . . .	Hydrographic . . . . .	SE Alaska; Hawaii	
Do . . . . .	Hydrographic . . . . .	Cook Inlet	
McArthur . . . . .	Hydrographic . . . . .	SE Alaska	
Do . . . . .	Bottom gravity . . . . .	West coast	
Do . . . . .	Hydrographic . . . . .	Hood Canal, Wash.	
Mt. Mitchell . . . . .	Hydrographic . . . . .	Va., Puerto Rico, Ga.	
Pathfinder <sup>1</sup> . . . . .	Hydrographic . . . . .	Cook Inlet	
Peirce . . . . .	Hydrographic . . . . .	Mass.; S.C.; Ga.	
Rainier . . . . .	Hydrographic . . . . .	Shelikof Strait, Alaska; Calif.	
Whiting <sup>2</sup> . . . . .	Hydrographic . . . . .	Delaware Bay; S.C.	
Do . . . . .	Hydrographic . . . . .	Virgin Islands	
Researcher . . . . .	Geophysical . . . . .	Gulf of Mexico	CICAR <sup>3</sup>
Do . . . . .	Physical Oceanography . . . . .	Lake Ontario	IFYGL <sup>4</sup>
Surveyor . . . . .	SEAMPA <sup>5</sup> . . . . .	West Coast	
Do . . . . .	Bathymetric Mapping . . . . .	West Coast; Alaska	
Rude and Heck <sup>6</sup> . . . . .	Wire Drag . . . . .	Approaches to Delaware Bay	
Do . . . . .	Wire Drag . . . . .	Chesapeake Bay, Approaches to Galveston	
Ferrel <sup>7</sup> . . . . .	Circulatory . . . . .	S.C. Coast; Massachusetts Coast	
Discoverer . . . . .	Geophysical traverse . . . . .	Trans-Atlantic	
Do . . . . .	Geophysics . . . . .	Cape Verde Islands; Lesser Antilles Arc	AOML—Miami.
Do . . . . .	Circulation . . . . .	Caribbean Region	Do
Oceanographer . . . . .	Internal wave energy . . . . .	Washington-British Columbia	(CICAR) Project. <sup>3</sup>
Do . . . . .	Circulation . . . . .	Washington	POL—Seattle.
Do . . . . .	Geophysics . . . . .	Western Pacific	Do
			Do

<sup>1</sup> Pathfinder deactivated August 1971.

<sup>2</sup> Automated High-Speed Launch 1257 used.

<sup>3</sup> Cooperative Investigation of Caribbean and Adjacent Regions.

<sup>4</sup> International Field Year of the Great Lakes.

<sup>5</sup> Scientific Exploration and Mapping Program.

<sup>6</sup> Wire-drag ships.

<sup>7</sup> Automated High-Speed Launch 1255 used.



nautical charts, aeronautical charts and chart-related data. At the end of the fiscal year there were 813 nautical charts, 12 special-purpose charts, 33 bathymetric maps, 12 tidal current charts, and 79 visual aeronautical charts on issue, which are distributed to the user primarily through chart agents. At the end of June 1972, there were 933 nautical and 2,340 aeronautical chart agents under contract to NOS. There were also 2,538 Instrument Aeronautical Charts on issue which are distributed through a mail subscription system to approximately 52,000 subscribers.

The program of converting aeronautical charts to joint civil/military specifications was completed during FY 72.

## **GEODESY**

### **Geodesy Accomplishments**

Approximately 1,254 new triangulation or traverse stations were established by geodetic field parties during the year. A large portion of this work was accomplished under cooperative agreements with Federal and State agencies. Horizontal control data for 4,099 stations were added to the files for distribution as requested.

Resurveys for monitoring crustal movements along the San Andreas fault system of California were continued during the year. These resurveys included an extensive network of triangulation in the San Fernando area of the February 1971 earthquake. Results of these resurveys will be published in a NOAA report of the earthquake. In addition, resurveys were performed in eight areas where the California aqueduct crosses the fault system. Results of these and previous resurveys have provided valuable information for construction of the aqueduct in seismic areas.

A cooperative highway project was in progress in the State of Kansas. Surveys performed to standard specifications and being processed and included in the national network are those of the U.S. Geological Survey; the Highway Departments of the States of California, Florida, Louisiana, Minnesota, and Mississippi; the North Carolina Geodetic Survey; Monroe County, New York, Geodetic Survey; and the City of Medford, Oregon.

Daily measurements of astronomic latitude were continued throughout the year at Gaithersburg, Md., and Ukiah, Calif. These are two of the five observatories participating in an internationally coordinated program to measure polar motion, or the wobble of the earth about its rotational axis.

### **National Geodetic Satellite Program**

This program is designed to provide a unified global framework for earth mapping. Data reduction is nearing

completion on the project which, under the technical direction of NOS, represents the cooperative efforts of the Departments of Commerce and Defense, the National Aeronautics and Space Administration (NASA), and 27 host countries.

### **Geodetic Research and Development Laboratory**

Data reduction for the Worldwide Geometric Satellite Triangulation Program has been completed and a successful final adjustment of this net has been computed. Release of the results is being prepared.

## **LAKE SURVEY CENTER**

The Lake Survey Center mission is: (1) to prepare and publish navigation charts and related publications for the Great Lakes, their outflow rivers, Lake Champlain, the naturally navigable waters of the New York State Barge Canal System, and a portion of the Minnesota-Ontario Border Lakes; (2) to carry out the necessary hydrographic and associated surveys and maintenance operations to accomplish the charting mission; (3) to make studies of all matters affecting the hydraulics and hydrology of the Great Lakes, including the recording of the levels of the Lakes and their outflow rivers; and (4) to perform limnological studies pertinent to the development and improved use of the water resources of the nearly 100,000 square miles of water surface of the Great Lakes system. It is currently deeply involved in NOAA's intensive study of these waters in connection with the International Field Year for the Great Lakes (IFYGL).

### **Hydrography**

**Nautical Charts — Navigational Charts and Publications.** — During FY 72, the Marine Mapping and Charting Division published a new edition of the Great Lakes Pilot and prepared six monthly Supplements thereto.

A monthly Bulletin of Lake Levels was prepared and published each month.

In support of IFYGL, various special maps were prepared and printed. Gage installation and maintenance on Lake Ontario were continued also for the IFYGL Program.

Various items under "reimbursable work" were prepared and printed for the Corps of Engineers, National Park Service, Department of the Interior, National Ocean Survey, and the Great Lakes Basin Commission.

Arrangements were completed with the Canadian Hydrographic Service (CHS) and the Lake Survey Center (LSC) for a four-month exchange of technical expertise beginning in April 1972.

**Coastal Zone Mapping and Services—Estuarine and Lake Investigations.**—A total of 51 permanent and 85 temporary seasonal water level gauges were operated and maintained during the year to provide water level elevations. Two telemetering gauges are in operation year-round on Lake Erie to assist shippers during the navigation season.

### Geodesy and Photogrammetry

**Geodesy Accomplishments.**—A total of 350 kilometers of precise levelling was completed on the St. Marys River line, between Lakes Huron and Superior, as part of the long-range program of updating International Great Lakes Datum (1955).

Results of the special survey of the landslide area at Sleeping Bear Point on the east coast of Lake Michigan were provided to the State of Michigan's Department of natural Resources.

**Photogrammetry Accomplishments.**—Stereo-compilation of the planimetry of Burns Harbor on Lake Michigan was completed and compilation of St. Clair River planimetry from Lake Huron to Algonac, Michigan, was completed. Stereo-compilation also was completed in the area of Marinette, Wisconsin and Menominee,

Michigan. Approximately 42 linear miles of metric aerial photography were used.

### Limnology

**Accomplishments.**—Plans for a data buoy network to be installed in Lake Ontario for IFYGL were completed. Field testing of a prototype buoy was also completed. Land and island meteorological stations to be used in the same program were delivered and accepted.

Feasibility studies in preparation for IFYGL were conducted at two Lake Ontario harbors to determine flushing, diffusion and circulation.

Data on extreme lake level fluctuations have been furnished as a basis for design of intake structures for nuclear power plants to avoid ice damage.

Joint investigations with the Atomic Energy Commission (AEC) are underway to determine the behavior of heated discharges entering the lakes.

The Limnology Division is actively involved with other agencies in the program for extension of the navigation season on the Great Lakes.

Data on characteristics of Great Lakes water were given to the Environmental Protection Agency (EPA) for use in enforcement plans and conferences.

## NOAA National Marine Fisheries Service

### Functions

The mission of the National Marine Fisheries Service (NMFS) is to conduct an integrated program of services and research for the protection and rational use of living marine resources which have economic, aesthetic, and recreational value to the Nation. The NMFS conducts programs (1) to determine the effects of natural and man-made changes in the environment on living marine resources; (2) to provide information and services to enhance efficient and judicious use of these resources; and (3) to further good national and international practices in the management, use, and protection of the live resources of the sea.

### Resource Assessment

Assessment of living marine resources ranges from the compilation of statistics on the catch to the development and use of complex instruments based on recent discoveries in space and other advanced technologies. Fishery resources harvested by U.S. commercial fishermen in calendar year 1971 reached 4,969 million pounds of fish, shellfish, other aquatic animals, and aquatic plants. The ex-vessel value was \$643 million — the

highest dollar value in the history of U.S. fisheries. The quantity landed was the fifth largest on record. Details of the commercial landings are given in *Fisheries of the United States*, 1971, Current Fishery Statistics No. 5900.

Research of the National Marine Fisheries Service on living marine resources was consolidated into seven major research centers to better coordinate and direct programs along common lines.

Scientists of the NMFS participated with scientists of the USSR, France, West Germany, and Canada in a study of herring in the Georges Bank-Gulf of Maine area. The NMFS vessel *Delaware II* and the French vessel *Cyros* played an active role in the study. By means of an exchange of scientists on the vessels, coordination of methodology was achieved.

Another cooperative study was conducted with the USSR using the NMFS vessel *Albatross* and the *Soviet Blesk*. This study involved measuring the accuracy of groundfish abundance estimates derived from using research vessel trawls. Following this study, surveys were made to assess groundfish stocks from Cape Hatteras to Georges Bank.

## **Fur Seals**

In 1971 an independent panel of distinguished veterinarians from various U.S. universities went to the Pribilofs and examined the harvest. They reported that the method now in use, "clubbing, followed by exsanguination, constitutes painless, humane euthanasia," and that the killing methods "cannot be criticized from the standpoints of humaneness and efficiency." The veterinarians did recommend that even though they found the present operation to be humane, rapid, and efficient, the search should continue for an improved method of euthanasia. The search has been a continuing one and is now being accelerated through a contract with Battelle Memorial Institute of Columbus, Ohio.

## **Resource Utilization**

Studies to enhance resource utilization include: (1) economic and marketing research (such as demand and supply projections, benefit/cost studies, and foreign trade analyses); (2) the collection, analysis, compilation, and dissemination of fishery statistics and market news information; (3) administration of fishing industry assistance by providing money for loans, mortgage and loan insurance, and subsidies; (4) microbiological, chemical, and technological research to enhance the quality and utilization of fishery resources; (5) a voluntary national program of inspection and certification of fishery products; (6) programs to improve marketing practices and to alleviate extraordinary short-term supply-demand imbalances; and (7) national research programs in fishery products technology.

## **Statistics and Market News**

Data were collected on the volume and value of commercial landings of fish and shellfish by species, State, and type of gear; production of fishery products; imports and exports of fishery products; per capita consumption of fishery products; employment on fishing craft and in wholesale and fish processing establishments; and the number of fishing craft and gear operating in the fisheries. These data are collected in cooperation with the various State fishery agencies, and are published in monthly, quarterly, and annual reports. They are used for policy formulation, decision making, and research programs in both Government and private industry. Also statistics on the marine sport fisheries were collected, such as the quantity of fish caught, and the amount of fishing efforts by species and by region.

Current market information on commercial fishing and processing was collected, published, and stored. Seven Market News Offices located in major fishery marketing centers collected daily information on prices, landings, imports, holdings of fishery products, and other general

market information. This is disseminated three times a week.

## **Aquaculture**

The major effort on aquaculture is being conducted on the Pacific Coast and in the Gulf. At the Southwest Fisheries Center marine fish eggs and larvae were reared to enable scientists to classify fish larvae with precision; to study the physiology of fish larvae and juveniles; and to study their behavior in relation to predators and environmental conditions. In the Puget Sound and in Alaska, NMFS biologists successfully reared salmon in saltwater pens. In the Gulf emphasis is directed toward determining the optimum techniques for rearing shrimp under controlled conditions.

NMFS scientists participated in a project with Alaska Department of Fish and Game biologists to test and develop techniques for providing high quality pink salmon fry from gravel incubators.

## **Impact of Fishing**

High seas fishing operations conducted by many foreign countries have expanded off our coasts and elsewhere around the world at an alarming rate. Because some important fishery resources along U.S. coast have suffered declines, critical situations have developed which require positive actions to solve disputes and conflicts among countries over available resources. The International Activities Staff has collated and evaluated information on foreign fishing operations to keep the public, the Government and the Congress fully informed. Profile data and background information for major fishing countries also were developed to assist our negotiators at the United Nations Law of the Sea Conference and in negotiating international conservation agreements.

The NMFS participated with the U.S. Coast Guard in the seizure of 15 foreign vessels, found within the contiguous fishery zone of the United States, which resulted in fines totaling \$385,000. In addition, 53 separate violations of International Agreements were observed, documented, and brought to the attention of the offending country.

The President signed an amendment to the North Atlantic Fisheries Act, which implemented international inspection of foreign fishing vessels.

## **Impact of Changes in the Environment**

NMFS scientists of the Middle Atlantic Coastal Fisheries Center cooperated with the Public Health Service in studies in the vicinity of the offshore New York dump site areas. Studies showed evidence that coliform bac-

teria are present in the bottom sediments 100 miles to seaward in the Hudson Canyon. Other observations strongly suggest the transport of wastes down the Canyon from dredge spoil and sewage sludge disposal areas. While such transport was implicit in the original planning for the dump sites, the manner in which it takes place and the cumulative effects, which have significance for both living marine resources and public health, were not anticipated. The data already in hand justifies strong resistance to continuation of ocean dumping.

The National Marine Fisheries Service participated in a cruise aboard the U.S. Coast Guard Cutter *Glacier* to inshore and high seas areas near the Prudhoe Bay, Alaska, oil field. The mission of the cruise was to obtain ecological baseline data in the area before major industrial development takes place. Findings show that the Beaufort Sea cannot be considered as an isolated basin but that it will be affected by developments in the Bering Sea and Chukchi Seas as well as by what happens in the Prudhoe Bay area.

### Industry Problems

Of great concern to the fishing industry and sportfishing groups is the need to keep marine fishery resources at their highest productivity now, and to maintain them in a healthy and productive condition. To accomplish this, the NMFS conducts extensive surveys to evaluate the condition of marine fish and shellfish stocks contiguous to the United States. In collaboration with the States, foreign governments and international fishery commissions, NMFS recommends measures required to manage these resources.

During the year, four financial programs of benefit to the fishing industry were administered. (1) The Fisheries Loan Fund (authorized by the Fish and Wildlife Act of 1956) provided loans totalling about \$1 million for fishing vessels. To make the program more responsive to fishermen's credit needs, the interest rate was lowered from 8 to 6 1/2 percent. (2) Under the Fishing Vessel Mortgage and Loan Insurance Program (started in 1960) about \$2 million of fishing vessel mortgages were insured. (3) The Capital Construction Fund was implemented this fiscal year and fishermen as of the end of

the year have about \$4.5 million on deposit as tax deferrable capital reserves. This program is permitting 400 fishing vessels to obtain deferral of taxable calendar year 1970 funds which otherwise would have been indeferrable. (4) Under the Fishermen's Protective Act (started in February 1969) over 200 fishing vessels entered into guarantee agreements with NMFS.

### Interagency Cooperation

Numerous programs are underway in the NMFS in cooperation with universities and States, Federal, foreign and international agencies. There was national cooperation with other agencies in areas such as: irradiation of fishery products with the Interdepartmental Committee on Irradiation; metals in fish with the Food and Drug Administration; fish processing with the Economic Development Administration; economics and financial assistance with the Farm Credit Administration; fishing vessel safety with the U.S. Coast Guard; and on the Fishermen's Protective Act with the Department of State.

Examples of NMFS cooperative programs during FY 1972 include: (1) a study of abalone-sea urchin relationships with the California Department of Fish and Game, (2) a Lake Washington fish-finder service with the University of Washington and Washington Department of Fisheries, (3) study of albacore tuna migration and population dynamics with the American Fishermen's Research Foundation, (4) cruises to assess abundance of fish off the Pacific and Atlantic coasts with the USSR, West Germany, Japan, France, and Canada, and (5) comprehensive studies to determine the ecological effects of dumping municipal wastes in the New York Bight area with the U.S. Public Health Service.

All 50 States, American Samoa, Guam, Puerto Rico, and the Virgin Islands participated in the grant-in-aid for fisheries programs during FY 1972. Three million eight hundred thousand dollars was provided for commercial fisheries research and development projects and \$2.0 million was provided for conservation, development and enhancement of anadromous fish resources. Additionally, \$350,000 in resource disaster funds was made available for restoration of damaged oyster resources in the Gulf of Mexico and coastal North Carolina.

## NOAA National Environmental Satellite Service

### Functions

The National Environmental Satellite Service (NESS) is responsible for coordinating environmental satellite activities of NOAA and for managing an operational environmental satellite system. The satellites currently

employed in the system were the Environmental Survey Satellites (ESSA 8 and 9). The ESSA spacecraft provide the real time direct readout service, known as APT (Automatic Picture Transmission), to users around the world and the daily mapping of the earth's cloud cover. In addition, NESS has continued an intensive opera-



tional experiment with NASA using the Applications Technology Satellites ATS 1 and 3. The ATS spacecraft observe daylight cloud coverage of the Western Hemisphere and its surrounding oceans, and they are also used to broadcast environmental data to users located in Western Europe, North and South America, and in the Pacific Ocean.

## Operations

The NESS operation has been sustaining a 95% reliability, providing scheduled cloud information products to users from the ESSA 9 and the ATS spacecraft. The APT coverage via ESSA 8 has been maintained without interruption.

Cloud cover forecasts extending to 36 hours were provided daily to support Apollo 15 and 16. This product, a joint NESS-NWS effort, has also been used by the U.S. Navy and the National Weather Service (NWS) to support aviation forecasting.

ATS 3 was used to support severe weather forecasting and research. Developing cloud formations which could spawn tornados were identified and tracked by meteorologists using photographs taken by this satellite. NESS continued a large scale development effort with remote sensors. The flight model of the Infrared Temperature Profile Radiometer (ITPR) funded by NASA and developed by NESS for Nimbus E has been delivered to the spacecraft contractor for integration. NESS has also begun work on development and fabrication of an Earth

Radiation Budget Radiometer for NASA. The Satellite Infrared Spectrometer (SIRS) on Nimbus 4 continued to provide operationally useful data for the numerical weather prediction models of the National Weather Service.

In May 1972, the Spacecraft (SPOC) Project of the Naval Research Laboratory was integrated into the National Environmental Satellite Service. The new NOAA/NESS SPOC Group will assume the lead role in planning and coordinating a NOAA-wide program in applying remote sensing techniques to NOAA research and operations in ocean dynamics, ocean color, sea ice, coastal processes, fisheries environment assessment, and hydrology.

NESS personnel are members of joint USA/USSR Working Groups on Space Cooperation on Meteorological Satellites, and on the Natural Environment. Both working groups made tentative arrangements for cooperative experiments using satellites and other facilities of both countries, and for the acquisition and exchange of data.

During the past year there were 63 officially named hurricanes and typhoons, which were tracked by satellite imagery. In a number of cases, the satellite observation was the first indication of a developing storm. On the basis of these satellites observations, 1898 special tropical storm advisories were sent to meteorological services worldwide.

## NOAA Environmental Data Service

During FY 72 NOAA reorganized and expanded the Environmental Data Service (EDS) to provide a comprehensive national focus for environmental data and information services. As a result, EDS for the first time became responsible for both data and technical literature management and dissemination. The addition of a literature-based information service makes it possible for EDS centers to act in concert as a comprehensive, single source of data and information applicable to environmental problems.

EDS services and products are provided by the

National Climatic Center  
NOAA

Federal Building  
Asheville, N.C. 28801

National Geophysical and  
Solar-Terrestrial Data Center  
NOAA  
Boulder, Colo. 80302

National Oceanographic Data Center  
NOAA  
Rockville, Md. 20852

Environmental Science  
Information Center  
NOAA  
Rockville, Md. 20852

The three EDS data centers also serve as World Data Center subcenters for a number of environmental science disciplines, under an international data exchange program.

## Representative FY 72 Activities and Achievements

During FY-72 EDS initiated a new, single-contact data and documentation service available to both NOAA and non-NOAA users. A user need contact only one EDS center to receive a comprehensive answer concerning global environmental science data information and

literature for all NOAA disciplines, whether or not his query concerns the discipline for which the center has responsibility, or requires multi-discipline input. EDS also provides referral information concerning data and literature collections and information services of other agencies and activities.

The National Science Foundation has designated the Environmental Data Service (EDS) lead agency for data management and information services for United States programs in the International Decade of Ocean Exploration (IDOE). Three EDS data centers — the National Oceanographic Data Center, National Geophysical and Solar-Terrestrial Data Center, and National Climatic Center — are involved in the acquisition, formatting, storage, and dissemination of IDOE oceanographic, geophysical, and meteorological data.

During the winter of 1971-1972, EDS worked with the Office of Emergency Preparedness (OEP) to help OEP prepare weekly briefings for the President regarding potential fuel or power shortages in the Eastern and North Central United States. EDS provided statistical climatological data for key United States cities, as well as interpretations of these data with respect to their impact upon fuel oil, gas, and electric power consumption. OEP uses this information to evaluate the risk of potential fuel shortages and "brownouts" and to plan measures to cope with such events should they occur.

In another cooperative program with OEP, EDS person-

nel supplied climatological data needed to assess the drought situation in the Southern and Southwestern United States.

"Environmental Guide for Seven U.S. Ports and Harbor Approaches," a 166-page special report compiled for the President's Council on Environmental Quality, was published in February. The publication is an integral part of a National Supertanker Study to select suitable United States harbor sites for ships of over 100,000-ton cargo capacity.

The Franklin Institute Research Laboratories of Philadelphia, under contract to EDS' National Oceanographic Data Center (NODC), have completed compilation of two new bibliographies under the Cooperative Investigation of the Caribbean and Adjacent Regions (CICAR). The subjects are marine biology and marine geology and geophysics. Printing and distribution are scheduled for the first half of FY 73. These volumes follow the CICAR bibliography on meteorology and oceanography previously established by NODC.

EDS published a 236-page "Drought Bibliography." This compilation (made over a period of 5 years) of references, with abstracts where available, covers the literature from 1467 through 1968 on agricultural, hydrologic, and meteorological drought, and is thought to be the most comprehensive yet assembled. Copies are available through EDS' Laboratory for Environmental Data Research, Gramax Bldg., Silver Spring, Md. 20910.

## NOAA Environmental Research Laboratories

### Functions

The Environmental Research Laboratories (ERL) conduct an integrated program of research, fundamental technology development, and services as part of their mission to develop new and useful knowledge as a scientific basis for NOAA operations and services. ERL research contributes to our knowledge and understanding of the physical environment, provides the basis for precise and timely warnings of threatening elements in the environment, and leads to methods of modifying the environment for public safety and benefit. Programs of research are conducted in the fields of oceanography, meteorology, geomagnetism and seismology, and solar and space physics. Principal laboratories are located in Boulder, Colorado; Seattle, Washington; Norman, Oklahoma; Miami, Florida; Princeton, New Jersey; and Silver Spring, Maryland.

Selected items of activity and achievement in several of the program areas are noted below.

### EARTH SCIENCES

The Earth Sciences Laboratories (ESL) was reorganized

in FY 1972, bringing together all NOAA efforts in seismology and geomagnetism, both research and operations, into one organization.

After 14 years of operation, the geomagnetic observatory at Byrd Station in the Antarctic was closed in October 1971 as the result of the U.S. deactivation of that scientific station. The availability of further geophysical data from this region is currently dependent upon successful development of an unmanned geophysical observatory.

During the past year, ESL has continued its close relationship with the Atomic Energy Commission (AEC). ESL components monitored the seismic and possible tsunami effects of the Cannikin nuclear experiment in which NOAA emerged as the authoritative source of information to the general public. Monitoring of strain in the Aleutians revealed episodic creep-like events which can be interpreted in terms of tectonic interactions of the Pacific plate and the Continental plate to the north. Other areas of cooperation with the AEC include monitoring of natural and man-made seismic activity in the Nevada Test Site area; studies with

private industry in developing geological and seismological data in an effort to define more clearly the potential seismic hazard at nuclear power plant sites; and a study of seismicity and tectonics of the Eastern United States.

## OCEANOGRAPHY

Trans-Atlantic geotraverse research conducted by the Atlantic Oceanographic and Meteorological Laboratories has provided information about the ocean bottom that can be applied to the search for subsea oil and minerals. Preliminary work has already revealed the presence of possible salt domes in the deep ocean basin off Cap Blanc, Mauritania, the first region where possible salt domes have been identified in the deep ocean basin. If true salt domes, their presence would indicate immense oil potential for the deep ocean basin.

Geophysical studies were conducted in the Caribbean-Lesser Antilles to establish the structural relationships between the southern Lesser Antilles and the South American continent and between the northern Lesser Antilles and the Equatorial Atlantic Ocean basin. Data analysis revealed that the southern Lesser Antilles island arc structure is an integral part of the South American continent and not part of an independent crustal plate as suggested by the new global tectonics hypothesis. These results have strong implications for future exploration for petroleum and mineral deposits in this area of the Caribbean. Present efforts are extending this analysis eastward from the Lesser Antilles in an attempt to predict probable mineral resources and earthquake producing structures in the Equatorial Atlantic Ocean.

Work continued on the Continental Shelf Sedimentation Project (CONSED) by planting the first CONSED bottom current meter in the New York Bight. The meter was emplaced by divers adjacent to Ambros Light in 60 feet of water. This is the first of five such installations planned for this area to measure seasonal variations in bottom currents and their influence on sediment transport.

A micro-tsunami experiment was conducted in conjunction with the AEC test at Amchitka. Wave gauges were installed offshore at Marcus, Wake, Oahu, and Amchitka and were operated during the test. Although a small short-duration disturbance was noted on one gauge, no significant waves were recorded at 20-100 kilometers offshore of the islands.

## AERONOMY AND SPACE SCIENCES

Aeronomy Laboratory (AL) scientists have studied a mysterious enhancement in the red light from the night sky using the high-power ionospheric-modification radar operated by the Institute of Telecommunication Sciences. Detailed observations of this phenomenon have

provided new information on the chemistry of oxygen in the outer regions of the atmosphere. Theoretical investigations of the cause of the light emission have yielded new insights into the mechanisms involved in heating plasmas by radio waves, a topic that is currently of major interest to the Nation's program to produce controlled thermonuclear fusion.

AL has initiated a program using a tunable infrared laser in conjunction with a laboratory flowing-afterglow system to determine the rates of the important chemical reactions involved in lower-atmosphere pollution. Another program will use a theoretical computer model and direct measurements from balloons and aircraft to determine the natural concentrations of certain trace gases in the stratosphere. This information is an essential ingredient in estimating the potential contamination effects of stratospheric aircraft operations.

Space Environment Laboratory scientists staffed the Space Radiation Console, Manned Spacecraft, NASA during the flights of Apollo 15 and 16, and provided on-the-spot support for these missions.

## ATMOSPHERIC SCIENCES

The NOAA program of geophysical monitoring for climatic change was augmented in cooperation with the Office of Naval Research. Construction has begun on an observatory at Point Barrow, Alaska, to measure background trace materials in the Arctic environment. The observatory is expected to be ready for activation in the late fall of 1972. A suitable site for a third observatory was located in American Samoa. An observatory at Cape Matatula on the Island of Tutuila will provide an almost ideal site.

Computer models, applicable from scales the size of a large city to analyses of the global buildup of carbon dioxide, have been designed and tested. The global CO<sub>2</sub> model permits projections of atmospheric carbon dioxide levels to the year 2000 and predicts a significant increase by that time if the burning of fossil fuels continues at the accelerating rate.

Air Resources Laboratories staff assigned to the Environmental Protection Agency have begun the initial planning and deployment for a major urban regional study in the St. Louis, Missouri area. This experiment will incorporate not only meteorology but the physics and chemistry of pollutants, methods of emission inventories, health, social and economic effects and will represent a comprehensive effort to understand the details and dynamics of pollution generated within and crossing large urban areas.

In a cooperative program with NASA, FAA, and USAF, thunderstorms have been penetrated by instrumented aircraft under carefully monitored and controlled

observation conditions. Data obtained during the penetrations on the frequency, magnitude and duration of the superimposed gusts are providing assistance to the aviation industry and air traffic control system in developing storm avoidance procedures.

Continuing studies of lake effect snowstorms has confirmed the hypothesis that it is possible to achieve greater downwind dispersal of a storm's snowload through seeding. Two additional results have developed in the past year. On selected occasions it is possible to seed storms over the Great Lakes so that the major portion of the snow falls back into the Lakes rather than on densely populated urban areas. It has also become apparent that the lake effect snowstorm is a special type of the widely occurring shallow winter storm. These storms occur over the high plains east of the Rocky Mountains. This has prompted NOAA to propose and plan for a high plains precipitation enhancement experiment that could ultimately produce the technology for a new cloud seeding industry and for export abroad. It is also suggested from Great Lakes storm research that water which evaporates during the flow of cold air across the still warm Lakes can be recycled into the Lakes by seeding. It is expected that such activities could be beneficial toward the alleviation for the water needs of adjacent communities where water supply depends on the Lakes.

The National Hurricane Research Laboratory (NHRL), working with Project Stormfury, a joint Department of Commerce-Department of Defense effort to explore the feasibility of hurricane modification, seeded Hurricane Ginger on September 26 and 28, 1971. The storm's winds decreased after seedings on September 28, but it is doubtful that the seeding caused much of the change. Although Ginger was a large, diffuse storm lacking a well-defined eyewall, it did permit Project scientists to attempt a rainsector experiment for the first time.

Because of the unusual nature of the storm, invaluable research data were obtained from the experiment.

NHRL has developed a group of two-dimensional models and one fully three-dimensional computer model, based on physical theory, that simulate hurricane life cycle and structure with a high degree of realism. NHRL is the first to develop and publish realistic results from a three-dimensional model. These models will result in improved accuracy in the forecasting of hurricane tracks and intensity and provide a greater potential for beneficial hurricane modification.

The Experimental Meteorology Laboratory (EML) focuses on cumulus modification experiments directed toward precipitation enhancement and investigations into severe storm mitigation. Mathematical-numerical models predicting results of the experiments are a key part of the program. In FY 1972, EML completed and published analyses of the 1971 Federal-State drought mitigation program which it had conducted, showing that about 100,000 acre feet of water were contributed by dynamic cumulus seeding.

The Apollo 17 lightning incident led to a joint research project between the NASA Kennedy Space Center and NOAA's Atmospheric Physics and Chemistry Laboratory which included the design and installation of a short range warning system against electrified clouds. The system involved an electric field mill system at Kennedy Space Center to display the electric field potential on a television screen providing information on the location, movement and electric strength of potential thunderclouds in the area. The second part of the project was research through which lightning strokes have been successfully triggered from the electric field inside of thunderclouds, using small rockets equipped with a newly designed measuring and triggering payload.



# PATENT OFFICE

Table I.—SELECTED PATENTS WORKLOAD DATA

Item	Fiscal years				
	1968	1969	1970	1971	1972
Applications for patents received:					
Inventions . . . . .	90,252	96,342	100,116	103,733	102,663
Plants . . . . .	107	103	113	161	166
Reissues . . . . .	304	376	344	266	293
Total . . . . .	90,663	96,821	100,573	104,160	103,122
Application disposals by examiners: <sup>1</sup>					
Applications allowed . . . . .	72,205	72,666	72,298	74,403	69,890
Applications abandoned . . . . .	29,307	29,404	31,394	34,842	36,383
Total . . . . .	101,512	102,070	103,692	109,245	106,273
Applications pending, June 30:					
Pre-Examination . . . . .	24,949	16,317	42,149	45,101	35,020
Under Examination . . . . .	164,960	174,241	145,290	139,026	176,239
Post Examination . . . . .	25,095	33,543	35,632	32,352	14,601
In issue process . . . . .	16,666	15,905	17,596	21,703	22,830
Total in office . . . . .	231,670	<sup>2</sup> 240,006	240,667	238,182	218,690
Patents granted: <sup>3</sup>					
Inventions . . . . .	61,599	61,957	66,339	70,387	83,221
Plants . . . . .	67	80	80	77	170
Reissues . . . . .	185	201	311	222	264
Total . . . . .	61,851	62,238	66,730	70,686	83,655

<sup>1</sup> Includes plant and reissue applications.

<sup>2</sup> Inventory adjustment of 2,605 plus category not previously counted of 2,654.

<sup>3</sup> Includes withdrawn numbers.

Table II.—SELECTED TRADEMARK EXAMINING WORKLOAD DATA

Item	Fiscal years				
	1968	1969	1970	1971	1972
Applications for trademark filed:					
For registration . . . . .	28,292	31,268	33,807	32,803	33,741
For renewal . . . . .	4,089	6,267	6,329	6,189	5,980
Disposals by Office:					
Maturing to registration . . . . .	21,499	21,833	23,752	23,710	22,875
Abandoned . . . . .	5,859	5,907	6,134	6,974	7,656

Table III.—INCOME FROM FEES, FISCAL YEARS 1968-72  
(In thousands of dollars)

	1968	1969	1970	1971	1972
Patent issue fee, including printing . . . . .	9,274	9,067	9,000	10,490	10,436
Patent application filing fee, including extra claims . . . . .	7,638	8,332	8,720	8,880	8,838
Printed copies, U.S. patents, designs, and trademarks . . . . .	2,638	2,564	2,588	2,358	2,467
Recording assignments . . . . .	1,476	1,651	1,801	1,711	1,851
Trademark application filing fee . . . . .	998	1,154	1,235	1,229	1,243
Reproduction of records . . . . .	1,038	1,126	1,159	1,063	1,065
Appeals, including briefs . . . . .	561	582	677	636	757
Making, mounting, correction, and comparison of drawings . . . . .	129	142	138	139	155
Trademark renewal filing fee . . . . .	102	154	159	155	150
Design application filing fee . . . . .	98	109	115	123	129
Filing of affidavits pertaining to use or non-use of trademarks <sup>1</sup> . . . . .	(*)	(*)	(*)	34	127
Special service on orders . . . . .	155	122	144	166	122
Certification of records . . . . .	107	128	136	124	120
Design issue fee . . . . .	103	88	113	95	91
Disclosure documents filed <sup>2</sup> . . . . .	. . . . .	(*)	23	34	60
Trademark oppositions and cancellations . . . . .	37	37	38	40	41
Subscription service for copies . . . . .	34	35	37	38	39
Petition fees . . . . .	20	25	32	38	37
Attorney registrations and certificates . . . . .	(*)	17	41	29	26
Patent reissue filing fee, including extra claims . . . . .	21	26	28	28	25
Certificates of correction . . . . .	(*)	(*)	15	15	19
Patent and trademark disclaimers . . . . .	(*)	(*)	(*)	(*)	18
Other fees <sup>3</sup> . . . . .	97	97	79	81	67
Total . . . . .	24,526	25,456	26,278	27,506	27,883

<sup>1</sup> Includes fees first applicable in FY 1971 under P.L. 89-83.

<sup>2</sup> Fee was not in effect until May 1969.

<sup>3</sup> Approximately 40 types of fees amounting to less than \$15,000 for each type.

\* Less than \$15,000.

# NATIONAL TECHNICAL INFORMATION SERVICE

## SELECTED STATISTICS

Source agency	New reports processed		
	Announced and added to collection	Announced only	Total
DoD . . . . .	18,517	6,820	25,337
Interior . . . . .	—	14,733	14,733
NASA . . . . .	*7,616	—	7,616
AEC . . . . .	*12,295	—	12,295
Other . . . . .	14,837	—	14,837
Total . . . . .	53,265	21,553	74,818
Documents shipped			
	Copies		Sales income
Papercopy sold . . . . .	670,400		\$2,675,856
Microfiche sold . . . . .	1,613,000		749,144
Total . . . . .	2,283,400		\$3,425,000
Sales income			
Documents . . . . .	\$3,425,000		
NTISearch . . . . .	41,000		
Magnetic tape . . . . .	70,000		
Subscriptions . . . . .	685,000		
Total . . . . .	\$4,221,000		
Reference inquiries			
Quotations . . . . .	50,642		
Subject searches . . . . .	84,554		
Order identification . . . . .	136,718		
Total . . . . .	271,914		

\*Magnetic tape input.

# OCEAN SHIPPING

## INTRODUCTION

The Assistant Secretary for Maritime Affairs serves as the principal adviser to the Secretary on the development, promotion, and operation of a viable American

merchant marine. He also serves as head of the Maritime Administration.

## OFFICE OF THE ASSISTANT SECRETARY FOR MARITIME AFFAIRS MARITIME ADMINISTRATION

### Functions

The Maritime Administration (MarAd) is responsible for the development and maintenance of an efficient American merchant marine—one capable of meeting the United States' commercial and military needs. To meet this goal, MarAd carries out a broad range of programs: (1) extending financial assistance to eligible operators and shipyards; (2) assisting American operators to increase the proportion of U.S. trade carried in their ships; (3) helping U.S. ports to develop more efficient and economical facilities and operations; (4) engaging in a wide variety of research and development programs to improve maritime productivity; (5) training skilled seafarers to man American ships; (6) monitoring and participating in international activities which affects the American maritime industry; and (7) maintaining the National Defense Reserve Fleet as a source of emergency shipping capability for the Nation.

MarAd's financial assistance programs for the industry include such direct aids as construction-differential subsidy and operating-differential subsidy, as well as indirect forms, such as ship mortgage insurance and tax-deferred Capital Construction Funds. MarAd also writes war-risk insurance and oversees the federal government's cargo preference program.

Other MarAd activities include supervision of the U.S. Merchant Marine Academy at Kings Point, N.Y., and administration of several advanced training programs to upgrade sea-going mariners' skills in safety-related areas, such as radar operation and usage. MarAd also sells

obsolete ships from the National Defense Reserve Fleet for scrap or nontransportation use.

### Shipbuilding

Subsidized shipbuilding contracts for 21 new ships and five conversions were awarded during the year. These contracts aggregate \$795.5 million, of which the government will pay \$342.7 million in construction subsidy and the cost of National Defense Features. The award of these contracts brings the total volume of shipbuilding generated by the President's program to 30 new ships and 13 conversions with a total value of over \$1.1 billion.

At the end of the fiscal year, there were a total of 92 ships of 1,000 gross tons or more under construction or conversion in U.S. shipyards, a net increase of 13 over the total at the beginning of the year. In terms of tonnage, these ships represent the largest peacetime orderbook for American shipyards in history. These ships had a contract value of almost \$2.1 billion. Forty-two ships were ordered during the year (including those to be built with construction subsidy), and 29 were delivered to their owners. Of the 92 on order as of June 30, 1972, 60 were being built with subsidy, at a total value of nearly \$1.5 billion.

The subsidized ships ordered during the year include 16 tankers. Three of these, at 265,000 deadweight tons each, are the largest to be ordered in the United States.



Five existing freighters to be converted into high-productivity containerships were also approved for subsidy.

Compared to a guideline construction subsidy rate of 43 percent in effect during FY 1972, the average subsidy rate for contracts awarded during the year was 42.8 percent. The 1970 Merchant Marine Act provides for a steadily declining subsidy level for ship construction until a 35 percent level is reached in FY 1976. The success of American shipyards in meeting these goals during the year is attributable to their ability to achieve economies in the shipbuilding process and a general rise of foreign ship-construction prices.

Recognizing the emergence of a potential new market for American shipbuilders in the growing worldwide demand for liquefied natural gas (LNG) carriers, MarAd undertook discussions with shipbuilders, cryogenic equipment manufacturers and potential buyers to initiate U.S.-shipyard orders for this sophisticated type of ship. Added impetus for these efforts was provided by the fact that the difference between the foreign and domestic cost of these ships is comparatively small, due to the large portion of the cost that is attributable to cryogenic containment systems and their associated equipment. This differential can be narrowed through series production of these ships and the favorable financing terms available in the U.S. Additionally, it was recognized that American shipyards can offer prospective buyers favorable delivery schedules, which might well influence the selection of the U.S. shipyards. At the end of the year, applications for the subsidized construction of nine LNG tankers were pending, and the award of contracts for these ships appeared imminent.

### **Ship Operations**

During FY 1972, five new operating-differential subsidy contracts were awarded by MarAd. One of these, with the American Steamship Company, was the first to cover ships in the U.S.-Canada trade across the Great Lakes.

One of the major new benefits extended by the Merchant Marine Act of 1970 to previously excluded segments of the merchant fleet was the tax-deferred Capital Construction Fund (CCF) program, designed to encourage operators to amass the capital to build new ships. Previously restricted to subsidized operators in the foreign trade, these funds may now be used by operators in the domestic and foreign trades to construct and reconstruct vessels for foreign, noncontiguous domestic and Great Lakes trades and the U.S. fisheries. As of the end of the fiscal year, 91 interim CCF agreements—pending the development of final contracts by the Maritime Administration and the Internal Revenue Service—had been established. These funds will generate an estimated \$800 million in new ship construction or

conversions for the American merchant marine in the next five years or so.

MarAd has responsibility for the administration of cargo preference programs, which reserve a proportion of government-generated cargoes for American ships. Two rules—one requiring that the U.S.-flag share of shipload lots of preference cargoes be booked first, and the other establishing an informal grievance procedure to resolve disputes between carriers and shippers—were promulgated during the year.

### **Domestic Shipping**

To carry out MarAd's new concern for improvement of the domestic shipping fleet, an Office of Domestic Shipping was established during the year. In addition to coordinating MarAd's programs for the domestic fleet, this office is charged with insuring that the industry is kept informed of actions by other government agencies, and insuring that these agencies are aware of the impact of their programs on the domestic shipping industry.

Following the creation of this office, MarAd sponsored the National Planning Conference on Domestic Shipping, which brought together nearly 200 leading representatives from the industry for four days to discuss how the Maritime Administration could best assist them in improving their future growth potential. This represented the first coordinated effort by industry, labor, and government to identify and resolve the industry's most pressing problems.

MarAd initiated a joint study with the U.S. Coast Guard to explore the cost-effectiveness of vessel design changes intended to reduce the possibility of pollution from tank barge accidents on inland waterways.

### **Civil Rights**

The Maritime Administration is charged with assuring equal employment opportunities in the Nation's shipbuilding, ship repair, and shipping industries. To carry out this mission, MarAd conducts compliance surveys of companies in these industries. During FY 1972, all major shipbuilders and ship-repair firms were monitored. As a result of these audits, to correct the present effects of past discrimination, about 3,000 black maritime workers were given the opportunity to transfer to skilled jobs, without loss of seniority or earnings.

Minority employment in major shipyards rose from 17 percent of the workforce in 1969 to 21.3 percent in 1972. The further opening of skilled-craft jobs to black workers resulted in an increase in black participation in this category from 15.7 percent in 1969 to 19.7 percent in 1972.

### **Pollution Abatement**

Fiscal Year 1972 saw MarAd expand its activities to

eliminate ocean pollution caused by ships. Efforts were continued in conjunction with other federal agencies to develop data for the International Maritime Consultative Organization, which will result in international regulations governing ship discharges.

In cooperation with several government agencies and industry associations, the Maritime Administration has let a contract to study alternative means for disposal of oily water from ships. MarAd is also working with a local port authority to obtain a surplus U.S. Navy tank farm to establish a pilot project for the recycling of oily wastes. This project is intended to demonstrate the technical and economic feasibility of such a facility.

### **Research and Development (R&D)**

MarAd's R&D capability was significantly increased during FY 1972 by the creation of a second National Maritime Research Center to augment the one established the preceding year at Kings Point, N.Y. The new center, located at Galveston, Tex., will conduct a broad range of research efforts, including the development of improved, integrated tug-barge technology for the inland and offshore trades, and improved LNG-handling technology.

Over \$22 million in research contracts were awarded in FY 1972. These ranged from the first, or systems analysis, stage in the development of a computerized Shipping Operations Information System to hardware improvements in oil-water separators to eliminate the discharge of contaminated ballast water from tankers. In addition, the Maritime Administration undertook programs to determine the technical and economic feasi-

bility of constructing deepwater terminals in the United States to accommodate very large bulk carriers, and to develop an integrated computer/earth satellite communications and control system for ships.

MarAd's research program continued to be characterized by a high degree of industry involvement, particularly through the cost-sharing mechanism. During the year, MarAd's research investment was increased by the addition of \$9 million in industry funds and support services for specific projects which showed a high likelihood of near-term benefit.

### **Mortgage Insurance**

During Fiscal Year 1972, new applications were approved for ship mortgage and/or loan insurance totalling \$647.3 million—representing a better than 200 percent increase above last year's record \$280.7 million. Commitments granted in FY 1972 covered 162 vessels and 1,172 lighters.

### **Savings and Sales**

Savings of \$10.9 million were achieved by MarAd in FY 1972 through management improvement and cost-reduction actions.

A total of 214 World War II-built ships were sold from the National Defense Reserve Fleet during FY 1972, returning \$11.0 million to the government. Since 1958, when the sale of obsolete ships from the reserve fleet was begun, 1,730 vessels have been sold for scrap or nontransportation use, resulting in receipts to the government of \$103.5 million.

# MARITIME ADMINISTRATION

(Selected Workload Data)

	1968	1969	1970	1971	1972
CONSTRUCTION-DIFFERENTIAL SUBSIDIES:					
Number of new ships contracted for . . . . .	12	10	5	12	21
Total number under construction . . . . .	36	36	28	33	48
Total expenditures (in 000's) . . . . .	\$97,707	\$95,517	\$96,723	\$139,191	\$137,345
OPERATING-DIFFERENTIAL SUBSIDIES:					
Number of companies . . . . .	14	14	13	12	16
Number of ships covered . . . . .	307	293	247	206	207
Total subsidy paid (in 000's) . . . . .	\$200,130	\$194,703	\$205,732	\$268,021	\$235,667
SHIP MORTGAGE INSURANCE					
Number of ships insured . . . . .	129	144 and 360 barges	171 and 360 barges	284 and 520 barges	434 and 1,721 barges
Insurance in effect, principal and interest (in 000's) . .	\$651,552	\$751,555	\$919,418	\$1,168,192	\$1,689,233
GOVERNMENT-OWNED SHIPS:					
National defense reserve fleet . . . . .	1,062	1,017	1,027	860	673
Number under bareboat charter . . . . .	8	6	5	0	0
General Agency Agreement . . . . .	144	144	2	1	0
U.S.-FLAG OCEANBORNE FOREIGN TRADE: <sup>1</sup>					
Long tons carried in U.S.-flag ships (000,000) . . . . .	25.0	19.1	25.2	24.3	( <sup>1</sup> )
Percent of U.S. foreign trade . . . . .	5.3	4.5	5.3	5.3	( <sup>1</sup> )

<sup>1</sup> On calendar year basis. Data for 1972 not available.

## APPENDIX

LIST OF GENERAL ACCOUNTING OFFICE (GAO) REPORTS ISSUED TO CONGRESS AND ACTION  
TAKEN ON SIGNIFICANT GAO RECOMMENDATIONS

Date of report	Report title	GAO recommendation	Action taken
November 4, 1971	Opportunities for Increasing Effectiveness of Overseas Trade Exhibitions—Departments of Commerce and State.	<p>That the Secretary of Commerce consider:</p> <ol style="list-style-type: none"> <li>(1) Allocating a greater portion of Commerce's resources for overseas promotional activities to developing countries and limiting promotional efforts to developed countries mainly to introducing new products or new-to-export companies.</li> <li>(2) Initiating a continuing program to contact American companies, State governments, and other internationally oriented organizations to determine what types of promotional services are needed and to provide those services not presently offered under existing programs.</li> <li>(3) Developing a more effective domestic program to inform American companies of the benefits of foreign trade and to stimulate these companies to use trade exhibitions to expand their export business.</li> </ol>	<p>The available facts are sufficient to indicate that an increase in such promotion is needed—but are not sufficient to indicate how much of an increase. The Bureau has begun an intensive effort to develop a sound base for estimating the optimum proportion of export promotion resources to be devoted to the less-developed markets.</p> <p>The Bureau's first actions in this area have proven to be most successful and helpful in our forward planning. They are actively working to build on this initial foundation by improving existing programs and developing new ones. In this context, a Task Force has been established to examine certain of the Bureau's business information services.</p> <p>The Bureau is now carrying out a public advertising campaign principally aimed at the business community but peripherally also directed to the general public. The Bureau is also employing other techniques that are designed to create</p>



LIST OF GENERAL ACCOUNTING OFFICE (GAO) REPORTS ISSUED TO CONGRESS AND ACTION  
TAKEN ON SIGNIFICANT GAO RECOMMENDATIONS—Con.

Date of report	Report title	GAO recommendation	Action taken
			effectively closer liaison with a more selective segment of the business community.
		(4) Evaluating the desirability of maintaining permanent, fixed-facility trade centers in view of the need for alternative promotional devices in developing countries.	The Bureau still believes that the maintenance of fixed-facility trade centers is essential to achieve a reasonable balanced promotional program and that their maintenance will not preclude the expansion of overseas promotional activities in developing countries. Trade centers are considered a primary means for introducing new firms to exporting. So that the centers can be better utilized between exhibitions, the International Trade Specialists of the Commerce Field Offices have been instructed to place a high priority on locating firms new-to-export and new-to-market for Between-Show Promotions.
		(5) Adopting more useful measures of the benefits of trade promotion programs, recognizing that these programs cannot always produce immediate results.	In its continuing efforts to be responsive to this situation, the Bureau has repeatedly been confronted with the difficulty of separating normal export growth from promotion-induced growth. New measures of benefits of the trade promotion program were proposed by the management firm studying Bureau activities.
		(6) Establishing a flexible fee structure using minimal fees to attract new companies and charging higher fees to repeat exhibitors and established international trading companies.	The Bureau concurred with the intent of the Comptroller General's recommendations and has developed a variable contribution structure which provides a preferential rate for new-to-export and

LIST OF GENERAL ACCOUNTING OFFICE (GAO) REPORTS ISSUED TO CONGRESS AND ACTION  
TAKEN ON SIGNIFICANT GAO RECOMMENDATIONS—Con.

Date of report	Report title	GAO recommendation	Action taken
November 18, 1971	Savings Available by Consolidating Certain Reserve Fleet Activities—Departments of Commerce and Defense.	That the Secretaries of Defense and Commerce make arrangements to (1) have the Maritime Administration (MarAd) assume the maintenance and preservation and related administrative functions for the Navy's inactive vessels at Orange and Vallejo, (2) close the Army wet storage facility at Rio Vista and move the watercraft in wet storage to Vallejo or place the watercraft in dry storage, and (3) close the Navy Stockton berthing area and move the vessels to Vallejo and Suisun Bay.	new-to-market participants in Trade Center shows.  MarAd is receptive to the proposal and briefly reiterated that funding during the transitional phase of consolidation is considered to be the most sensitive and critical factor in the proposal.
December 8, 1971	Coordinating Deep-Ocean Geophysical Surveys Would Save Money—National Oceanic and Atmospheric Administration, (NOAA) Departments of Commerce and the Navy.	GAO also recommended that a study be made to ascertain the feasibility and effect on costs from consolidating functions for other Army, Navy, and MarAd inactive fleet sites.  That the Secretaries of Commerce and Navy should (1) ensure that plans being formulated by their departments result in effective coordination of the deep-ocean geophysical survey programs and (2) explore the possibility of coordinating other marine science activities.	The Secretary of Defense was advised of the Department's readiness to participate in the further study the report recommends.  Since the report was completed, further steps have been taken to effect an exchange of personnel and to develop procedures for developing joint coordinated survey efforts. The position of Associate Administrator for Interagency Relations has been established. The incumbent is to assure that effective coordination and cooperation exists in the area of geophysical surveys. NOAA also expects to further its coordination with Navy in all marine areas.
January 28, 1972	Ways To Increase U.S. Exports Under the Trade Opportunities Program—Departments of Commerce and State.	That Commerce and State jointly determine the relative importance of the Trade Opportunities Program within the framework of current commerical activities.	The Department agreed to reassess the relative importance of this program within the framework of other commercial activities. Major

LIST OF GENERAL ACCOUNTING OFFICE (GAO) REPORTS ISSUED TO CONGRESS AND ACTION  
TAKEN ON SIGNIFICANT GAO RECOMMENDATIONS—Con.

Date of report	Report title	GAO recommendation	Action taken
		Also, the Departments should examine the features of the trade opportunities programs of New York State and the United Kingdom with a view to adopting practices that offer potential for improving the U.S. program. GAO further recommended that the Departments consider centralizing management authority in a single, business-oriented administrator, improving field office support, pursuing aggressively program objectives at overseas posts, strengthening trade lead review procedures, the feasibility of an automated system and the desirability of charging a fee for the service.	improvements and the degree that priority can be increased are dependent on resources that State and Commerce can allocate to the program in light of other priorities and budgetary considerations. There was general agreement with the conclusions and recommendations of the report and corrective actions are being taken or planned.
February 7, 1972	The Effects of Federal Expenditures on the Economy of Johnson County, Kentucky—Economic Development Administration.	That the Secretary of Commerce require EDA to initiate a comprehensive study, either with in-house capability or with technical assistance program grants, of the problems of rural economic development to identify additional incentives that may encourage industry to expand in rural areas and thereby maximize the benefits from Federal economic development programs.	Some of the activities undertaken include: (1) The establishment of an information system to match industry requirements with local area resources; (2) A study of the industrial plant location decision process surveying firms that have relocated from the Cleveland area; and (3) development of a composite mapping system, computer-oriented for the quick retrieval of maps showing present requirements of specific industries.  EDA, in conjunction with the Domestic Council, has investigated many of the potential program tools not presently available to the agency as possible incentives to industry for locating in economically distressed areas. A number of these incentives are currently under discussion within the agency.

LIST OF GENERAL ACCOUNTING OFFICE (GAO) REPORTS ISSUED TO CONGRESS AND ACTION  
TAKEN ON SIGNIFICANT GAO RECOMMENDATIONS—Con.

Date of report	Report Title	GAO recommendation	Action taken
March 21, 1972	More Effective Use Could Be Made of Program Resources To Alleviate Unemployment—Economic Development Administration.	That the Secretary require EDA to (1) coordinate its public works financial assistance programs with those of other Federal agencies, (2) establish improved procedures for evaluating proposed projects, (3) adopt improved criteria for determining whether the designation of an economic development center would contribute to the alleviation of distress within redevelopment areas and to make periodic evaluations of such designations, and (4) clarify its policy on the acceptance of the value of previously acquired assets as project costs eligible for financing.	EDA's statement on the final report, while commenting on some matters where they differ with the GAO, has advised of implementing actions being taken to comply with the intent of all of the recommendations.



## Secretaries of Commerce and Labor and of Commerce

### *Commerce and Labor:*

	<i>Tenure</i>	
	<i>Begun</i>	<i>Ended</i>
George B. Cortelyou .....	Feb. 18, 1903	June 30, 1904
Victor H. Metcalf .....	July 1, 1904	Dec. 16, 1906
Oscar S. Straus .....	Dec. 17, 1906	Mar. 5, 1909
Charles Nagel .....	Mar. 6, 1909	Mar. 4, 1913

### *Commerce:*

William C. Redfield .....	Mar. 5, 1913	Oct. 31, 1919
Joshua W. Alexander .....	Dec. 16, 1919	Mar. 4, 1921
Herbert C. Hoover .....	Mar. 5, 1921	Aug. 21, 1928
William F. Whiting .....	Aug. 22, 1928	Mar. 4, 1929
Robert P. Lamont .....	Mar. 5, 1929	Aug. 7, 1932
Roy D. Chapin .....	Aug. 8, 1932	Mar. 3, 1933
Daniel C. Roper .....	Mar. 4, 1933	Dec. 23, 1938
Harry L. Hopkins .....	Dec. 24, 1938	Sept. 18, 1940
Jesse H. Jones .....	Sept. 19, 1940	Mar. 1, 1945
Henry A. Wallace .....	Mar. 2, 1945	Sept. 20, 1946
W. Averell Harriman .....	Oct. 7, 1946	Apr. 22, 1948
Charles Sawyer .....	May 6, 1948	Jan. 20, 1953
Sinclair Weeks .....	Jan. 21, 1953	Nov. 10, 1958
Lewis L. Strauss*	Nov. 13, 1958	June 30, 1959
Fredrick H. Mueller .....	Aug. 10, 1959	Jan. 19, 1961
Luther H. Hodges .....	Jan. 21, 1961	Jan. 15, 1965
John T. Connor .....	Jan. 18, 1965	Jan. 31, 1967
Alexander B. Trowbridge .....	June 14, 1967	Mar. 1, 1968
C. R. Smith .....	Mar. 6, 1968	Jan. 19, 1969
Maurice H. Stans .....	Jan. 21, 1969	Feb. 15, 1972
Peter G. Peterson .....	Feb. 29, 1972	

\*Interim Appointee.