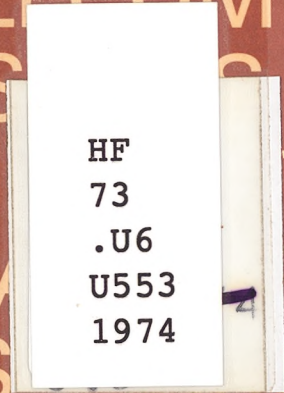
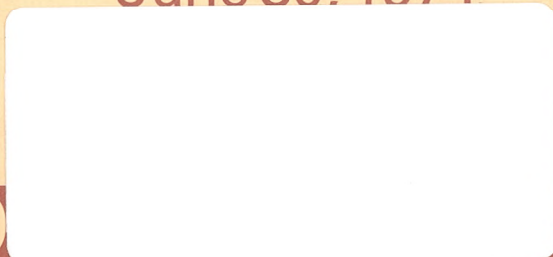


SPECIAL
COLLECTIONS



Annual Report of the
Secretary of Commerce
for the Fiscal Year Ended
June 30, 1974



SINCE ENERGY CONSUMPTION
FACTORS BALANCE OF PAYMENTS
TRENDS PRODUCTIVITY TRENDS
BUSINESS METRIC CONVERSION
ACCOUNTS TECHNICAL REPORTS
ECONOMIC DEVELOPMENT
REMARKS MARINE FISHERIES
PATENTS WEATHER FORECASTS
STANDARDS TRADE PROMOTION
POLLUTION MEASUREMENT
TELECOMMUNICATIONS TOURISM
CENSUS OF POPULATION
BUSINESS ENTERPRISE
MERCHANDISE MERCHANDISE
CROSS NATIONAL PRODUCT

U.S. COMMERCE
DEPT. LIBRARY

MAY 12 4 29 PM '75

For sale by the
Superintendent of Documents
U.S. Government Printing Office
Washington, D.C., 20402

Price \$1.55



HC
10
A27
1973/74
C-5

HF
73
.46
4553
1974



Annual Report of the Secretary of Commerce for the Fiscal Year Ended June 30, 1974

U.S. DEPARTMENT OF COMMERCE

Frederick B. Dent, Secretary

John K. Tabor, Under Secretary



51, 31, 13-4

Letter of Transmittal

December 2, 1974

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, 1974. In the interest of economy, we have eliminated the printing of the full number of copies authorized by 44 U.S.C. 1116. 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 are being 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 also 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 dark ink, appearing to read "Frederick B. Dent", with a long, sweeping horizontal stroke extending to the right.

Frederick B. Dent
Secretary of Commerce

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

Foreword

This is the 62nd 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 by the Department's Economic Development Administration, Patent Office, Maritime Administration, United States Travel Service, National Bureau of Standards, Office of Minority Business Enterprise, Office of Telecommunications, and National Marine Fisheries Service. Also, each of the Regional Action Planning Commissions publishes an annual report, and the Department's Domestic and International Business Administration publishes a quarterly report of its export administration activities. Except for those of the Regional Commissions, all these reports may be obtained from the Superintendent of Documents. The reports of the Commissions may be obtained from the Department's Office of Regional Economic Coordination in Washington, D.C. 20230.

Annual reports, in addition to meeting legal and other requirements, 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 would be appreciated. These comments should be directed to the Director of the Office of Organization and Management Systems, Department of Commerce, Washington, D.C. 20230.

Contents

	Page
Letter of Transmittal	iii
Foreword	iv
Highlights	1
CHAPTER I.—THE DEPARTMENT OVERALL	4
CHAPTER II.—GENERAL ADMINISTRATION	10
Administrative Management	10
Public Affairs	13
Office of General Counsel	14
Policy Development	16
CHAPTER III.—SOCIAL AND ECONOMIC STATISTICS	17
The Assistant Secretary for Economic Affairs	17
Social and Economic Statistics Administration	17
Bureau of Economic Analysis	18
Bureau of the Census	19
CHAPTER IV.—ECONOMIC DEVELOPMENT	22
CHAPTER V.—REGIONAL ACTION PLANNING COMMISSION PROGRAM	26
CHAPTER VI.—DOMESTIC AND INTERNATIONAL BUSINESS	29
General	29
Office of Field Operations	29
Bureau of Domestic Commerce	30
Bureau of Resources and Trade Assistance	32
Bureau of International Commerce	34
Bureau of East-West Trade	35
International Economic Policy and Research	37
CHAPTER VII.—TOURISM	43
CHAPTER VIII.—FOREIGN DIRECT INVESTMENT	45
CHAPTER IX.—MINORITY BUSINESS ENTERPRISE	46
CHAPTER X.—SCIENCE AND TECHNOLOGY	50
The Assistant Secretary	50
National Bureau of Standards	51
Patent Office	54
National Technical Information Service	55
Office of Telecommunications	56

CONTENTS—Continued

	Page
CHAPTER XI.—OCEANIC AND ATMOSPHERIC ACTIVITIES	61
General	61
Severe Storms Research	64
Coastal Zone Management	64
Sea Grant	65
The NOAA Corps	65
National Weather Service	66
National Ocean Survey	68
National Marine Fisheries Service	69
Environmental Data Service	72
National Environmental Satellite Service	73
Environmental Research Laboratories	74
CHAPTER XII.—MARITIME AFFAIRS	78
CHAPTER XIII.—APPENDIX	82

HIGHLIGHTS

GENERAL ADMINISTRATION

- The Assistant Secretary for Administration implemented a Department-wide management by objectives program, covering some 40 percent of the Department's activities.

SOCIAL AND ECONOMIC STATISTICS

- Drawing on work by the Social and Economic Statistics Administration, the Assistant Secretary for Economic Development and the Chief Statistician of Canada completed reconciliation of trade statistics for the two countries. This represents the cumulation of a program designed to provide a better basis for trade negotiations between the United States and Canada.
- The Administration completed a series of alternative economic projections through the year 2020. These projections include separate figures for 39 industries, each of the 50 states and the District of Columbia, plus 632 metropolitan and other areas.
- Benchmark input-output tables for the year 1967 were completed and offered for sale. Such tables are fundamental to a detailed understanding of the American economy.
- The Administration published the first results of a program to measure the country's expenditures for pollution control.
- It also worked to complete processing and review of the 1972 Economic Censuses and released reports from the Censuses of Business, Construction Industries, Manufactures, and Mineral Industries.
- Finally, it began publishing U.S. import data on a new basis. This—the so-called “cost, insurance and freight” basis—is the one generally used abroad, and now our import statistics will be much more comparable to those of foreign countries.

ECONOMIC DEVELOPMENT

- The Economic Development Administration approved \$174 million for 456 public works projects. This consisted of \$38.7 million for 190 projects to help create immediate jobs and \$135.3 million for 266 projects to support long-range planning for permanent jobs.
- It provided \$17.9 million in technical assistance to help solve problems that curtail economic growth.
- It approved \$20 million for business development loans and working capital guarantees.
- Finally, it made 209 grants totaling \$7.7 million to help local governments, multi-county district organizations, and the States plan for economic growth.

REGIONAL ACTION PLANNING COMMISSION PROGRAM

- The Regional Commissions approved \$17.3 million for public works projects and \$18.9 million for technical assistance. A number of the Commissions played a significant role in helping State Governors develop programs for dealing with current issues, such as short-term and long-term energy problems.

DOMESTIC AND INTERNATIONAL BUSINESS

- The Domestic and International Business Administration realigned and expanded its field office system to improve service to local businessmen. Its Ombudsman continued to help at the national level, answering over 10,000 inquiries relating to shortages and other matters.
- The 1974 edition of the *U.S. Industrial Outlook* reviewed 1973 developments and projected activity for 1974 and 1980 for over 200 industries.

- The Domestic and International Business Administration began a special program of industrial energy conservation, contacting over 43,000 business leaders and awarding some 8,000 "SavEnergy" citations to successful participants.
- The Administration helped negotiate the new "Arrangement Regarding International Textile Trade," which involves the United States and 50 other countries.
- The drive to increase exports continued, the Administration sponsoring 75 major exhibitions and over 1,000 smaller exhibitions around the world. It implemented a new, fully automated system to notify U.S. firms of overseas business opportunities. It also provided support to the President's Export Council, which was created in December 1973.
- The Administration continued work to promote East-West trade, supporting the existing U.S.-Soviet and U.S.-Polish commercial commissions as well as the new U.S.-Romanian commission. It recruited some 300 U.S. firms to participate in exhibits and trade missions.
- Early in the fiscal year, the Administration introduced export controls for soybeans and certain related products. These were terminated with the new soybean crop.
- One of the Administration's more significant accomplishments was creation of a new staff, specializing in matters of international economic policy and research. During the year, this staff played a major role in the formulation of U.S. negotiating positions on tariff and non-tariff barriers. It also worked to improve Government coordination with U.S. industry during the course of multilateral trade negotiations.

TOURISM

- The United States Travel Service made substantial progress towards its calendar 1974 goals of increasing foreign exchange earnings by \$137 million and foreign visitor arrivals by 235,000.
- The Service developed 41 tour programs in six foreign markets, and these produced 115,000 passenger bookings. It also established 355 travel planning centers in the United Kingdom and West Germany, helped U.S. cities land 26 international congresses, and promoted 40 international trade shows.

FOREIGN DIRECT INVESTMENT

- Pursuant to long-standing policy to remove controls over U.S. investment abroad as soon as feasible, the Department terminated its Foreign Direct Investment Program.

MINORITY BUSINESS ENTERPRISE

- Federal expenditures for minority enterprise activities totalled \$1.3 billion, including .7 billion for procurement from minority-owned firms, during fiscal 1974.
- The Department's Office of Minority Business Enterprise assisted 24,683 minority firms, packaging over \$201 million in loans and generating \$253 million in procurement.

SCIENCE AND TECHNOLOGY

- Thirty-three cooperative arrangements with other Federal agencies were undertaken during the first full year of the Experimental Technology Incentives Program. This Program is managed by the National Bureau of Standards and is designed to influence the rate of technological change.
- Room air conditioners were the first products for which specifications were developed in the Bureau's voluntary appliance labeling program. This program is designed to inform consumers about the energy consumption and efficiency of home appliances.
- The Bureau hosted two major national conferences on privacy of information and security of data stored in computers, and also issued a handbook for the physical protection of computerized data and computer installations.
- The Bureau completed a study of children's strength capabilities, as an aid in designing safer toys and other children's products, and developed flammability standards for children's sleepwear in sizes 7 through 14.
- The Bureau originated a system of television captions for the deaf that was tested by the Public Broadcasting System.
- The Bureau developed standards for walkthrough metal detectors used in airports and public buildings to detect hidden objects such as guns, knives, and razor blades. It also developed security standards for exterior residential doors and windows.

- The Patent Office examined and processed 116,000 patents to completion, a new record. Since only 104,000 applications were received, this reduced the Office's inventory of applications awaiting examination by 12,000.
- The Office also installed a system to assess and forecast technological developments for the American business, scientific, and engineering communities. Using patent data, the system produces reports on such subjects as coal gasification, shale oil, and solar and nuclear energy.
- The National Technical Information Service sold 2.4 million copies of Federal or Federally-sponsored scientific and technical reports. These sales and the Service's other activities grossed \$8.3 million, up \$2.7 million from fiscal 1973.
- The Office of Telecommunications performed the first comprehensive review of cable television technology, the results of which are being used in applying this technology to both Government and non-Government use.

OCEANIC AND ATMOSPHERIC ACTIVITIES

- Timely Weather Service warnings were credited with reducing the death toll during the April 1974 tornado outbreak, which hit 13 States. To speed storm warnings further, the National Oceanic and Atmospheric Administration unveiled plans for a system of highly computerized meteorological offices. It will be installed in some 275 locations by 1980.
- The Administration also added two meteorological satellites to its observing system. These polar-orbiting spacecraft, together with another series of geostationary satellites, are key elements in the system.
- The operational phase of the Atlantic Tropical Experiment began in June 1974, bringing together scientists

and technicians from 72 nations in the largest and most complex international weather project ever conducted. The Administration is coordinating U.S. participation in the experiment.

- Researchers installed and began testing electronic tornado detectors at 20 sites along the Nation's "tornado alley." In Colorado, scientists flew into thunderstorm clouds to attempt to modify lightning.
- The Administration announced a one-year goal for computerizing nautical chart data for the Gulf of Mexico, the first area in the nation to be included in a new automated hydrographic data bank.
- The Administration provided scientific data that led to reduced fishing by foreign nations off our coasts. It also made significant advances in administering the Marine Mammal Protection Act.

MARITIME AFFAIRS

- The Maritime Administration awarded construction differential subsidy contracts for 12 ships at a cost of \$281.7 million. All 12 are tankers and three—rated at 390,770 deadweight tons—are the largest ever built in American shipyards. The award of these contracts brought total construction under the program to 59 ships aggregating 6.2 million deadweight tons.
- In calendar year 1973 American flag vessels carried 39.8 million tons of cargo. This was a two-thirds increase over the previous year, but still only 6.4 percent of the Nation's total waterborne foreign trade.
- In January 1974 the Maritime Administration's Merchant Marine Academy became the first—and only—Federal academy to admit women. Of the 348 plebes in the July 1974 class, 15 were female.

THE DEPARTMENT OVERALL

Creation

The Department of Commerce was so designated by the Act of March 4, 1913, which reorganized the Department of Commerce and Labor, created by the Act of February 14, 1903, transferring the labor activities into a separate department.

Mission

The primary statutory mission of the Department is "to foster, promote and develop the foreign and domestic commerce" of the United States. As a result of legislative and other additions, this has evolved to encompass a broad 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 1903 organic act (15 USC 1501 et. seq.) and by other legislation. They also include responsibilities transferred from other Departments and agencies by Presidential reorganization plan, as well as responsibilities assigned to the Secretary of Commerce

or the Department by Executive Order or other Presidential action.

Organization

The chart on page 6 shows the organization of the Department. The organizational components on this chart fall into one of the following three general categories:

- Office of the Secretary
- Operating units
- Federal Cochairman of the Regional Commissions

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 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, the staff units immediately serving these officials, and a number of independent offices which perform Department-wide functions and report directly to the Secretary. The Secretarial Officers are:

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

The Under Secretary serves as the principal deputy to the Secretary in all matters affecting the Department and performs such continuing and special duties as the Secretary may from time to time assign.

The Assistant Secretary for Administration and the General Counsel are the Secretary's principal assistants

on administrative management and legal matters, respectively.

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 one or more operating units or, instead, serving as the head of a single operating unit.

The *operating units* of the Department are organizational entities outside the Office of the Secretary charged with carrying out the major substantive functions, or programs, of the Department. The heads of some operating units are Program Secretarial Officers; in other cases, they report to a Program Secretarial Officer or directly to the Secretary. During fiscal 1974, the Department had 12 operating units:

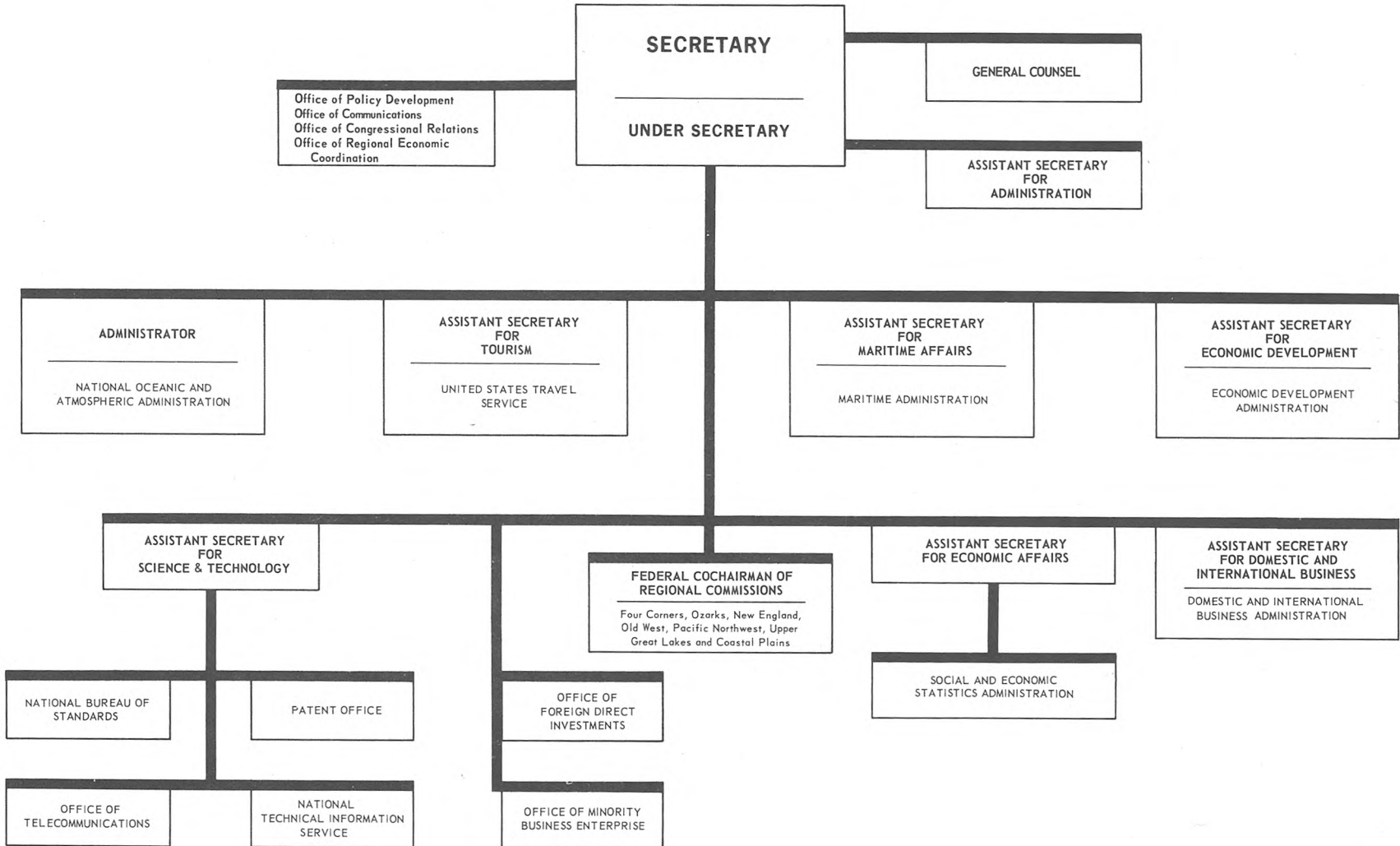
Social and Economic Statistics Administration
Economic Development Administration

Domestic and International Business Administration
United States Travel Service
Office of Foreign Direct Investments
Office of Minority Business Enterprise
Patent Office
National Bureau of Standards
National Technical Information Service
Office of Telecommunications
National Oceanic and Atmospheric Administration
Maritime Administration

One operating unit—the Office of Foreign Direct Investments—was officially abolished on June 30, 1974.

The *Federal Cochairmen of the Regional Commissions* represent the Federal Government on the joint Federal-State Regional Action Planning Commissions. These Commissions provide assistance to economically distressed, multistate regions designated by the Secretary. Only the Federal Cochairmen and their supporting staffs are part of the Department.

U.S. DEPARTMENT OF COMMERCE



LIST OF KEY OFFICIALS
DEPARTMENT OF COMMERCE
June 30, 1974

Secretary of Commerce	Frederick B. Dent
Assistant to the Secretary	Murray S. Scureman
Administrative Assistant to the Secretary	Edward W. Huffcut
Special Assistant to the Secretary	Hastings Wyman
Under Secretary of Commerce	John K. Tabor
Special Assistant to the Under Secretary	James A. Goyette
Program Assistant to the Under Secretary	Vacant
Deputy Under Secretary for Legislative Affairs	George J. Pantos
Staff Offices of the Secretary:	
Special Assistant for Policy Development	Darrell Trent
Special Assistant for Regional Economic Coordination	Daniel Garbern
Special Assistant for Public Affairs	Basil R. Littin
Director, Office of Communications	Thomas A. Bell
Assistant Secretary for Administration	Henry B. Turner
Deputy Assistant Secretary	Guy W. Chamberlin, Jr.
Deputy to the Assistant Secretary	Paul J. O'Neill, Acting
Director, Office of Administrative Services and Procurement	Donald B. Moore
Director, Office of Audits	Sidney S. Baurmash
Director, Office of Budget and Program Analysis	David S. Nathan
Director, Office of Emergency Readiness	Richard J. Pidgeon
Director, Office of Financial Management Services	Clyde E. Ahrnsbrak
Director, Office of Investigations and Security	Harry C. deVenoge
Director, Office of Organization and Management Systems	Joseph O. Smiroldo
Director, Office of Personnel	John Will
Director, Office of Publications	David Farber, Acting
Special Assistant for Civil Rights	Luther C. Steward, Jr.
Chairman, Appeals Board	Hugh Dolan
Director, Interagency Auditor Training Center	Elwood A. Platt
General Counsel	Karl E. Bakke
Deputy General Counsel	Bernard V. Parrette
Assistant Secretary for Economic Affairs	Sidney L. Jones
Deputy Assistant Secretary	David Ferrel
Administrator, Social and Economic Statistics Administration	Edward D. Failor
Director of the Census (Bureau of the Census)	Vincent P. Barabba
Director, Bureau of Economic Analysis	George Jaszi
Assistant Secretary for Economic Development (Head of the Economic Development Administration)	William W. Blunt, Jr.
Deputy Assistant Secretary	Richard L. Sinnott
Deputy Assistant Secretary for Economic Development Planning	Joseph G. Hamrick
Deputy Assistant Secretary for Economic Development Operations	Daniel J. Cahill

LIST OF KEY OFFICIALS--Continued

Federal Cochairmen of the Regional Action Planning Commissions:

Coastal Plains Regional Commission	Russell J. Hawke, Jr.
Four Corners Regional Commission	Stanley Womer
New England Regional Commission	Russell F. Merriman
Ozarks Regional Commission	Bill H. Fribbley
Upper Great Lakes Regional Commission	Raymond C. Anderson
Old West Regional Commission	Warren C. Wood
Pacific Northwest Regional Commission	Jack O. Padrick

Assistant Secretary for Domestic and International Business (Head of the Domestic and International Business Administration)

Deputy Assistant Secretary	Tilton H. Dobbin
U.S. Commissioner General of the International Exposition of the Environment to be held at Spokane, Washington in 1974	John M. Dunn
Deputy Assistant Secretary for International Economic Policy and Research	Claude Bekins
Deputy Assistant Secretary for International Commerce	Lawrence A. Fox
Deputy Assistant Secretary for Resources and Trade Assistance	Marinus van Gessel
Deputy Assistant Secretary for Domestic Commerce	Seth M. Bodner
Deputy Assistant Secretary for East-West Trade	Paul T. O'Day
Deputy Assistant Secretary for Administrative Management	Lewis W. Bowden
	Judith S. Chadwick

Assistant Secretary for Tourism (Head of the U.S. Travel Service)

Deputy Assistant Secretary	C. Langhorne Washburn
Deputy Assistant Secretary for Bicentennial Affairs	Michael Miller
	Peter J. Malatesta

Director, Office of Foreign Direct Investment

Assistant Director	Vacant
	Vacant

Director, Office of Minority Business Enterprise

Deputy Director	Alex M. Armendaris
	Samuel J. Cornelius

Assistant Secretary for Science and Technology

Deputy Assistant Secretary	Betsy Ancker-Johnson
Deputy Assistant Secretary for Product Standards	David B. Chang
Deputy Assistant Secretary and Director, Office of Environmental Quality	Francis LaQue
Director, National Bureau of Standards	Sidney R. Galler
Director, National Technical Information Service	Richard W. Roberts
Commissioner of Patents (Patent Office)	William T. Knox
Director, Office of Telecommunications	C. Marshall Dann
	John M. Richardson, Acting

Administrator, National Oceanic and Atmospheric Administration

Deputy Administrator	Robert M. White
Associate Administrator	Howard W. Pollock
	John W. Townsend, Jr.

Assistant Secretary for Maritime Affairs (Head of the Maritime Administration)

Deputy Assistant Secretary	Robert J. Blackwell
	Howard F. Casey

DEPARTMENT OF COMMERCE

Summary of Employment and Financing—Fiscal 1970 to 1974^a

	End of year employment					Obligations (in thousands)				
	1970	1971	1972	1973	1974	1970	1971	1972	1973	1974
General Funds:										
General Administration	287	305	299	326	342	\$6,070	\$6,896	\$7,484	^b \$9,533	^b \$9,386
Social and Economic Statistics Administration	31,634	5,454	4,574	4,721	4,381	154,364	84,609	56,657	61,753	58,841
Economic Development Administration	1,001	991	905	742	719	271,765	252,995	284,133	326,875	239,999
Regional Action Planning Commissions	-----	50	65	49	53	-----	36,505	37,720	42,528	40,935
Domestic and International Business Administration	1,890	1,836	1,705	1,765	1,921	38,666	43,277	49,404	61,933	68,406
United States Travel Service	107	123	108	98	122	4,525	4,546	6,377	8,996	11,455
Office of Foreign Direct Investments	144	113	100	101	9	3,153	2,846	2,546	2,426	2,504
Office of Minority Business Enterprise	79	78	258	305	263	1,200	2,084	43,519	36,036	48,991
Science and Technology:										
Patent Office	2,785	2,682	2,692	2,793	2,918	48,594	56,063	62,294	67,234	71,908
National Bureau of Standards	2,104	2,196	2,161	2,072	2,072	42,446	45,923	50,261	52,286	61,220
National Technical Information Service	-----	-----	-----	74	321	-----	-----	-----	1,495	1,632
Office of Telecommunications	-----	172	207	197	231	-----	2,424	4,934	5,348	5,045
Office of State Technical Services	-----	-----	-----	-----	-----	290	-----	-----	-----	-----
National Oceanic and Atmospheric Administration:										
Administration	9,123	12,170	12,532	12,254	12,544	179,219	287,686	338,422	364,631	417,609
Maritime Administration	1,596	1,458	1,564	1,540	1,480	303,833	478,759	516,670	719,169	581,121
National Industrial Pollution Control Council	-----	11	9	-----	-----	-----	298	312	320	-----
Subtotal, General Funds	50,750	27,639	27,179	27,037	27,376	1,054,125	1,304,911	1,460,733	1,760,563	1,619,052
Other Funds ^c	7,037	6,770	6,846	7,260	7,806	195,578	152,587	146,626	169,700	170,171
Total, All Funds	57,787	34,409	34,025	34,297	35,182	1,249,703	1,457,498	1,607,359	1,930,263	1,789,223

^a Amounts for fiscal 1970 through 1973 have been adjusted so as to be comparable to the Department's fiscal 1974 organization structure.

^b Fiscal 1973 and 1974 obligations for General Administration include obligations under the Department-wide special foreign currency program.

^c Other funds include public enterprise, intra-governmental, and trust funds. Employment, but not obligations, is included for allocation accounts carried in the budget schedules of other agencies. Advances and reimbursements between Commerce appropriation accounts are excluded.

GENERAL ADMINISTRATION

ADMINISTRATIVE MANAGEMENT

The Assistant Secretary for Administration

The Assistant Secretary for Administration conducts all administrative management activities required in the overall operation of the Department and, in addition, provides administrative management services to the Office of the Secretary and selected operating units. He also exercises functional supervision over administrative management activities throughout the Department.

During fiscal 1974, the Assistant Secretary focused on the development of a Department-wide management by objectives program and on upgrading the capabilities of his staff for in-depth operational reviews. He also continued to emphasize the task force approach to both operational and organizational reviews.

Administrative Services and Procurement

Department procurement totalled \$521.4 million, about the same as last year.

	<u>Fiscal 1973</u>	<u>Fiscal 1974</u>
Maritime ship construction program	\$343.4	\$281.6
All other procurement ...	<u>181.0</u>	<u>239.8</u>
Total	\$524.4	\$521.4

Of the \$239.8 million, awards to small businesses amounted to \$76.0 million including \$29.9 million in set-asides. There was also \$81.2 million awarded to minority business enterprises, including \$2.5 million under the Small Business Administration's "8(a)" program.

Excess property, with an acquisition cost of \$13.5 million, was transferred out of the Department. Reductions in inventory, equipment, and space requirements, together with related improvements, produced cost benefits of \$3.5 million.

The Department (the 12th largest Federal energy user) reduced its energy consumption 13.5 percent below fiscal 1973. This reduction was principally due to the efforts of the National Bureau of Standards.

Five Department field offices were collocated in the Federal Office Building in Philadelphia. Four offices were collocated at the Federal Plaza in New York City.

The Department reduced its motor vehicle accident rate 20 percent, and its injury frequency rate 4 percent, below fiscal 1973. It also continued its record of achievement under the Payroll Savings Plan and Combined Federal Campaigns, exceeding its established goals for the 11th straight year.

The Office of Administrative Services and Procurement saved \$1.2 million through the use of various procurement techniques, as well as increased utilization of manpower. It removed 7,460 cubic feet of records and discontinued or consolidated 970 forms, saving an additional \$164,000. Its library circulated 201,515 books and periodicals and serviced 53,595 reference and telephone requests. As a result of employee cross training and other actions, the Office increased its productivity by 5 percent.

Appeals

The Appeals Board considers private contractors' protests on decisions made under contracts which may be appealed to the Secretary. The Board also handles appeals of specified administrative actions in the fields of maritime subsidies, export control, regulation of imports of foreign excess property, and foreign direct investments. In addition, the Board may be assigned specified cases for review. The Board is quasi-judicial in nature. Its goal is to handle cases expeditiously as well as fairly, in a manner that will forestall litigation in court.

At the beginning of fiscal 1974 there were four cases pending before the board; 18 new cases were presented during the course of the year. Of these, 11 were settled and 11 were carried over into fiscal 1975.

Audits

The Office of Audits continued to emphasize reviews of program effectiveness and of the efficient and economic use of resources. It also developed streamlined audit methods to increase productivity.

During fiscal 1974 the Office issued 58 reports on the internal operations of the Department. These reports identified potential savings of \$4.1 million on an annual basis and \$.8 million on a one-time basis. This represents an increase of about \$.5 million over the prior year.

The Office also issued 473 (and reviewed an additional 438) reports on the operations of the Department's contractors and grantees. This compares with 429 reports issued and 269 reviewed in fiscal 1973. Cost savings from audits completed and reviewed during fiscal 1974 totalled \$1.0 million, up \$.1 million from fiscal 1973.

All in all, savings came to \$5.9 million—a 360 percent return on the Department's investment in audit activities.

Budget and Program Analysis

Work was continued on the integration of the Department's management by objectives program with its budget formulation process. Special effort was given to the development of major Departmental objectives and specific program plans for their attainment, both of which had to be consistent with, and supportive of, proposed Administration goals and priorities.

Progress also continued on the Department's management reporting system. This system is designed to provide managers and analysts with information necessary to track program progress and evaluate program accomplishments. Effort was directed toward the addition of performance measurements to the automated portion of the system so as to allow comparison of program performance against program plans and resources.

Appropriations for fiscal 1974 totalled \$1,553,177,000. Of this amount, \$1,445,093,000 was contained in the regular appropriation act and \$108,084,000 was contained in supplemental appropriation acts. At year-end, \$36,615,000 was held in reserve for use in carrying out fiscal 1975 programs.

Civil Rights Compliance

At the beginning of fiscal 1974, the Department had 24 pending discrimination complaints filed by either its employees or applicants for employment. During the year it received an additional 22 complaints; but it also disposed of 29 complaints for a year-end carry over of 17. Of the 29 complaints closed, 25 required final Departmental decision by the Director of Equal Employment Opportunity. To date, none of these decisions has been reversed by the Civil Service Commission or the courts.

Revised regulations implementing Title VI of the Civil Rights Act became effective in July 1973. The revision reflected recent developments in civil rights enforcement. It specifically requires nondiscrimination in the membership of planning and advisory bodies which are an integral part of Federal financial assistance programs.

The Department appointed equal housing coordinators for all of its operating units and major field installations. It also established equal housing referral services in some operating units.

Emergency Readiness

The Office of Emergency Readiness concentrated on implementation of the Departmental Contingency Plan for Emergency Operations. It completed organizational arrangements for executive-policy emergency teams designed to perform essential defense mobilization functions. These teams are assigned to the Department's emergency operating facilities and could be activated in a national defense emergency.

The Office coordinated a Departmental review of several defense-related plans and exercises and of natural disaster legislation. It also continued to provide support for NATO civil emergency planning and civil wartime agencies activities.

Financial Management Services

The Office of the Secretary accounting function was centralized in one organization within the Office of Financial Management Services. Previously the function was split between two organizations, presenting significant coordination problems both inside and outside the Department.

A significant training effort was undertaken in connection with decentralization of the Office of Minority Business Enterprise. Sessions were held in Washington and the field to assist office employees in all financial aspects associated with their relocation.

Interagency Auditor Training

Established in fiscal 1969, the Interagency Auditor Center is the only Federal facility oriented to the needs of the government auditors. Its students consist primarily of Federal employees, but employees of State and local governments—as well as of foreign governments—also participate.

By fiscal 1974 the number of courses had increased by 244 percent, enrollments by 303 percent, and revenues by 372 percent over the base year of fiscal 1969. Out-of-town courses were conducted in 17 locations.

Investigations and Security

The Office of Investigations and Security evaluated 581 full field investigations and conducted 23 administrative and 14 criminal investigations involving employee misconduct. Eight cases were referred to the FBI. The Office completed 17 discrimination complaint cases and 12 investigations and inspections involving suspected criminal activity, referring seven to the FBI. It also completed 15 assignments to provide personal protection to the Secretary and others during East-West trade conferences.

The Office initiated a system of security inspection and contracted for an electronic alarm system for the Main Commerce building in Washington.

Organization and Management Systems

The Office of Organization and Management Systems conducted a number of major studies during fiscal 1974. It reviewed the Department's international business policy, tourism, and procurement activities and in each case recommended a streamlining of the organization involved. It also developed a plan to strengthen domestic business programs and evaluated the adequacy of safeguards against fraud, improper use of funds and other financial abuses. Most of the recommendations in these studies were either implemented in fiscal 1974 or were being implemented at the end of the year.

One of the Office's more significant contributions was the full implementation of a Department-wide management by objectives program. In fiscal 1974 this program encompassed eight Presidential and 16 Secretarial objectives, covering some 40 percent of Commerce's activities. It helped top management focus on the achievement of specific program results of direct benefit to the public and the economy.

In the area of automatic data processing, the Office began development of a long-range planning system. It revised its policy on feasibility studies to insure their review before funds are requested. It also improved software management procedures and developed a Department-wide software inventory.

The Office also expanded the automated cost-based budget system at the Patent Office to incorporate the reporting requirements for the management by objectives program, and completed a personal property management inventory system for the Patent Office.

Personnel

The Department continued its efforts to assure equal employment opportunity for all. The percentage of minority employees in its full-time work force rose from

19.8 in 1973 to 20.7 in 1974. The percentage of women in higher grades (GS-12 and above) increased from 6.9 percent to 7.7 percent. This progress reflects continued results of equal opportunity efforts instituted in the past few years, as well as increased availability of qualified minority and female competitors.

Special efforts were made to strengthen the managerial skills of Department executives. These included systematic identification of all managers with executive potential, specific identification and training of 683 individuals for special development in fiscal 1974, and formulation of individual development plans for all Department managers.

Department employment rose by 880 (about 2 1/2 percent) from June 1973 to June 1974. Most of the increase was in temporary and other non-permanent personnel.

	June 1973	June 1974	Change
Full-time permanent	28,333	28,592	+259
Temporary and other	5,964	6,585	+621
Total	34,297	35,177	+880

Planning and Evaluation

During fiscal 1974, the Office of Planning and Evaluation continued to operate as a management task force under the direct supervision of the Assistant Secretary for Administration. It reviewed material for the Department's management by objectives program and interpreted Presidential initiatives in the areas of program planning, management control, and operational evaluation. It conducted, or helped to conduct, major studies of program, operational, or management problems. These included studies of alternative ways to improve the competitive position of the United States maritime industry, and of the objectives of the National Oceanic and Atmospheric Administration's marine activities.

The Office also conducted more limited analyses of such Commerce activities as voluntary energy labeling, fire safety, and preparation for the 1976 bicentennial.

Publications and Printing

Sales of Department printed materials increased 22.5 percent in fiscal 1974 to a new record of \$22.6 million. Included in that total were sales of charts and maps, patents and trademarks, and technical reports. Supporting the sale of its publications, the Department produced some 465 flyers and other promotional pieces. For a number of years the Department of Commerce has been the leading Federal Government

originator of publications sold through the Superintendent of Documents sales systems.

The Office of Publications, which produces most of the Department's in-house printing, turned out 149 million pages in its main plant in Washington, D.C. At Springfield, Virginia, site of the Office's Micrographic Division, 70 million pages were printed, and microfiche duplicates totalled 3.3 million. Value of work at the Washington and Springfield sites totalled \$5.6 million, up 4 percent from the previous year.

The Office's Micrographics Division installed unique microfiche enlargement and duplication equipment which, through consolidation of previously separate production steps, is saving an estimated \$195,000 a year. The Office also converted its main printing plant to a new system of producing printing negatives and installed a new automated plate processor. Estimated savings of \$14,000 a year will result from these changes.

The Office launched an intensive study of Commerce publications with the goal of producing a Department design manual. This study is being carried out in coordination with efforts of the White House-sponsored National Endowment for the Arts to upgrade the appearance of Government publications. The Office also completed editorial work on a new edition of the Department's "Handbook of Publishing and Printing."

PUBLIC AFFAIRS

General

The Department's Office of Communications disseminated public information on Departmental activities through many different news media outlets during fiscal 1974. One outlet was the 17 press conferences the Secretary of Commerce held in Washington. In addition, over 2,700 news releases were issued, hundreds of tape recordings were made by the Department's Broadcast Service, many articles carrying the Secretary's byline were prepared, news film clips were produced, and news was disseminated by interviews, briefings, and conferences. In addition to his many contacts with correspondents, editors, writers, and broadcasters in the Nation's capital, the Secretary made 69 out-of-town news appearances.

Energy conservation was one of the major news events of the year, with the Secretary unveiling a nationwide program of energy conservation for industry in October in which he urged adoption of an energy management program. He also announced in December formation of the National Industrial Energy Conservation Council, made up of 21 of the Nation's top industrialists. The energy work of the Department's National Bureau of Standards also proved extremely newsworthy. This

Bureau has been studying methods of improved building design to conserve energy. It also began an expanded research study of solar energy and developed a new Energy Conservation System for Industry and Commerce jointly with the Federal Energy Administration. This System, if fully implemented, could result in energy savings by industry alone of the energy equivalent of 1.4 million barrels of oil a day. The Department also began a program of voluntary labeling of appliances showing with an easily readable label the energy consumption of each appliance. The labeling program began in May with the labeling of room air conditioners.

But many of the year's newsmaking events were as diversified as the Department, ranging from the admission of women for the first time to the U.S. Merchant Marine Academy (administered by the Department's Maritime Administration) to the Secretary's trade mission to the Soviet Union, Romania, Bulgaria, the United Kingdom, and Belgium in April. There were major announcements on formation of the Commerce Action Group for the Near East to help American companies take advantage of the anticipated market boom in the Near East as a result of climbing oil revenues, and on export controls of instruments and equipment used in crime control and detection that were placed on shipments to 10 Eastern European countries, the Soviet Union, Outer Mongolia, and the People's Republic of China. Then there was a major agreement signed between two Commerce operating units—the Maritime Administration and the Office of Minority Business Enterprise—to expand minority business involvement in the shipbuilding industry, and announcement of the Minority Business Enterprise program in which 15 National Football League players secured 1,770 management training jobs for minority college students. Dedication in May by the Secretary of the \$11.5 million Federal Pavilion at "Expo '74," the International Exposition on the Environment at Spokane, Washington, also received extensive media coverage.

News Room

The Department's News Room issued 2,725 press releases, responded to approximately 15,000 inquiries from the news media and public, and fulfilled some 2,500 media requests for Commerce publications. In addition, the News Room handled distribution of over 500 recurring releases, including foreign trade and statistical reports of the Bureau of International Commerce, and economic reports of the Bureau of Economic Analysis, which are made available to editors on a demand basis. The News Room prepared and distributed 251 issues of the daily "Commerce News Digest," 24 issues of the "Magazine Digest," 12 issues of the monthly "Communications Digest," and two special

issues on the metric system and the energy crisis. The News Room also processed 295 speech texts.

Broadcast Service

The Commerce Broadcast Service provided special daily economic reports to a number of networks and, in addition, to many of the Nation's 50-watt radio stations. These reports reached approximately 1,600 stations. They were also translated into Spanish and provided to 32 Spanish-speaking radio stations. Reports of regional and local interest were distributed to various sections of the country on a daily basis, including special interest reports to minority-oriented broadcasting stations. Each weekend a recorded 60-second economic wrap-up was distributed to both radio and television stations. Also 35-mm color slides were forwarded to television stations using the material. Approximately 110 radio stations regularly aired a weekly Commerce 3 1/2-minute feature program produced and distributed by the Office of Communications. Over 20,000 calls were received requesting "Spotmaster" recordings.

Publications

Publication of the Department's biweekly official magazine, "Commerce Today," continued as an information service to the Nation's business and industrial community. This magazine provides its subscribers with authoritative interpretation of Commerce policies, programs, and procedures, as well as information about other governmental activity affecting the American businessman.

Early in 1974, the magazine was restyled to make more efficient use of page space without sacrificing content in a successful effort to reduce its steadily increasing subscription rate. A rate increase from \$33 to \$42.40 was announced in January, but the rate was reduced to \$29.80 in March. A highly successful promotion campaign was launched in May, bringing total paid subscriptions to nearly 10,500, an increase of 7 percent above the level earlier in the year.

Special "World Trade Outlook" issues were published in July and January. At the direction of the Secretary, new emphasis was given to the coverage of domestic business news in order to divide the magazine equally between domestic and international news.

The Office also updated the Department brochure, "Serving a Growing Economy and a Growing People," to reflect a number of changes that have taken place.

OFFICE OF GENERAL COUNSEL

General

The General Counsel is the chief law officer of the Department and legal adviser to the Secretary and other Commerce officials. He is responsible for advice on all legal matters and related policy questions, except for those involved in the issuance of patents or the registration of trademarks, and provides legal guidance to all Department operating units. He also provides legal services to operating units which do not have legal staffs of their own.

Legislation and Implementing Regulations

The General Counsel is responsible for preparation or review of Departmental legislative proposals, expressions of official opinion as to the merits of proposed or pending legislation, statements concerning such legislation to be made before Congress, and advice to the President on enrolled enactments. He is also responsible for preparation or review of Departmental comments on environmental regulations proposed by other agencies. He is responsible for representing the Department with the Office of Management and Budget and other Federal agencies.

The Department developed 22 detailed legislative proposals during the fiscal year and received requests for comment on over 900 items of legislation, including approximately 500 requests from the Congress. The Department also received 264 requests to comment on agency regulations in the environmental field; particularly noteworthy were effluent guidelines for 30 industries under the Federal Water Pollution Control Act. Departmental witnesses testified at over 90 Congressional Committee hearings (exclusive of appropriation hearings).

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

Amendments to the National Sea Grant College and Program Act of 1966 (P.L. 93-73).

Transferring domestic travel promotion functions from the Department of the Interior to the Department of Commerce (P.L. 93-193).

The Endangered Species Act of 1973 (P.L. 93-205).

Administration

Legal services were provided in support of Department-wide activities such as conflict of interest, personnel,

budget and appropriations, equal opportunity, procurement, internal organization, tort and other claims, property control and rulemaking.

Approximately 1,120 procurement contracts and grant documents were reviewed, including 163 contracts and grants for the Office of Minority Business Enterprise. Legal counsel was also furnished on contract-related problems including disputes, terminations, appeals, and related involvement with the Comptroller General and with the Department of Justice.

There was substantial activity calling for extensive legal assistance involving census law, the Freedom of Information Act, the Federal Advisory Committee Act and related litigation. As Departmental authority on administrative law, the Office of General Counsel also provided legal counsel for its legal offices and units on a variety of questions arising out of proposed legislation and other matters, and acted to coordinate recommendations of the Administrative Conference of the United States applicable to the work of the Department.

Domestic and International Business

Legal services were provided to the Domestic and International Business Administration, the Social and Economic Statistics Administration, and to the United States Travel Service.

In the area of domestic commerce and business, counsel was provided on minimum wage laws, pension plans, tax proposals and antitrust issues. Legal assistance was also provided on administration of, as well as a legal challenge to, the Department's defense priority system for certain defense-related materials under the Defense Production Act.

Other litigation involved the Justice Department's anti-trust suit against IBM. As part of this suit, IBM has sought access to various Department documents which contain proprietary information supplied by individual firms and for which there are statutory privileges against disclosure.

Energy and environmental issues received considerable attention. The Office participated in development of proposals regarding noise control, pollution from pesticides and solid wastes, and the effects of strip mining. It also worked with interagency groups to develop proposals regarding fuel allocation and the licensing and siting of nuclear power plants.

Policy guidance and extensive legal services were provided on the Department's export control program. These included formulating and drafting the Adminis-

tration's proposal to amend and extend the Export Administration Act of 1969, working with Congressional Committees during their consideration of the proposal, preparing regulations to monitor commodities in short supply, developing licensing methods for commodities subject to short supply export controls, granting exceptions on hardship grounds, representing the Office of Export Administration before the Appeals Board, and work involving violations of the program.

The trade adjustment assistance program also received attention, which included reviewing adjustment proposals and drafting commercial documents for financial and technical assistance loans and loan guarantees.

Counsel was provided to the U.S. Travel Service on programs to encourage foreign tourists to visit the United States and on the possible establishment of a National Tourism Resources Board.

In the area of international trade and commerce, legal assistance involved expansion of trade between the United States and the Soviet Union, the People's Republic of China, and the countries of Eastern Europe. Counsel was also provided on such matters as: (1) the textile import program, including a suit brought against the Government by the Consumer's Union challenging the procedures under which bilateral textile agreements were negotiated; (2) international expositions, particularly the Spokane "Expo '74" where work included formulating the drafting legislation to authorize Government participation, preparing all required legal documents, and providing counsel to the U.S. Commissioner General; (3) trade and tariff legislation in connection with the proposed Trade Reform Act, including inter-agency negotiations, drafting amendments and Departmental submissions; and (4) preparation for the upcoming trade negotiations, including the establishment of industry advisory committees.

Science and Technology

Legal services were provided to the Assistant Secretary for Science and Technology, the National Bureau of Standards, Patent Office, National Technical Information Service, Office of Telecommunications, and Office of Environmental Affairs.

Advice covered such major areas as fire research and safety, international voluntary standards, patent policy, the metric system, energy conservation, energy research and development, and environmental affairs.

In accordance with former President Nixon's directive in his energy message of January 1974, the Office of the

General Counsel, in coordination with the Federal Energy Office, drafted legislation to promote energy conservation by requiring the labeling of major appliances and motor vehicles with respect to their energy use and efficiency. This legislation, cited as the "National Appliance and Motor Vehicle Energy Labeling Act of 1974," was submitted to the Congress in March 1974.

Substantial legal services were also provided in connection with the increasing environmental activities of the Department. For example, legal comments were provided on regulations issued under the Clean Air Act and the Federal Water Pollution Control Act Amendments of 1972, on environmental impact statements submitted for Departmental review, and on environmental legislation.

POLICY DEVELOPMENT

The Office of Policy Development serves as the Secretary's advisor on Departmental policy. The Office aids in

setting and monitoring overall policy guidelines for the Department. Its staff also serves as a special problem-solving and study group on matters of direct concern to the Secretary.

The main focus of the Office during fiscal 1974 was shaped by the increasing demand and price for certain resources and the resultant impact on U.S. industrial and commercial activities. Policy studies undertaken included industrial energy conservation practices, the impact of the oil embargo on petroleum availability, international food and commodity requirements, coal and natural gas availability, and waste recycling. Policy reviews undertaken included R&D recoupment, the financial difficulties of U.S.-flag international air carriers, and U.S. policies for the World Food Conference and trade negotiations. The Office also assisted in developing Departmental policy and programs relating to the enhancement of productivity in commerce and industry.

SOCIAL AND ECONOMIC STATISTICS

THE ASSISTANT SECRETARY FOR ECONOMIC AFFAIRS

The Assistant Secretary for Economic Affairs is the Chief Economist of the Department and principal advisor to the Secretary on domestic and international economic policy issues. He serves as the Department's liaison with the Council of Economic Advisers and economic officials of the Government. He also exercises policy direction and general supervision over the Social and Economic Statistics Administration.

In fiscal 1974, the Assistant Secretary for Economic Affairs continued to serve as one of the Administration's chief economic spokesmen. In this capacity, he conducted regular quarterly briefings for the press on the Gross National Product and prepared biweekly articles on the economy for publication in *Commerce Today*.

During Phase IV of the Economic Stabilization Program, the Assistant Secretary participated with other members of the Cost of Living Council's Policy Review Committee in a series of hearings on requests for exceptions to price controls. He also addressed a number of business groups as part of the Cost of Living Council's program to enlist the cooperation of business.

The Assistant Secretary represented the United States at the International Economic Symposium, held at Alpbach, Austria, in September 1973. As the Commerce representative on the U.S. delegation, he also met with the Economic Policy Committee of the Organization for Economic Cooperation and Development.

In November 1973, the Assistant Secretary and the Chief Statistician of Canada announced the results of the reconciliation of United States-Canada bilateral trade statistics for 1971 and 1972. This represented the successful culmination of a joint program undertaken in 1971 to provide a better basis for trade negotiations between the two countries. A similar reconciliation of balance of payments statistics was concluded in March 1974.

At hearings conducted by the Senate Banking Committee's Subcommittee on International Finance in early 1974, the Assistant Secretary testified on the historical pattern of foreign investment in the United States. He also delivered a major address on this subject at a

conference sponsored by the *London Financial Times* in February 1974.

Under the chairmanship of the Assistant Secretary, the Department's Economic Advisory Board met quarterly with the Secretary of Commerce to review economic developments and offer advice on policy issues.

SOCIAL AND ECONOMIC STATISTICS ADMINISTRATION

The Social and Economic Statistics Administration serves as a center for collecting, compiling, analyzing, and publishing a broad range of general purpose statistics dealing with social, economic, and demographic data. It (1) conducts censuses, surveys, and other data-gathering activities designed to make available statistical data relating to the social and economic activities and characteristics of the population and enterprises of the Nation, (2) maintains the economic accounts of the United States, (3) serves as the central research organization of the Department on the functioning of the economy, (4) provides special analyses to government officials on the effects of alternative economic policies, and (5) conducts special statistical studies on various segments of the economy. It also has responsibility for the preparation, interpretation, and projection of measures of aggregate U.S. economic activity.

The Administration carries out its programs through its two component organizations, the Bureau of Economic Analysis and the Bureau of the Census.

During the year Administration management gave particular emphasis to how the Bureau of the Census might better respond to the challenges of the 20th Decennial Census. A key factor is the Bureau's computer capacity. It has, therefore, proposed a computer facility designed specifically as a computer installation. This proposal has been approved by the General Services Administration. As recommended, this building would be in place and operational well in advance of the 1980 Census.

A comprehensive review was made of all Census Bureau publications, and comparisons made of the time lag between the period covered and the release of the publication. This review determined that release dates for high priority publications, including the periodic

censuses and one-time surveys, have been advanced substantially. For the 1972 Economic Censuses, processing of publications up to and including printing is being monitored, and all will be released earlier than was the case for the 1967 Economic Censuses—some by as much as 12 months.

This year witnessed a number of innovative developments that will improve service to data users. "CARPOL," a computerized carpooling program, was released at the onset of the critical gasoline shortage in the fall of 1973. More than 4,000 copies of the user's manual were distributed by the Federal Energy Office. "UNIMATCH" is a computerized system which will perform both address matching and general statistical matching. "CENTS" was developed to facilitate the tabulation of population and housing data. It provides a flexible, easy-to-use report generating system that can be used by both non-programmers and programmers. "ZIP-MATCH" is a system developed for the U.S. Postal Service to assign zipcodes to mailing pieces.

Other initiatives included work on socio-economic data from the 1970 Census of Population and Housing, and these were computerized into narrative profiles. More than 800 socio-economic characteristics from the 1970 Census of Population and Housing for places not included in the standard census publications were made available through a specially developed computer program. An Index to the Published Tables of the 1970 census was also prepared, to provide a complete cross reference between any specific subject covered and the tables where it is shown.

Other data use publications intended as aids to data users included the 1972 edition of the *Census County and City Data Book*, the *Mini-Guide to the 1972 Economic Censuses*, and a historical catalog of all Census publications from 1790 through 1972.

BUREAU OF ECONOMIC ANALYSIS

Mission

The Bureau of Economic Analysis provides basic measures and analyses of the state of the U.S. economy, through the preparation, development, and interpretation of national economic accounts. These consist of (1) the national income and product accounts, summarized by the Gross National Product, (2) wealth accounts, which show the business and other components of national wealth, (3) input-output accounts, which trace the interrelationships among industrial markets, (4) personal income and related economic series by geographic area, and (5) the U.S. balance of international payments. Work on 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, econometric models of the U.S., and a system of economic indicators. Data and analyses prepared by the Bureau are disseminated mainly through its monthly publications, the *Survey of Current Business*, *Business Conditions Digest*, and *Defense Indicators*.

Econometric Model

A new version of the Bureau's quarterly econometric model of the United States was published in July 1973. An analysis of the model's use as a forecasting instrument was published in August 1973.

Balance of Payments

Annual data on U.S. international transactions with Australia and South Africa were separately compiled and published for the first time in the June 1974 *Survey*.

Data on income receipts from U.S. direct investments abroad were revised for 1966-73 to eliminate overstatements in income receipts from some foreign producing affiliates of U.S. petroleum companies. A special survey revealed the overstatement has become sizable in recent years. The revisions were published in the June 1974 *Survey*.

Regional Economics

In conjunction with the Department of Agriculture, the Bureau completed a set of alternative economic projections to complement the original set of projections based on the so-called "C-Series" population projections. The projections were made for the United States, 50 States plus the District of Columbia, 253 Standard Metropolitan Statistical Areas, 173 economic areas, 206 water resource planning areas, and the non-metropolitan portions of economic and water resource areas. They are for intervals of ten years between 1980 and 2020, covering population and employment and income detail for 39 industries. Projections of other measures such as land use and various types of agricultural and nonagricultural production are also included.

The decennial employment series, contained in *Growth Patterns in Employment by County, 1940-1950 and 1950-1960*, have been extended to include data for 1970. These employment series by industry are from the several Censuses of Population. The updated series will be published in a single volume entitled *Regional Employment by Industry, 1940-1950, 1940-1970, Decennial Series for the United States, Regions, States, and Counties*.

In the May 1974 issue of the *Survey*, in an article entitled "Local Area Personal Income," there were presented for the first time income measures for nearly 2,500 counties that lie outside the Standard Metropolitan Statistical Areas of the United States. These

measures included total personal income and per capita personal income by place of residence. In addition, there were presented labor and proprietors' income by industry. A new feature was the inclusion of an explicit "residence adjustment" which links place of work to place of residence for labor and proprietors' income.

Business Capital

Annual estimates of the Nation's stock of fixed nonresidential business capital for the years 1925-73, by major industry groups and detailed types of assets, were published in *Fixed Nonresidential Business Capital in the United States, 1925-73*, available from the Department's National Technical Information Service. A summary of these estimates appeared in the March 1974 issue of the *Survey*.

The 1967 Input-Output Study

Benchmark input-output tables for the United States for the year 1967 were completed in the second half of fiscal 1974. The 85-industry tables were published in the February 1974 *Survey*, along with discussion of concepts, relation to the national income accounts, applications of the tables in economic analysis, sources, and estimating techniques. These tables have been made available for sale on computer tape at the 367-industry and 484-industry levels of detail, as well as at the 85-industry level.

Reliability of GNP Estimates

A paper giving the results of a study of the reliability of the quarterly GNP estimates, *Reliability of the Quarterly National Income and Product Accounts of the United States, 1947-71*, was presented at the Thirteenth General Conference of the International Association for Research in Income and Wealth. This paper was also published in the March 1974 issue of the *Review of Income and Wealth* and as a Bureau Staff Paper.

Spending by Foreign Affiliates

Revision of two data series covering property, plant, and equipment expenditures and sales by majority-owned foreign affiliates of U.S. companies for the period 1966-72 was completed. The work included reviewing sample data for consistency and re-benchmarking the sample data to the 1966 census of U.S. direct investments abroad. Revised estimates of affiliates' property, plant, and equipment expenditures were published in December 1973.

Utilization of Manufacturing Capacity

A new series on capacity utilization was introduced in the July 1974 *Survey*. The series covers all manufac-

turers and provides actual and preferred utilization rates by industry and by asset-size class. The series are available for year-end 1965, for midyear and year-end 1966 and 1967, and for the end of each quarter from 1968 through 1973. The data will be released on a quarterly basis in the future.

Expenditures for Pollution Abatement

A comprehensive program to estimate the expenditures made by consumers, businesses and government for pollution control was initiated in fiscal year 1973. Estimates of business capital expenditures for air and water pollution abatement, which appeared in the July 1974 *Survey*, represent the first published results of this program. The data will be published on an annual basis.

BUREAU OF THE CENSUS

Mission

The Bureau of the Census collects and publishes basic statistics concerning the population and the economy of the Nation in order to assist the Congress, the Executive Branch, and the general public in the interpretation and evaluation of economic and social developments. The Bureau publishes a wide variety of statistical data and provides special tabulations of statistical information for government and private users.

Economic Censuses

Emphasis during fiscal 1974 centered on completion of clerical processing and analytical review of the data needed to publish 1972 census results. All preliminary reports for the Census of Business (retail and, wholesale trade and selected service industries), the Census of Construction Industries, the Census of Manufactures, and the Census of Mineral Industries were issued during the year. Also released were final publications of the National Travel Survey, the Truck Inventory and Use Survey, and several state reports of the Census of Business trade areas.

An unprecedented effort was made to publicize results of the 1972 Economic Censuses. Press releases were issued to newspapers, radio-TV outlets, trade associations, and newsletters. About 80,000 releases were mailed.

Census of Governments

The data collection phase of the 1972 Census of Governments was completed, and all data reviewed, edited and entered onto computer tape. Ten of 17 final reports had been issued by the end of fiscal 1974.

Agriculture Census

Funds for the 1974 Census of Agriculture were released late in September, permitting resumption of planning after more than 12 months suspension. A combined pretest and dress rehearsal was conducted by mail in 11 geographically and agriculturally dispersed counties in January, followed by two follow-ups and field interviews of a sample of both respondents and non-respondents. Work began on the construction of the mailing list for the Census with receipt of address lists from various administrative sources.

The public information program to encourage cooperation with the 1974 Census of Agriculture will make greater use of modern electronic media techniques than ever before. Spot announcements have been prepared by Loretta Lynn, a country music star, and Bill Baird, a well-known TV Puppeteer. They will be released during the time when data are being collected.

Population and Housing

In fiscal 1974, the first preparatory funds for the 1980 Census of Population and Housing were authorized and formal planning activities initiated on a number of fronts. Plans were developed for a major effort to elicit information on 1980 census data needs from a broad range of census users and potential users. To meet the expanding data needs of State and local governments for reapportionment and redistricting purposes, a working relationship was established with the National Legislative Conference and similar organizations. Because of the critical importance of the underenumeration problem, a large-scale staff effort to develop procedures to improve coverage was begun. In addition, discussions were undertaken to establish continuing and organized channels of communication with the black and Spanish-ancestry communities to help develop more effective enumeration approaches.

Current Surveys

Effective with the statistics for January 1974, the Bureau is publishing U.S. import data a "c.i.f." (cost, insurance, and freight) and a "f.a.s." (freight alongside ship) basis—both in addition to the Customs value basis which has traditionally been reported. As most other countries report their import data on a c.i.f. basis, the presentation of the U.S. import data on a similar basis makes our statistics more comparable with those of our trading partners, permitting better analysis of the competitive impact of specific imports on the domestic market. The f.a.s. valuation is on the same basis as that used for valuing U.S. exports, and is the one most suitable for balance of payments computations.

More reliable data on persons of Spanish origin were published by doubling the number of Spanish origin persons included in the Current Population Survey of March of each year. Annual reports are being prepared on the demographic, social, and economic characteristics of persons of Spanish origin.

Data on State and local government adjusted taxes and intergovernmental revenues during fiscal year 1973 were provided to the Department of the Treasury for use in implementing the Federal Revenue Sharing Program.

Special Surveys and Projects

The final phase of data collection for the Consumer Expenditure Survey was completed during the year, and results from the earlier phases began to flow to the Bureau of Labor Statistics. These data form the basis for revising the Consumer Price Index. Data collection was begun to develop a sampling frame for outlets in which prices will be collected for the Consumer Price Index throughout the decade.

The Bureau has provided extensive technical advice to the Government of Saudi Arabia on planning for population and housing censuses. This assistance has included on-site guidance from Bureau specialists in census design, training, and data processing. Following a meeting in late June between the Saudi Minister of State for Finance and the National Economy and the Department's Assistant Secretary for Economic Affairs, the Bureau recruited a highly qualified population census advisor to provide one year of on-site assistance, and has also made arrangements to provide short-term assistance in the development of an industrial statistics base.

A complete set of State and county population estimates for July 1972, and per capita income estimates for 1971 were transmitted to the Office of Revenue Sharing. County population estimates were prepared for 39 States as a part of the Federal-State Cooperative Program.

At the request of the Department of Housing and Urban Development the Bureau undertook a survey to measure placements of new mobile homes. This survey will provide data now lacking for a significant portion of low cost housing.

The Bureau also initiated a program which will provide quarterly information on new housing started, completed, and under construction, in selected metropolitan areas. This report will be supplemented each year to show selected characteristics of these structures. This is the first time such information will be available for a local area.

Improvements

The Bureau was asked by the Office of Management and Budget to assist them, through the Federal Regional Councils, with a prototype Socio Economic Demographic Information System in San Francisco. Two information specialists were assigned to the San Francisco Office during the year. Procedures were developed for providing information on such projects as housing defaults, child day-care center locations, and carpooling.

The Bureau's Field Division initiated a mileage reduction program for most ongoing surveys in conjunction with the overall effort to conserve energy. The result was a savings of nearly two and one-half million miles, or 11.7% of 1973 mileage. The Field Division, which conducts the Bureau's direct interview surveys, through its 12 regional offices, incurs approximately 96% of all Social and Economic Statistics Administration mileage.

In conjunction with local agencies of government and regional planning councils, the Bureau has begun the development of a standardized set of geographic base files on all Standard Metropolitan Statistical Areas in the United States.

Other Activities

The Bureau prepared a book-length monograph entitled *Population of the United States, Trends and Prospects: 1950-1990* as part of the background material for the World Population Conference in August at Bucharest, Rumania. This was one of 57 similar "country statements" prepared by cooperating countries. The report included information on the historical growth of population in the United States and on the components of growth—births, deaths, and net immigration. It also covered changes since 1950 in regard to fertility differentials, marriage, education, migration, and ethnic composition of the population; recent employment, occupation, and income trends; and projections of population to 1990 in terms of age, school enrollment, labor force participation, and household formation.

An updated *Census Guide to Programs and Publications: Subjects and Areas* was issued early in the fiscal year. An *Historical Catalog of Census Publications: 1790 through 1972* was submitted for printing to be issued in the fall of calendar 1974. The *1973 Pocket Data Book* was issued in March 1974.

SOCIAL AND ECONOMIC STATISTICS ADMINISTRATION

Reports Published by the Bureau of the Census, Fiscal 1970-74

	1970	1971	1972	1973	1974
Current Program:					
Retail, Wholesale, and Selected Service Trade Statistics	80	108	111	80	203
Manufacturing and Industrial Statistics	1,150	624	652	630	564
Current Population Survey	71	57	52	83	92
Construction Statistics	75	85	86	81	76
Housing Statistics	17	8	7	11	7
Agriculture Statistics	17	13	22	20	20
State and Local Governments	25	22	27	30	24
Foreign Trade Statistics	128	196	140	139	116
Statistical Abstracts and Special Reports	123	184	183	102	56
Geography	5	15	59	18	10
Transportation . . . . .	.....	.....	.....	1	22
Economic Statistics and Surveys . . . . .	.....	.....	.....	7	53
Subtotal for Current Programs	1,691	1,312	1,339	1,202	1,243
Censuses:					
Population and Housing: 1960	1	.....	2	.....	.....
1970	33	533	327	295	140
Governments: 1967	62	.....	.....	.....	.....
1972 . . . . .	.....	.....	.....	3	8
Economic: 1967	241	407	8	2	4
1972 . . . . .	.....	.....	.....	46	873
Agriculture: 1969 . . . . .	.....	159	3,138	50	22
Special Population Census	14	15	69	143	49
Subtotal for Censuses	351	1,114	3,544	539	1,096
Total all reports	2,042	2,426	4,883	1,741	2,339

ECONOMIC DEVELOPMENT

The Assistant Secretary

The Assistant Secretary for Economic Development heads the Economic Development Administration—the Commerce Department operating unit that provides financial assistance to help areas of the Nation with serious unemployment problems plan and carry out programs to create jobs and increase incomes. The Assistant Secretary advises the Secretary on economic development in the States, multi-county districts, and local communities. He represents the Department of Commerce and the Federal Government in developing and coordinating programs to support industrial and commercial growth in economically undeveloped areas of the Nation.

Mission of the Economic Development Administration

The mission of the Economic Development Administration is to help create jobs and increase incomes in economically lagging areas of the Nation. In fiscal 1974 the Administration placed special emphasis on assistance to communities and States facing high unemployment because of cutbacks in military activities. The Public Works and Economic Development Act of 1965 as amended (42 USC 3121 et seq.) authorizes the Agency to provide financial, planning, and technical assistance to encourage long-range industrial and commercial growth in qualified areas. The Act also authorizes grants to help create immediate jobs through the construction of public facilities in areas of high unemployment.

Economic Development Assistance

During fiscal 1974 the Economic Development Administration approved:

- \$174 million for 456 public works projects including \$38.7 million for 190 public works impact projects to help create immediate jobs and \$135.3 million for 266 projects supporting long-range planning programs to create permanent jobs through orderly, diversified economic growth.
- \$20 million for business development loans and working capital guarantees.
- \$17.9 million for 322 technical assistance projects, including \$7.5 million for 79 grants to help communi-

ties plan long-range economic growth to combat unemployment anticipated in connection with cutbacks in military activities.

- \$7.7 million for economic development planning at local, multi-county district, and State levels.

Basic Programs

The Economic Development Administration makes grants and loans to help local communities build facilities to encourage private enterprise to expand and create new jobs. Funds are provided to help develop industrial areas, transportation facilities, job-training centers, and water and sewer systems.

The Administration makes long-term, low-interest loans to help expand or establish job-generating activities.

Technical assistance is provided to help solve problems blocking growth.

Grants are provided to help areas, multi-county economic development districts, Indian reservations, and States plan activities essential to orderly, diversified economic development.

Qualified Areas

Qualification for assistance from the Economic Development Administration, under provisions of the Public Works and Economic Development Act of 1965, generally is based on high unemployment or underemployment.

Qualified areas are geographic units such as counties or their equivalents, Indian reservations, cities or parts of cities, or labor areas.

On June 30, 1974, there were 1,780 areas qualified for assistance. This included 335 areas qualified under Title I for public works grants only. The other 1,445 areas were qualified for the full range of benefits—public works loans and grants, business loans, and planning and technical assistance.

The Administration can provide technical assistance to any area of the Nation where serious problems of unemployment exist or are anticipated.

Planning Program

The multi-county economic development district is the key element of the Economic Development Administration's planning program. On June 30, 1974, there were 157 districts operating in 40 States.

The aim of the district program is to encourage adjacent jurisdictions to work together to overcome regional problems blocking growth and to create jobs for residents of economically lagging areas.

The 157 operating economic development districts contained 1,234 counties and 256 growth centers—communities that can provide jobs and services for

unemployed and underemployed residents of the district.

Redevelopment areas participating in the district program are eligible for bonuses of 10 percent above what they would normally receive in public works grants.

In fiscal 1974, the Administration approved 143 grants for \$6.2 million to help pay administrative costs of the district staffs.

In addition, nine grants for a total of \$370,000 were approved for area planning units and 57 grants for a total of \$1.1 million were approved for the Nation's Indian reservations.

Table 1.—SUMMARY OF EDA OBLIGATED PROJECTS FOR FISCAL 1974

By State and Program
(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	7	\$4,058	1	\$494	.....	8	\$510	1	\$122	17	\$5,184
Alaska	11	3,607	...	.....	.....	6	200	1	180	18	3,987
Arizona	10	5,040	...	.....	.....	10	192	...	187	20	5,419
Arkansas	16	3,878	...	.....	.....	4	124	...	415	20	4,416
California	29	9,223	1	.....	\$180	16	1,730	...	107	46	11,060
Colorado	6	2,476	...	.....	.....	5	214	...	107	11	2,797
Connecticut . . .	5	2,938	...	.....	.....	5	346	...	.....	10	3,283
Delaware	1	100	...	.....	.....	1	3	...	.....	2	103
District of Columbia . .	1	112	1	.....	450	2	110	...	.....	4	222
Florida	9	1,659	...	.....	.....	3	313	1	98	12	2,070
Georgia	9	3,179	...	.....	.....	8	661	...	555	17	4,395
Hawaii . . . . .	...	.....	...	.....	.....	...	.....	...	.....	...	.....
Idaho	8	1,363	...	.....	.....	4	274	...	126	12	1,764
Illinois	8	6,751	1	2,500	.....	6	182	...	158	15	9,591
Indiana	7	3,513	...	.....	.....	3	193	1	68	11	3,774
Iowa	3	1,067	...	.....	.....	1	63	2	100	6	1,230
Kansas	2	1,920	...	.....	.....	4	220	...	52	6	2,192
Kentucky	9	3,981	1	500	.....	2	235	2	230	14	4,945
Louisiana	18	5,127	...	.....	.....	3	40	1	253	22	5,419
Maine	9	1,524	...	.....	.....	1	14	1	132	11	1,669
Maryland	2	1,668	...	.....	.....	2	176	...	.....	4	1,844
Massachusetts . .	8	7,448	...	.....	.....	17	1,666	...	117	25	9,230
Michigan	9	4,505	...	.....	.....	2	152	2	375	13	5,033
Minnesota	19	9,644	...	.....	.....	7	122	...	148	26	9,914
Mississippi	10	5,606	...	.....	.....	9	267	...	397	19	6,269
Missouri	5	1,558	...	.....	.....	9	248	3	264	17	2,071
Montana	4	532	...	.....	.....	6	111	1	217	11	860
Nebraska	4	2,074	...	.....	.....	1	50	...	30	5	2,154
Nevada	3	344	...	.....	.....	1	30	...	7	4	381
New Hampshire . .	3	1,653	...	.....	.....	...	.....	...	.....	3	1,653
New Jersey	3	1,225	1	5,200	.....	3	209	...	.....	7	6,634
New Mexico	22	4,370	...	.....	.....	4	10	1	186	27	4,566
New York	13	5,581	...	.....	.....	9	350	2	198	24	6,129
North Carolina . .	10	3,765	2	2,400	.....	6	135	1	204	19	6,504
North Dakota . . .	10	1,935	...	.....	.....	6	205	2	125	18	2,265
Ohio	4	4,387	...	.....	.....	5	584	...	89	9	5,060
Oklahoma	18	5,411	...	.....	.....	18	188	1	333	37	5,932
Oregon	9	3,148	1	2,500	.....	4	150	...	180	14	5,978
Pennsylvania . . .	7	3,019	...	.....	.....	14	1,059	...	138	21	4,216
Rhode Island . . .	2	601	...	.....	.....	2	602	1	.....	5	1,203
South Carolina . .	8	3,607	...	.....	.....	5	206	1	236	13	4,049
South Dakota . . .	8	2,807	...	.....	.....	1	5	1	210	10	3,022
Tennessee	9	5,191	...	.....	.....	6	205	...	140	15	5,537
Texas	43	9,630	3	1,310	270	8	527	2	387	56	11,854
Utah	4	1,726	2	2,250	.....	2	135	...	92	8	4,202
Vermont	2	365	...	.....	.....	1	26	...	.....	3	391
Virginia	3	1,476	...	.....	.....	2	145	...	158	5	1,779
Washington	23	9,145	...	.....	.....	13	784	...	209	36	10,103
West Virginia . . .	6	3,115	...	.....	.....	1	19	...	41	7	3,175
Wisconsin	12	3,002	...	.....	.....	2	70	...	38	14	3,110
Wyoming	1	576	1	800	.....	...	.....	...	.....	2	1,376
American Samoa . .	...	.....	...	.....	.....	...	.....	...	54	...	54
Puerto Rico	4	3,311	...	.....	.....	5	728	...	39	9	4,079
U.S. General . . . .	...	.....	...	.....	.....	59	3,153	1	324	60	3,478
Totals . .	456	\$173,943	¹ 15	\$17,954	² \$900	³ 322	\$17,942	⁴ 28	\$7,739	821	\$217,578

NOTE: Detail may not add to totals due to rounding.

¹ Includes 3 working capital guarantees.² Agency exposure for guarantee of 90 percent of unpaid balance of loans.³ Does not include additional line items such as task orders.⁴ Does not include continuing grants.

Table 2.—CUMULATIVE SUMMARY OF EDA OBLIGATED PROJECTS

By State and Program through Fiscal 1974

(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	95	\$36,443	14	\$16,131	\$493	42	\$1,361	10	\$619	161	\$54,553
Alaska	62	35,138	2	87	135	42	1,807	14	823	120	37,855
Arizona	78	32,536	4	2,612	55	1,422	9	1,243	146	37,813	
Arkansas	160	58,040	8	3,604	720	45	918	52	3,261	265	65,282
California	187	112,303	31	20,331	2,930	264	12,110	12	605	494	145,349
Colorado	26	8,506	2	2,315	30	556	11	661	69	12,038	
Connecticut . . .	18	14,367	2	2,819	14	807	1	26	35	18,019	
Delaware	8	4,958	1	738	3	33	....	....	12	5,729	
District of Columbia . .	5	13,457	6	828	1,046	35	2,435	....	....	46	16,719
Florida	24	11,509	10	3,119	765	35	1,233	8	446	77	16,308
Georgia	98	43,646	12	21,419	53	3,010	81	4,305	244	72,381	
Hawaii	3	1,197	1	66	3	38	3	73	10	1,374	
Idaho	46	9,895	5	2,818	360	15	605	10	531	76	13,849
Illinois	69	55,247	11	14,241	86	3,528	24	995	190	74,010	
Indiana	27	14,057	6	2,187	180	31	789	7	254	71	17,288
Iowa	16	5,886	1	398	7	157	2	100	26	6,541	
Kansas	19	10,779	....	....	13	680	6	385	37	11,844	
Kentucky	175	83,589	20	6,683	1,643	50	1,894	26	1,455	271	93,620
Louisiana	86	38,868	6	3,113	30	959	31	1,780	153	44,721	
Maine	39	8,325	15	17,703	4,410	35	645	20	853	109	27,526
Maryland	12	4,611	5	5,052	180	22	2,171	6	357	45	12,191
Massachusetts . .	35	27,884	6	4,928	91	5,471	18	645	150	38,928	
Michigan	119	48,118	6	8,167	540	47	1,410	44	2,515	216	60,210
Minnesota	110	44,438	24	5,697	1,080	83	1,089	12	890	229	52,114
Mississippi . . .	190	81,036	14	15,510	840	51	2,150	50	2,978	305	101,674
Missouri	70	19,686	3	1,772	53	1,062	29	1,313	155	23,832	
Montana	52	21,654	6	2,048	315	58	765	43	1,829	159	26,296
Nebraska	19	12,941	....	....	14	514	3	145	36	13,601	
Nevada	21	3,210	1	299	5	78	5	241	32	3,828	
New Hampshire . .	15	7,158	3	1,300	270	11	151	....	....	29	8,609
New Jersey . . .	22	18,187	15	20,942	878	42	1,508	....	....	79	40,637
New Mexico . . .	98	45,353	11	3,948	999	55	770	25	1,032	189	51,101
New York	83	43,072	24	17,095	42,528	151	6,338	30	1,491	288	67,996
North Carolina .	97	48,391	12	7,816	293	34	1,139	27	1,308	170	58,654
North Dakota . .	36	14,283	1	750	19	716	11	686	67	16,435	
Ohio	74	43,990	8	3,976	74	4,789	11	614	167	53,369	
Oklahoma	138	44,517	14	14,343	315	71	1,228	47	2,653	270	62,740
Oregon	36	21,268	2	7,500	25	580	7	337	70	29,685	
Pennsylvania . .	104	52,536	11	11,934	585	164	9,300	30	1,898	309	75,668
Rhode Island . .	17	18,048	1	1,113	11	1,140	2	5	31	20,306	
South Carolina .	90	33,908	12	11,468	810	16	637	24	1,299	142	47,312
South Dakota . .	45	10,069	....	....	23	345	29	1,155	97	11,570	
Tennessee . . .	121	56,104	13	16,034	540	32	1,572	22	1,062	188	74,772
Texas	183	65,433	19	12,074	670	80	2,903	55	2,413	337	82,824
Utah	46	16,487	2	2,250	8	377	11	499	67	19,613	
Vermont	11	4,415	....	....	6	46	1	50	18	4,512	
Virginia	31	14,226	3	2,640	900	24	1,469	25	1,273	83	19,608
Washington . . .	107	57,461	15	18,266	945	60	3,176	16	869	198	79,772
West Virginia . .	116	63,796	12	5,667	761	50	705	11	532	189	70,700
Wisconsin	57	14,120	3	2,919	41	1,445	11	378	112	18,862	
Wyoming	13	2,481	1	800	7	48	1	38	22	3,367	
American Samoa .	2	1,510	3	1,010	135	4	132	4	231	13	2,883
Guam	1	60	....	....	....	....	....	....	....	1	60
Puerto Rico . . .	63	48,254	19	12,681	36	2,396	7	440	125	63,772	
Virgin Islands . .	2	1,251	....	....	5	113	1	30	8	1,394	
U.S. General . .	....	....	....	....	....	325	18,386	23	2,081	350	20,467
Totals . .	3,477	\$1,608,701	¹ 426	\$340,673	² \$66,459	2,686	\$111,105	968	\$51,702	7,559	\$2,112,180

NOTE: Detail may not add to totals due to rounding.

¹ Includes 80 working capital guarantees.² Agency exposure for guarantee of 90 percent of unpaid balance of loans.

REGIONAL ACTION PLANNING COMMISSION PROGRAM

Mission

The Regional Action Planning Commission Program is a unique partnership between the Federal Government and the States. It provides for financial, technical, planning, and research assistance to designated multi-state regions which are economically distressed. The regions must first be designated by the Secretary of Commerce. The States affected may then come together with the Federal Government to form regional commissions consisting of the Governors of these States and a Federal Cochairman appointed by the President. The commissions set development priorities for the regions, propose strategies for upgrading their economies, and develop plans and programs for enhancing their growth.

At present 29 states participate either on a partial or whole-state basis in the following seven regional commissions: Coastal Plains (parts of North Carolina, South Carolina, and Georgia); Four Corners (parts of Arizona, Colorado, New Mexico, and Utah); New England (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont); Old West (Montana, Nebraska, North Dakota, South Dakota, Wyoming); Ozarks (Arkansas, Louisiana, Missouri, Oklahoma, Kansas); Pacific Northwest (Idaho, Oregon, Washington); and Upper Great Lakes (parts of Michigan, Minnesota, Wisconsin).

The Regional Action Planning Commission Program is authorized by Title V of the Public Works and Economic Development Act of 1965, as amended, and Executive Order 11386. It was recently extended through June 30, 1976, by Public Law 93-423. The Secretary carries out his responsibilities under this legislation through his Special Assistant for Regional Economic Coordination. The Special Assistant heads the Department's Office of Regional Economic Coordination.

Coastal Plains Regional Commission

In a joint effort with eight oil companies, the Coastal Plains Regional Commission organized and spearheaded an analysis of the economic and environmental feasibility of deepwater oil ports and the attendant refinery sites for the southeast Atlantic coast of the United States. A draft report of the study has been submitted.

A third-level aviation service provided by Wheeler Flying Service of Raleigh was initiated, with Com-

mission support, in North Carolina. The service links medium-size cities and is similar to the system funded by the Commission in Georgia and South Carolina.

The Commission created an Industrial Development Advisory Committee, which serves as a link to public and private industrial development agencies and organizations, to advise the Commission on broad policy considerations and program development in industrial development. An Environmental Affairs Advisory Committee provides guidance with respect to economic growth in terms of its impact on the environment.

In fiscal 1974, the Commission invested \$2.6 million in public works projects with a total cost of \$16.2 million. It also funded technical assistance projects in the amount of \$1.4 million.

Four Corners Regional Commission

The States of Arizona and Utah joined in expanding two newly developed techniques to handle competing demands on scarce fuel, energy, and water resources, and state planning policies and decisions affecting these demands. The project combines the Arizona Trade-Off Model, which evaluates economic and environmental factors involved in specific development projects, and the Utah Forecasting Model, which estimates the impact of alternative state futures. Colorado and New Mexico are expected to join these activities early in fiscal 1975.

All four States expanded work in the field of energy research and information coordination, primarily because of coal, oil shale, and natural gas development and potential in the region. Colorado funded a study to explore alternative employment potentials for industries which have suffered or may suffer because of energy shortages. Utah instituted a comprehensive mining education program at the College of Eastern Utah. A number of the public works projects approved in fiscal 1974 related to new energy exploration and development in the Four Corners region.

The Four Corners Regional Commission approved \$4.6 million in public works grants and \$1.7 million in technical assistance during fiscal 1974.

New England Regional Commission

The New England Regional Commission played a significant role through its various energy programs by operating an energy information system which can assist in contingency planning, allocation procedures, conservation programs, and long-range energy policy formulation; by performing technical and policy analyses; by assisting in interfacing between state and Federal Governments on energy matters; by developing programs to take advantage of the benefits of Federal research and development activities; and by developing a regional program of energy conservation.

As a major part of its energy program, the Commission initiated a comprehensive analysis for oil refinery sites, deepwater ports, and a petroleum product distribution system in New England. This effort will lead to a coordinated region-wide approach to major energy producing and distributing facilities resulting in large economic benefits to the region. It will help the Commission examine the siting of electric, including nuclear, plants.

To enable its member States to meet the complex issues presented by the Regional Rail Reorganization Act of 1973, the Commission helped the States in their efforts to overcome gaps in the overall transportation system in the region. Through analyses of highway, rail, and air service problems, it assisted the States in studying alternative solutions and supported them in the implementation of the alternatives selected.

In fiscal 1974, the Commission approved a total of \$7.2 million in such program areas as energy conservation and development, transportation, commercial-industrial development, and state management programs.

Old West Regional Commission

The Old West Regional Commission became fully operational during the latter part of the fiscal year with the establishment of Commission headquarters under an Executive Director in Rapid City, South Dakota, and a field office in Billings, Montana. These offices help coordinate and monitor energy programs as well as provide assistance to the States on Commission activities.

The Old West Region, along with the Four Corners Region, contains the country's largest reserve of energy resources—coal, uranium, oil and other fuels. The Commission is deeply involved in opportunities for economic development but is also trying to ameliorate the effects of its development. A special appropriation in the amount of \$2 million in fiscal 1974 was used to help identify and solve the social and economic impacts of coal development in the region.

In fiscal 1974, the Commission expended \$2.8 million in technical assistance in the areas of human resources, industrial development, natural resources, agriculture and forestry, recreation and tourism, transportation, regional economic analysis, government services, and state investment planning. The Commission does not have supplemental grant-in-aid authority in fiscal 1974.

Ozarks Regional Commission

With the inclusion of the whole of Kansas, the Ozarks Region is now a five-state region and a new regional plan is being developed and will be completed and submitted to the Secretary within calendar 1975.

The Ozarks Regional Commission continued, and plans to complete during fiscal 1975, a five-state regional health evaluation survey. The survey is being financed by the Commission and coordinated by the U.S. Public Health Service. Results will be displayed both graphically and statistically, so as to show where health problems are most intense and where Federal and state efforts need to be concentrated.

The Arkansas River Development Corporation entered the third year of work planning for the optimum utilization of the McClellan-Kerr Waterway on the Arkansas River. The Corporation is financed by the Commission. Efforts are being made to extend the project to other states in the Arkansas Basin.

The Commission contracted with Worldwide Transportation services to provide service to shippers and distributors utilizing both the Arkansas and Mississippi waterways as a means of stimulating additional traffic and marketing opportunities throughout the region, especially on the Arkansas and lower Mississippi waterways. Arkansas, Oklahoma, and Louisiana are active participants in the project.

The Commission's five-state land use planning effort, in cooperation with the U.S. Department of Interior, continued and is expected to be regionwide within fiscal 1975.

In fiscal 1974 the Commission invested \$1.5 million in technical assistance projects and \$5.2 million in public facilities projects.

Pacific Northwest Regional Commission

The Pacific Northwest Regional Commission was utilized by the Governors to fund state energy offices and to coordinate regional energy efforts through a Regional Energy Task Force. The energy offices successfully coordinated a program for a petroleum allocation and

distribution system within and among the three States. In addition, the Commission funded a regional energy program which would enable Idaho, Oregon, and Washington to plan and coordinate alternative regional solutions to energy shortages through 1980.

The Commission focused on expanding foreign trade and evaluating alternate foreign trade expansion strategies for the region. Steps have been taken to increase foreign trade from a 1972 level of \$7.1 billion to approximately \$12.3 billion by 1980.

The Commission undertook a warm water irrigation project to demonstrate and assess the feasibility of using condenser cooling water from thermal power plants for agricultural production, thereby reducing the biological degradation of the Columbia River into which the water is now allowed to flow.

The Commission launched several demonstration projects in fiscal 1974. Among them were development of a third-level air carrier plan for the Pacific Northwest, a regional pilot project for waste-disposal, and an Indian Cultural-Education Center.

At the present time, the Commission has invested \$1.5 million in technical assistance projects. The Commission did not have supplemental grant authority in fiscal 1974.

Upper Great Lakes Regional Commission

To meet the energy crisis, the Upper Great Lakes Regional Commission embarked on an energy program

which centered on assistance to the region's recreation industry and on development of energy accounting and information systems. The program included a demonstration project to provide publicly subsidized transportation from metropolitan areas to the region's recreation facilities. Special promotion and information services were instituted to encourage in-state tourism, as well as special assistance to each governor's office to provide the public with information on energy problems as a conservation measure.

A major effort was also undertaken to establish a computerized energy information service to provide regional planners with information on energy usage and demand in the future.

The Inland Lake Renewal and Demonstration Project, a joint venture of the University of Wisconsin and the Wisconsin Department of Natural Resources funded by the Commission, was completed in fiscal 1974. Wisconsin enacted legislation to implement a similar program throughout the State. The project attempted to restore the degraded inland lakes, develop and evaluate techniques for land use management that would control the movement of pollutants into these lakes, and to develop techniques for systematic lake-use and land-use planning. The program is expected to have a regional benefit with widespread use in Michigan and Minnesota.

In fiscal 1974 the Commission invested \$4.8 million in supplemental grants and \$2.8 million in technical assistance projects.

DOMESTIC AND INTERNATIONAL BUSINESS

GENERAL

The Assistant Secretary for Domestic and International Business is the Secretary's principal advisor on the promotion of progressive business policies and growth and strengthening the international economic position of the United States. The Assistant Secretary heads the Domestic and International Business Administration, and, as such, is responsible for Commerce programs involving the expansion of international commerce, including: (1) research, analysis, and the development of policy initiatives in the areas of international trade, finance, and investment, (2) the expansion of East-West trade and other commercial relations, (3) promotion of business-consumer relations, (4) competitive assessment, (5) energy programs, (6) import quota administration, (7) export administration, (8) trade adjustment assistance, (9) the collection, analysis, and dissemination of selected information on various industries, commodities, and markets, (10) the preparation and execution of plans for industrial mobilization readiness, and (11) participation in domestic trade fairs.

The Domestic and International Business Administration underwent a realignment of certain policy and other functions in fiscal 1974. Its international economic policy, research, and analysis functions, together with those of its Office of Competitive Assessment, were placed into a single area—the International Economic Policy and Research staff—headed by a Deputy Assistant Secretary. Concurrently, the Bureau of Competitive Assessment and Business Policy was redesignated the Bureau of Domestic Commerce.

OFFICE OF FIELD OPERATIONS

Mission

The Domestic and International Business Administration's Office of Field Operations has six regional, 42 district, and 10 satellite offices located in major industrial and commercial centers in the United States and Puerto Rico. It serves as the Department's principal medium of contact with the local business community. Its primary function is to provide these communities with informational services, business data, and counseling on Departmental international and domestic programs, including related marketing aids.

Export Promotion Programs

Fiscal 1974 goals for tangible export actions were met as follows:

Category	Goals	Results	Percent of goals
Target industry export actions	2,600	3,760	144
Non-target industry export actions	3,400	5,118	150
Total export actions	6,000	8,878	147
Trade opportunity subscriptions	7,000	7,096	101

Of the total export actions reported above, 5,089 represent initial export sales by New-to-Market firms totaling \$588,958,000.

Domestic Trade

District Offices continued to be involved in a variety of domestic trade activities in fiscal 1974. These included: (1) bringing to the local business community the Department's energy conservation program, (2) participating in presentation of the Secretary's productivity message to local business firms, (3) arranging and participating in a series of "Census User" conferences with the Bureau of the Census in ten major cities, (4) cooperating with the National Bureau of Standards in promoting awareness of its energy labeling program and metric conversion material, and (5) participating with the Bureau of Domestic Commerce in a program to alert the Department to material shortages at the local level.

For the 6-month period ending June 30, 1974, Field Energy Conservation activities included the following:

Energy seminars held	181
Energy conservation film showings	759
Energy citations awarded	5,957

Federal Procurement

The Office conducts Procurement Conferences for local businessmen as requested by Members of Congress who act as the sponsors. An average of 14 civilian agencies

and the Army, Navy, and Air Force send procurement counselors to each Conference. In fiscal 1974, 31 conferences were held, attended by 5,963 local businessmen representing small and medium sized firms. At each conference a seminar on "Export Opportunities" was given by an Office Trade Specialist.

Service Improvements

To improve service to the local business community, ten "satellite" offices were opened in fiscal 1974. The Office also realigned the geographical areas of its District Offices to conform with appropriate state boundaries. States with large concentrations of industry continued to be served by more than one office. In some cases a District Office continues to serve more than one State.

BUREAU OF DOMESTIC COMMERCE

Mission

The Bureau of Domestic Commerce of the Domestic and International Business Administration is responsible for aiding and promoting the development of U.S. business. The Bureau monitors and analyzes trends, issues, and other national priorities and their impact on individual industries, and evaluates significant inter-industry issues which affect the business community. The Bureau also operates an Ombudsman program to serve the business community and others in their business with Government, and administers the statutory program for industrial mobilization readiness.

Research, Analysis, and Information

The Bureau assisted in the administration of the Economic Stabilization Program. It provided the Cost of Living Council with detailed analyses for selected industries and commodities in short or tight supply. Bureau officials were detailed to the Cost of Living Council during the period June-September 1973 to assist in the analysis of exemption requests and in the formulation of Phase IV.

The Bureau initiated and published a weekly *Business Conditions Report* that was distributed throughout the Department and to other Federal agencies concerned with current tight supply situations. This report is a concise compilation of issues and problems that are emerging throughout the economy as a consequence of the strong domestic and worldwide demand for basic industrial products and raw materials.

The Bureau monitors export activity in ferrous scrap. Similar monitoring was initiated to assess export activities in copper base scrap. Special surveillance procedures were established to monitor the exports of fertilizers and petro-chemicals. The Bureau also chaired the Inter-

agency Fertilizer Task Force which was created to monitor domestic and foreign fertilizer supply.

In coordination with the International Economic Policy and Research staff, the Bureau assisted in preparations for future negotiations under the General Agreement on Tariffs and Trade. Activities included:

- Recommendations for membership of over 500 business executives on the 26 Industry Section Advisory Committees.
- Preparation of separate background and trade material for each of these 26 committees.
- Contact with each of the members of these committees to assist them in their contributions.
- Preparation of studies on the effect of foreign non-tariff barriers on selected areas of U.S. trade and the effect of preferential trade agreements on U.S. trade.

In other activities designed to support trade expansion, the Bureau:

- Worked with the Assistant Secretary for Science and Technology, the Bureau of International Commerce, and the Bureau of East-West Trade in a program of technical aid to exporters.
- Assisted in developing trade opportunities through participation in trade missions and catalog shows.
- Supported the National Bureau of Standards by serving on the Government's Advisory Committee for International Legal Metrology.

The Bureau prepared and published the 1974 edition of *U.S. Industrial Outlook*. This publication reviewed significant industry developments in 1973 and projected activity levels for 1974 and 1980 for more than 200 individual manufacturing and non-manufacturing industries. For the first time, it included special reports on general economic areas that affect most of the individual industries covered. Reports on the energy situation, consumer credit, and pollution control costs were included.

Industry studies on newsprint, certain food products, electronics, chlorine, and fertilizers were published during the year, the latter two in support of interagency task forces. The third annual survey entitled *Franchising in the Economy 1972-74*, as well as the eighth edition of the *Franchising Opportunities Handbook* were published.

The Bureau completed a 15-month study entitled *Frozen Cooked Food Survey* on the economic feasibility of using frozen foods for military troop field

feeding. This study was performed, under contract, for the Army.

The Bureau established the Interagency Committee to Assess the Impact of Crimes Against Business which will, among other things, evaluate the effectiveness of existing Federal programs to reduce the costs to the business community of this type of illegal activity.

Project Independence

Working closely with the Federal Energy Office, the Bureau:

- Provided 18 volumes of basic data on key energy-using industries for use in analytical work and planning and implementation of allocation and conservation programs.
- Planned and managed 15 contract studies on energy use patterns in industry, energy supply problems, opportunities for fuel substitution and energy conservation, and the impact of allocation programs on industry.
- Coordinated Departmental inputs to an inter-agency task force, to inventory all government sources of energy information and identify critical additional requirements for energy data.
- Conducted a major study of materials, construction, and equipment requirements and possible bottlenecks to meet the increased energy production goals of the President's Project Independence.
- Developed an automated industrial energy data base for use in analyzing the impact of energy problems on manufacturing.

Inter-Industry Analyses

In fiscal 1974, the Bureau developed policy positions on 360 legislative proposals and was involved in policy analysis of a number of significant issues including:

- Preparation of an interdepartmental study on workers' compensation which analyzed the recommendations of the National Commission on State Workmen's Compensation Laws.
- Participation in an interdepartmental task force to draft the Employee Retirement Income Security Act, as well as a special task force to establish the Pension Benefit Guaranty Corporation.
- Participation in an interdepartmental task force to develop National Health Insurance proposals.
- Preparation and publication of a study on the economic impact of proposed Environmental Protection Agency air quality regulations.

- Preparation, in response to Section 6 of the Clean Water Act Amendments of 1972, of an annual report to the Congress on the impact of environmental legislation and regulation on the foreign trade position of U.S. industry.

The Ombudsman

Throughout the fiscal year, the Bureau's Office of the Ombudsman for Business served as a clearinghouse within the Department of Commerce for dissemination of information about shortages affecting the U.S. economy. It responded—normally within 5 days—to some 5,600 written inquiries, 90 percent of which originated from senior management of U.S. businesses and Members of Congress in respect to commodity shortages. In addition, it answered another 5,000 general and shortage inquiries arising from visits and telephone calls.

The Office provided current situation reports for major commodities in short supply. Developed in close coordination with Bureau industry specialists and other Washington analysts, these situation reports contained an analysis of each short supply situation including production, imports, exports, demand, and expected availability levels for the near and longer term. Periodic revisions incorporated details of each announced government action and its impact on availabilities as well as changes in industry plans in respect to both production and distribution.

Industrial Mobilization

Under the Defense Production Act, the Bureau:

- Processed 1,883 special assistance cases and authorizations.
- Conducted disaster surveys pursuant to 36 disaster declarations.
- Redrafted Defense Priorities System Regulation 1, "Basic Rules of the Defense Priorities System," and Defense Materials System Regulation 1, "Basic Rules of the Defense Materials System"—both becoming effective July 1, 1974.
- Prepared analyses on materials stockpile supply and requirements, essential survival items, and the availability in domestic production of certain items important to national security.
- Participated with NATO in developing plans for its Wartime Organizations and in a continuing and expanded analysis of production lead-time for critical NATO material.

BUREAU OF RESOURCES AND TRADE ASSISTANCE

Mission

The Bureau of Resources and Trade Assistance of the Domestic and International Business Administration handles import issues, assists industries experiencing difficulties from international competition and disrupted markets, and coordinates Department energy programs.

Energy Conservation

The principal thrust of the Bureau's energy program was to request the business/industrial community, large and small, to adopt a four-point energy management program. The four points are: (1) a top management commitment to energy conservation, (2) a thorough audit of all forms of energy use, (3) a setting of tough, measurable goals for energy conservation, and (4) an energy conservation campaign designed to educate and motivate employees, customers, suppliers, and the community at large. In November 1973, the Secretary addressed a direct appeal to 43,000 business leaders to adopt the four-point program. Those firms whose chief executive pledged to support this concept were awarded a "SavEnergy" citation expressing the Department's appreciation. Approximately 8,000 of these awards were made during the fiscal year.

To assist in delivering the Government's energy conservation message, the Bureau developed a variety of promotional materials including a 20-minute color motion picture. The film depicted the importance of energy conservation and gave practical suggestions for implementing the four-point energy-management concept.

A number of brochures and pamphlets designed to help the businessman develop and carry out his energy-management program were published. Seven major brochures were: *Energy Conservation and the Business Community*, *How To Start an Energy Management Program*, *33 Money-Saving Ways to Conserve Energy in Your Business*, *Energy Management: Economic Sense for Retailers*, *Marketing Priorities and Energy*, *Industry's Vital Stake in Energy Management*, and *Energy Conservation Handbook*. By the end of the year, the brochures (180,000 copies) and the Energy Management film had reached over 750 business groups, with a total audience of approximately 25,000. Over 100 private organizations purchased copies of the film for use in their own programs.

The Bureau also provided staff and substantive support to the National Industrial Energy Conservation Council established by the Secretary of Commerce at the direction of the President on November 28, 1973. The Council's 24 business leaders represent a broad cross-section of the U.S. business community, and it has

provided an important link between Department of Commerce programs and the leadership of the American business community. The full Council met three times during the year. In addition, its program evolved through four active sub-councils, focusing on problems in technology, motivation, product efficiency, and public awareness.

On January 3, 1974, the Secretary and the Federal Energy Administrator addressed an appeal to 43,000 businessmen. The letter described certain energy-saving steps of the Federal Government and urged business leaders to adopt such of those steps that applied to their own organizations. They were also requested to send a summary of actions and savings to the Department and the Federal Energy Office.

Bureau members participated in Project Independence working groups on resource development and supply. In addition, the Bureau was responsible for the Department-led Material, Equipment, and Construction Task Force.

The Bureau helped establish and implement procedures for quantitative restrictions on exports. These controls began in January 1974 and remained in effect at the end of the fiscal year. In fiscal 1974, 493 petitions were processed with awards resulting in the importation of 512,000 barrels of petroleum per day.

International Trade in Textiles

On December 20, 1973, the United States and 50 other nations concluded an international arrangement under the General Agreement on Tariffs and Trade (GATT) for the orderly expansion of world trade in cotton, wool, and man-made fiber textiles and apparel. The United States led in the negotiation of this agreement, which is known as the Arrangement Regarding International Trade in Textiles. This Arrangement provides for the negotiation of bilateral agreements to ensure the orderly development of textile trade and the equitable treatment of participating countries. It provides for bilateral consultations when an importing country finds its market threatened with disruption. If the consultations do not result in a solution, the importing country may unilaterally restrain further imports of the product from the exporting country. The Arrangement also establishes a Textile Surveillance Body to supervise its implementation. The United States is a permanent member of the Body.

The Bureau participated in the negotiation of the Arrangement, furnished data and analyses to the U.S. delegation, and worked with the GATT Textiles Committee Technical Sub-group, which is developing information sources for the Textile Surveillance Board.

The Bureau developed the background papers for, and participated in, the negotiation of a new wool and

man-made fiber textile and apparel agreement with Singapore. In addition, six expiring cotton textile agreements were extended with Japan, Italy, the Philippines, Egypt, Jamaica, and Malta.

The Bureau is taking part in a review of all U.S. bilateral textile and apparel agreements required of all participants in the Textile Arrangement. It prepared the position papers for, and participated in negotiations with Hong Kong, the Republic of China, and India to extend these major textile agreements and bring them into conformity with the Arrangement.

The Interagency Committee for the Implementation of Textile Agreements, which is responsible for supervising the implementation of all textile trade agreements, is chaired by the Deputy Assistant Secretary for Resources and Trade Assistance. The Bureau carries out the Committee's staff work, monitoring all textile and apparel imports under U.S. bilateral agreements and imports from countries without such agreements in order to be in a position to take appropriate action if imports threaten or cause market disruptions. At the end of fiscal 1974, the United States had bilateral textile and apparel agreements with 30 countries covering 83 percent of U.S. cotton textile and apparel imports, 37 percent of U.S. wool imports, and 52 percent of U.S. man-made fiber textile and apparel imports.

Import Trade Policy

The Bureau continued its activities on import-related problems affecting industrial products such as steel, footwear, and consumer electronic products. The Office of Import Programs monitored steel imports in relation to the Voluntary Restraint Arrangement on steel exports to the United States. A detailed statistical series on steel imports was prepared and published. It formed the basis for quarterly reports to key Congressional committees analyzing developments in the steel trade.

International Commodity Trade

The Bureau staff represented the Department in inter-agency planning for, and participated in, U.S. delegations to a number of intergovernmental meetings and negotiations affecting international trade or access to supplies of primary commodities. This included consultations held under the general auspices of the United Nations Conference on Trade and Development, the Special Session of the United Nations General Assembly on Raw Materials, and specialized meetings such as the International Rubber Study Group, the International Coffee Organization, and the United Nations Conference on Law of the Sea. The Bureau worked on a review of the economic basis for U.S. policy toward Law of the Sea questions, which involved participation in the first Law of the Sea Conference held in Caracas during the

summer of 1974, and on an overall study of critical imported materials.

Statutory Programs

The Bureau assists the Secretary of Commerce, as Chairman of the Foreign-Trade Zones Board, in the administration of the Foreign-Trade Zones Act. There are 13 foreign-trade zone sites presently in operation in the United States, including new sites at Kansas City, Kansas, and Kansas City, Missouri, which became active during fiscal 1974. A synthetic natural gas plant was located within the subzone in Hawaii and the Kansas City, Missouri, and the New York City zones expanded their facilities during the year. Merchandise in U.S. zones at the beginning of fiscal year 1974 amounted to about 226,000 short tons, valued at approximately \$53,000,000. Merchandise received during the year amounted to about 1,700,000 short tons, valued at approximately \$205,000,000. About 1,600,000 short tons, valued at approximately \$200,000,000 were forwarded.

During fiscal 1974 action was taken on 515 applications for duty-free entry of scientific instruments under the Educational, Scientific, and Cultural Materials Act.

The Bureau administers the Secretary's responsibilities with regard to the foreign excess property program. A total of 427 cases were processed during the fiscal year, with approximately \$2,216,000 worth of property approved for importation.

Public Law 89-805 limits the number of watches and watch movements that may be imported duty-free from U.S. insular possessions (the Virgin Islands, Guam, and American Samoa). During the reporting period almost \$4.5 million in salaries and wages and \$4.5 million in corporate taxes were generated by territorial watch assembly operations. Approximately 5.6 million units of quota were allocated, and 77 licenses and 1,202 shipment permits were issued.

Trade Adjustment Assistance

In the course of the year, the Department certified three firms eligible to apply, certified three proposals, and monitored the operations of 13 firms to assure compliance with the provisions of their certified proposals. Also one new application for certification of eligibility to apply for trade adjustment assistance was received, and four firms submitted their economic adjustment proposals for certification. By the end of the year and since the beginning of the program, a total of 31 firms had been certified. Overall assistance authorized reached \$38 million. Assistance to implement adjustment proposals has been extended to firms in the footwear, textile, electronics, piano, stainless steel flatware, barber chair, and sheet glass industries.

BUREAU OF INTERNATIONAL COMMERCE

Mission

The Bureau of International Commerce of the Domestic and International Business Administration promotes U.S. foreign trade, stimulates export marketing by U.S. firms, and assists U.S. business in its operations abroad.

Overseas Sales Assistance

During fiscal 1974, the Bureau of International Commerce provided significant assistance to firms in winning contracts on 20 major foreign projects involving more than \$1 billion in direct exports. The Bureau also instituted a new service, the Overseas Product Sales Group, to assist firms in capitalizing on export opportunities for specific products valued in excess of \$1 million. As a result of this new activity, the Bureau was instrumental in assisting U.S. firms to win export sales contracts totalling more than \$1.1 billion. The Bureau also sponsored 19 commercial exhibitions at national and international trade fairs in Europe, Latin America, Africa, and Asia, and 56 major exhibitions at U.S. Trade Centers in Tokyo, London, Frankfurt, Milan, Paris, Stockholm, Sydney, Mexico City, Buenos Aires, Beirut, Singapore, Tehran, and Taipei. In addition, 1,041 special exhibitions were scheduled between the major exhibitions at trade centers. In all these trade fair and trade center exhibitions, 3,876 exhibitors participated. The Bureau also sponsored 92 trade missions with 672 members, 14 technical sales seminars with 103 members, and six special consumer goods promotions in foreign department stores.

New Trade Centers

To allow U.S. manufacturers to display their products in three of the fastest growing markets in Asia, U.S. Trade Centers were established this year in Tehran, Taipei, and Seoul. The Center in Tehran fosters the development of a balanced trading partnership with oil-rich Iran by encouraging the sale of sophisticated U.S. equipment ranging from scientific monitoring devices to agricultural machinery. The Government of the Republic of China strongly supported the establishment of the Taipei Center in line with its official policy of directing Taiwanese importers and manufacturers to seek U.S. sources of supply. The Government of the Republic of Korea was also instrumental in the creation of the Seoul Center.

Trade Opportunities Program

In September 1973, the Bureau implemented a fully automated system to disseminate to U.S. companies on a paid subscription basis sales inquiries and bid requests received from overseas businessmen and Government

agencies. By the end of fiscal 1974, over 7,000 U.S. companies had registered as subscribers to receive direct mail notifications of overseas business opportunities disseminated through this new system. During fiscal 1974, the Bureau disseminated to potential U.S. suppliers 9,150 sales and representation opportunities, 3,190 foreign government tenders, and 517 miscellaneous trade opportunities.

President's Export Council

The President's Export Council, composed of 22 chief executive officers of major U.S. corporations, was established by Executive Order in December 1973 to serve as a national advisory body to the President on export expansion activities. This Council, for which the Bureau of International Commerce provides administrative support, has initiated action in a number of areas, including calling for a strong U.S. Government position on the importance of a sustained program to promote exports; endorsing the Domestic International Sales Corporation tax deferral authority; and conducting studies on export financing, export controls, taxation, and the effect of U.S. antitrust laws on exports.

Foreign Buyers

The Foreign Buyers Program was inaugurated in February 1974 to encourage foreign visitors to attend selected trade shows in the United States and to facilitate contact between U.S. businessmen and foreign buyers visiting here. During the remainder of fiscal 1974 the new program was instrumental in attracting an estimated 1,800 foreign buyers to three trade shows in the United States and arranging approximately 1,500 contacts between these buyers and U.S. firms.

Near East Study Group

A special Near East Study Group was formed in March 1974 to review the changing market situation in the Near East resulting from that region's greatly increased oil revenues. Three members of the Group made a 3-week trip to the Near East in April, consulting with Embassy officers, foreign government officials and businessmen, and resident U.S. businessmen in Cairo, Baghdad, Tehran, Kuwait, Abu Dhabi, Jidda, Riyadh, and Beirut. A report, entitled: *The Near East Market: A Report to U.S. Business*, was prepared and published describing the opportunities in the area, with emphasis on the oil-rich countries.

Expo '74

Expo '74, the international exposition on the environment at Spokane, Washington, opened on May 4, 1974, for a 6-month run and an anticipated 4.6 million visitors.

The Bureau was instrumental in ensuring that an impressive U.S. Pavilion was constructed, and advising on cost-reducing methods based upon its considerable experience in these matters. Its officials served as advisors to the exhibition managers on the ongoing programs of this function.

BUREAU OF EAST-WEST TRADE

Mission

The Domestic and International Business Administration's Bureau of East-West Trade is responsible for promoting trade and improving economic relations with the centrally-planned economies of Eastern Europe and Asia. The Bureau is also charged with the responsibility for carrying out the provisions of the Export Administration Act of 1969.

Joint Commercial Commissions

The institutional mechanism of a joint commercial commission is a major vehicle in the negotiation of commercial accords in the promotion and normalization of East-West trade relations. Two commissions, the Joint U.S.-U.S.S.R. Commercial Commission and the Joint American-Polish Trade Commission were in place at the beginning of the year. The U.S.-Romanian Economic Council was added during President Ceausescu's December 1973 visit to Washington. The Bureau serves as the staffing base for Commission activities.

The U.S.-U.S.S.R. Commission reviewed the current state of commercial relations and the implementation of existing agreements, explored the prospects for the future, including opportunities for U.S. firms in long-term Soviet projects, and developed the text of the Long-term Agreement to Facilitate Economic, Industrial, and Technical Cooperation which was signed in Moscow on June 29, 1974. The Agreement provides that both governments shall use their good offices to facilitate such cooperation and to provide facilities for the businessmen of one country in the other. The Agreement also provides for creation of a group of experts who will meet periodically to exchange information and forecasts of basic economic, industrial, and commercial trends.

American-Polish Trade Commission discussions centered on long-term industrial cooperation, joint ventures, business facilitation problems, maritime issues, agricultural purchases, and textile agreements.

U.S.-Romanian Economic Council discussions primarily concerned: (1) existing and new areas of economic, industrial, and technical cooperation, including joint ventures, (2) the need for continuing support of activities undertaken in these areas by the firms and organizations of both countries, (3) the intensification of

scientific and technological cooperation and the development of cooperative projects, and (4) the continued need to work toward the creation of normal trading conditions.

People's Republic of China

Commercial relations with China continue to improve sharply, with two-way trade for fiscal 1974 reaching \$1.14 billion, a 485 percent increase over fiscal 1973. Important institutional roles in this trade continued to be played by the United States Liaison Office in Peking and by the private, non-profit, National Council for United States-China Trade. A council delegation was the only broad gage U.S. commercial group to have visited China. Further progress in normalization of this bilateral trading relationship is dependent upon resolving outstanding problems such as the Chinese blocked assets—U.S. private claims issue, Most Favored Nation tariff treatment (a problem with most other socialist countries also), and, ultimately, diplomatic recognition.

During the year, the Secretary of Commerce led or participated in missions to the U.S.S.R. Hungary, Poland, Romania, and Bulgaria. Two of these visits involved commission meetings, but on all of them the Secretary held extensive meetings with high level officials to discuss expansion of trade relations.

Trade Promotion

The Bureau continued promoting U.S. trade with promising markets in Eastern Europe and the Soviet Union. It recruited about 300 U.S. firms to participate for the first time in officially sponsored trade exhibits and trade missions. Numerous U.S. firms were encouraged to participate on their own in 16 major Eastern European trade fairs. The Bureau organized and conducted six technical sales seminars and five specialized trade missions and also supported six other U.S. trade missions that were initiated or organized by U.S. industry or regional organizations. Particular attention was given to organizing Joint Export Expansion Programs for U.S. firms that were new-to-export or were exporting to the East for the first time.

Some 500 U.S. firms have now actively cooperated with the Bureau in promoting sales to Eastern Europe, as compared with about 200 at the close of fiscal 1973. Numerous opportunities for exports to the East were brought to the attention of interested U.S. firms and also used in planning special trade promotion events. While the objectives set for all the trade promotional events organized by the Bureau were achieved or exceeded, the following promotions proved most notable.

A nine-day metal working equipment exhibit at the fall Brno Engineering Fair in Czechoslovakia, for which 20

U.S. firms were recruited, resulted in off-the-floor sales of \$44,500 and a projected \$1,355,000 first year sales for new-to-market and \$730,000 for old-to-market U.S. firms. A technical seminar held in conjunction with the U.S. exhibit was attended by 50 high-level Czechoslovakian industry officials.

The U.S. special commercial exhibit, "USA Tech 1973," featuring petrochemical technology and equipment, was held at Bucharest, Romania, in November 1973. Twenty-two U.S. firms participated in the promotion which attracted 297 commercial executives and about 3,000 technical and business visitors from Romanian and other East European state industries and trading organizations. Off-the-floor spot sales amounted to a record \$2.5 million, with 1 year's projected sales of \$45 million.

"STANKI-USA," a solo U.S. exhibit for machine tools and metalworking equipment held in Moscow in April, was officially opened by the Secretary. Fifty-five of the 83 participating U.S. firms were new-to-market. Spot sales during the 10-day exhibit totaled \$19.3 million with sales of \$97.9 million projected over the next year. Top Soviet officials and high ranking delegations from every Eastern European country visited this exhibit. With over 350,000 visitors this was the most heavily attended U.S. solo exhibit ever held in the U.S.S.R. The show also featured a most successful seminar with 24 technical presentations.

"Health-USA-74," held in conjunction with a Soviet international fair for public health systems, featured participation by 43 U.S. firms recruited and sponsored by the Department of Commerce. Twenty-seven of these were new-to-market. Floor sales during the event totaled \$1.4 million and a 1-year sales projection amounted to \$9.4 million. U.S.S.R. sources reported over 600,000 visitors, almost all of whom visited the U.S. exhibit.

The Poznan International Technical Fair featured a U.S. exhibit with 32 exhibitors who represented 62 American firms recruited by the U.S. Trade Development Center in Warsaw. Off-the-floor sales totaled \$1.3 million while 12-month sales were projected at \$28 million. Of the latter, sales of \$1.4 million were anticipated by new-to-market firms.

Well-targeted trade missions also had unusual success. An Air Traffic Control Mission to Czechoslovakia, Hungary, and the U.S.S.R. in April 1974 achieved projected sales of \$6 million in the next 12 months. A high level executive mission to Hungary in April resulted in one member's signing a contract for over \$1 million.

Trade Centers

The Vienna East-West Trade Center now has over 1,000 subscribers to its trade information bulletin, all of which

are U.S. firms and their affiliates or agents in Europe. The Center concentrates on helping new-to-market U.S. firms and using the long established and numerous East-West traders based in Vienna as avenues of trade for American products.

In addition to providing support for trade missions, recruitment for exhibits, and coordination of exhibits in the United States' second largest market in East Europe, the Warsaw Trade Development Center served as an ideal base for a number of American firms to hold individual between-show exhibits, seminars, and business meetings. It is preparing for five Joint Export Expansion Promotions in the coming year.

The Secretary officially opened the new Commercial Office in Moscow in April 1974. The Office served as a base of support for the important trade promotions scheduled for the U.S.S.R. These included not only trade fairs but also trade missions, seminars, and the provision of sales information on U.S. products to the Soviet state trading organizations.

Trade Development Assistance

During the year there were 1,678 contacts, including 602 new ones, with U.S. companies for the purpose of providing advice on the "how to" of East-West trade and/or assistance on individual East-West transactions. The specific transactions for which assistance was being provided on a continuing basis were almost triple that of fiscal 1973. The export value of these transactions increased from \$1.3 billion to over \$5 billion.

Advisory Committees

The six government-industry technical advisory committees that were established in 1973 under the provisions of the Export Administration Act of 1969, as amended, held a total of 29 meetings during fiscal 1974. In addition, subgroups of the various committees met 29 times. The committees dealt with matters relating to computer systems and computer peripherals, components and related test equipment, semiconductors and semiconductor manufacturing and test equipment, numerically controlled machine tools, and telecommunications equipment. A seventh committee, dealing with electronic instruments, was established during fiscal 1974 and held two meetings. It began a work program for providing the same type of information and recommendations as the other six.

An Advisory Committee on East-West Trade was officially created during the year to advise on the Bureau's programs and problems. It is anticipated that its membership will be established and that its organizational meeting will be held in the first quarter of the next fiscal year.

Publications

Eight major publications regarding trade and commercial relations with the socialist countries were printed and distributed during the fiscal year along with a number of minor publications. Among the major efforts were publications on trading in Poland, Romania, Czechoslovakia, Hungary, and the U.S.S.R. Also included was a report on the America-Polish Trade Accords of 1972-73 which reflected the activities of the Joint American-Polish Trade Commission.

Export Licensing

The Bureau worked through the various programs enumerated above to facilitate East-West trade. The Bureau also took firm measures to assure that such trade was conducted within the national security, foreign policy, and short supply guidelines of the Export Administration Act of 1969.

In the conduct of its export control program, the Bureau received advice on a regular basis from the government-industry technical advisory committees and from such governmental agencies as the Departments of Agriculture, Defense, Interior, State, Transportation, and Treasury, the Atomic Energy Commission, the National Aeronautics and Space Administration, and the Central Intelligence Agency. On the international level, the Bureau's export licensing was coordinated with the established list of strategic commodities.

Short Supply Commodities

The Office of Export Administration continued monitoring programs begun in the previous fiscal year to provide data on anticipated exports of a number of grains and related agricultural commodities. The reporting requirements imposed on exporters of agricultural commodities was discontinued in November 1973, when the Department of Agriculture began its monitoring system.

At the beginning of fiscal 1974, export licensing systems were introduced for soybeans and certain related products, under the short supply provisions of the Export Administration Act of 1969. With the approval of the Secretary of Agriculture, these licenses allowed export of 50 percent of the unfilled balance of soybean contracts, as reported June 13, 1973, and 40 percent of such contracts for soybean oil-cake and meal. Exports of other controlled agricultural commodities were licensed for 100 percent of contracts. With the availability of a new crop in the autumn of 1973, the controls for soybeans and other agricultural commodities were terminated.

Controls on exports of ferrous scrap were introduced at the start of the fiscal year and were administered for the

first half of the fiscal year by licensing against contracts dated before July 2, 1973. For the third and fourth quarters of fiscal 1974, ferrous scrap licensing was based on past histories of exports to various countries by each applicant. These controls are maintained to assure adequate supplies of scrap for domestic steel mills and foundries.

Midway through the fiscal year, controls were imposed on petroleum based fuels, to prevent excessive exports of those scarce commodities. As with ferrous scrap, the licensing system is based on country quotas and historical participation in exports.

A new monitoring system was introduced in November 1973, to gain information on the supply and demand for fertilizers. Producers and importers were required to report monthly on inventories, production, imports, shipments, and prices. Exporters filed semi-monthly reports of unfilled export orders and actual export shipments.

INTERNATIONAL ECONOMIC POLICY AND RESEARCH

Mission

The Deputy Assistant Secretary for International Economic Policy and Research, of the Domestic and International Business Administration, is responsible for developing and recommending positions and policies on international trade, finance, and investment issues. Economic research and analysis are conducted to support the development of policy decisions and recommendations.

Trade Negotiations

Foreign Ministers of the more than 80 participating nations formally opened the seventh round of the Multilateral Trade Negotiations under the General Agreement on Tariffs and Trade in September. International Economic Policy and Research staff played a major role in formulation of U.S. negotiating positions on means of achieving tariff and nontariff barrier liberalization. As a backdrop to preliminary discussions, the United States concluded negotiations with the European Community concerning increased tariffs arising out of enlargement of the Common Market. The International Economic Policy and Research staff developed the list of industrial products, and supporting materials for which the United States requested compensatory tariff reductions from the Community.

The staff also worked with the Office of the President's Special Representative for Trade Negotiations and other agencies to provide information for Congressional consideration of the proposed Trade Reform Act. This Act would authorize United States participation in the enforcement of Multinational Trade negotiations. It would

also help this country to expand its trade with Eastern Europe, Latin America and other markets and to better protect itself against unfair or injurious import competition.

Trade Talks

The International Economic Policy and Research staff has been playing a key role in U.S. consultations with the European Community and the nations of the European Free Trade Association on the "rules of origin" issue. The United States requested these consultations under Article XXII of the General Agreement on Tariffs and Trade to help prevent our commercial interests from being impaired by these restrictive rules, which are an integral part of the free trade agreements entered into in 1973 by the European Community and European Free Trade Association countries. An organizational meeting was held on April 29, 1974, and further meetings are scheduled for this year.

In April 1974, the Secretary visited London and Brussels as part of a continuing U.S. effort to work for better understanding and improved commercial relations with the European Community and its member states. In London the Secretary discussed a number of economic and commercial issues with representatives of the British Government, including Secretary of State for Trade Peter Shore. In Brussels, the Secretary met with Belgian Minister for Economic Affairs Willy Claes and with Altiero Spinelli, European Community Commissioner for Industrial, Technological, and Scientific Affairs. The discussion with Commissioner Spinelli focused on the emerging common industrial policy of the Community and comparable measures in the United States.

The Deputy Assistant Secretary for International Economic Policy and Research was a member of the U.S. delegation for the seventh round of U.S.-European Community bilateral consultations held in Washington on October 29-31, 1973, and the eighth round held in Brussels June 6-7, 1974. A broad range of economic issues of mutual interest were discussed, and specific sessions were devoted to Community industrial policies as they affect U.S. trade interests.

Bilateral discussions on trade and investment were held during the Secretary's four-country visit to the Far East in July 1973 and the Under Secretary's visit to the same region in March 1974. The former included the Ninth Meeting of the Joint United States-Japan Committee on Trade and Economic Affairs and the Fifth United States-Korea Commerce Ministers Meeting. Extensive briefing material was prepared and coordinated to cover the range of economic issues of interest to the United States in these discussions. Similar contributions were made for the annual sub-cabinet bilateral economic consultations with New Zealand held in Wellington in

February 1974, as well as for the Sixth United States-Korea Commerce Ministers Meeting in Washington in June 1974.

Industry Consultations

In order to achieve close and continuing coordination with U.S. industry throughout the course of the multilateral trade negotiations, an Industry Consultations Program involving some 500 industry representatives has been established jointly by Commerce and the Office of the President's Special Trade Representative. The Industry Policy Advisory Committee held its first meeting in March. This Committee, consisting of high-level executives representing major segments of U.S. industry, is designed to provide overall industry views on general U.S. objectives and approaches in the multilateral trade negotiations. Twenty-six Industry Sector Advisory Committees, comprised of technical experts, also have been established to provide detailed advice and recommendations regarding U.S. and foreign trade barriers affecting their particular products.

Environment and Energy

In conjunction with the Department of State, the President's Council on Environmental Quality, and the Environmental Protection Agency, the International Economic Policy and Research staff participated in four meetings under the auspices of the Organization for Economic Cooperation and Development in Paris, seeking the adoption by the 24 member countries of both national and international environmental policies and programs with appropriate safeguards to prevent unnecessary distortions of international trade and investment patterns. A staff official headed the U.S. Delegations at sessions of the Economic Commission for Europe's Committee on the Development of Trade, and the Economic Commission for Asia and the Far East's Trade Committee. The concern of many Asian countries about the impact of rising oil prices on their economic development was urgently expressed at the Economic Commission for Asia and the Far East meeting.

Foreign Investment Policy

During fiscal 1974, U.S. international investment policy became an area of widening concern, both domestically and abroad. As foreign investment in the United States increased, following two devaluations of the dollar, Congressional and public interest in this issue heightened. The International Economic Policy and Research staff's Office of International Finance and Investment was repeatedly called upon to service requests for specific information, as well as to assist in the preparation of legislation providing for a comprehensive

study of foreign investment in the United States. The Office was also active in interagency working groups within the Executive Branch dealing with expropriation and other investment problems abroad.

Various international organizations increased this interest in international investment during the year, and Office members attended four separate meetings of committees set up under the Organization for Economic Cooperation and Development to deal with investment matters. The Commerce goal at such international meetings is to assure the maintenance of an adequate climate for U.S. business abroad.

Exports

Fiscal 1974 witnessed the growth of numerous movements both within Congress and elsewhere to restrict the operation of U.S. export financing facilities. The Office of International Finance and Investment mounted a substantial effort to analyze the short- and long-term implications of such restrictions on the competitiveness of U.S. exporters and our position in world markets. The Office was also involved on a continuing basis with such issues as: (1) export financing costs of various industrial sectors among major competitor countries, (2) harmonization of export credits with Japan and the European Communities, (3) financing sales of short supply commodities, and (4) financial issues arising from international energy problems and the increased cost of primary commodities.

The Office continued to publicize the Domestic International Sales Corporation tax deferral benefit for exporters, enacted in December 1971. In fiscal 1974, the Office responded to 750 requests for information on this feature of the Tax Code. About 1,700 such corporations were formed during this period, making an approximate total of 5,800 as of June 30, 1974.

The Office also provided assistance to the business community on the creation and operation of export trade associations, which, when registered with the Federal Trade Commission, have a limited immunity from the antitrust laws under the Webb Pomerene Act of 1918. It also provided information in connection with the proposed Omnibus Export Expansion Act. Certain features of this Act would expand the ability of the associations to export limited services as well as goods.

Competitive Assessment

The International Policy and Research Staff's Office of Competitive Assessment combined to develop and recommend policy and program actions to enhance the international competitiveness of, and to counter adverse developments in U.S. industry and business. A new program for the Office was approved in March 1974 and implementation began before the fiscal year was out. The program has three major components: (1) information systems development, (2) competitive determinants research and analysis, and (3) competitive systems projections and testing.

Research and Analysis

In the area of research, efforts were concentrated on issues and problems of particular concern to the U.S. international economic position. Research was conducted on the impact and implications of exchange rate changes, oil prices and the balance of payments, long-term raw materials availability, and U.S. dock strikes. A research information bank was created, collecting together research studies conducted in and out of the government concerning international economics. Quarterly compilations of research are widely distributed to maximize the exchange of information among researchers and users of research.

OFFICE OF FIELD OPERATIONS
Selected Workload Data for Fiscal 1971-74

	1971	1972	1973	1974
Export Seminars	2,293	2,519	¹ 1,925	1,335
Domestic Seminars	825	1,332	¹ 962	905
Out-of-Office Visits	30,778	39,313	¹ 30,073	36,034
New-to-Export Actions	475	487	1,300	1,080
New-to-Market Actions	n.a.	n.a.	4,556	7,798
Business Opportunity/Federal Procurement Conferences	49	40	23	31
Associate Offices	700	750	750	792
Publication Sales	\$529,000	\$450,000	² \$373,000	\$302,000
CBD Subscriptions	24,500	26,000	³ 27,500	27,500

¹ The Export Promotion Program established in fiscal 1973 required concentration on Target Industries and less emphasis on seminars and visits to non-Target Industries.

² The sales reductions over the past three years are primarily due to the opening of Government Printing Office bookstores in key cities.

³ Adjusted.

n.a.—Not available.

BUREAU OF DOMESTIC COMMERCE
Selected Workload Data for Fiscal 1974

	1974
BUSINESS ASSISTANCE:	
Industrial Outlook Reports	225
Domestic Trade Publications	135
Legislation Proposals Reviewed	360
Business Impact Analyses Prepared	55
Trade Opportunities Disseminated	11,500
DEFENSE PRODUCTION AND INDUSTRIAL READINESS:	
Special Assistance and Authorization Cases Processed	1,883
Estimates of Essential Civilian and War-Supporting Requirements	0
Special Supply-Requirement Studies	0
Stockpile Materials Consumption Data Studies	102
Stockpile Materials Supply Data Studies	15
Special Stockpile Studies	2
National Defense Executive Reserve:	
Reservists	542
Training Conferences Held	6
Industrial Evaluation Studies	135

BUREAU OF INTERNATIONAL COMMERCE

Selected Workload Data for Fiscal 1970-74

Table I.—INTERNATIONAL COMMERCIAL INFORMATION ACTIVITIES

	1970	1971	1972	1973	1974
Overseas Business Reports prepared	86	75	78	75	62
Market Share Reports issued	1,182	1,182	1,182	1 23	1,161
Trade Lists sold	47,727	50,645	51,133	50,525	4 2,320
Export Mailing Lists sold .....	.....	.....	.....	2 145	1,625
World Traders Data Reports sold	41,331	45,721	44,879	36,486	28,904
Agent/Distributor Service Reports sold .....	.....	.....	.....	3 3,357	5,931
Foreign Market Reports Disseminated	52,780	61,429	64,113	65,299	41,336

¹ An additional 1,161 reports were released in July-December 1973, after delays resulting from the relocation of the United Nations computer office from New York to Geneva, Switzerland.

² The Export Mailing Lists is a new program which began in fiscal 1973.

³ The "Agent/Distributor Service" was operated on a limited "pilot" basis until November 1972, when it became a "worldwide" program.

⁴ Represents Target Market Trade Lists, consolidated lists previously sold separately.

Table II.—TRADE AND INDUSTRIAL EXHIBITIONS

	Exhibitions	Exhibitors	Trade visitors	12-month sales (000's)	Agency agreements established
1970	22	963	71,084	94,801	388
1971	22	905	208,154	155,844	370
1972	18	1,075	Not avail.	170,079	783
1973	20	766	204,950	172,555	177
1974	23	876	170,446	236,444	160

Table III.—TRADE CENTERS

	Joint Export Expansion Programs	Between- show Promotions	Exhibitions	Exhibitors	12-month sales (000's)	Agency agreements established
1970 .....	.....	126	49	1,533	84,196	507
1971 .....	.....	240	55	1,875	112,193	520
1972	1	424	63	2,297	194,838	1,233
1973	17	983	57	2,135	327,900	537
1974	29	1,012	56	2,171	413,894	461

Table IV.—TRADE MISSIONS

	Missions	Mission members
1970	39	257
1971	35	241
1972	99	769
1973	84	615
1974	92	672

Table V.—COMMERCIAL REPRESENTATION ACTIVITIES

	1970	1971	1972	1973	1974
Personnel Selections and Placements	352	362	358	610	615
Foreign Service Officers Participating in:					
Commerce Consultations	189	174	175	202	225
Field Office Consultations	50	41	48	52	65
Performance Evaluations:					
Annual End-User Evaluations	345	331	250	280	271
Foreign Service Report Appraisals	170	167	190	193	174
Experience Record Appraisals (profiles)	189	155	200	125	100
Briefings for Foreign Service Inspectors	75	88	120	90	127
Training:					
Foreign Service Officers	276	280	243	106	80
Foreign Nationals (Trained Abroad)	210	215	225	101	111
Foreign Nationals (Trained in U.S.) .....	.....	.....	.....	.....	18

BUREAU OF EAST-WEST TRADE

Export Administration Activities for Fiscal 1972-74

	1972	1973	1974
Export License Applications Received	78,561	64,046	65,883
Special Commodity Studies Initiated	713	1,446	1,118
Investigations Opened	196	236	241
Export Transaction Checks Required	463	345	489

TOURISM

The Assistant Secretary

The Assistant Secretary for Tourism administers the International Travel Act of 1961 and heads the United States Travel Service. He also serves as the principal adviser to the Secretary on matters of foreign and domestic tourism in the United States, and is the Secretary's representative to the American Revolution Bicentennial Administration.

Mission of the U.S. Travel Service

The United States Travel Service, the official government tourist office, is responsible for strengthening the domestic and foreign commerce of the United States by promoting business and pleasure travel to American tourism destinations from abroad. It works with other government agencies and the U.S. travel industry to shape "VISIT USA" programs that develop travel to the United States.

The fiscal 1974 Presidential objective of the Travel Service was to increase foreign exchange earnings from tourism by \$137 million and foreign visitor arrivals by 235,000 over levels which would have resulted from normal growth in in-bound travel during calendar 1974.

To measure progress toward this objective the Service uses a Performance Measurement System to track specific programs. Performance data is reported quarterly, and includes input from each of the six market-nations in which the Service operates: Canada, Mexico, Japan, the United Kingdom, France, and West Germany. Under this System, the Service continuously monitors five programs and several related activities. Three are major, direct impact programs which received heavy emphasis during fiscal 1974. These are Tour Development, Sales Development, and Convention Sales.

Tour Development

Tour Development is designed to get the VISIT USA product into the brochures of foreign travel wholesalers and on the shelves of international retail travel agents. It stresses the development of VISIT USA package tours and tour features not previously offered, and the inclusion of more U.S. destination packages in the catalogs of major multi-destination tour wholesalers.

Through the Tour Development program, the Travel Service supplies selected wholesalers and tour operators abroad with product information about U.S. attractions, assists them in planning sample itineraries, and provides financial support on a shared basis for the production, distribution and promotion of tour catalogs and collateral material.

During fiscal 1974, the Service invested \$1,071,000 in tour development contracts with 35 foreign tour wholesalers in six markets. These funds assisted in the development of 41 tour programs during the fiscal year.

The number of package tour programs made available with Service assistance by market was: Canada, 13; West Germany, 10; United Kingdom, 5; France, 5; Japan, 5; and Mexico, 3. Collectively these package tour programs resulted in 115,232 passenger bookings and \$41.1 million in foreign exchange earnings during fiscal 1974, a direct cost-benefit ratio of 39 to 1. Since actual operation usually occurs in successive fiscal years, total bookings and earnings will approximate 200,000 and \$80 million.

Sales Development

Sales Development has as its purpose the production of passenger sales to the United States from specific travel agency and travel industry sources abroad.

Retail travel agencies which offer the greatest potential to increase VISIT USA sales, through their sales volume, interests, and location, are identified and invited to become "Travel Planning Centers." Those which accept are officially recognized, provided with reference libraries, information on U.S. travel opportunities and specialized training in selling all types of U.S. holiday, group and individual travel.

For fiscal 1974, the Travel Service set as its objective the establishment of 260 Travel Planning Centers in two market-nations, the United Kingdom and West Germany. A total of 355 centers were actually established during the fiscal year.

Training for 5,000 foreign travel agents was conducted by Travel Service field office personnel during 100 special seminars in the fiscal year. These seminars, along

with familiarization training, acquaint the retail seller of travel with the actual packaged product he is to sell and with specific U.S. tour facilities and destinations.

Convention Sales

The Travel Service's Convention Sales Program has the objective of selling more international associations on holding their congresses and conventions in the United States.

Through sales calls on the U.S. affiliates of international associations, Service personnel seek to sell them on inviting their internationals to meet in the United States. When such invitations are extended and accepted, U.S. convention cities are notified and urged to bid for the congress.

Service field office personnel call on U.S. and foreign tour operators to sell them on organizing tours to conventions and on developing both pre- and post-convention tours. As part of this effort to increase convention sales, the Service produced a sales brochure and a convention promotion film. Both items feature U.S. convention facilities and were placed in use during the final quarter of fiscal 1974.

During the fiscal year, Service commercial intelligence and sales leads enabled U.S. convention cities to win 26

major international congresses, with minimum estimated earnings of \$5.6 million. Six conventions landed with the Service's assistance were held during Fiscal Year 1974 with minimum estimated dollar earnings of \$891,500. An estimated 2,300 foreign attendees participated in the six conferences held.

Office of Expositions and Special Projects

The Office of Expositions and Special Projects, which became an operating organization within the Travel Service during the fiscal year, develops and stimulates major international expositions and other events proposed for the United States.

The Office assists U.S. trade show organizers in arranging for duty-free entry of foreign exhibit items under the Trade Fair Act of 1959, and represents the United States at the Bureau of International Expositions in Paris.

During fiscal 1974, the Office of Expositions and Special Projects (1) certified 49 qualifying trade events for duty-free entry of foreign exhibit items, (2) promoted 40 trade shows, (3) counseled 46 sponsors of export-oriented expositions, and (4) processed applications and completed foreign promotion for five "VIP" shows (Visit, Investigate, Purchase) designated by the Secretary as major international events.

FOREIGN VISITOR ARRIVALS TO THE U.S. BY AREA OF PERMANENT RESIDENCE FOR CALENDAR 1971, 1972, 1973, AND FIRST SIX MONTHS OF 1974

Area	1971		1972		1973		First six months of 1974	
	Total	Change from 1970	Total	Change from 1971	Total	Change from 1972	Total	Change from first six months of 1973
Europe	1,112,683	+13.4%	1,301,385	+17.0%	1,605,100	+23.3%	663,214	-4.8%
South America . .	312,650	-2.0	312,318	-0.1	355,149	+13.7	166,163	+9.5
Central America .	113,531	+2.0	117,719	+3.7	132,992	+13.0	66,080	+11.9
West Indies . . .	315,676	+15.3	333,170	+5.5	359,886	+8.0	148,108	+3.2
Asia	485,321	+35.8	609,282	+25.5	845,482	+38.8	475,992	+26.9
Oceania	124,106	+2.7	153,072	+23.3	187,081	+22.2	81,887	-6.4
Africa	32,385	+17.3	34,649	+7.0	41,269	+19.1	18,755	+13.1
Other Overseas . .	71	-24.5	63	-11.3	30	-52.4	33	+230.0
Total Overseas	2,496,423	+9.0	2,861,658	+14.6	3,526,989	+23.2	1,620,232	+5.9
Mexico	1,170,583	+7.8	1,377,143	+17.6	1,619,451	+17.6	856,726	+14.5
Canada	9,928,000	+2.0	8,818,318	(^a)	8,808,724	-0.1	3,298,860	-8.3
Grand total . .	13,595,006	+3.7	13,057,119	(^a)	13,955,164	+6.8	5,775,818	-1.7

^aCanadian data for 1972 and subsequent years is not comparable to that for 1971.

FOREIGN DIRECT INVESTMENTS

The Office of Foreign Direct Investments was established by Executive Order 11387 in January 1968 to administer a temporary program to reduce the immediate impact of foreign direct investment on the U.S. balance of payments. While the program did not restrict the total amount of overseas business investment, U.S. companies and individuals were limited in using U.S. source funds and foreign earnings to invest or reinvest in foreign affiliates in which they had an interest of 10 percent or more. The primary effect of the program was to induce investors subject to its restrictions to borrow overseas a portion of the funds they used for foreign direct investments.

Office regulations established quotas for "direct investments," defined as the algebraic sum of net

transfers of capital by U.S. investors to their affiliated foreign nationals and the direct investor's share in the reinvested earnings of such affiliates. The program also limited the amount of foreign balances or other foreign property that direct investors could hold in liquid form.

During the life of the Program, the Office of Foreign Direct Investments pursued a policy of gradual liberalization aimed at ending controls as soon as balance of payments considerations would permit. To this end, Foreign Direct Investment Regulation controls administered by the Office were terminated on January 29, 1974. The Office completed all work involved in this termination and was abolished on June 30, 1974.

OFFICE OF FOREIGN DIRECT INVESTMENTS

(Selected Workload Data)

	Fiscal years			
	1971	1972	1973	1974
Applications for specific authorizations	208	186	160	37
Petitions for reconsideration of prior decisions	50	31	18	.....
Foreign borrowing certificates processed	3,096	2,898	2,949	1,787
Specific authorizations issued	135	193	141	37
Quarterly, annual and special reports processed	9,550	9,561	7,516	4,892
Compliance investigations initiated	312	448	227	91
Sections of regulations and general bulletin issued	260	179	241	353
Legal interpretations or opinions rendered	761	748	1,239	1,448
Research projects completed	146	165	151	117
Key punch cards processed	(*)	(*)	210,648	106,336

*Function commenced in 1973.

MINORITY BUSINESS ENTERPRISE

Mission

The Office of Minority Business Enterprise provides the overall direction for the minority business activities of the Federal Government. It also supports programs of local governments and of the private sector to promote the establishment, growth and stability of minority-owned business enterprises.

Established in 1969, the Office seeks to help change an economic picture which at that time showed some 35 million minority Americans owning 322,000 businesses, or 4 percent of the total number of businesses. Less than a quarter of these firms, most of which are retail and service operations, had paid employees. Their receipts in 1969 accounted for less than 1 percent of all earnings for U.S. businesses.

The Federal Role

During fiscal 1974 Federal expenditures for minority enterprise activities including grants, loans, loan guarantees, and procurement continued near the levels set the previous year and totalled approximately \$1.3 billion.

Federal agencies continued to place more procurement contracts with minority-owned firms through competitive bidding and through the Small Business Administration's "8(a)" program than ever before. Direct procurement amounted to an estimated \$474.7 million, and 8(a) procurement rose to an estimated \$272.2 million versus \$212.9 million in fiscal 1973.

Total procurement was \$746.8 million, up nearly \$16 million over the previous year's total.

Working with officials from other Federal agencies, the Office of Minority Business Enterprise launched several inter-agency programs in fiscal 1974. Minority firms in a number of industries from food service to real estate can benefit from new specialized programs now underway with the National Aeronautics and Space Administration, the Department of Housing and Urban Development, the Department of the Interior, and the Commerce Department's Maritime Administration.

Business Services

Fiscal year 1974 saw a major reorganization of the Office of Minority Business Enterprise's technical assistance system along regional and local lines. It now

operates fully staffed regional offices in Atlanta, Chicago, Dallas, New York, San Francisco, and Washington, D.C. It also has smaller field offices in 12 other cities. These offices direct the activities of some 300 local business assistance centers across the country.

The Office of Minority Business Enterprise provides funds to the centers for administrative costs which enable these private, non-profit organizations to offer free management and technical assistance services to individual clients. Included are organizations which provide general management and technical assistance including feasibility and marketing studies, loan packaging, accounting, and other business services. A number of centers specialize in services to construction contractors. Nearly a dozen are involved exclusively in Indian business development activities. The Office also supports State minority business enterprise offices which have been established in several states around the country.

During fiscal 1974 some 24,683 clients received some form of business assistance at centers funded by the Office. More than 4,590 loan packages valued at \$200.8 million were approved, and the centers generated some 3,824 procurement contracts valued at an estimated \$252.6 million for minority firms.

On the national level, the Office continues to work with trade and professional groups which conduct specialized training and marketing programs in support of minority business enterprise.

Over the past 2 years the Cablecommunications Resource Center of Washington, D.C., has operated a national clearinghouse to promote and assist minority entrepreneurs and venture organizations in the emerging cable television industry. This Office-sponsored activity has resulted in the organization of 21 minority-owned cable television franchises. One, in Gary, Ind., is already on the air, and Cablecommunications is presently looking at franchise systems with an estimated potential market value of more than \$18,000,000.

Capital and Marketing

At the close of fiscal 1974, 67 Minority Enterprise Small Business Investment Companies with an aggregate capitalization from private sources in excess of \$29.3 million were in operation. These Investment Companies provide

a valuable source of equity capital for minority firms which has the leveraging potential to generate over one half billion dollars in financing for minority-owned business ventures.

The American Bankers Association reported \$272 million in new loan commitments to minority businesses in fiscal 1974, a 36 percent jump over the previous year's total. This increase puts the commercial banking industry over the top in its goal of \$1 billion in credits to minority entrepreneurs by 1975.

Total deposits in the Nation's 55 minority-owned banks also climbed over the \$1 billion mark during fiscal 1974. This compares with under \$400 million on deposit in 1970 at the start of a joint Government/private sector drive to increase funds on deposit in the then 28 minority banks.

More than 800 major companies are now represented on the National Minority Purchasing Council. Organized by the Office in 1972 to increase corporate purchases from minority firms, the Council reported minority sales to its member firms totaled some \$433 million.

Research and Training

An 18-month study of minority business education and training programs commissioned by the Office of Minor-

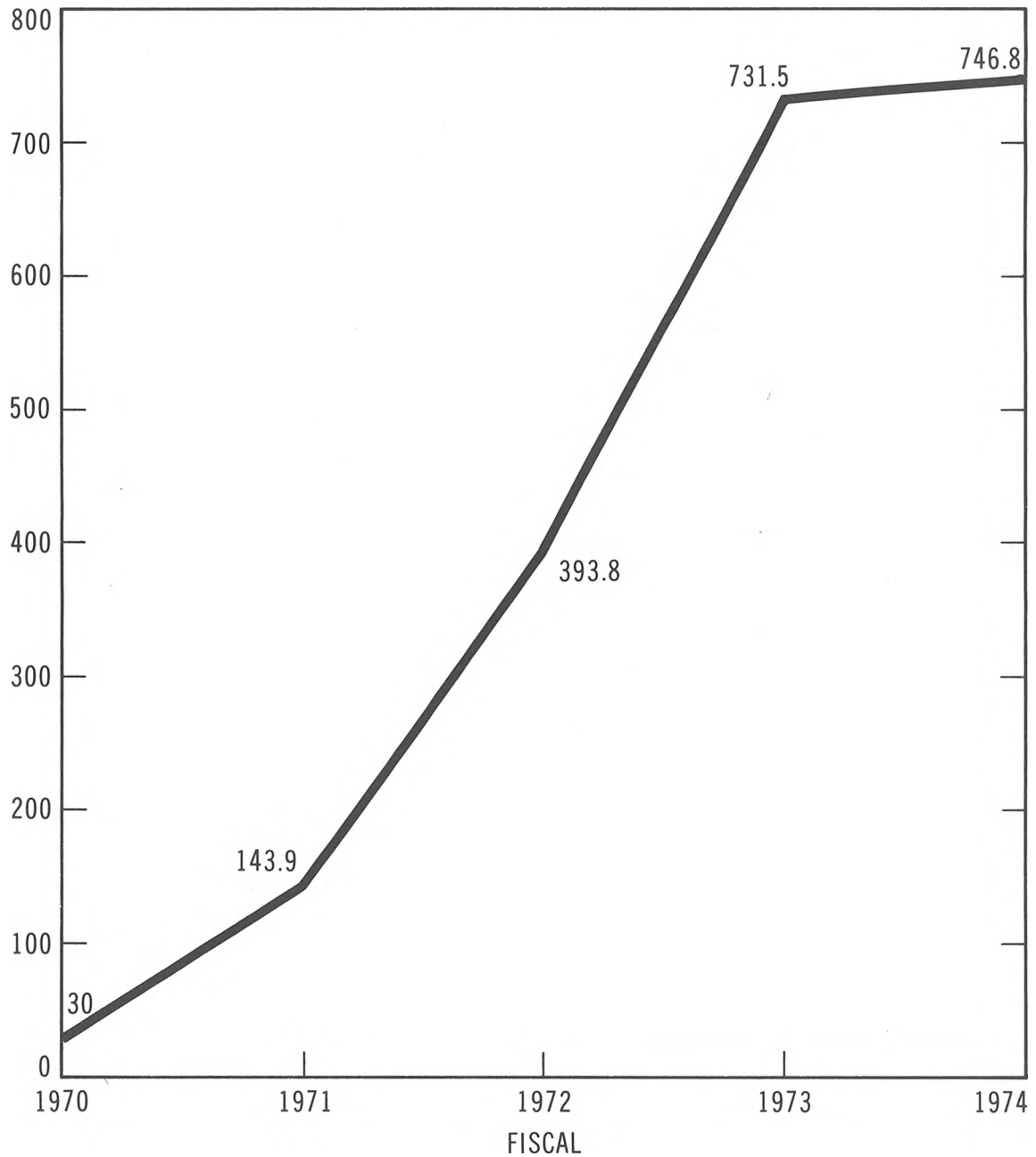
ity Business Enterprise, the Labor Department, and the Department of Health, Education and Welfare was completed in fiscal 1974. The report of the National Task Force on Education and Training for Minority Business Enterprise, a blue-ribbon panel of educators and minority business specialists, forms the basis for shaping a long-term national minority business education program which is now getting underway.

In another area, the U.S. Conference of Mayors is conducting a study under a grant to determine a strategy for municipal involvement in minority business generation. Researchers will look at several means of community renewal including the creation of neighborhood business centers serviced by specialists from business development organizations in the study to be completed later this year.

Nearly 2,300 young people are now on the employment rolls of major companies around the Nation as a result of the completion of the second successful year of the Business Management Fellowship training plan for socially or economically disadvantaged college students. This unique plan offers students the opportunity to gain on-the-job business experience and earn a salary while they attend college.

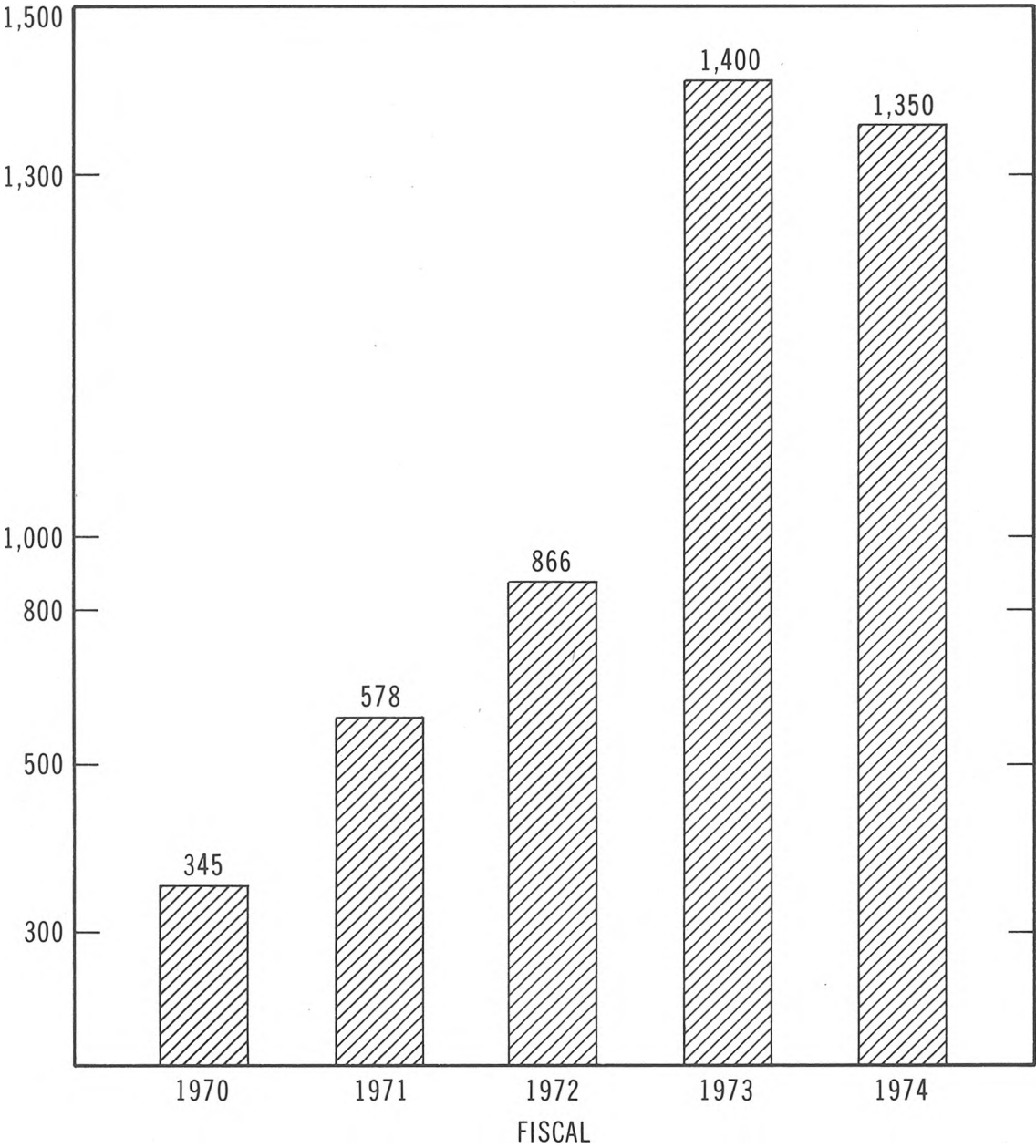
FEDERAL PROCUREMENT FORM MINORITY BUSINESSES

(IN MILLIONS OF DOLLARS)



FEDERAL FUNDING FOR MINORITY
BUSINESS DEVELOPMENT

(LOANS, LOAN GUARANTEES, GRANTS, PROCUREMENT
IN MILLIONS OF DOLLARS)



SCIENCE AND TECHNOLOGY

THE ASSISTANT SECRETARY

Responsibilities

The Assistant Secretary for Science and Technology has authority over the scientific and technological affairs of the Department. She supervises research and development activities, coordinates environmental affairs, and advises the Secretary and other Commerce officials on science and technology. The major scientific and technical programs are conducted by the National Bureau of Standards, the Patent Office, the National Technical Information Service, and the Office of Telecommunications—all under her direction. She also supervises the Office of Environmental Affairs and the Office of Product Standards.

Commerce Technical Advisory Board

Established in 1963, the Commerce Technical Advisory Board consists of about 20 members, all recognized leaders in engineering, science, education, industrial research, business, or labor. It is chaired by the Assistant Secretary, its only government member. It recommends measures to increase the value to business and industry of Department scientific and technical activities, advises on ways to stimulate private industrial research and development, and provides liaison on technical matters between industry and Government.

In fiscal 1974, the Secretary established a special Board panel—the Panel on Project Independence Blueprint—to advise him—as well as the Department of the Interior and the Federal Energy Administration—on technical, scientific, and policy matters involved in an in-depth analysis of the Nation's energy posture. The panel will:

- Provide an independent assessment of the feasibility of the actions and policies resulting from the Project Independence Blueprint.
- Represent a central input of private sector views concerning governmental policy decisions designed to expand the domestic supply of U.S. energy resources.
- Provide advice and information on such matters as the realistic capacity for expansion of domestic energy resources within a given time frame.

Commerce Science and Technology Fellowship Program

The Ninth Commerce Science and Technology Fellowship Program was conducted for 13 outstanding scientific and technical men and women who participated in a 10-month program of advanced training, combined with specific work assignments. Each of the Fellows was assigned, for a 9-month work period to the Department of Housing and Urban Development, House Interstate and Foreign Commerce Committee, House Science and Astronautics Committee, District of Columbia Government, Office of Management and Budget, National Science Foundation, Department of Transportation, and to one of several operating units within Commerce.

Office of Environmental Affairs

The Office of Environmental Affairs was established in February 1972 to provide scientific and technological advice and coordination for a wide range of activities related to air and water pollution, land use, solid waste, recycling, noise, pesticides, toxic substances, and energy.

The Office coordinates Commerce review of draft environmental impact statements prepared by other Departments pursuant to the National Environmental Policy Act of 1969, and provides expert technical assistance in the evaluation of the environmental consequences of proposed Federal actions. During fiscal 1974, more than 800 draft statements prepared by other Departments and independent agencies were received, comments forwarded to the originating Departments. The Office assisted various operating units in Commerce prepare 12 draft statements on their programs. It disseminated these statements, as well as 10 final statements, to other government offices, environmental groups, and the general public. The Office also reviewed and commented on over 400 other documents involving proposed environmental legislation, rule making, and reports. This compares with about 200 such documents in fiscal 1973 and 90 in fiscal 1972.

The Office has significantly expanded its water pollution work during the year. The Federal Water Pollution Control Act Amendments of 1972 call for a broad range of standards, criteria, guidelines, and other regulations directed toward the abatement of water pollution in the United States. Among the more significant are industrial

waste effluent guidelines and new source performance standards, which set forth the degree of pollution reduction that must be attained by industrial discharges. Compliance with these regulations will require billions of dollars from American industry in the next decade. For this reason, and because of their impact on the economy in general, the Office has been conducting a comprehensive evaluation of the regulations to insure that they are scientifically valid, technically feasible, and economically achievable. During the year, the effluent guidelines for 30 major industrial categories, including most of the larger water using industries, have been evaluated.

Other water pollution regulations which the Office has evaluated include those pertaining to pretreatment, toxic pollutants, user charges for dischargers into publicly owned treatment works, discharge permits, thermal discharges, and ocean dumping.

The Office has been active in the Interagency Committee on International Environmental Affairs and the Environment Committee of the Organization for Economic Cooperation and Development. It has major responsibilities under the U.S.-U.S.S.R. Environmental Agreement and during fiscal 1974, was also assigned the job of maintaining communications with business and industry on environmental matters. In addition, it has worked with national education associations to develop improved environmental curricula, and participated in the deliberations of a number of Federal interagency advisory groups.

Office of Product Standards

The Office of Product Standards coordinates the Department's activities in product standards (domestic and international), packaging and labeling, and building codes. It also provides Commerce liaison with other Federal agencies, private organizations, the Congress and foreign governments. The latter includes work involving the exchange agreement on standards with the U.S.S.R.

The head of the Office serves on the Council of the International Organization for Standardization, the Board of Directors of the American National Standards Institute, and the Committee of Government Officials Responsible for Standardization Policies of the UN Economic Commission for Europe.

NATIONAL BUREAU OF STANDARDS

Mission

The National Bureau of Standards was created by Congress in 1901 to develop a unified measurement system for the Nation's growing economy. Since that time it has become the Nation's largest physical sciences and measurement laboratory.

Some of the Bureau's primary functions include:

- The development, custody, and maintenance of national standards of measurement;
- The development of methods for testing materials, mechanisms, and structures;
- The determination of physical constants and properties of materials;
- Cooperation with other government agencies and private organizations to develop standard practices;
- Invention and development of devices to serve special needs of the government.
- Operation of a fire research program and chief technical resource for the Consumer Product Safety Commission.
- Enforcement of the 1967 Fair Packaging and Labeling Act.
- Providing scientific and technological advice to other Federal agencies on automatic data processing.

Experimental Technology Incentives

During fiscal 1974, its first full year of operation, the Experimental Technology Incentives Program began letting contracts and entering into arrangements with other Federal agencies to examine government policy in areas that influence the rate of technological change. Examples of the 33 separate projects launched in fiscal 1974 included one with the Environmental Protection Agency to consider alternative incentives that would stimulate private industry to develop new and safer pesticides in the face of stricter Federal controls. A contract was also awarded to Charles River Associates, a small consulting firm, to develop policy alternatives that would prevent or ameliorate crises caused by cutoffs of foreign supplies of metals or ores.

Energy

In the area of energy conservation, the Bureau launched a voluntary appliance-labeling program to show consumers the energy consumption and efficiency of home appliances. Air conditioners were the first product for which energy efficiency labels were developed. Labels for refrigerators, home freezers, clothes washers and dryers, ranges, and hot water heaters will be developed in the near future.

Energy utilization and conservation in a factory-built townhouse was studied by Bureau scientists and engineers. They measured total energy lost by the house and compared the results with expected losses through the

14000
useful

ceilings, walls, windows, and doors. Based on these and other tests, a number of definitive energy-loss factors were established for field conditions. For example, it was found that effective use of insulation can save up to 55 percent of the energy required for heating a house. For a given area, single-pane glazing can lose 10 times more heat than a well-insulated wall and five times more heat than double glazing. Turning the thermostat back 9 degrees overnight can save about 11 percent of the heating energy when the outdoor temperature is about 21° Fahrenheit.

Technical staff in the Bureau's Center for Building Technology drafted design and evaluation criteria for energy conservation in new buildings at the request of the National Conference of States on Building Codes and Standards. In cooperation with the General Services Administration, NBS engineers are studying the technology of energy conservation in a new Federal office building being constructed in Manchester, New Hampshire.

Other energy-related programs include research on materials for advanced energy conversion systems and coal gasification plants, and development of measurement standards for liquefied natural gas and for national nuclear and fusion energy programs.

Environment

Bureau scientists developed three certified standard reference gases for mobile source emission analysis. These standards are used by the Environmental Protection Agency for compliance testing with automotive emission laws. As primary standards to be used in the calibration of daily working standards obtained from commercial sources, they will also be used by the automotive industry and specialty gas manufacturers.

The Bureau examined the performance of several motor vehicles run on gaseous fuels rather than gasoline. The operations and exhaust emission characteristics of one-half and one ton trucks run on three different fuels—gasoline, compressed natural gas, and liquefied petroleum gas—were determined for the U.S. Postal Service.

In other environmental programs, Bureau scientists developed accurate measurement methods for use in guarding against nuclear pollution from nuclear power plants, and made significant contributions to understanding and controlling the impact of noise pollution on man.

The Bureau developed a technique to identify and analyze mercury and volatile organo-mercury compounds produced by microorganisms isolated from natural waters and the bottom sediments of the Chesapeake Bay. The method is sufficiently sensitive to detect mercury compounds at natural levels in samples as small

as one milliliter of air in the neighborhood of the isolated mercury-processing bacteria.

The State of Washington, under sponsorship of Commerce's National Marine Fisheries Service, completed the large-scale mathematical modeling of the Pacific Coast salmon hatcheries and began modeling of the salmon fisheries. Designed by a Bureau scientist, the models are intended to improve management efficiency in both commercial and sport fishing in an area where the annual yield to the State of Washington is over \$150 million.

Health and Safety

The National Bureau of Standards developed a system of television captions for the deaf that was tested by the Public Broadcasting system. The project, funded by the Department of Health, Education and Welfare, will enable many hearing-impaired persons to enjoy television. Initial reactions and suggestions of deaf viewers were extremely positive based on the early showings.

A Bureau study of the Nation's blood banking system was used by the Department of Health, Education and Welfare to help develop a proposal for a new national blood banking program. The study found three federal agencies, four national organizations, and at least eight states that impose regulations on the blood-banking industry—with the nature of controls and enforcement varying widely. The report included a cost analysis of the current system and nine alternative system structures.

The Bureau's Boulder, Colorado, laboratories made a pioneering comparison of ultrasonic power measurement techniques with the Department of Health, Education and Welfare's Bureau of Radiological Health in Rockville, Maryland. The closeness of the results provided increased confidence in ultrasound as both a diagnostic and therapeutic tool in medicine.

The Bureau developed a standard for walk-through metal detectors used in airports and public buildings to detect objects such as guns, knives, and razor blades hidden on the body. It also developed security guidelines for door and window assemblies. The guidelines are aimed at upgrading security of residences and small businesses.

Consumer Protection

The Bureau has completed a study of children's strength capabilities as an aid to designing safer toys and other children's products. It studied 556 children, ages 2 through 6, in day schools and day-care centers in the Washington, D.C., area.

The Bureau designed and developed an instrument to test a hot surface and determine in a few seconds whether the surface will be harmless to touch, painful,

or will inflict a burn injury. The instrument is called a "thermesthesiometer" and it was developed with funds from the Consumer Product Safety Commission. It will be produced commercially by a private firm for use by designers in testing new products.

The Bureau developed the technical basis for the issuance of a flammability standard for children's sleepwear in sizes 7 through 14. The standard will take effect May 1, 1975. It follows an earlier standard for sleepwear sizes 0 through 6X that became effective July 29, 1973. The Bureau also performed the technical groundwork for that standard.

The Bureau's Programmatic Center for Consumer Product Safety produced 75 reports for the Consumer Product Safety Commission during fiscal 1974. They covered a wide range of tests and products—from tricycle stability to blanket flammability to plastic gasoline containers.

Measurement Standards

The United States, through the National Bureau of Standards, became a member of the International Organization of Legal Metrology, which is concerned with the promulgation of recommended laws governing the design and use of commercial and industrial measuring instruments.

The Bureau's high-accuracy time service logged an average of 11,000 calls per week in fiscal 1974. Since it began a time-of-day service utilizing radio station WWV in 1970 there have been more than a million calls. A new service of stations WWV and WWVH at Fort Collins, Colorado, was announcement of Skylab experiments.

In cooperation with the Forest Service, the Bureau is studying the use of microwave measurements to determine the depth and structure of snow pack in order to try to predict avalanches.

Under a 5-year contract with the American Petroleum Institute, the Bureau will provide the American petroleum industry with an extended set of reference data on the density of crude oil and petroleum products. Agreement on densities of crude oil is needed to ensure an orderly market between buyers and sellers.

The Bureau presented the State of Colorado with a new set of weights and measures standards. Colorado was the 42nd state to receive new standards under a program to replace the weights and measures standards of all 50 states, the District of Columbia, Puerto Rico, and the Virgin Islands.

Materials

The Bureau developed a novel method of testing the structural integrity and for predicting the lifetime of

such diverse products as turbine blades, space-ship windows, soft drink bottles, and other brittle materials. It is based on the rate at which cracks grow. Compatible with production line techniques, the new method makes possible the proof-testing and lifetime prediction of glass containers and other products made of brittle materials with consequent improvement in mechanical durability and safe use.

Bureau scientists developed a new tool for studying basic chemical reactions induced in gaseous systems by an incident laser beam. The chemical reactions are identified and analyzed by a mass spectrometer. Because of the interaction of laser light with specific chemical bonds, these reactions can lead to the production of novel materials for new scientific and industrial applications. It also has the potential for the separation of chemical isotopes.

In a powerful new technique, Bureau scientists employed the laser in the study of free radicals, electrically charged fragments of molecules involved in many chemical reactions. Free radicals are very short-lived. Their identification and behavior must be determined on a very short time scale, yet the knowledge gained is essential to pollution studies, fire research, high temperature chemistry, stratospheric chemistry and the development of new lasers.

Computer Technology

The National Bureau of Standards has the responsibility for strengthening the Nation's computer science and technology and for advancing the effective use of computers for the public benefit. The Bureau has charge of developing information processing standards to help guide the Federal Government to more efficient utilization of computers. During fiscal 1974, nine such standards were issued.

The Bureau's Institute for Computer Sciences and Technology expanded its work in the area of privacy and security of data stored in computers. In addition to hosting two major national conferences on the subject, the Institute published a handbook for the physical protection of computerized data and computer installations. It also published an executive guide for security planning and developed techniques for controlling access to computer systems that included positive identification of individuals who are remote users of computer networks.

The Institute designed, for the President's Special Action Office on Drug Abuse Prevention, a computer-based footprint identification system. It was an adaptation of the automated fingerprint identification system designed for the Federal Bureau of Investigation.

The Bureau entered into a contract with the General Accounting Office to develop guidelines for computer systems used in vote tallying. After surveying jurisdictions that have employed computers in conducting elections, it will recommend guidelines for election computer systems to assure accuracy, prevent fraud, and provide effective decision-making information to election officials.

PATENT OFFICE

Mission

The Patent Office administers the patent statute (Title 35 of the United States Code) and the Federal trademark statute (Title 15, Section 1051 et. seq. of the Code).

Pursuant to the patent laws, the Office examines applications for patent and issues patents to applicants whose inventions satisfy the requirements of the law; publishes and disseminates patent and related scientific and technical information; maintains classified search files of U.S. and foreign patents, a scientific library and public search room; supplies copies of patents and technical documents to the public; records assignments and other documents affecting title to patents; and performs other duties related to these laws.

Similar functions are carried out under the Federal trademark laws. The Office examines, registers, and maintains records related to trademarks, service marks, certification marks, and other special kinds of marks which are used in commerce and qualify for registration under the Federal trademark system.

Patent Examining

The patent examining corps achieved new records of quantity performance during fiscal 1974. An all time high of 116,003 patent applications were disposed of and the initial examination of 118,710 new applications was completed. A total of 103,979 new applications were received. The inventory of new applications awaiting examination was thus reduced by approximately 12,000.

Two new programs were instituted during fiscal 1974 to improve the quality of patents issued by the Office. First, a program was implemented to evaluate the quality of a selected sample of applications prior to their issuance. This program includes researching some of the selected applications and reopening prosecution of applications where this is determined to be appropriate. Second, an experimental program was developed under which applicants may voluntarily expose their patent applications to public protest proceedings prior to issuance. The purpose of this program, scheduled to commence in July 1974, is to provide the public an

opportunity to submit evidence relevant to whether or not a patent should be issued on a particular invention or whether the form of such patent should be modified.

In response to developing problems in the energy field, the Office established a new category of cases for accelerated treatment, supplementing its earlier program of special treatment of patent applications having possible environmental impact. Under this program, applications will (upon request) be taken up for examination in advance of their normal order if the inventions disclosed in such applications are determined to contribute materially to (1) the discovery or development of energy resources or (2) the more efficient utilization and conservation of these resources.

Trademark Examining

During the year, 34,193 applications for trademark registration were filed, a decrease of 2,011 applications as compared to corrected fiscal year 1973 receipts. A record number of 36,540 applications were disposed of, including 27,185 marks registered, and this reduced the inventory of pending applications by 2,347.

During the year, the delay between the filing date of the average trademark application and its being acted upon by an examiner dropped from 9 to 6 months.

Effective September 1973, the international trademark classification, also in use in more than 60 foreign countries, was adopted as the primary system of classification in the Patent Office. As a transitory measure, however, the prior classification system will be maintained in filing copies of trademark registrations in the trademark search room.

Legislation and Legal Affairs

A proposed bill providing for a comprehensive revision of the patent laws was forwarded to the Congress in September 1973. This proposal was the result of an intensive effort in which the Departments of Commerce and Justice participated. Following introduction by Senator Scott and after review by the staff of the Senate Subcommittee on Patents, Trademarks, and Copyrights, a modified form of this bill was reported in May 1974. The Administration's views on the committee print of the proposed revision bill were forwarded to the Senate.

In September 1973, legislation to implement the Patent Cooperation Treaty was introduced in the Congress. Shortly thereafter, the Senate forwarded to the President its advice and consent to ratification of this patent treaty. The implementing legislation was reported out by the Senate Subcommittee on Patents, Trademarks, and Copyrights both as a separate bill and as an additional part of the general patent revision bill.

The Patent Office participated in public discussions concerning the question of ratification of the Trademark Registration Treaty, signed by the United States in May 1973, and completed a study of legislation required for its implementation. Public comments on the question of ratification and the form of its implementation were also solicited.

The Strasbourg Agreement concerning the international patent classification system received the advice and consent of the Senate, and the United States deposited instruments of its ratification with the World Intellectual Property Organization on December 21, 1973.

During the fiscal year the Patent Office participated in a number of programs and international meetings related to patent system development and the transfer of technology to developing countries under sponsorship of the World Intellectual Property Organization, the Organization of American States, and the United Nations.

Information Dissemination

The Office released the second and third of a series of publications designed to expand its services to the U.S. business and the scientific and engineering communities. Utilizing patent data, these reports highlight selected areas of technology related to such areas as coal gasification, shale oil, and solar and nuclear energy. In addition, a system was implemented whereby reports may be tailored to the special needs and interests of government agencies and private industry.

A second phase of the Patent Application Locator and Monitoring System was implemented, and more detailed information on the status and location of pending applications is now monitored from receipt to publication or abandonment. This System provides improved services to Patent Office units as well as to the public.

The final element in the quick query system for retrieving patent classification information has been completed and is operational. This microfilm system contains computer generated information identifying patents which are contained in each of the classes and subclasses in the U.S. Classification System. The microfilm is used in the public search room and in the Office of Patent Classification to provide instant subclass lists. It also is made available for sale to the public through the National Technical Information Service.

In view of comments received from the public, the Patent Office returned to its pre-1968 practices of printing representative patent claims in the "Official Gazette," in lieu of an abstract of the invention. The new format commenced with the October 1, 1974, issue of the "Gazette."

NATIONAL TECHNICAL INFORMATION SERVICE

Mission

The National Technical Information Service serves as a central source for the public sale of Government-sponsored research, development, and engineering reports and other analyses prepared by Federal agencies, their contractors, or grantees. It is also an essential source for Federally generated machine processable data files.

The Service ships 11,500 information products daily as one of the world's leading processors of specialty information. It supplies the public with approximately 4 million documents and microforms annually. Its collection exceeds 800,000 titles. All are available for sale, and about 100,000 titles are in current shelf stock.

Credit Card Service

Holders of American Express Credit Cards charged \$32,000 for NTIS products and services. This was comprised of \$18,000 for documents and \$14,000 for subscriptions. This is the first time the Federal Government has recognized a national credit card.

New Products and Services

The first centralized comprehensive guide to Federal data resources and software in machine readable form was developed by the Service. Through an inventory survey of over 75 Federal agencies, the "Directory of Computerized Data Files and Related Software Available from Federal Agencies" was developed. It covers 60 percent of the Federal establishment. During fiscal 1974, 1,377 directories were sold.

An Agreements Program was established to provide Government and non-government organizations with access to customized products and services as a means of fulfilling the Service's mission. There were 75 ongoing and new agreements in fiscal year 1974, these for \$1,541,000.

In fiscal 1974, a new bulletin was added to the "Weekly Government Abstract" series, entitled "Government Inventions for Licensing." This publication announces recently issued Government-owned patents and recently filed patent applications that are available for licensing.

More than 2,500 patents and applications were announced as available for licensing in the "Weekly Government Abstracts," the "Federal Register," and Patent Office's "Official Gazette." Over 3,000 paper and microfiche copies of Government-owned patent applications have been sold to the public.

A pilot program has been implemented which will allow customers to order microfiche copies of reports by

specific descriptors or identifiers. This innovation will permit them to be more selective in their choice of microfiche ordering.

A mass mailing to prospective "SRIM" (Selected Research in Microfiche) customers was made in February 1974 with a response that will increase sales approximately \$150,000 annually.

Agreements with Information Analysis Centers

The Service is now performing marketing and other services for information analysis centers. Also, considerable effort has been made in getting the Atomic Energy Commission's information analysis centers under agreement. Fruition of these agreements will begin during fiscal 1975.

Subscription Services Expanded

The "Weekly Government Abstract" newsletters are the basic NTIS announcement product. During fiscal 1974, 11 newsletters were added to the "Weekly Government Abstract" series: "Agriculture and Food," "Biomedical Technology and Engineering," "Chemistry," "Civil and Structural Engineering," "Communication," "Electrotechnology," "Energy," "Government Inventions for Licensing," "Natural Resources," "Ocean Technology," and "Physics." Subscriptions to the series total over 24,000.

Technology Transfer

For the past 2½ years, the Service has distributed a quarterly journal in 40 developing nations to promote awareness and utilization of its resources. The major focus has shifted to local promotion by NTIS agents overseas. During fiscal 1974, the Service concluded agreements with eight national information organizations within the developing countries. These will perform local promotions of NTIS products and services. Of the 40 countries covered, all but seven have ordered reports on new technology. This constitutes steady progress toward meeting the Service's objective for technology transfer to developing countries.

Circulation and Revenue

In fiscal 1974, 78,000 titles were announced by the NTIS. Of this total, 59,000 were added to the data base of 800,000 titles available for distribution. A total paper copy and microfiche demand of 2.4 million copies generated \$5.2 million in revenue.

Total revenue for all products in fiscal 1974 was \$8.3 million, inclusive of reimbursable income to other

agencies of \$730,000. Sales income for paper copy and microfiche increased 17 percent over fiscal 1973.

OFFICE OF TELECOMMUNICATIONS

Mission

The mission of the Office of Telecommunications, established in 1970, is to assist the Department in fostering, serving, and promoting the Nation's economic development and technological advancement by:

- Improving man's comprehension of telecommunication science.
- Assuring the effective use and growth of the Nation's telecommunications resources.

In carrying out this mission, the Office (1) conducts research, engineering, and analysis in the general field of telecommunication science to meet Government needs; (2) acquires, analyzes, synthesizes, and disseminates information for the efficient use of the Nation's telecommunication resources; (3) performs analysis engineering, and related administrative functions responsive to the needs of the Office of Telecommunications Policy (in the Executive Office of the President) in the performance of its responsibilities for the management of the radio spectrum; (4) conducts research needed in the evaluation and development of telecommunication policy as required by that Office and of other policy as required by the Department of Commerce; and (5) assists other Government agencies in the use of telecommunications.

Telecommunication Science and Engineering

During the fiscal year, the Office:

- Performed the first comprehensive review of cable television technology. The results have been used by policy-makers and Government decision-makers in applying this technology both to Government and non-Government use.
- Prepared two reports—one on channel-spacing and another on antenna height tradeoffs—which were used by the Federal Communications Commission in determining channel-spacing restrictions in the use of the new 900 megahertz region for land mobile radio and in the relaxation of antenna heights for citizen-band radios.
- Developed equipment that utilizes sky-scattered radiowaves from the ocean to determine the height and direction of the seawaves in a 30 kilometer by 30 kilometer area from a distance of 1,500 miles.

Telecommunications Information

In this sector, the Office's activities included:

- Publishing two brochures and one report on the use of telecommunications for energy conservation.
- Developing handbooks, reports and short courses on the use of optics in communications. Those have been extremely useful to Government and industry in assisting in evaluating optical communications systems.
- Performing an optical survey and report on performance requirements for data communications for the Government as a whole.

Managing the Federal Radio Spectrum

The Office provided support to the Interdepartment Radio Advisory Committee. The Committee is instrumental in assigning radio frequencies to Federal departments. During fiscal 1974, the Office supported the Committee by:

- Preparing, reproducing, and distributing briefing papers prior to, and minutes, reports, and other documentation subsequent to and preceding 141 meetings of the Committee.
- Processing 51,185 applications for frequency assignments submitted by government agencies and maintaining the Government's Master File of 124,557 frequency assignments.
- Assisting in the development of the U.S. position at the Maritime Mobile World Administrative Radio Conference held in Geneva.

Numerous research and analysis studies have been completed involving the overall assessment of the compatibility of systems operating and proposed to operate in frequency bands such as 7250-8400, 2700-3700, and 5000-5250 megahertz.

Supporting the Policy Makers

Telecommunications policy is formulated by the Office of Telecommunications Policy in the Executive Office of the President. The Office of Telecommunications has supported the formulation of these policies as follows:

- Provided analysis and supporting material on land mobile radio.
- Studied the various aspects of the cable market and its development, (e.g., copyright problems, company profiles, service demand).

- Studied common carrier economics and industry problems.
- Established the National Information Center for "911," a standard unified emergency telephone number.
- Analyzed national policy on disaster warning systems.
- Examined the networking aspects of computer-communications.
- Studied existing and potential international communications markets for U.S. telecommunication services.

Working With Other Government Agencies

A major share of the technology programs undertaken in the Office was directed toward assisting other Federal agencies. The programs that follow are not all-inclusive, but represent its support to other agencies during fiscal 1974.

The Office launched a 5-year cooperative Community Communication Program with the Department of Housing and Urban Development to address technical and economic aspects of integrating multi-channel broadband systems into an overall urban communications system which will serve both routine and emergency needs of a community.

It formalized a cooperative program of research and experimentation with the Federal Energy Administration to bring about increased energy conservation through the use of telecommunications in lieu of travel.

It conducted a continuing program for the Federal Aviation Administration on research into basic factors affecting the performance of air-ground radar systems.

The Office provided predictions of high-frequency communication reliability for buoy-to-receiving station communications and expert consulting services in a variety of technical areas in support of the Department of Commerce's National Data Buoy Project.

It designed, built, and tested for the U.S. Air Force, two instruments, "RSL-1" and "RSL-2," that accurately measure and process the signal levels of receivers of a microwave communications link.

It completed Phase I of a study for the Department of Transportation on the use of radar activated braking systems for automobiles.

PATENT OFFICE

SELECTED PATENTS WORKLOAD DATA FOR FISCAL 1970-74

Item	1970	1971	1972	1973	1974
Applications for patents received:					
Inventions	100,116	103,733	102,663	100,900	103,479
Plants	113	161	166	109	109
Reissues	344	266	293	382	391
Total	100,573	104,160	103,122	101,391	103,979
Application disposals by examiners:					
Applications allowed	72,298	74,403	69,890	77,093	76,687
Applications abandoned	31,394	34,842	36,383	37,954	39,316
Total	103,692	109,245	106,273	115,047	116,003
Applications pending, June 30:					
Pre-examination	42,149	45,101	35,020	30,515	30,551
Under examination	145,290	139,026	146,239	137,088	125,028
Post examination	35,632	32,352	14,601	^a 30,583	24,421
In issue process	17,596	21,703	22,830	14,201	13,959
Total in office	240,667	238,182	218,690	^a 212,387	193,959
Patents granted:					
Inventions	66,339	70,387	83,221	^a 67,552	79,300
Plants	80	77	170	146	211
Reissues	311	222	264	^a 274	367
Total	66,730	70,686	83,655	^a 67,972	79,878

^a Revised.

SELECTED TRADEMARK EXAMINING WORKLOAD DATA FOR FISCAL 1970-74

Item	1970	1971	1972	1973	1974
Applications for trademark filed:					
For registration	33,807	32,803	33,741	^a 36,204	34,193
For renewal	6,329	6,189	5,980	5,614	5,633
Disposals by Office:					
Maturing to registration	23,752	23,710	22,875	27,863	27,185
Abandoned	6,134	6,974	7,656	8,015	9,352

^a Revised.

INCOME FROM FEES, FISCAL 1970-74

(In thousands of dollars)

	1970	1971	1972	1973	1974
Patent issue fee, including printing	\$9,000	\$10,490	\$10,436	\$9,491	\$11,058
Patent application filing fee, including extra claims	8,720	8,880	8,838	8,432	9,018
Printed copies, U.S. patents, designs, and trademarks	2,588	2,358	2,467	2,145	2,312
Recording assignments	1,801	1,711	1,851	1,665	1,669
Trademark application filing fee	1,235	1,229	1,243	1,231	1,237
Reproduction of records	1,159	1,063	1,065	1,253	1,097
Appeals, including briefs	677	636	757	700	966
Making, mounting, correction, and comparison of drawings	138	139	155	182	214
Trademark renewal filing fee	159	155	150	137	143
Design application filing fee	115	123	129	116	111
Filing of affidavits pertaining to use or non-use of trademarks ^a	(b)	34	127	139	142
Special service on orders	144	166	122	110	189
Certification of records	136	124	120	64	118
Design issue fee	113	95	91	101	114
Disclosure documents filed ^c	23	34	60	83	132
Trademark oppositions and cancellations	38	40	41	44	45
Subscription service for copies	37	38	39	31	33
Petition fees	32	38	37	40	44
Attorney registrations and certificates	41	29	26	25	40
Patent reissue filing fee, including extra claims	28	28	25	30	38
Certificates of correction	15	15	19	21	23
Patent and trademark disclaimers	(b)	(b)	18	19	22
Other fees ^d	79	81	67	60	57
	26,278	27,506	27,883	26,119	28,822

^a Includes fees first applicable in FY 1971 under P.L. 89-83.

^b Less than \$15,000.

^c Fee was not in effect until May 1969.

^d Approximately 35 types of fees amounting to less than \$15,000 for each type.

NATIONAL TECHNICAL INFORMATION SERVICE

SELECTED STATISTICS FOR FISCAL 1973-74

	1973	1974
New reports processed by source agency: ^a		
DOD	18,188	18,521
Interior	15,522	13,341
NASA	^b 8,123	7,083
AEC	^b 13,727	15,200
Other	15,694	24,245
Total	71,254	78,390
Report sales:		
Copies:		
Paper copy	697,000	757,000
Microfiche	1,941,000	1,599,000
Total	2,638,000	2,356,000
Income:		
Paper copy	\$3,368,000	\$4,126,000
Microfiche	1,087,000	1,108,000
Total	\$4,455,000	\$5,234,000
Total sales income:		
Documents (paper and microfiche)	\$4,455,000	\$5,234,000
NTISearch	74,000	155,000
Bibliographic data leasing	18,000	106,000
Subscriptions	1,051,000	1,923,000
Special technology	(^c)	833,000
Total	\$5,598,000	\$8,251,000
Reference inquiries:		
Quotations (includes subject searches)	100,494	110,353
Order identification	206,728	239,115
Total	307,222	349,468

^a Represents reports announced and/or added to collection.

^b Magnetic tape input.

^c Reported under "Documents (paper and microfiche)."

OCEANIC AND ATMOSPHERIC ACTIVITIES

GENERAL

Mission

The National Oceanic and Atmospheric Administration carries out programs designed to further the Nation's safety, welfare, security, and commerce through increasing our knowledge and rational use of the natural environment. These involve:

- Ensuring continuing abundance of varied fishery products through promotion of the economic and safe use of all fishery resources, conserving and managing resources of interest to the United States, and increasing U.S. resources.
- Providing the Nation with maps, surveys, and related information for safe navigation and accurate location, through navigational and aeronautical charts and aids, coastal maps, tidal and Great Lakes data, and national networks of geodetic control and related surveys.
- Providing a sound basis for planning and conducting weather-sensitive activities and protecting life and property from natural disasters through (1) weather, river, flood and oceanic forecasts and warnings, (2) specialized forecasts for aviation, space, agriculture, and fire control interests, (3) establishment of practical means to modify hurricanes and severe storms, (4) development of theoretical and experimental descriptions of the ocean and atmosphere as a total system, and (5) data collection and dissemination.
- Fostering balanced development, conservation, and management of coastal zone and marine resources, through (1) information on human impact on environmental ecosystems, (2) protection of marine mammals and endangered species, (3) creation, with the states, of a national conservation-development strategy, (4) improvement of global ocean-process forecasts, (5) identification of new resources and techniques for efficient marine operations, and (6) provision of advisory services and specialized marine, educational, and environmental data.

The National Oceanic and Atmospheric Administration is headed by an Administrator assisted by two special-

purpose associate administrators—one for marine resources and one for environmental monitoring and prediction.

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. He is the Permanent Representative of the United States to the World Meteorological Organization, and the U.S. Commissioner to the International Whaling Commission. He chairs the Marine Fisheries Advisory Committee, the Interagency Committee on Marine Science and Engineering, and the Federal Committee for Meteorological Services and Supporting Research, and serves on seven other advisory and interagency committees. He is also the U.S. principal in U.S./French Cooperation in Oceanography and U.S. Chairman of the Joint Committee for the U.S./U.S.S.R. Cooperation in studies of the World Ocean.

Associate Administrator for Marine Resources

The Associate Administrator for Marine Resources has cognizance over, and establishes policy for, the National Oceanographic and Atmospheric Administration's marine resources, mapping, charting, and geodetic programs. He also plays a key role in coordination of these programs elsewhere in the Federal Government.

Coordination of Federal ocean programs is conducted through the Federal Council for Science and Technology, and the Administration exercises leadership in marine mapping and charting through the Council. This work is critical to safety at sea, development of offshore resources, and efficient use and protection of the marine areas bordering our shores.

The Administration also coordinates Federal geodetic and related surveys. National geodetic control networks and related surveys are essential to mapping, planning, and construction across the Nation, to protection of public and natural resources and to national defense. In fiscal 1974, a revised "Classification, Standards of Accuracy, and General Specifications of Geodetic Control Surveys," was prepared and published by the Administration-chaired Federal Geodetic Control

Committee. This document prescribes the criteria required to establish national geodetic control networks.

The Administration provides national leadership in several bilateral, international marine agreements. These involve cooperation with France, Japan, and the Soviet Union. In fiscal 1974, the U.S.-French project "FAMOUS" (French-American Mid-Ocean Undersea Study) began operations along the Mid-Atlantic Ridge. Three submersibles, one American and two French, are diving to depths of 10,000 feet to study the dynamic processes which occur in an area where new crust is being generated and the ocean floor spreading, increasing the separation between North America and Europe.

The Administration also provides leadership in other bilateral and international agreements and policy advice to nine international fisheries commissions. In the International Commission for the Northwest Atlantic Fisheries, its efforts culminated in an agreement to reduce the total fisheries catch quota from 924,000 to 850,000 metric tons, while providing an increase in the U.S. catch of 16,600 metric tons.

The Associate Administrator also manages the Manned Undersea Science and Technology Program, which serves as a focus for civilian manned undersea activities in coastal waters. Work included:

- Management of the Administration's safety program for research submersibles and scuba diving.
- Provision, by leasing, of underwater platforms for fisheries management and ocean dumping studies, and for interagency and international man-in-the-sea work.
- Coordination and management of field operations involving manned underseas science and technology.
- Cooperation with, and transfer of technology from, the Navy and NASA to civilian manned underwater activities.
- Continuing assessment of civilian agency needs for manned underwater platforms and coordinating use of available commercial and Navy platforms by civilian agencies.

The Associate Administrator also coordinates ocean pollution work under the provisions of the Marine Protection, Research, and Sanctuaries Act of 1972. The first annual "Report to the Congress on Ocean Dumping and Other Man-Induced Changes to Ocean Ecosystems" was issued in March 1974.

Associate Administrator for Environmental Monitoring and Prediction

The Associate Administrator has cognizance over and establishes policy for meteorological and other programs which entail monitoring and prediction of the environment and environmental modification. He is the focal point for emergency readiness planning against natural disasters, and provides management and coordination for the Global Atmospheric Research Program, International Hydrologic Decade, and the special foreign currency research program. He also carries out coordination with Committees of the National Academy of Sciences and the National Academy of Engineering and discharges Federal meteorological coordinating functions assigned to Commerce by the Office of Management and Budget and by the President for the World Weather Program.

The coordination of Federal meteorological and marine environmental prediction programs and of preparing and maintaining related Federal plans is performed by interdepartmental committees which conduct systematic, continuous reviews of meteorological and marine environmental prediction requirements and supporting research. Federal plans for the following were published in fiscal 1974:

- Meteorological services and supporting research.
- The World Weather Program.
- Marine environmental prediction.
- Hurricane operations.
- East coast winter storms operations.
- Severe local storms operations.
- Meteorological rocketsonde observations.
- National climatic services.
- Cooperative backup for severe local storms and aviation forecasts.
- Rocketsonde support for special events.
- Weather radars.

During fiscal 1974 the National Oceanic and Atmospheric Administration continued its lead role in coordinating U.S. participation in the International Field Year for the Great Lakes, the Atlantic Tropical Experiment (conducted under the Global Atmospheric Research Program), and the World Weather Program.

There was continued progress in editing, processing, analysing, and archiving of Great Lakes data collected

from April 1972 to March 1973. The U.S. archive is being established at the National Climatic Center at Asheville, North Carolina. Final U.S.-Canadian scientific reports are in initial preparation in each of six major areas: (1) terrestrial water budget, (2) energy balance, (3) biology and chemistry, (4) boundary layer, (5) lake meteorology, and (6) water movements. These reports will be published in the 1975-77 period. Status and progress on 78 U.S. tasks and a comparable number of Canadian tasks are published in a joint U.S.-Canadian Bulletin published quarterly by the Administration. In April 1974, the Great Lakes project office became a part of the Great Lakes Environmental Research Laboratory within the Administration's Environmental Research Laboratories.

The Atlantic Tropical Experiment ("GATE") was conducted between June 15 and September 23, 1974, over a 20-million-square-mile area extending from the eastern Pacific Ocean, across Latin America, the Atlantic Ocean, and Africa to the western Indian Ocean. The Experiment was designed to gather information on the behavior of the tropical atmosphere and its ultimate effects on global weather. Sponsored by the World Meteorological Organization, a U.N. agency, and by the International Council of Scientific Unions, the 101-day study directly involved scientists and technicians from 66 nations. Field operations were directed by an international control center at Dakar, Senegal. Special instruments were placed aboard 40 ships, approximately 60 buoys, 12 aircraft, and six satellites. These observed and recorded meteorological and oceanographic phenomena through extensive depths of the atmosphere and ocean. The U.S. contribution included nine ships, eight aircraft, buoys, and geostationary and polar orbiting satellites. The Administration coordinated and directed U.S. participation, but the Department of Defense, State, and Transportation, the National Aeronautics and Space Administration, and the National Science Foundation also contributed. Each nation that contributed observation platforms (ships, aircraft, buoys, or satellites) for the experiment will process and validate the observations and data collected by instruments on these platforms. By March 1976, this data will be sent to the two World Data Centers operated by the United States and the Soviet Union, where it will be available for scientific uses.

The World Weather Program consists of two major components: the World Weather Watch and the Global Atmospheric Research Program. Senate Concurrent Resolution 67 of the 90th Congress urges U.S. participation in the World Weather Program and requires an annual report. The fiscal 1975 plan featured the past, present, and future activities of the Global Atmospheric Research Program.

The Administration continued its active participation in providing guidance for implementation of the United Nations Environment Program. At the request of the State Department, it took a lead role in developing the proposed U.S. program for a Global Environmental Monitoring System. This proposal was considered, along with others, at an Intergovernmental Working Group on Monitoring convened by the United Nations in February 1974, and the recommendations of that group were in close accord with the framework for global monitoring proposed by the United States. The Administrator of the National Oceanic and Atmospheric Administration was chairman of the U.S. Delegation to the Intergovernmental Working Group. At its second session held in March 1974, the U.N. Environmental Program Governing Council authorized the implementation of the Global Environmental Monitoring System, as well as new thrusts in the areas of fisheries, natural disasters, oceanic monitoring, and inadvertent climate change.

A national program for continuing environmental monitoring for the marine leg of the Trans-Alaska Pipeline System was prepared at the request of the Federal Task Force for Alaskan Oil Developments. The program is designed to assure safe and efficient marine transport of oil from the Alaskan North Slope.

A comprehensive field survey was conducted to investigate the effectiveness of the Administration's natural disaster warning system during the widespread tornado outbreak of April 3-4, 1974. As a result of the findings the report recommended (1) the expansion of the Administration's Weather Radio to provide more direct dissemination of warnings, (2) the accelerated installation of local use radars for severe storm detection, and (3) increased assistance to communities for disaster preparedness planning.

A supplement is being prepared which will update the Federal Plan for Natural Disaster Warning and Preparedness. The plan is a joint effort of Federal agencies involved to present a coordinated response to needed improvements in the detection, prediction, warning, and preparation for natural disasters.

Public Law 92-205 requires that all nonfederally sponsored weather modification activities in the United States be reported to the Secretary of Commerce. By December 1973, 65 reports of project activities covering rain and snow increase, hail reduction, and fog suppression had been received. Federal agencies recently have agreed to report their field operations, thus creating a central source of information for all weather modification activities in the United States. A report summarizing the data received from reports through December 1973 was published.

SEVERE STORMS RESEARCH

Tornado and severe thunderstorm research is centered at the National Oceanic and Atmospheric Administration's National Severe Storms Laboratory in Norman, Oklahoma. The research emphasizes physics of severe local storms and the development of methods for early detection and identification of these storms. Theoretical work is supported by an observation program including surface, upper air, radar, satellite, and aircraft observations. Advanced techniques are developed for probing the atmosphere and for processing, displaying, and transmitting severe storms data. Dual Doppler radars with real time displays of the radial component of the wind provide observations of storm interiors and a basis for analysis of internal storm circulations. Used with chaff (hair-like fibers with a radar reflective coating) distributed in the clear air near the thunderstorm, air motion fields both inside and adjacent to storms can be probed and their interrelationship determined. The Doppler radar system is complemented by a network of surface stations recording temperature, pressure, humidity, wind speed and direction, and rainfall. Rawinsonde stations (which track meteorological balloons) provide upper air information, which is enhanced by measurements from a 1500 foot instrumented TV tower.

On April 20 and June 8, 1974, tornadic storms passed through the area of dual-Doppler radars. Tornadic circulation "signatures" similar to those observed in 1973 were again in evidence. Portions of these cloud circulations were well photographed. Correlated radar, surface network, and rawinsonde observations, as well as the dual Doppler radar information, were obtained as the circulation moved through the area.

Theoretical models of convective cloud precipitation and tornado formation are being developed. A model of the "dry-line" and its role in the initiation of squall lines has been completed and is now undergoing evaluation as a forecast tool.

A comprehensive study of the April 29-30, 1970 tornado which passed through Oklahoma City has been completed. This study brings together observations made by several laboratories. It details electrical phenomena, infrasound, ionospheric disturbances, surface, upper air, and radar observations accompanying the storms, and provides an explanation of possible factors in tornado initiation.

The National Severe Storms Laboratory's surface radar, rawinsonde network, and instrumented 1500-ft. television tower have been part of a NASA Skylab experiment to investigate mesoscale features in the atmospheric environment as they relate to storm development.

In the Remote Sensing Program, conducted by the Wave Propagation Laboratory, the field study to identify electromagnetic signals associated with tornadic storms

was continued in cooperation with the Administration's National Weather Service. During the 1974 season, improved instruments for this purpose with directional capability were tested at 19 Service offices in the field. Based on the encouraging results from these tests, the Service and the Wave Propagation Laboratory are designing operational instruments for incorporation in the Service's severe storm warning system. Other activities in the Laboratory's Remote Sensing Program includes deployment of the dual Doppler radar system in the National Hail Research Experiment conducted by the National Center for Atmospheric Research in northeastern Colorado. This radar system shows three-dimensional wind flow patterns within severe storms for use in understanding storm dynamics and developing improved numerical models of these storms. The Laboratory is also studying the significance of ultra-low frequency sound waves emitted by some severe storms, using three arrays of sensitive microbarographs. The information is being analyzed to determine the potential of this approach for storm monitoring. It is also conducting field tests of an infrared laser Doppler system to serve as a remote wind velocity sensor for possible use in the study of severe storms.

During fiscal 1974 the National Weather Service developed a 2 to 6 hour severe storm probability forecast to provide additional guidance in preparing warnings. Research is continuing in an effort to construct an advanced, operational three-dimensional planetary boundary model that will be capable of predicting temperature, humidity, and wind within the lowest 2 kilometers of the atmosphere for a 24-hour period. It is anticipated that the output from this model will be experimentally used for severe storm prediction in fiscal 1975.

COASTAL ZONE MANAGEMENT

During the year, the National Oceanic and Atmospheric Administration's Office of Coastal Zone Management began the funding under the Coastal Zone Management Act of 1972. Funds in the amount of \$7.2 million were appropriated for grants to assist states in preparing management programs for their coastal areas. By year-end, 31 of the 34 eligible states and territories had submitted grant proposals, and funds for 28 of these were awarded. It also granted the State of Oregon \$824,000 to enable it to acquire a portion of Coos Bay as an estuarine sanctuary for research and educational purposes.

In addition to providing funding, the Office has assisted the states in developing their management and sanctuary programs by:

- Holding workshops and otherwise bringing to the States' attention the unique capabilities that exist

within the National Oceanic and Atmospheric Administration.

- Sponsoring a successful second national Conference on Coastal Zone Management in March at Charleston, South Carolina.
- Assisting in the preparation by the Conservation Foundation of the volume *Coastal Ecosystems: Ecological Considerations for the Management of the Coastal Zone*, as well as the major, four-volume document *Coastal Ecosystems of the United States*, a basic reference work for coastal zone managers.
- Holding in November a national conference on the background, purpose, and direction of the estuarine and marine sanctuary programs which the Office administers.
- Establishing a regional desk structure to deal directly with state representatives on a regional basis.
- Initiating coordination with other Federal agencies to make them aware both of the opportunities available in assisting States in preparing coastal zone management programs as well as their responsibilities for ensuring consistency of Federal actions with approved State management programs.

SEA GRANT

The National Sea Grant Program was created by Congress in 1966, to speed development of the Nation's marine resources while ensuring that these resources are wisely managed, conserved, and used. The National Oceanic and Atmospheric Administration's Office of Sea Grant makes grants and contracts to universities, laboratories, and other institutions for research, education, and advisory services that further the Program's goals. At least a third of the funds for each Sea Grant program must come from non-Federal sources.

During fiscal 1974, the National Sea Grant Program supported work at almost 100 colleges, universities, and other institutions in 28 states, plus the District of Columbia and several island territories.

A technical assistance grant awarded through the University of Washington Sea Grant Program helped perfect a technique for literally exploding barnacles and other growth from vessel hulls. Using this method, called the Sequential Sea Mesh System, the hull of a ship can be cleaned in about 2 hours without damage. The cleaning operation may take a day or more when conventional techniques are employed.

Wave attenuation studies at the University of California at San Diego led to the development of a breakwater system with the potential for revolutionizing the use of coastal regions. Rows of submerged spherical buoys are anchored by cables to the ocean floor. Each tethered float is propelled by the incoming waves, pushing aside the slower-moving water around it. When it reaches the limit of its tether, the float reverses and swings back against the waves like an inverted pendulum. The float's turbulent motion, working against the surrounding water, dissipates some of the waves' energy.

Four years ago Sea Grant researchers at the University of Hawaii located precious coral in the State's waters, launching an industry that currently has a retail sales level of \$10 million to \$14 million, employs more than 500 persons, and provides the State with \$2 million annual tax revenue. University scientists now are advising the industry on harvest levels that will best preserve the coral resource and allow the industry to thrive in future years.

Salmon culture methods developed by the University of Rhode Island's Sea Grant Program form the basis for a planned commercial fish farming operation. Rhode Island Aquaculture Inc., will grow salmon from egg stage to mature, marketable size, a process that requires 2 to 3 years. The company has leased a site for a 6,000-square-foot building at Narragansett Oceanic Research Industrial Park.

THE NOAA CORPS

The Administration's officer corps—the "NOAA Corps"—was leveled off to 335 officers by year's end, down from 341 at the beginning of the period and well within the Congressionally-authorized average strength of 358 for the fiscal year.

Recruiting of women took a modest, yet dynamic upturn with the addition of nine female officers over the previous year. Thus, a whole new chapter has been opened for the Corps with women being billeted at sea and ashore on the same basis as male officers of the Corps. Another changing aspect of the Corps has been the further increase in the recruitment of officers with educational backgrounds in the life sciences, particularly biology, fisheries, and zoology. Approximately one-fourth of the officers appointed during the past year have life science backgrounds. Attendant with this has been a corresponding increase in officer assignments to the life science areas.

The officer training program, which uses the facilities of the Maritime Administration's Merchant Marine Academy at Kings Point, New York, has been strengthened

by the addition of lectures in Management Science, plus the significance of Equal Employment Opportunity and Civil Rights Programs.

A staff study, the first of its kind, has been prepared on problems of Corps retired officers and widows, with special reference to difficulties that may relate to Federal responsibilities. Although area interviews were taken, the bulk of the data was derived from questionnaires that were mailed to each individual or family. The results of this research are being issued in a series of installments appearing in the monthly *NOAA Corps Bulletin*.

NATIONAL WEATHER SERVICE

Mission

The National Weather Service is a major component of the National Oceanic and Atmospheric Administration. Through some 400 field facilities, it observes and reports on 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. The Service 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. Through a cooperative international network of seismic and tide stations, it also observes and reports on earthquakes and tsunamis.

Severe Weather and Floods

Devastating tornadoes occurred in fiscal 1974, especially in the Southern and Ohio Valley States. There were at least 770 tornadoes, causing 382 deaths, thousands of injuries, and an estimated \$650 million property damage. During April 3-4, some 80 tornadoes occurred within an area extending from the Mississippi to the Appalachians. These tornadoes caused 328 deaths in 11 states, over 6,000 injuries, and an estimated \$540 million in damage. The most concentrated damage was sustained in the city of Xenia, Ohio. The April 3 death toll was the highest since March 18, 1925, when a Tri-State tornado accounted for 689 fatalities.

Fiscal 1974 was the first year since 1962 that a hurricane did not cross the United States coastline. However, Tropical Storm Delia did claim five lives and cause \$18 million in damages in Texas and Louisiana.

Record flood levels occurred on many small streams in Kansas and southeast Nebraska as the result of torrential rains on October 10-11, 1973. In January 1974 there was severe flooding along coastal streams in the Pacific northwest. Spring rains of up to 17 inches fell in

Mississippi over the weekend of April 13-14, with record flooding in several communities in the Pearl and Pascagoula river basins. Three thousand people were safely evacuated as the result of accurate and timely flood forecasts.

Activities and Achievements

A major new thrust, "AFOS", was initiated during fiscal 1974. The acronym stands for Automation of Field Operations and Services. The concept is to develop an overall integrated system for achieving maximum feasible automation of the data acquisition, handling, and communication functions of field stations. The major goal is to improve services to the public by improving the timeliness and quality of forecasts and warnings and by increasing the productivity and effectiveness of Service personnel through the automation of routine tasks.

During fiscal 1974, an "AFOS" facility was installed and began experimental operations at Service Headquarters in Silver Spring, Maryland. With the complex of hardware and software in this facility, the basic forecast office can be simulated to verify system design and to carry out experiments prior to field implementation.

Lessons learned from the experimental facility will be applied to an eventual network of 52 modernized Weather Service Forecast Offices, nationwide. These will be electronically linked with each other and with 12 regional River Forecast Centers, the National Meteorological Center, the National Severe Storms Forecast Center, National Hurricane Center, and National Climatic Center. The "AFOS" operational system is scheduled for completion by fiscal 1980.

On September 16, 1973, the Service assumed responsibility for the Tsunami Warning System previously operated by the Environmental Research Laboratories of the National Oceanic and Atmospheric Administration. One of its first actions was to provide emergency power sources for the Honolulu and Adak Observatories.

Community disaster preparedness programs expanded during fiscal 1974 with the addition of 14 community preparedness meteorologists at field offices. The value of community disaster preparedness was repeatedly proven during the year. Outstanding examples involved the record outbreak of tornadoes in the Salina, Kansas, area on September 25, 1973, and at Drumright, Oklahoma, on June 8, 1974.

New steps were taken in fiscal 1974 to expedite the collection of hydrologic data in order to speed up warnings of flood events. River and rainfall gauging facilities at over 100 locations can now be automatically interrogated whenever a flood threat appears to be

developing. Additional flash flood alarms were installed. Nineteen communities in 14 states can now be warned by these alarms, substantially reducing the flood threat to people living and working in the flood plains of downstream areas. Also, river forecasting centers are in the process of being tied in to the Administration's large computer system in Suitland, Maryland. This will add greatly to computer capability of each of these centers and improve the timeliness and accuracy of river and flood warning services.

The World Agricultural Weather Watch was implemented in February 1974. Monthly temperature and precipitation values and their departure from 30-year normals are presented in a series of maps covering the major agricultural areas of the world. The *Weekly Weather and Crop Bulletin* and the *Foreign Agricultural Service* serve as the vehicles for dissemination.

An Environmental Study Service Center was established in Auburn, Alabama, to serve the agricultural areas of Florida, Georgia, and Alabama.

In cooperation with the Federal Aviation Administration, the Aircraft Owners and Pilots Association and the Public Broadcasting Service, the Service is participating in a nationwide Thursday and Friday evening Aviation Weather television program. This program depicts pilot weather outlooks for the coming weekend. Over 175 stations participate.

The first edition of "Worldwide Marine Weather Broadcasts" was issued in February 1974 as a successor to *Weather Service for Merchant Shipping*. This document is furnished free to all ships in the U.S. Cooperative Ship Weather Reporting Program and has been adopted by the Defense Mapping Agency as a replacement for its publication, *Radio Weather Aids*, for use by the U.S. Navy. Several foreign countries use the document in their civilian and naval fleet operations.

The Service made an in-depth study of all U.S. marine weather broadcasts. In close coordination with the Coast Guard, Navy, and commercial marine broadcast companies, changes are being made to ensure full coverage of coastal, offshore, and high seas areas without duplication. The forecasts and warnings disseminated on these broadcasts are being tailored toward specific user groups: the mariner, fisherman, offshore driller, and the recreational boatman. One commercial broadcast company, which provides marine broadcasts free of charge, was able to reduce its transmissions by 50 percent without detriment to the program.

The RAMOS (Remote Automatic Meteorological Observing) system met its test and evaluation criteria. An order was placed for 21 units. Plans are for an increased order which will result in 50 units being available for installation by fiscal 1976.

The AMOS III (Automatic Meteorological Observing) system installations are well underway. A total of 65 operational units are on hand; about 20 of them are installed and the remainder will be installed by fiscal 1976.

Fiscal 1974 saw great activity in the solar radiation program. Four data recorder/integrators were procured for evaluation. One preproduction pyranometer was procured. The pyranometer was officially accepted in June 1974 and is the basis for future purchases to upgrade the solar radiation network.

Twenty-one upper air minicomputers were installed at upper air stations. The minicomputers replaced commercial time-share data reduction at 13 stations. At eight other stations the minicomputers reduced the manpower required for manual data reduction from two to one man. The final coded messages produced by the minicomputer are more accurate than those done manually and by commercial time-share computers. Archiving of data will be done by use of magnetic tape produced by the minicomputer rather than the manual key punching or paper tape methods now used at the National Climatic Center. By mid-fiscal 1976, all 99 Service-operated and Service-sponsored upper air stations will use the minicomputer for data reduction.

A modern local warning radar was installed at Lubbock, Texas, to replace the obsolete radar there. This new C-band equipment is the forerunner of 66 local warning radars to be installed over a 4-year period. Procurement of the first 27 radars was initiated in fiscal 1974. Procurement of new modern S-band radars for network locations at Brookneal, Virginia, and Longview, Texas, was also begun. Operation of these radars is scheduled to begin in the fall of 1975. They will be used to monitor severe thunderstorms, tornadoes, and hurricanes and will provide a basis for issuing warnings.

The method of Model Output Statistics ("MOS") was used to produce automated forecasts of numerous weather elements including the occurrence, type, and amount of precipitation, maximum and minimum surface temperatures, surface wind speed and direction, cloud amount, ceiling, visibility, thunderstorms, and severe local storms. Plans call for a completely automated, computer-worded, local weather forecast to be produced routinely as part of the AFOS program described above.

A new Subsynoptic Update Model, or ("SUM"), became operational, replacing the Subsynoptic Advection Model ("SAM"). The purpose of the new model is to provide more accurate short-range forecasts of sea-level pressure and precipitation.

The Service has under development prototype seismic and tide instruments which will telemeter data via satellite.

Interagency Cooperation

The Service continued a variety of reimbursable tasks for other agencies. Two of the most significant were support of Skylab flights, largely to aid in scheduling the earth sensing experiments, and of NASA unmanned Earth Resources Technology Satellite operations to assist in the economical use of that Satellite's earth sensing equipment.

The community disaster preparedness program was enhanced in May 1974 with the passage of the Disaster Relief Act Amendments of 1974. These place much more emphasis on preparedness. The Service continued its cooperation with the Federal Disaster Assistance Administration, the Defense Community Preparedness Agency, and other Federal and state agencies to assist in implementing the Act.

As part of the continuing reimbursable support to the U.S. Geological Survey, the Service operates an extensive network of regular- and strong-motion seismographs in Alaska.

NATIONAL OCEAN SURVEY

Mission

The National Oceanic and Atmospheric Administration's National Ocean Survey conducts land and ocean survey and research operations which (1) promote commerce and transportation, (2) provide data for planning the rational use of the environment, and (3) contribute to the understanding and forecasting of hazards due to crustal motion as the consequence of either earthquakes or subsidence. To accomplish this mission, the Survey conducts continuing programs in physical 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

Accomplishments during fiscal 1974 included the issuance of one new, three reconstructed, and 467 revised nautical charts, as well as the compilation of five bathymetric maps. New editions of five Coast Pilots and annual supplements for three other Coast Pilots were published. The National Ocean Survey contributed 1,428 articles and 50 correction chartlets for publication in the Notice to Mariners. A total of 88 hydrographic surveys were verified, and 60 were reviewed. Eight ships

and two field parties were engaged in hydrographic operations supporting the nautical charting program. Reorganization of the Lake Survey Center will transfer chart compilation functions to the Office of Marine Surveys and Maps effective July 1, 1974.

About 12,000 linear miles of metric aerial photography were flown by two photographic missions. Field survey units were assigned to various coastal zone mapping jobs; approximately 130 maps were compiled for the marine charting program and in support of hydrographic operations. Field surveys for 163 airports were completed for the Federal Aviation Administration, and obstruction charts were compiled and published for 144 airports. Approximately 4,300 corrections were applied to 85 nautical charts. Research and development activities support continuing and proposed photogrammetric programs. Cooperation with the State of Florida continued in mapping the Florida coastal zone, and 33 coastal boundary maps were completed. Fifteen special flood study reports and map plates were delivered to the Department of Housing and Urban Development as part of the reimbursable Coastal Inundation Mapping Program. Photogrammetric compilation of bathymetry on seven maps at Beaufort Inlet, North Carolina, was begun. Ten National Ocean Survey-National Weather Service Storm Evacuation Maps in the areas of Norfolk, Virginia, and Long Island, New York, were issued.

The 5-year tidal and tidal current survey continued in Cook Inlet, Alaska, and a similar 5-year circulatory program was begun in Puget Sound. The Deep-Sea Tides Program was quite successful during the year, with 100 percent retrieval of equipment on three deployments. Records were excellent from all three sites. Most significant was the observing of tidal fluctuations over a 6-month period at a depth of 3,800 meters. The Survey participated in an international inter-calibration of deep-sea tide gages at Brest, France. Requests for tidal information to be used in litigation have drastically increased.

Marine Technology

The procurement contract for a prototype, operational deep-ocean meteorological buoy was completed in fiscal 1974. This buoy is the forerunner of a planned array of 35 data buoys to be located off the coasts of the United States and in the Great Lakes. Improvements in the reliability of experimental buoys resulted in the decision to phase them into operational use as providers of meteorological data. Several cooperative programs were successfully formulated in support of various national and international scientific projects including the Global Atmospheric Research Program, the Atlantic

Tropical Experiment, the Arctic Ice Dynamics Joint Experiment, and the Shelf Dynamics Program.

The Survey expanded inter-laboratory calibrations of marine sensors with Canada, Denmark, France, and countries participating in the Atlantic Tropical Experiment. Operations at the Regional Calibration Centers established last year at Seattle, San Diego, and Bay St. Louis, Mississippi, have been receiving an increasing number of requests for oceanographic instrument calibrations. The National Oceanographic Instrumentation Center's test and evaluation of non-moving part current meters has had substantial impact on the marine community.

The Engineering Development Laboratory provided engineering support for the Cook Inlet Circulatory Project and the Marine Ecosystems Analysis Project in the New York Bight. For Cook Inlet, a current meter mooring system capable of operating in currents up to 5.5 knots was designed and tested, and assistance was provided for software to process current sensory data. The Laboratory provided engineering support of data acquisition, processing, and procurement under the Marine Ecosystems Analysis Project. It also designed a bottom-resting current measuring system and camera combination.

Fleet Operations

The Survey's Office of Fleet Operations managed the operation and utilization of 21 ships in the Fleet of the National Oceanic and Atmospheric Administration. A total of 3,257 days at sea were provided. The Office also made progress in fleet management through implementation of the Inactive Ship Plan, expansion of field electronics and marine engineering support, pollution abatement, and fleet inspection.

Aeronautical Charting and Cartography

The Survey's Office of Aeronautical Charting and Cartography distributed 2,656,940 copies of 92 visual charts, 21,066,755 copies of 2,885 instrument charts, and 2,194,743 copies of 819 nautical charts.

National Geodetic Survey

The Survey's Office of the National Geodetic Survey determined approximately 4,300 horizontal control stations, 3,060 vertical control marks, 125 latitude and longitude stations, and 44 azimuths during the year. Resurveys were continued in order to monitor and update the networks in areas of tectonic activity, geothermal areas, and other areas where movements of network stations are indicated.

Coordination of surveying with other Federal, state, and local government agencies has been increased. The need for surveying has been recognized by state and local governments, many of which have set up control and land surveying organizations. In June 1974, the Office inaugurated a new program providing for the assignment of a geodetic advisor to each state that wished to participate.

High-precision traverse work continued with 1,174 kilometers observed during the year. Twenty-two positions were determined from Doppler satellite observations. Electronic distance base lines are being measured, and astronomic latitudes, longitudes, and azimuths are being observed to strengthen the horizontal network.

The monumented reference system of the geodetic networks is used as the basis for mapping, surveying, and engineering work as well as planning and environmental studies. The demands for survey control, especially by state and local agencies and private surveyors, have increased appreciably in recent years. A new publication, "Classification, Standards of Accuracy and Specifications of Geodetic Control Surveys," was published this year, and it includes more rigid and higher accuracies. These more rigid specifications, made possible by the development of more precise observational instruments such as electronic distance devices and self-leveling instruments, are required because of high land values, construction costs, and environmental problems.

Work was started at the beginning of the year on a new horizontal network adjustment. This adjustment, recommended by an ad hoc committee of the National Academy of Sciences, is scheduled to be completed in 5 years.

NATIONAL MARINE FISHERIES SERVICE

Mission

The National Oceanic and Atmospheric Administration's Marine Fisheries Service provides services and conducts research for the protection and rational use of living marine resources for their economic, aesthetic, and recreational value to the Nation. Programs are conducted to (1) determine how the living marine resources are affected by natural and man-made changes in the environment, (2) provide information and services to foster efficient and judicious use of those resources, and (3) further good national and international practices in the management, use, and protection of the living resources of the sea, including marine mammals.

Harvest of Aquatic Products

The U.S. commercial harvest of fish, shellfish, and other aquatic life in calendar year 1973 was 4.7 billion pounds, worth a record \$907.4 million to fishermen and vessel owners. Compared with 1972, the quantity was up slightly but the value increased 29 percent. Landings were up for bonito, Atlantic cod, croaker, Pacific sea herring, striped bass, pollock, rockfishes, scup, and whiting. They were down for flounders, Atlantic sea herring, jack mackerel, tuna, salmon, hard blue crabs, Dungeness crabs, Gulf shrimp, squid, haddock, Pacific halibut, menhaden, and oysters.

Marine recreational fishermen in 1973 caught the equivalent of an additional two-thirds of the commercial harvest. This does not include shellfish. The 1970 Salt-Water Angling Survey published by the Service in April 1973 showed that 9,392,000 U.S. marine anglers caught 817 million fish with an estimated weight of 1.47 billion pounds.

Imports of fishery products in 1973 were worth a record \$1,579 million, 6 percent higher than in 1972, the last record year. Exports of domestic fishery products came to \$299.2 million, up 89 percent from 1972.

National Fisheries Plan

The National Advisory Committee on Oceans and Atmosphere recommended to the President and the Congress the development of a National Fisheries Plan to rehabilitate the domestic fishing industry. An internal policy committee has been formed with representatives from the Service, other National Oceanic and Atmospheric Administration components, and the Department of the Interior's Bureau of Outdoor Recreation and Fish and Wildlife Service. Four goals for the Plan have been established and approved. These cover the interests of consumers, the commercial fishing industry, and recreational fishermen, as well as protection of the marine resource itself. To contribute to the achievement of the goals, five major activities have been identified: (1) aquaculture, (2) fisheries development, (3) management and allocation, (4) recreational fishing, and (5) habitat protection. The Advisory Committee is now collecting and analyzing information on the status and problems of U.S. fisheries, and developing a master plan.

Resource Research

During fiscal 1974, the Service continued research programs in resource assessment, aquaculture, the impact of environmental change, marine mammals, and recreational fisheries. Resource assessment focused on: (1) further development of the Marine Resources Monitoring, Assessment and Prediction program, (2) as-

essment of stocks covered by international agreements, (3) improved management techniques, and (4) identification and location of underutilized species. Aquaculture research covered the culture of Pacific Salmon and penaeid shrimp. Studies also include the salt-water pen-rearing of Pacific salmon, and shrimp culture. Studies on the impact of environmental change were aimed at development of supporting data in order to evaluate the impact of man-made and natural alterations on estuaries and nearshore ecosystems. Marine mammal research dealt with methods of saving mammals caught accidentally during fishing operations, assessment of the stocks of fur seals managed under international convention, and the life habits of many species fully protected by law. Recreational fisheries work included research on the abundance, distribution, life history, and environment of marine species of importance to recreational fishing.

Resource Utilization

Accomplishments in the field of resource utilization included:

- Initiation of a cooperative effort to increase the use of underdeveloped or latent fisheries resources in New England, with a primary objective of developing offshore crab, squid, and discarded trawl fish resources.
- Collection and dissemination of commercial fisheries statistics.
- A pilot recreational fishing survey in the Northeastern Coastal States to help develop a comprehensive national recreational fishery statistics program.
- Issuance of market news reports in five major market centers covering prices, landings, imports, holdings, and movement of products.
- Issuance of market intelligence reports covering market conditions and outlook for food fish, industrial fish, and shellfish.
- Economic analyses to identify problems and assess opportunities in various U.S. fisheries, and to evaluate policies and programs with respect to both commercial and recreational fisheries.
- Research and development focused on the increased use of latent and underutilized fish and shellfish resources.
- Analysis of samples of over 200 species of major commercial and sport fish and shellfish for their content of 15 different marine contaminants.

- Studies on the mercury content of American lobsters from inshore and offshore locations, and on the protective effects of selenium on mercury toxicity in rats.
- Methods of controlling waste discharge from seafood processing operations.
- A new dimension to the Fishery Products Inspection Program with the development and implementation of (1) a consultative service for fish processing plants which cannot meet minimum sanitation standards and (2) a Sanitarily Inspected Fish Establishment service for plants which can meet minimum sanitation requirements.

Financial assistance was provided to industry through the: (1) the Fisheries Loan Fund Program, (2) the Fishing Vessel Obligation Guarantee Program, which guarantees private loans up to 75 percent of the cost of constructing, reconstructing, or reconditioning fishing vessels, (3) the Fishing Vessel Capital Construction Fund Program, which permits vessel operators to defer payment of taxes on earnings, and (4) the Fishermen's Guarantee Fund Program, which indemnifies the industry against certain costs and expenses resulting from foreign seizures based on claims not recognized by the United States.

Resource Management

The cooperative fisheries management effort by the States and the Federal Government continues. Interim regulations for such species as American lobster, Gulf of Maine shrimp, and Dungeness crab have been instituted by the States, as recommended by regional State-Federal fisheries management councils constituted under this joint effort. More than \$800,000 has been obligated in contracts for varied purposes, including a coordination contract with California and a contract with Alaska for implementation of limited entry legislation.

The grant-in-aid program provided a total of \$3.8 million under the Commercial Fisheries Research and Development Act to the 50 States, American Samoa, Guam, Puerto Rico, and the Virgin Islands for commercial fisheries research and development projects. Additionally, \$1.5 million was provided for resource disaster aid. Under the Anadromous Fish Conservation Act, \$2 million was made available to coastal and Great Lakes States for the conservation and enhancement of their resources.

Regulations implementing the Marine Mammal Protection Act included: (1) Final regulations governing the taking and importing of marine mammals, (2) Interim rules for the incidental taking of marine mammals in the

course of tuna purse-seining operations, (3) Proposed final incidental take regulations of marine mammals in the course of commercial fishing operations. Regarding the proposed final regulations on incidental take, a draft environmental impact statement was issued on April 4, 1974. On the proposed rules, an Administrative Law Judge hearing was held in Seattle on May 15 and 16, 1974.

The Act authorizes the Secretary to grant undue economic hardship exemptions until October 20, 1973. Sixty applications for such exemptions were received: 24 approved, 21 denied, 13 withdrawn. No action was taken on the remaining 3 because of incomplete applications.

The Secretary is also authorized by the Act to issue permits to take and import marine mammals or marine mammal products for scientific research and public display. A total of 105 applications were received: 29 approved, 3 denied, 2 withdrawn, 6 referred to the appropriate States, and 65 are pending. Public hearings are held on applications that involve large numbers of marine mammals or have unique aspects which require a major policy decision. Five hearings were held to consider issuance of permits to take marine mammals for: (1) traveling marine mammal exhibits, (2) foreign public display facilities, (3) maintaining a specified inventory of marine mammals, (4) and the taking of killer whales for public display.

A report to Congress and the public was prepared on the current status of all marine mammal species and population stocks subject to the provisions of the Act. It describes those actions taken and those measures believed necessary, including the issuance of permits to assure the well-being of marine mammals.

Under the authority of the Fish and Wildlife Coordination Act and the National Environmental Policy Act, the Service worked with the Department of Interior's Fish and Wildlife Service and the States to respond to about 4,400 Federal requests for assistance on project licenses and permits. Action taken on these requests resulted in significant savings of productive estuarine and marine habitat, such as the saving of 615 acres of bay clam habitat at Sally's Bend, Oregon, and the lessening of impact of logging and related activities on 1,268 miles of Alaska Coastline. The expertise of Service scientists influences Federal agency decisions so as to protect and conserve the fishery resources. The Service has worked closely with the Environmental Protection Agency in the development of implementation guidelines.

The National Marine Fisheries Service enforces various U.S. statutes and international agreements on the taking of fish. It also conducts a surveillance program. This is carried on in conjunction with the U.S. Coast Guard which provides aircraft and surface patrol vessels with the Service's Special Agents aboard. Increased activity for fisheries enforcement allowed more patrols in fiscal 1974. This resulted in (1) 446 courtesy and official boardings of U.S. and foreign fishing vessels, (2) seizure of 472.74 tons of illegally caught fish, including 277.74 tons of tuna, and (3) eight seizures of foreign fishing vessels for violations of U.S. law or provisions of international agreements. Fines totaling \$1,028,536 were assessed for these and other violations.

International Activities

The Service broadened its programs in fiscal 1974 to (1) implement international measures to protect both coastal and distant-water fishery resources of interest to U.S. fishermen, and (2) make available information regarding foreign fishing activities. It also continued to support and participate in bilateral and multilateral negotiations concerning fishery resources of interest to U.S. fishermen. The United States is a member of eight international fishery commissions with responsibilities under treaty arrangements to manage and conserve such varied resources as (1) halibut, salmon, and fur seals in the North Pacific, (2) groundfish, herring, and mackerel in the Northwest Atlantic, (3) tunas in the tropical Pacific and in the Atlantic, and (4) whales generally. Of particular interest was the agreement on an overall national catch quota program for the entire biomass off the U.S. North Atlantic coast reached in the International Commission for the Northwest Atlantic Fisheries in October 1973. The United States is also a party to 12 bilateral fishery agreements adapted to more specialized management problems in waters off Alaska, the continental west coast, the Atlantic coast, and Brazil.

ENVIRONMENTAL DATA SERVICE

Mission

The National Oceanic and Atmospheric Administration's Environmental Data Service provides data and information on the atmosphere, oceans, solid earth, and sun by disseminating worldwide environmental data and data products. It provides access to environmental information through publications, library services, and automated referral networks. It also provides data management and analysis support for environmental research products and participates in international environmental data exchange and management efforts. To carry out this

mission, the Service operates five data centers: the National Climatic Center at Asheville, North Carolina; the National Geophysical and Solar-Terrestrial Data Center at Boulder, Colorado; and the National Oceanographic Data Center, Environmental Science Information Center, and the Center for Experiment Design and Data Analysis, located in Washington, D.C.

Accomplishments

During fiscal 1974, the Service became increasingly involved in contributing to the solution of problems related to such pressing national and international environmental issues as the crises in fuel and global food supplies, while continuing its efforts to improve traditional services to the data user community.

In an attempt to quantify the impact of environmental events on national and global social and economic problems, the Service organized a new Center for Climatic and Environmental Assessment. This Center provides tailored consultant services and products to other Government agencies concerned with national socioeconomic programs and policies. It models and assesses climate and climatic variations, as well as other natural environmental phenomena and their variations, and evaluates their probable impact upon such problems as the energy crisis and world food supplies.

At the request of the Energy Policy Office, Executive Office of the President, a special team composed of scientists from the Service and other Administration components prepared a report on the extent to which national heating fuel demands in the 1973-74 heating season would depend on the weather. This report, "Variability of Seasonal Total Heating Fuel Demand in the United States," became a key planning guide for the Department of the Interior's subsequent national heating oil allocation program last winter. The allocation program itself was based partly on data and analyses provided jointly by the National Weather Service and the National Environmental Data Service.

At the request of the State Department, the Environmental Data Service prepared a report for the U.S. Coordinator, World Food Conference, on the impact of weather variability on world food supplies. The report will be made available to those speaking for the United States at the World Food Conference in November 1974.

The Service furnished detailed data and statistics on severe storm, ice, tsunami, and earthquake probabilities for the Bureau of Land Management's *Outer Continental Shelf Study for Gas and Oil Exploration off the Atlantic Coast and Gulf of Alaska*. The data were provided for five areas off the Atlantic Coast and three in the Gulf of Alaska.

With input from the National Marine Fisheries Service and the Development of the Interior, the Environmental Data Service prepared comprehensive environmental descriptions for the U.S. Atlantic, Gulf, and Pacific Coasts and the Great Lakes for the Floating Nuclear Power Plant Study of the President's Council on Environmental Quality. Disciplines covered include marine geology and geophysics, physical and chemical oceanography, meteorology, seismology, and living resources. In addition, the Environmental Data Service provided more detailed environmental descriptions for four selected Atlantic coast areas.

In June 1974, the Service prepared a 135-page report on "Ocean Data Resources" for the Interagency Committee on Marine Science and Engineering as part of the Committee's response to a request from the National Ocean Policy Study Committee of the U.S. Senate. The Study has since been forwarded to the Senate Committee.

The Service's National Climatic Center completed the first series of publications under its Periodic Summarization of Climate Program. Published data for the 50 States for the new normal period 1941-70 include monthly normals of temperature, precipitation, and heating and cooling degree days; monthly averages of temperature and precipitation for State climatic divisions; and daily normals of temperature and heating and cooling degree days. These data are used by the Federal Power Commission and utility companies to determine the proper rate of capital return and the consumer rate structure for electricity and gas.

At the request of the Bicentennial Commission, the Service designed a prototype climatological pamphlet for the U.S. Bicentennial celebration in 1976. The brochures will be prepared for 10 Federal Regions and will include general climatic descriptions, as well as specific temperature and precipitation data for approximately six representative cities within each Region.

NATIONAL ENVIRONMENTAL SATELLITE SERVICE

Mission

The National Environmental Satellite Service manages and coordinates all operational satellite programs within the National Oceanic and Atmospheric Administration. It operates satellite systems for the acquisition of environmental data. It conducts research in new applications and methods of acquiring environmental data through satellites, and in satellite instrumentation, observational techniques, data recording and processing techniques, and other aspects of satellite system engineering. The Service operates satellite Command and Data Acquisition Stations located in Virginia and Alaska.

Satellite Field Services Stations established at San Francisco, Kansas City, Washington, D.C., and Miami provide operational satellite data and interpretative services to weather forecast offices and other environmental activity centers in their respective regions.

Activities

An entirely new system of operational satellites, known as the Geostationary Operational Environmental Satellites, was inaugurated with launch of the first prototype spacecraft in late May 1974. One of these satellites, hovering over a fixed point on the earth, can observe virtually continuously the clouds and other environmental phenomena over about one-fourth of the earth's surface. Pictures taken at half hour intervals throughout the day and night provide constant surveillance of rapidly developing destructive weather systems such as tropical storms, hurricanes, thunderstorms, tornadoes, and major winter snowstorms. A highly complex computer-controlled data handling system linking the central acquisition facilities with the four field service stations assures rapid distribution of the data to National Weather Service forecast offices throughout the country. The satellites also provide three other services: (1) continuous measurement of environmental conditions in space including solar X-rays, magnetic fields, and energetic particles, (2) broadcast transmission of satellite pictures and weather facsimile charts to ships and other remote stations within radio range, and (3) collecting and relaying observational data from remotely located tide and river gages, automatic weather stations, and buoys and ships at sea.

At the end of June 1974 the first spacecraft under the Geostationary Operational Environmental Satellite system was positioned to view the Atlantic Ocean and adjacent land areas, specifically to watch over the hurricane spawning areas and to support the international Atlantic Tropical Experiment underway in the eastern Atlantic from June through September 1974. At the conclusion of the experiment, the satellite will be moved to a new position over the western Atlantic to provide better coverage of North America. A second satellite to be launched in early 1975 will be positioned to observe western North America and the eastern Pacific Ocean.

A new polar-orbiting satellite, the "NOAA-3," was launched November 6, 1973 in continuation of the Improved "TIROS" Operational Satellite series. The sensor complement of NOAA 3, identical to that of its predecessor NOAA 2, provides imaging and atmospheric temperature sounding over the entire globe twice daily, and very high resolution pictures of North American and adjacent oceans. A new feature introduced on NOAA 3

is the capability to broadcast continuously the temperature sounding data. Properly equipped ground stations anywhere in the world can now receive real time data from which local temperature soundings can be computed. Several countries, including France and Norway, have established or plan to establish stations to receive these transmissions.

In the area of oceanography and hydrology, high resolution data from these satellites play a significant role in determining ice conditions in the Great Lakes and polar regions. This information is used to assist shipping through ice infested waters. In addition, these data will continue to be used extensively in detailed studies of thermal features of the sea surface which will be an aid to weather forecasting, marine pollution detection, ship routing, and determining melt processes in the Great Lakes. High resolution imagery is used operationally to make quantitative estimates of snow cover for use in flood potential forecasting and water resource studies. A pilot project, designed to develop and apply high resolution data to Alaskan environmental needs, was started in fiscal 1974.

Snow mapping of watersheds, using NOAA 2 high resolution data, was started routinely as an operational experiment. The percent of snow cover of selected watersheds of an areal extent exceeding 3000 square kilometers is reported to the National Weather Service's River Forecast Centers for inclusion in numerical river flow and forecast models. A crude cost comparison of satellite snow mapping versus aircraft surveys shows a ratio of 1:200 in favor of satellite mapping.

The "ITOS" spacecraft has little growth capability for future operational sensors being developed in NASA's research and development program. Advanced sensors, with improved resolution and accuracy of observation, are needed to keep pace with improvements in numerical weather analysis and forecast models. To meet these requirements, a decision was made to proceed jointly with NASA to design and develop a third generation polar-orbiting satellite system known as "TIROS N". Instrument definition was virtually completed during fiscal 1974, with launch of the first prototype spacecraft targeted for late 1977 or early 1978.

ENVIRONMENTAL RESEARCH LABORATORIES

Mission

The Environmental Research Laboratories of the National Oceanic and Atmospheric Administration conduct an integrated program of research, technology development, and services to carry out their primary mission of providing a basis for improved Administration operations and services. The Laboratories select research undertakings in which there is good promise of high

quality results that are relevant to national problems and within the framework of Administration overall environmental sciences mission. To this end, programs of research are conducted in the fields of oceanography, meteorology, upper atmosphere, and space physics. Principal laboratories are located in Boulder, Colorado; Miami, Florida; Seattle, Washington; Norman, Oklahoma; Princeton, New Jersey; Silver Spring, Maryland; Ann Arbor, Michigan; and Stony Brook, New York.

Oceanography

The use of satellites in oceanographic research received much attention, and close cooperation was developed between NASA groups and the Atlantic Oceanographic and Meteorological Laboratories. Data from the Earth Resources Technology Satellite were used in a global study of the generation and propagation of oceanic internal waves. It appears that tidal energy is used to generate internal waves in many parts of the world. An Ocean Remote Sensing Laboratory was established to study oceanographic phenomena using advanced technology remote sensing techniques. A joint satellite-acoustic sensing cruise examined the distribution of amplitudes and wavelengths in internal wave fields in the ocean. Findings show that remote sensing by underwater sound waves may allow the study of the stirring of sediments by internal waves and dredging and of below surface effects of oil spills.

Field work for the Mid-Ocean Dynamics Experiment was completed in collaboration with numerous other groups of the oceanographic research community under the International Decade of Ocean Exploration. Objectives were to define the nature of the energetic mesoscale eddy motions in the deep ocean and their effects on the ocean circulation and transport of materials in the ocean. A series of 13 monthly cruises in the Caribbean Sea and the Gulf of Mexico was completed, and these have yielded the most detailed time series ever obtained of the ocean currents in that region. Results are contributing substantially to the environmental assessments required for outer continental shelf oil and gas leasing. The data are to be used as input to a predictive model of circulation in the region for addressing a number of marine environmental problems. Results from an intensive investigation of the circulation of coastal waters off southeast Florida will contribute to management decisions regarding waste disposal there.

Scientists collaborating on the Administration's Trans-Atlantic Geotraverse have discovered the first field where solid metallic minerals are being deposited by hot, metal-rich solutions discharging from an active mid-ocean ridge. The results have important economic implications for the metallic mineral potential of all

ocean basins, and regions where oceanic crust is exposed on islands and continents.

The Marine Ecosystem Analysis Project's New York Bight Project Office was established in Stony Brook, New York. Major field investigations were undertaken in the Apex of the New York Bight to determine the fate and effect of pollutants on the New York Bight ecosystem, with particular emphasis on ocean dumping. The Project became involved with many Federal, state, and local government institutions, academic institutions, and the public at large with respect to the effect of sewage sludge dumping, its movement, degradation, and impact on marine fisheries and recreational sports. Alternative interim dump sites in the New York Bight were recommended to the Environmental Protection Agency. Testimony of scientific findings related to sewage sludge dumping was presented at public hearings of the Agency and the New York State Assembly.

The Pacific Marine Environmental Laboratory conducted an experiment near the San Juan Islands in which currents, sea level changes, density, temperature, and salinity data were obtained and incorporated into a general model of circulation in the Puget Sound estuarine system. Wind and ocean current measurements were made off the coasts of Oregon and Africa to determine the response of the upper ocean to winds in regions where coastal upwelling is occurring.

The Great Lakes Environmental Research Laboratory was established at Ann Arbor, Michigan by combining the Administration's project office of the International Field Year of the Great Lakes and the Limnology Division of the Lake Survey Center of its National Ocean Survey. Data on the temperature, circulation, chemistry and biological characteristics of Lake Ontario, obtained during the International Field Year, were analyzed and models developed. Most of the data from major observation systems have been processed to form a provisional data base in the archives of the National Climatic Center. A special session of the annual American Geophysical Union meeting was devoted to International Field Year results. More than 60 papers were submitted for the International Association of Great Lakes Research Conference scheduled for August 1974.

Atmospheric Sciences

A data processing and validation system was developed at the Geophysical Fluid Dynamics Laboratory. Together with a four-dimensional data assimilation scheme, the system now forms the basis for the creation of global data sets needed for the Atlantic Tropical Experiment and the First Global Experiment under the Global Atmospheric Research Program.

Numerical general circulation models, used to study the seasonal evolution of the South Asian monsoon, have found that the Tibetan Plateau and Burmese mountain ranges are essential for the formation of the monsoon "trough", and that the vigor of the monsoon over the Indian subcontinent relates to certain temperature changes in the western Arabian Sea.

Studies on the development of certain eddies in the oceans and on the nature of their interaction with large-scale circulation identified temperature and pressure instabilities that lead to the spontaneous appearance of eddy motions. Simulation of the equatorial ocean circulation produced results important for short- and long-term air-sea interaction.

The Geophysical Monitoring for Climatic Change Program, conducted by the Air Resources Laboratories, had four observatories in full or partial operation measuring carbon dioxide, solar radiation, ozone, and small particles. The observational program was augmented at the South Pole and construction and logistics arrangements were completed for an American Samoa observatory. The data continue to show the upward trend of carbon dioxide, with the increase at Mauna Loa the largest observed in the 17 years of record.

Mathematical modeling for air pollution was increased to encompass additional pollutants and a greater variety of sources, from single rural locations to complex urban areas. Experiments to verify the models in cities were performed in Los Angeles and St. Louis. A capability to calculate air trajectories throughout the Northern Hemisphere was developed and is being applied to the transport, dispersion, and removal of such materials as ozone, and fluorocarbons. Atmospheric tracer studies in irregular terrain were expanded to better cope with the problem of siting both nuclear and fossil fuel power plants in mountainous terrain.

A major effort of the National Hurricane Research Laboratory is the exploration of the feasibility of beneficial hurricane modification through Project "STORMFURY". Data obtained in Hurricane Ellen verify for the first time that adequate quantities of supercooled water exist in hurricane clouds, furnishing the raw material for the hurricane modification experiment. Numerical modeling of hurricanes was advanced by successful experiments using a moving fine-mesh grid. This development opens the way for creating more sophisticated three-dimensional numerical models of hurricanes on existing computers.

The Experimental Meteorology Laboratory conducted an observational phase and additional analysis in the Florida Area Cumulus Experiment, a key research program to study the effects of cumulus cloud

modification. During this program the Laboratory (1) doubled the sample of days to be analyzed for the detection of a seeding effect, (2) analyzed all experimental days and found evidence for increased rainfall from seeding, (3) learned that silver iodide seeding is not an environmental hazard in Florida, (4) designed and tested an optimum system of rain measurement that combines radar and rain gage observations, (5) developed a method to estimate rainfall over remote regions using satellite imagery; and (6) determined the relative importance of natural rain variability and measurement errors in the detection of seeding effects.

The Atmospheric Physics and Chemistry Laboratory initiated a project to study the feasibility and potential for mitigating the severe weather that accompanies extratropical storms. Measurements in the Inter-Tropical Convergence Zone supported earlier observations that a convective storm in that area is a clear-cut source of water vapor in the stratosphere, one which considerably exceeds the water vapor contribution of a supersonic transport at stratospheric levels. The benchmark network for ice nuclei concentration in the western states has shown an annual variation of concentration with a maximum in summer. The natural processes which generate ice nuclei appear to be at the earth's surface during summer, and are inactive in winter over regions that are snow covered and have a frozen ground surface.

The Wave Propagation Laboratory advanced along several avenues in developing new measurement techniques by means of remote sensing. An acoustic echosounding system, capable of measuring winds to 500 meters altitude, was tested successfully at the Denver Airport. The technique has important application to the safety of aircraft landing and takeoff during conditions when the wind speed and direction change rapidly with height. A system of this type was used for air pollution studies in Los Angeles.

Upper Atmosphere and Space

The Space Environment Services Center, operated jointly by the National Oceanic Administration and the Air Weather Service of the Department of Defense, provides observations, forecasts, and warnings of solar disturbances and their effects on man's activities to national and many foreign agencies and organizations.

Support for SKYLAB astronauts operating the Apollo Telescope Mount experiment was successfully concluded. During the 10-month period of real-time support, over 1,000 solar flares, 300 eruptive prominences, 350 X-ray, and 600 radio events were observed and reported. A significant advance in space services capability was experienced with the addition of new satellite space data to the Center's computer data base.

Space Environment Laboratory scientists prepared 112 scientific papers during the year providing new insight into a variety of ionospheric and magnetospheric phenomena, including auroral physics, plasma instabilities in ionospheric-magnetospheric regions, explanations of trapped energetic electron distribution, and hot-cold plasma interactions occurring in the magnetosphere. Space environment monitoring packages, or experiments were launched on several rockets and satellites. The laboratory was deeply involved in planning and research for the International Magnetospheric Study and has been requested to provide vital data collection and display services for this program.

The Aeronomy Laboratory, which conducts research on the upper atmosphere, began construction of a large, very-high-frequency radar in Colorado capable of measuring atmospheric motions from near the ground to 100 kilometers altitude, with good height and time resolution. Located in an area of strong mountain lee wave activity, with frequent destructive surface winds and clear air turbulence, this radar will be used in the study of winds, waves, and turbulence in the atmosphere.

Theoretical studies were made of plasma turbulence produced by high power lasers used to produce a controlled thermonuclear fusion reaction. The development of such a reaction is part of an extensive national program to develop new energy sources. Theoretical studies were also conducted to understand how powerful radio transmitters can make the ionosphere sufficiently turbulent as to cause a blackout of radio and radar communications. These studies are significant for national defense. A sensitive Doppler radar technique has been developed for warning of the presence of birds hazardous to aircraft. The radar measures the velocity of each part of a moving object, such as a bird, so that birds of different size and flight characteristics can be readily distinguished.

HYDROGRAPHIC AND OCEANOGRAPHIC INVESTIGATIONS, BY SHIP AND AREA, FISCAL 1974

NOAA ships	Type of survey	Area	Comments
DAVIDSON	Hydrographic	Prince William Sound	
Do	Hydrographic	SE Alaska	
FAIRWEATHER	Hydrographic	Strait of Juan de Fuca, Washington	
Do	Hydrographic	Cook Inlet, SE Alaska	
McARTHUR	Circulatory (Tides & Currents) ..	Cook Inlet; Puget Sound, Washington	
MT. MITCHELL	Hydrographic	Georgia, Florida, South Carolina	
Do	Geological investigations	Baltimore Canyon	Conducted for USGS ¹
PEIRCE	Hydrographic	North Carolina	
RAINIER	Hydrographic	Cook Inlet, Alaska; Strait of Juan de Fuca, Washington	
WHITING	Hydrographic	Georgia coast	
RESEARCHER	Ocean Investigations	North Atlantic	
Do	Physical oceanography	Lake Ontario	
SURVEYOR	Cable route	Hawaii to Guam	Conducted for AT&T ²
Do		West Coast; Alaska	
RUDE and HECK	Wire Drag	Approaches to Gulfport	
Do	Wire Drag	Chesapeake Bay; Approaches to Galveston; SE Coast	
FERREL	Circulatory	N.Y. Bight	
DISCOVERER			Laid up Mar. '73.
OCEANOGRAPHER ..	Internal wave energy	Washington-British Columbia	
Do	Internal wave energy	West Coast of Africa	
Do	Geophysical traverse	Western Atlantic	
Do	Atlantic Tropical Experiment ..	West Coast of Africa	
OREGON II	Resource surveys & biological investigations	Caribbean and Gulf of Mexico; Western Atlantic	
ALBATROSS IV	Resource surveys & biological investigations	NE Atlantic Coast	
Do	Biological investigations	Gulf of Maine	
DELAWARE II	Resource surveys	NE Atlantic Coast	Reactivated May '74.
DAVID STARR			
JORDAN	Resource surveys & biological investigations	Eastern Pacific & Coast of California & Oregon	
GEORGE B. KELEZ ...			Laid up Mar. '73.
JOHN N. COBB	Resource surveys & fishing technology	Washington, Coast of Oregon	
Do	Biological investigations	Gulf of Alaska	
OREGON	Resource surveys & biological investigations	Bering Sea and Gulf of Alaska	
GEORGE M. BOWERS .	Resource surveys & biological investigations	SE Atlantic Coast & Gulf of Mexico	
MURRE II	Resource surveys & biological investigations & supply	SE Alaska	
TOWNSEND			
CROMWELL			Laid up May '73.
MILLER FREEMAN ...			Laid up May '70.

¹ U.S. Geological Survey.

² Atlantic Telegraph & Telephone.

MARITIME AFFAIRS

The Assistant Secretary

The Assistant Secretary for Maritime Affairs is the principal advisor to the Secretary on the development, promotion, and operation of the American merchant marine. He also serves as head of the Maritime Administration.

Mission of the Maritime Administration

The Maritime Administration is responsible for the development and maintenance of an efficient American merchant marine to meet the commercial and defense needs of the United States. Its programs include: (1) financial assistance to U.S.-flag vessel operators and American shipyards; (2) marketing programs to help U.S. vessel operators increase their participation in the carriage of U.S. foreign trade; (3) promotion of the development of U.S. ports and the efficient use of advanced intermodal transportation systems; (4) research and development programs to increase the productivity of American shipping and shipbuilding industries; (5) training of skilled officers and crews to man American ships; (6) participation in international activities which affect American-flag shipping; and (7) maintenance of the National Defense Reserve Fleet as a source of emergency shipping for the Nation.

Ship Construction

Continuing the national policy of revitalizing the American merchant marine, under the Merchant Marine Act of 1970, the Maritime Administration awarded construction-differential subsidy contracts in fiscal 1974 for 12 new vessels for foreign trade service. Of their total contract price of \$756 million, \$280.7 million will be paid by the U.S. Government to offset the cost difference in building the vessel in the United States rather than in a lower-cost foreign shipbuilding center. All 12 vessels are tankers, and three are rated at 390,770 deadweight tons. These mammoth vessels will be the largest ever built in an American shipyard, and each will have a cargo capacity of 25 of the standard "T-2" tankers built during World War II.

The award of these contracts brought the number of subsidized vessels ordered under the Merchant Marine Act of 1970 to 59 oceangoing ships with a total contract

value exceeding \$3 billion. These ships, which aggregate more than 6.2 million deadweight tons, represent a 45 percent increase in the size of the American-flag fleet.

In addition to subsidized orders, private construction contracts were placed for 26 ships: six liquefied natural gas carriers, one roll-on/roll-off van ship, 14 tankers, three Great Lakes bulk carriers, and two integrated tugbarges.

As of June 30, 1974, American shipyards had a record peacetime construction backlog of 96 large merchant ships valued at \$4.2 billion and aggregating 7.9 million deadweight tons. A year earlier 86 ships of 5.4 million deadweight tons were under contract.

The urgent demand for oil also led to a record boom in the construction of offshore drilling rigs. As of mid-1974, 42 drilling rigs, valued at nearly \$1 billion, were under construction or on order in American yards.

In addition to awarding construction-differential subsidies, the Administration encourages American shipbuilders to increase their productivity and competitiveness in the world shipbuilding market. The 1970 Act established a declining scale of subsidy rates.

The Government had previously been empowered to subsidize up to 55 percent of a ship's cost. The Act dropped the rate to 45 percent and prescribed further reductions of 2 percent per year until a 35 percent ceiling is reached in fiscal 1976. All awards made under the Act were within or below the prescribed rates. In addition, six liquid natural gas carriers were ordered for foreign trade service without subsidy.

Ship Financing Guarantees

During fiscal 1974, the Congress passed legislation raising the total amount of unpaid principal of privately financed ship construction and reconstruction projects that can be guaranteed by the Government from \$3 billion to \$5 billion. Such guarantees are authorized under Title XI of the Merchant Marine Act of 1936, as amended.

Guarantees totalling \$1.3 billion encompassing 311 vessels and 50 shipboard lighters were approved during fiscal 1974. On June 30, 1974, guarantees with a total outstanding principal balance of \$3.8 billion

had been committed, covering 764 vessels and 2,221 lighters.

The Maritime Administration also had pending applications for guarantees to aid in the construction or reconstruction of 466 vessels and 250 lighters with a total estimated cost of \$3.6 billion. If approved, \$2.9 billion of this total would be covered by guarantees.

Ship Operations

In fiscal 1974, four new, long-term operating-differential subsidy agreements between the Maritime Administration and American-flag operators were executed. The Maritime Subsidy Board also approved the merger of the operations of one subsidized operator with those of one of its subsidized, wholly-owned subsidiaries. Both subsidy agreements continued in force and the parent company was required to assume all provisions and obligations of the subsidiary's contract.

Many shipping firms holding Interim Capital Construction Fund agreements consolidated them under parent corporations. These agreements allow operators to set aside vessel earnings and capital gains for the construction of new vessels or reconstruction of existing vessels on a tax-deferred basis. At the end of the year the Administration had executed 63 individual and consolidated agreements with eligible operators. These agreements will result in a \$3 billion capital investment in new or converted American-flag vessels over the next 10 years.

To further implement the provisions of the U.S./U.S.S.R. Maritime Agreement signed in October 1972, an index was developed for determining freight rates for U.S.-flag vessel carriage of bulk agricultural commodities to the Soviet Union. The index is based on monthly voyage charter rates for carriage of heavy grains from the U.S. Gulf to the Netherlands and Belgium. This index enabled U.S.-flag operators to receive rates from the Soviets that ranged from a low of \$17.13 per long ton in August 1973 to a high of \$31.54 per long ton in April 1974.

Since the Maritime Agreement was signed, U.S.-flag vessels have carried 4.65 million metric tons of the 22.1 million metric tons of grain purchased in the United States by the Soviet Union. Soviet-flag vessels carried 3.8 million metric tons and the balance moved in third-flag vessels. The U.S. vessels engaged in this trade returned with over 4.7 million tons of crude oil and petroleum products. At the close of the year, 49 operators held short term operating-differential subsidy agreements on 87 ships for the transportation of grain to the Soviet Union.

The U.S./U.S.S.R. Maritime Agreement stipulates that the American-flag fleet and Soviet-flag fleet will each

have access to one-third of all cargoes moved by sea between the two countries. However, during calendar 1973, it became evident that most of the liner cargoes were being carried by Soviet vessels. To meet its obligations under the Agreement, the Soviet Union in November 1973 agreed to route all Soviet controlled general cargo by U.S.-flag liners until the imbalance was corrected. It was anticipated that parity would be achieved by December 31, 1974.

As a result of the resumption of trade relations with the Soviet Union, two American-flag companies instituted direct liner services between the United States and the Soviet Union during the year.

During the severe energy shortage between November 1973 and March 1974, the Maritime Administration assisted the maritime industry in developing conservation techniques. The Administration also assisted other Federal agencies in formulating fuel allocation regulations and helped ship operators of all flags locate bunker supplies for merchant vessels arriving at U.S. ports.

Largely as a result of the Administration's market development program, U.S.-flag vessels carried 39.8 million tons of cargo in calendar 1973—a 67 percent gain over the previous year. Although this was the largest volume carried since 1957, it still accounted for only 6.4 percent of the Nation's waterborne foreign trade movement.

Domestic Shipping

During the year the Maritime Administration continued its efforts to strengthen the domestic maritime industry. A major study completed for the Administration projected that U.S. domestic waterborne commerce (inland waterway, Great Lakes, and domestic ocean carriers) will rise from 867 million tons in 1970 to 2.7 billion tons by the year 2000. Also completed was a study to improve communications between vessels on inland waterways and their company offices.

To help extend the Great Lakes shipping season, the Administration successfully tested an advanced navigation system based on the laser principle. It also awarded several research contracts in the ice navigation field to aid the Government and Great Lakes ship operators in evaluating prospects for an extended shipping season. Projects included development of a bubbler system to reduce friction between a vessel's hull and ice, testing of various ship bow configurations, and economic analysis and operational testing of a Great Lakes ore carrier engaged in winter operations.

Civil Rights

To carry out its responsibility to assure equal employment opportunity, the Maritime Administration

conducted 277 compliance reviews that monitored the recruitment and employment practices of the maritime industry. Where deficiencies were identified, or underutilization of minorities and women encountered, the Administration worked with the industry to correct the shortcomings.

Minority employment in both the shipping and shipbuilding industries rose dramatically in recent years. In 1968 minorities held 17.7 percent of the positions in U.S. shipyards. As of January 1974 they constituted 27.9 percent of the work force. During the same period black employment rose from 15.5 to 23.2 percent and Spanish-surname employment from 1.9 to 4.1 percent.

Until recently, women had been virtually excluded from blue collar jobs in shipyards. In 1968 women held 158 jobs. By January 1974 they held 2,381 positions, 3 percent of all blue collar jobs.

The increase of minority employment by the major shipping companies is equally impressive. By 1974 minorities constituted 16.4 percent of the total work-force of the major companies, as compared with 10 percent in 1969. The utilization of women has also improved. Traditionally tied to clerical jobs, they are being hired as managers and professionals for shoreside jobs and are filling positions aboard ships.

In cooperation with the Department's Office of Minority Business Enterprise, the Administration developed a directory of minority entrepreneurs capable of serving as vendors and subcontractors to the maritime industry. Contracts amounting to \$2.5 million were awarded to minority firms by U.S. shipbuilders during the first 6 months of 1974. In addition, the Administration assisted in the creation of three minority firms, two participating in the shipping industry and the other building barges.

In January 1974, the U.S. Merchant Marine Academy at Kings Point, New York, became the only Federal academy to admit women. The Academy prepares young men and women for careers in all segments of the American maritime industry. Of the 348 plebes entering the Academy in July 1974, 15 were women.

Pollution Abatement

The Maritime Administration has continued its efforts to find better ways to protect the environment from marine-generated pollution. Environmental impact statements were issued or were in preparation on bulk chemical carriers, offshore oil and gas drilling and service vessels and a shore facility for the treatment and disposal of ship-generated oily wastes. Extensive programs are underway to improve navigational safety of tankers and cargo ships and reduce the incidence of pollution generated by collisions, strandings, or sewage and oily water discharges.

Research and Development

During the year the Maritime Administration committed \$24.3 million for research and development contracts. An additional \$8.5 million was provided by various segments of the maritime industry through cost-sharing.

To establish that competitive merchant ships could be licensed, and to promote their acceptance, the Administration completed conceptual designs for a 400,000 and a 600,000 deadweight ton nuclear powered tanker. Environmental impact studies of these vessels were also initiated.

The technical development of an advanced nuclear reactor design, capable of producing 120,000 shaft horsepower, has progressed to the point where commercial construction of nuclear merchant vessels can begin in the near future. The Administration solicited expressions of interest in constructing nuclear tankers from American-flag operators. Five companies have indicated their intention to file applications for Government assistance for the construction of nuclear tankers.

The Administration's shipbuilding research program, which is aimed at increasing shipyard productivity, has generated various improvements through the development of labor saving devices and automated processes. Innovations include a lightweight, portable power supply, a remote weld wire feeder, and a machine that simplifies vertical welding. In addition, improved material handling equipment, including lift platforms capable of moving modules of 70 tons and multi-pallet forklifts, were designed. A computer-aided automated ship design and production control system ("AUTOKON") was adopted by five U.S. shipyards. Computer controlled frame bending is also under development.

Satellite communications experiments were initiated at the Maritime Coordination Center at Kings Point, N.Y., to test the equipment for operational use for ships at sea. Satellite communications will be used not only for ship navigation and control but also for fleet management requirements of the shipping industry.

A Shipping Operations Information System Program was initiated with the participation of 15 shipping companies. It will develop systems for handling such fleet management problems as cargo handling documentation, maritime industry reporting, resources management, and intermodal distribution coordination.

In the area of ship automation, an integrated conning system (with navigation and collision avoidance aids), a machinery monitoring system ("VIDEC"), and an anti-stranding sonar system have been developed and are undergoing testing and evaluation aboard U.S. vessels.

Ports

During the year, the Maritime Administration published a survey of financing methods of public ports in the United States. It describes current financing methods in this and other countries and selected Federal assistance programs which might be applicable to U.S. port needs.

A study of port collection and separation facilities for oily wastes was also completed during the year. It serves as a guide to individual ports for the development of facilities to handle the disposal of oily water waste from vessels.

Also completed was a survey of capital improvements made by North American ports between 1966 and 1972. It contains projected expenditures through 1977 and will assist port entities in planning future expansion programs.

Ship Sales

An aggregate return to the Government of \$28.2 million in fiscal 1974 was realized from the sale of 87 Government-owned ships. Since the obsolete ship sales program was established in 1958, the sale of 2,101 ships has yielded a return of \$156 million.

SELECTED WORKLOAD DATA FOR FISCAL 1970-74

	1970	1971	1972	1973	1974
CONSTRUCTION-DIFFERENTIAL SUBSIDIES:					
Number of new ships contracted for	5	12	21	17	12
Total number under construction	28	33	48	55	52
Total expenditures (in 000's)	\$96,723	\$139,191	\$137,345	\$185,878	\$200,344
OPERATING-DIFFERENTIAL SUBSIDIES:					
Companies with long-term contracts	13	12	16	21	23
Ships covered	247	206	207	185	177
Total subsidy paid (in 000's)	\$205,732	\$268,021	\$235,667	\$216,846	\$226,504
Companies in Soviet Grain Program	0	0	0	52	49
Ships covered	0	0	0	88	87
Total subsidy paid (in 000's)	0	0	0	\$9,865	\$31,415
SHIP FINANCING GUARANTEES:					
Vessels covered	171	284	434	456	764
Shipboard lighters covered	360	520	1,721	2,171	2,221
Principal covered by guarantees (in 000,000's)	\$911.5	\$1,154.0	\$1,692.0	\$2,579.0	\$3,762.0
GOVERNMENT-OWNED SHIPS:					
National defense reserve fleet	1,027	860	673	541	487
Number under bareboat charter	5	0	0	0	6
General Agency Agreement	2	1	0	0	0
U.S.-FLAG OCEANBORNE FOREIGN TRADE:^a					
Long tons carried in U.S.-flag ships (000,000's)	25.2	24.4	27.6	39.8	(a)
Percent of U.S. foreign trade	5.3	5.3	5.3	6.4	(a)

^a On calendar year basis. Data for 1974 not available.

APPENDIX

SUMMARY OF GENERAL ACCOUNTING OFFICE REPORTS ISSUED TO CONGRESS AND ACTION TAKEN
ON SIGNIFICANT RECOMMENDATIONS

Report title and date	Recommendation	Action taken
Limited Success of Federally Financed Minority Businesses in Three Cities (November 8, 1973).	<p>Commerce's Office of Minority Business Enterprise should:</p> <ol style="list-style-type: none"> (1) Establish long-range goals in terms of numbers of successful minority businesses to be established by the Federal minority enterprise effort. (2) Use its new planning, evaluation, and information system to evaluate the effectiveness of local business development organizations in terms of numbers of successful businesses established. (3) Coordinate its management assistance activities with those of the Small Business Administration to provide maximum benefit to minority businessmen. 	<p>The Office of Minority Business Enterprise has already established goals on a fiscal year basis which include raising the success rate of assisted businesses and doubling the number of significant-scale businesses developed through its program. It is doubtful that quantifiable goals can be accurately set for a longer time span than the two-year maximum for which projections are currently made, since many variables such as the extent of Congressional appropriations committed to minority business development and the availability of business financing through conventional channels, influence the attainment of goals.</p> <p>The Office has now gathered information in its planning, evaluation and information system and is currently in the process of further refining this data to more effectively evaluate business development organizations.</p> <p>The Office recent decentralization has placed its staff in close contact with the Small Business Administration, thereby improving the coordination between the two agencies.</p>
Foreign Visitor Travel to the United States Can Be Increased (November 12, 1973).	<p>The Secretary of Commerce should direct the United States Travel Service to:</p> <ol style="list-style-type: none"> (1) Act as the catalyst for getting foreign tour operators together with U.S. travel suppliers (airlines, hotels, ground transportation, sightseeing attractions, etc.) to discuss the details of developing travel programs to the United States. 	<p>A new Office of Market Development was created to (1) stimulate the development of tour programs by the travel trade, (2) develop merchandising programs to motivate foreign retail travel agents to actively sell VISIT USA travel, and (3) analyze the U.S. tour product to identify the most salable</p>

SUMMARY OF GENERAL ACCOUNTING OFFICE REPORTS ISSUED TO CONGRESS AND ACTION TAKEN
ON SIGNIFICANT RECOMMENDATIONS—Continued

Report title and date	Recommendation	Action taken
	<p>(2) Strengthen its field staffs to provide direct, regular consultation to tour operators and others interested in developing and promoting travel programs to the United States. The Service should obtain feedback from tour operators regarding problems in handling such tours.</p> <p>(3) Devote research effort to meeting informational needs of those elements of the travel industry interested in developing travel programs to the United States and consider furnishing direct financial and promotional assistance to the travel industry for such things as the printing of tour catalogs and brochures; photographs, and promotional material; joint promotion efforts, including advertising; and travel trade promotional activities and seminars.</p>	<p>features and match them to the travel requirements of specific markets. Additionally, the Travel Service has initiated development of a sales intelligence inventory containing the names, addresses and tour specialties of U.S. tour operators. It also initiated a uniform program in all country markets of identifying and classifying all retail travel agencies with a present or potential capability of selling VISIT USA tours.</p> <p>The Travel Service has recognized the need for new skills. As vacancies occur abroad, employees with travel sales backgrounds are being hired to call on the trade and help operate the new tour development and merchandizing programs. Also, the Service has obtained authority to hire six additional people, which should enable it to strengthen its travel trade liaison function in the field offices. Additionally, a performance measurement system is being installed which will be capable of providing management with the data necessary to evaluate the Service's impact in each of the six prime markets in which it is competing.</p> <p>A Merchandising Test Program, consisting of three elements (1) "product" familiarization through tours of U.S. sightseeing attractions and tourist facilities, (2) sales training, including seminars and class lessons, and (3) incentives to reward performance, was implemented to determine the extent to which the Service could influence foreign retail travel agents to actively push VISIT USA package tours. The award aspect of the program was curtailed at the end of May 1973 when questions were raised by the Subcommittee on Foreign Commerce and Tourism of the Senate Committee on Commerce as to the scope of the authority granted the Travel Service. At the time of the curtailment, none of the agents participating in the test had been given an award by the Service. The Service is studying what action will be necessary to resume the program on a competitive basis.</p>

SUMMARY OF GENERAL ACCOUNTING OFFICE REPORTS ISSUED TO CONGRESS AND ACTION TAKEN
ON SIGNIFICANT RECOMMENDATIONS—Continued

Report title and date	Recommendation	Action taken
Need for Better Identification and Analysis of Nontariff Barriers to Trade (January 21, 1974).	(4) Generate to the travel trade a regular flow of ideas and information on happenings in the United States around which U.S. travel programs could be developed and promoted.	A new Office of Travel Trade, Business and Convention Travel Development was established to (1) facilitate contact between U.S. travel suppliers and foreign tour packagers, (2) "sell" the U.S. travel trade on selling travel to the United States, (3) encourage international associations to hold their congresses in the United States, and (4) assist domestic groups with convention facilities to attract international meetings.
	The Secretaries of State and Commerce, in consultation with the President's Special Trade Representative should:	
	(1) Increase efforts to identify nontariff barriers through Embassy, industry, and other available sources. Embassies should be kept informed of broad policy and specific developments in such barriers to facilitate these efforts.	The present Commerce programs to develop a nontariff barrier data base for the multi-lateral trade negotiations are geared to meet the informational requirements of U.S. negotiators. The deficiencies which were cited in the General Accounting Report regarding the identification and analysis of nontariff barriers are either outdated or will be remedied by these programs.
	(2) Identify priority nontariff barriers and give reporting instructions to the Embassies, in each case specifying the reporting time frame, level of detail, and modes of analysis required. Embassy input should include information on the volume of U.S. exports affected, the impact of the barriers, new barriers revealed during these investigations, foreign government attitudes and policies, and potential for relief. This input should complement information obtained from industry and other sources.	Commerce has moved, in coordination with other interested agencies, to enlist foreign service posts in a major new effort to identify and establish the importance of nontariff barriers maintained by both our principal trading partners and the less developed countries. This effort will regularly inform Embassies of Washington priorities and will bring up-to-date our knowledge of foreign country trade practices.
	(3) Improve consultative procedures with private industry and trade associations and insure that the information base is representative of industry interests.	Commerce commodity specialists have consulted trade associations and individual firms for their views of the implications of European Community standards. A broad range of industry representatives were contacted to ensure that their comments are representative of the entire industry. In addition, Commerce is considering ways of obtaining the continuing assistance of private U.S. standards bodies in following and evaluating European efforts to harmonize standards.

SUMMARY OF GENERAL ACCOUNTING OFFICE REPORTS ISSUED TO CONGRESS AND ACTION TAKEN
ON SIGNIFICANT RECOMMENDATIONS—Continued

Report title and date	Recommendation	Action taken
<p>Department of Commerce's Promotional Efforts in Increasing Exports of U.S. Consumer Goods (March 8, 1974).</p>	<p>The Secretary of Commerce should:</p> <ol style="list-style-type: none"> <li data-bbox="361 295 819 472">(1) Institute in Japan, or other promising developed countries, a pilot program for increasing consumer goods exports. Such a program could include reverse-buying missions and group association efforts. <li data-bbox="361 648 819 805">(2) Enter into cost-sharing arrangements, where needed, with new-to-market, new-to-export companies and trade associations interested in, and capable of, exporting consumer goods. <li data-bbox="361 1334 819 1628">(3) Contact companies to identify their needs for assistance in exporting. Work with them in providing governmental assistance needed to increase consumer goods exports with consideration toward promoting additional U.S. trade shows on a more comprehensive basis and assisting in developing U.S. business representation and distribution abroad. 	<p>The Foreign Buyer Program has been initiated with the purpose of encouraging more foreign businessmen to visit the United States, at their own expense, and to provide them with certain assistance during their stay. The assistance primarily facilitates contact between the foreign buyer and U.S. firms best suited to accomplish the visitor's business objectives. Much of the efforts of this program involve attracting foreign buyers to U.S. domestic trade shows.</p> <p>Commerce has had a Joint Export Association Program for several years to underwrite half the initial cost of establishing strong market programs abroad for 3 or more companies, associations or consortiums. The Program is still in existence but has had no funds for new projects since 1972. The contract with the Joint Export Association calls for full recovery of Commerce's matching funds based upon the progress and profits of the venture. One ongoing Association project has proven significantly successful for a consortium of 12 U.S. textile mill product manufacturing firms ("USA-TEX"). Through Joint Export Association Program funding, this group has been successful in establishing a strong marketing program in Western Europe, and is now extending marketing activities into Japan. The success of the group and sales volume has been such that projections indicate there will be a full cost recovery of government funds.</p> <p>The Bureau of International Commerce is engaged in a variety of activities to insure action on this recommendation. For example:</p> <ol style="list-style-type: none"> <li data-bbox="841 1481 1319 1754">(a) All U.S. exhibitors at the domestic shows in which the Bureau participates are contacted well in advance of the show regarding their intentions or desires to meet with potential foreign buyers at the show, (b) an integral part of the Foreign Buyer Program is compiling information on the foreign businessmen planning to attend a show (names, company, product and business interests, etc.)

SUMMARY OF GENERAL ACCOUNTING OFFICE REPORTS ISSUED TO CONGRESS AND ACTION TAKEN
ON SIGNIFICANT RECOMMENDATIONS—Continued

Report title and date	Recommendation	Action taken
Improved Federal Efforts Needed To Equally Consider Wildlife Conservation With Other Features of Water Resource Developments (March 8, 1974).	<p>(1) The Secretaries of the Army, Commerce, and the Interior should, with the advice of State wildlife agencies, establish procedures to be observed by their agencies in implementing a coordination process for carrying out the requirements of the Fish and Wildlife Coordination Act and the criteria for determining the justification of the mitigation or enhancement measures for water resource developments.</p> <p>(2) The Secretaries of Commerce and the Interior should seek an agreement on their wildlife agencies' respective roles and responsibilities for the coordinated review of Federal water resource projects and permits and initiate efforts to obtain the funds and personnel needed to effectively implement the act.</p>	<p>so that a "match-up" can be arranged prior to or during the show, (c) the Bureau is compiling a computerized list of U.S. manufacturers of consumer goods that are interested in international trade, and (d) Commerce is currently investigating other programs which can be adapted to promoting U.S. consumer goods abroad. A senior level task force has been established for this purpose.</p> <p>Appropriate Federal agencies have been informed of Commerce's intention to participate under the Fish and Wildlife Coordination Act, and of the suggested memoranda of understanding to facilitate coordination. Commerce has signed a memorandum of understanding with the U.S. Forest Service and is examining the possibility of expanding the agreement between the Secretary of the Interior and the Secretary of the Army to include the Secretary of Commerce. Also, Commerce is discussing with the Bureau of Sport Fisheries and Wildlife the possibility of establishing a broadly constituted task force to address the technical and policy questions implicit in the General Accounting Office's recommendation. Further, regional directors have been asked to increase their efforts with State fish and wildlife personnel to improve coordination and to minimize duplication of effort.</p> <p>Commerce and the Bureau of Sport Fisheries and Wildlife have signed a Declaration of Policy and both agencies have been issued instructions to carry out this policy. Also, Commerce is working closely with the Bureau in an effort to identify their respective roles and responsibilities and anticipate that this will result in more definitive memoranda of understanding.</p>
Emphasis Needed on Government Efforts to Standardize Data Elements and Codes for Computer Systems (May 16, 1974).	<p>To accelerate development and use of standard data elements and codes, the Secretary of Commerce should:</p> <p>(1) Determine where standards would be most beneficial and establish standardization priorities.</p>	<p>In addition to the suggestions for new standards subjects provided by Federal departments and agencies in response to Secretary Dent's letter of November 28, 1973, actions are also being taken in</p>

SUMMARY OF GENERAL ACCOUNTING OFFICE REPORTS ISSUED TO CONGRESS AND ACTION TAKEN
ON SIGNIFICANT RECOMMENDATIONS—Continued

Report title and date	Recommendation	Action taken
	<p>(2) Issue policy delineating accepted theory and terminology and provide for preparation of guidelines, methodology, and criteria to be followed by agencies in their standardization efforts.</p> <p>(3) Assign to specific agencies responsibilities for developing standard data elements and codes in specified areas.</p> <p>(4) Monitor implementation of data standards to insure their uniform adoption and use.</p>	<p>cooperation with the National Archives and Records Service of the General Services Administration and the Office of Management and Budget to identify those data elements and representations that are commonly collected and interchanged in Federal reporting and statistical systems. This is being done to identify problem areas and determine the frequency and extent of such interchanges. In this regard, some subjects and programs have already been identified as primary candidates for standardization.</p> <p>The terms associated with data standards have been issued as an appendix to the Federal Regulation on the standardization of data elements and representations. Efforts have been initiated to develop and promulgate guidelines containing methodologies and criteria for the development, maintenance and implementation of data standards. These are expected to be approved and published during fiscal year 1975.</p> <p>A Letter of Agreement between the National Bureau of Standards and the Civil Service Commission has been prepared to provide policy and procedural guidelines for the development of data standards in automated civilian personnel systems. Discussions have been held with the Office of Management and Budget and with the Department of Transportation on similar assignments for occupation codes, industry codes, and codes for data used in freight movement systems. Arrangements will be made with other departments and agencies for the development of additional high priority standards.</p> <p>Federal reporting requirements, in accordance with the provisions of Office of Management and Budget Circular A-40, must be justified and approved in advance. Arrangements are being made with the Office of Management and Budget and the National Archives and Records Service to modify existing procedures to require the use of approved Federal data standards in such interchanges and to monitor such use by Federal departments and agencies. Also, the</p>

SUMMARY OF GENERAL ACCOUNTING OFFICE REPORTS ISSUED TO CONGRESS AND ACTION TAKEN
ON SIGNIFICANT RECOMMENDATIONS—Continued

Report title and date	Recommendation	Action taken
		National Bureau of Standards is developing procedures to provide for useful feedback from installations and agencies on the use of standards and any problems associated with their implementation.

Secretaries of Commerce and Labor and of Commerce

	<i>Tenure</i>	
	<i>Begun</i>	<i>Ended</i>
<i>Commerce and Labor:</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
 <i>Commerce:</i>		
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	Feb. 1, 1973
Frederick B. Dent	Feb. 2, 1973	

*Interim Appointee.

INDUSTRY OMBUDSMAN FOR B
PROJECTIONS BUSINESS INDIC
ECONOMICS TECHNOLOGY INC
TRADE CENTERS MOBILIZATION
STATISTICS NATIONAL INCOME
JOB CREATION NAVIGATION CI
COASTAL ZONE MANAGEMENT
ENERGY ECONOMIC CENSUSES
EAST-WEST TRADE COMPUTER
AQUICULTURE GEODETIC SURV
TRENDS MARINE MAMMALS
INFORMATION WEIGHTS AND MI
ENVIRONMENTAL SPACECRAFT
BUSINESS OUTLOOK PRODUCT
BUILDING CODES AND STANDAR