46TH

ANNUAL REPORT

of the Secretary of Commerce

U. S. DEPARTMENT OF COMMERCE

1958

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U. S. DEPARTMENT OF COMMERCE

Creation and Significance

The Department of Commerce was designated as such by the act of Mar. 4, 1913 (37 Stat. 736; 5 U. S. C. 611), which reorganized the Department of Commerce and Labor, created by the act of Feb. 14, 1903 (32 Stat. 826; 5 U. S. C. 591), by transferring out of the former department all labor activities.

The Department seal of blue and gold is crested by the American bald eagle denoting the national scope of the Department's activities; the ship symbolizes commerce; the lighthouse represents guidance from the darkness, translated as commercial enlightenment; the blue denotes uprightness and constancy; and the gold denotes purity.

The statutory functions of the Department are to foster, promote, and develop the foreign and domestic commerce, manufacturing, shipping, and transportation facilities of the United States. Related functions subsequently have been assigned to or removed from the Department from time to time by legislation or Executive order; however, the purposes have remained substantially the same as those for which the Department was established.

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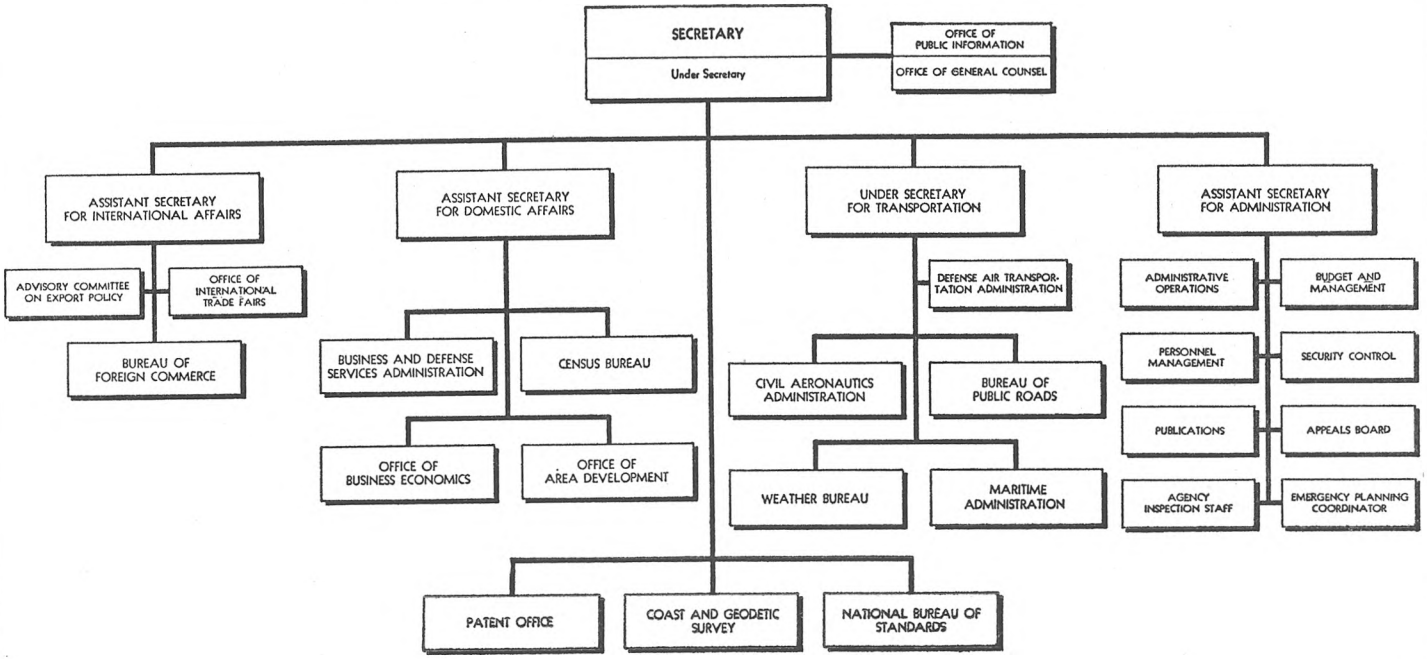

June 30, 1958

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As of June 30, 1958

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Director, Bureau of Foreign Commerce	LORING K. MACY
Director, Office of International Trade Fairs	WALTER S. SHAFER

46TH ANNUAL REPORT OF THE SECRETARY OF COMMERCE

Transmittal and Statement

DEPARTMENT OF COMMERCE,
OFFICE OF THE SECRETARY,
Washington, November 3, 1958.

SIRS: I have the honor to report to you the services and information provided to industry and business by the Department of Commerce during the fiscal year ended June 30, 1958.

The Coast and Geodetic Survey continued its basic program of surveying and charting in support of marine and air commerce. Major accomplishments were the detailed survey of the eastern half of Georges Bank in behalf of the fishing industry, cooperation with several States in the establishment of geodetic monuments along interstate highway routes, and the large-scale photogrammetric mapping of the Chantilly Airport site preliminary to the location of runways and other construction. Participation in the International Geophysical Year was highlighted by observational work in geomagnetism, seismology, geodesy, and oceanography.

This was the second year in the 8-year program of the Patent Office for reducing the backlog of pending applications. Considerable progress was made in achieving conditions essential to the success of this program and improving the status of work in the Patent Office. Most noteworthy was the fact that the examining staff was successfully increased to the full number planned despite difficulty in recruiting personnel earlier in the program and continued high turnover. With more than half the examiners being new and inexperienced, it was not possible in the span of 1 year to achieve the production level needed to dispose of the number of applications originally planned for 1958. Disposals, however, were the highest in any year since 1933 and exceeded receipts of new applications by a substantial margin.

Encouraging developments were made in the continuing effort of the Patent Office to devise feasible systems for the mechanized searching of

patents. One such system was put into operational use in the examination of applications in the chemical field of steroid compounds.

The trademark examining operation of the Patent Office continued to function at a high level of activity, receiving the second highest annual volume of applications in its history and disposing of nearly as many applications with fewer examiners than were available last year.

Progress in technology and scientific research are dependent upon the continuous effort of the National Bureau of Standards to provide standards and methods of measurement in new and unexplored areas. To meet the increasing demand for its services by industry and science, the Bureau has been concentrating more of its effort on its basic responsibilities for measurement and has been transferring its personnel from "other-agency" work to basic Bureau problems. Increasing emphasis has been placed on such critical fields as high-temperature research, high-energy radiation, electronic standards, and high-purity materials.

The Civil Aeronautics Administration has under way the biggest program in history to strengthen air safety and flight reliability. Excellent progress was made in the second year of the Federal Airway Plan toward providing a modernized air traffic control system to handle adequately the ever-increasing air traffic and the jet aircraft expected by 1959. A second and third in a series of progress reports were published on the many operational problems to be met with the introduction of commercial jets. Aid to communities in providing and maintaining an adequate national system of airports continued at a high level.

The planning for mobilization of civil aviation resources in wartime, which is the primary function of the Defense Air Transportation Administration, has progressed materially. Among the significant accomplishments are the advances in the planning for the Civil Reserve Air Fleet, particularly regarding war risk insurance, Operations Boards agreements, and standby contracts.

The Maritime Administration, working with industry and encouraging and guaranteeing private investment, continued to promote the largest shipbuilding program in our history and to move ahead in the field of research and development. Highlight of the year was the keel-laying of the world's first nuclear-powered merchant ship, the NS. *Savannah.*

Responsive to nationwide needs for improved highway transport serving automobile use, commerce and industry, and defense, the Bureau of Public Roads engaged in a wide range of administrative, engineering, and research activities concerned with the planning and development of adequate, modern highway systems. Progress in the vast program of Federal aid to the States for highway improvement, including construction of the National System of Interstate and Defense Highways, continued to accelerate. During the year $2.75 billion of Federal funds was obligated for highway improvement.

The phenomenal growth of aeronautics, the introduction of high-flying passenger-carrying jet aircraft, the development of missiles and satellites, and the expanded collection of global weather data through the meteorological program of the International Geophysical Year—along with a host of recent technological developments—have placed on the Weather Bureau much greater responsibilities and wider opportunities for providing weather services deemed essential to the Nation's economy and welfare.

In developing the broad plans needed to keep abreast of the changing weather service needs of our economy, Weather Bureau scientists will be supported by several recent outstanding accomplishments in the field of meteorology that have been made possible through earlier research programs and the adaptation of radar, electronic computers, data-processing equipment, and other modern products of business and industry.

The President, by Executive Order 10771 of June 21, 1958, assigned to me the responsibility of directing and supervising the operating phase of the Saint Lawrence Seaway Development Corporation. Adding a vital link to our national transportation system, the seaway will prove a potent factor in the development and promotion of our domestic commerce and foreign trade.

We participated in the development of United States policies affecting foreign trade and investment, in efforts to liberalize trade and travel barriers throughout the world, and in international trade negotiations. We strengthened and expanded our advisory and informational services to business on foreign trade and investment matters, and reevaluated, revised, and added to our foreign commerce publications. While easing controls on nonstrategic goods, we tightened those on strategic exports.

The Office of International Trade Fairs organized and produced 11 official United States exhibits, with the wholehearted support of United States industry, at major international trade fairs in Europe, North Africa, the Near East, and the Far East. Here, close to 10 million people overseas saw for themselves the tangible evidence of a peaceful, productive America. Showing extensive displays of American-made consumer goods, we stressed the wide range of style and price of these items—always underscoring the fact that these products are available to the vast majority of Americans because of our system of free enterprise and mass production.

We actively participated in the Administration's successful effort for extension and improvement of the Reciprocal Trade Agreements Program. Main objectives of this program are to protect the more than 4½ million American workers whose jobs depend upon world trade and to strengthen the free world economy and security.

Recent developments in our economy and in those of other nations put new emphasis on the importance of our work in regard to the business and industrial economy. We continued our basic services in this area, including analysis of current and prospective trends in important industries,

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and are laying and acting upon plans for increasing emphasis in this field. Important progress was made in our industrial mobilization preparedness program, particularly in the Executive Reserve and national survival planning programs.

More and more cities, towns, and regional associations recognize that sound local growth and development can be accomplished through well-planned community action. An increasing number of these groups came to the Office of Area Development for technical and program suggestions on how they could develop new industries and create new jobs without Federal subsidies and assistance. The Office strengthened its relations with the growing number of State development agencies and assisted many industrial firms with problems of plant location.

In a year characterized by a business downturn, the economic information and analyses turned out by the Office of Business Economics were highly useful as guides to Government agencies and business. The circulation of the Department's major economic periodical, its monthly *Survey of Current Business*, increased by more than one-third, and the normal steady stream of timely intelligence reports was augmented. In the fall of 1957 OBE published a 344-page *Business Statistics* supplement to the *Survey*, and by mid-1958 had issued new data on the movements of national income and gross national product since the beginning of the 1954–57 business rise.

OBE's anticipatory statistics on domestic investment, instituted a decade ago in its quarterly survey of private business programs for new plant and equipment expenditures, provided invaluable information on the extent of change in investment. Recognizing the need for more complete knowledge of the effects of fast-growing, direct, United States private foreign investments, the Office also published the results of a special survey in this hemisphere, under the title *U. S. Investments in the Latin American Economy*.

The Bureau of the Census began publishing the detailed results of the 1957 Census of Governments; completed the publication program of the 1954 Censuses of Agriculture, Business, Manufactures, and Mineral Industries comprising over 30,000 printed pages; and accomplished preparatory work for the 1958 and 1959 censuses covering the same fields as those for 1954 and for the 1960 Censuses of Population and Housing. In addition, the Bureau's current programs continued to provide up-to-date information on economic and social aspects of the Nation's development. One example of activity in the current program was the national housing inventory, final results of which provide specific information on changes in the housing situation since the 1950 housing census. A new service undertaken was the National Health Survey, conducted as a continuing survey of 45,000 households for the Department of Health, Education, and Welfare.

Following a general description of the condition of our national economy and developments in foreign trade, there is attached a full report of the Department's accomplishments and expenditures for fiscal 1958.

Frederick H. Mueller

Secretary of Commerce.

THE PRESIDENT OF THE SENATE.
THE SPEAKER OF THE HOUSE OF REPRESENTATIVES.

THE NATIONAL ECONOMY IN FISCAL 1958

Unlike the years preceding, fiscal 1958 opened with a higher rate of economic activity than marked its end. Although the year will be characterized as one of business downturn, it nevertheless contained also the beginning of recovery. Thus, since the modest rise of the final quarter gave promise of continuing, the year as a whole may be remembered for its upturn as well as decline. The change in direction was accomplished in the face of continued inventory liquidation and without the stimulus of a rising trend in business outlays for new plant and equipment. A general expectation of further strength in those elements encouraged confidence in speedy resumption of the long-term growth rate.

In the initial quarter of fiscal 1958 the annual rate of gross national product attained the highest level ever recorded, and subsequent developments established that rate as the peak of the rise that had been in process for almost 3 years previous. The decline experienced in the middle quarters of fiscal 1958 reduced the annual rate of GNP by $20 billion—to a level of $426 billion. This was the low point of the fiscal 1958 economic downturn, since a rise in output was again recorded in the final quarter.

Business inventory accumulation and increased capital outlays for new plant and equipment, which had been important elements in the long upward movement ending in fiscal 1958, ceased to provide stimulus to the economy after the first quarter of that year. The change in inventory policy resulted in a shift, within a 6-month period, from production in excess of final purchases to a situation in which final purchases were absorbing goods at an annual rate $9 billion in excess of production. Outlays for new plant and equipment, which had risen steadily to an annual rate approaching $38 billion in the first quarter of the fiscal year, were down to about $30 billion in the closing quarter.

Perhaps most evident to the general public was the marked reduction in automobile output, which proceeded at a relatively high rate after the introduction of 1958-model passenger cars, only to be cut back severely as dealers' sales remained at a low level. As manufacturers' orders fell off, and their sales as well as inventories declined, the effect upon production rates was progressively greater.

Total civilian employment, at an all-time high above 67 million in July 1957, fell below 62 million in February 1958, with unemployment rising from about 3 million to almost 5.2 million. In the same period, seasonally adjusted employment in durable goods manufacturing was reduced by 1 million.

The extent of the overall decline in national economic activity occasioned extensive speculation as to its ultimate depth and duration. More immediately, decisions had to be made on Government fiscal policy—on the need for, and the character of, extraordinary antirecession measures. In these assessments the economic intelligence furnished by the Commerce Department proved invaluable. Presenting an economic analysis to the House Banking and Currency Committee, Secretary Weeks showed "how our detailed knowledge of business activity has been enlarged" and pointed out that "we now have measures like those of national income and gross national product which tell us not only how the economy is faring as a whole, but also allow us to watch the movement of important parts of the mechanism."

Thus, the Department's monthly estimates of personal income revealed in February a decline of less than 2 percent from the peak rate of the previous August. While the effect of the contraction in consumer spending was apparent in reduced sales of consumer durable goods, especially automobiles, the economic data also showed that consumer purchases of nondurable goods and services had been well maintained. Although a sharp drop had occurred in corporate profits and in wage and salary disbursements, the former was not fully reflected in the flow of dividend payments and the latter was to a considerable extent offset in total by rising Government payments for unemployment and other social security benefits.

Purchasing power in agricultural areas was bolstered by the rising trend in farm proprietors' income which began in December 1957. Furthermore, Government purchases of goods and services continued to increase throughout the period of overall decline, mainly because of expanded State and local outlays.

A full account of all public and private developments significantly affecting the course of the economy during this period is contained in the Department's monthly magazine *Survey of Current Business*, published by the Office of Business Economics.

Analysis of the increase in the annual rate of gross national product which occurred in the fourth quarter of fiscal 1958—to $429 billion, from the $426 billion low of previous quarters—reveals the interaction of the various economic elements mentioned above. By the end of June 1958, the annual rate of personal income had regained its former peak level. Personal consumption expenditures in that quarter were in total equal to their highest previous figure, increased expenditures for nondurable goods and services having offset the reduction in spending for autos and house-

hold durables. A higher rate of Federal Government purchases, mainly for defense procurement, reinforced the steady rise in State and local outlays. With manufacturers' sales and new orders showing some pickup, the rate of inventory liquidation had slackened. The steady decline in the industrial production index which characterized most of fiscal 1958 was ended in the closing months.

UNITED STATES FOREIGN TRADE DEVELOPMENTS

United States foreign trade in the fiscal year ended June 30, 1958, fell short of the record level attained in the preceding period.

According to preliminary estimates, the value of nonmilitary exports dropped by 8 percent from the peak of $19.2 billion recorded in fiscal 1957 but continued well above earlier rates. Much of the cutback stemmed from the passing of temporary factors which had raised exports of petroleum, coal, wheat, and cotton to unusually high levels in the year ended June 30, 1957. Reflecting the decline in exports, the ratio of nonmilitary exports to gross national product decreased from 4.4 to 4.1 percent.

The rate of increase in imports slowed considerably as compared with that in either of the 2 preceding fiscal years. The value of imports (partially estimated) advanced by only about 1 percent from the fiscal 1957 level of $12.7 billion, as increases in purchases of finished manufactures and foodstuffs slightly exceeded decreases in raw materials. In proportion to the gross national product, imports were barely maintained at 2.9 percent.

The gain in volume of purchases made abroad was somewhat larger than the gain in their value in fiscal 1958, as average import prices fell slightly. Export prices, on the other hand, were rising moderately, and exports declined more steeply in volume than in value.

Exports

Agricultural exports decreased in value from $4.7 billion in fiscal 1957 to about $4 billion in the following year. A major part of this drop reflected reductions in wheat and cotton shipments from exceptionally high levels attained in fiscal 1957. A good harvest in Western Europe lowered that area's import requirements for wheat, while world demand for United States cotton returned to relatively normal levels, after climbing in fiscal 1957 with the cut in cotton export prices to internationally competitive levels.

The value of nonfarm shipments abroad fell by approximately 5 percent from the total of $14.3 billion registered in fiscal 1957. Playing major roles in the decline were reduced shipments of petroleum, of coal, and of metals, which had all been at peak values in that year.

Sales of crude petroleum and petroleum products subsided after having expanded to about twice their usual volume in fiscal 1957, when Western

Europe had temporarily substituted United States supplies for Middle Eastern oil. Coal shipments also receded, reflecting the abatement of demand which had been generated by the Suez crisis and also the leveling off of European industrial production. In addition, sales abroad of metals diminished following their sharp expansion in the preceding period to meet peak foreign demand.

Exports of machinery—by far the leading export category—showed an increase in fiscal 1958. These rose by about 3 percent from the $3.8 billion level recorded a year earlier. Latin America, our leading market for machinery, received most of the increase in these shipments.

Among major areas, Latin America was the only one to which sales expanded in fiscal 1958. Total exports to the 20 American Republics increased by nearly 10 percent from the value of $4.3 billion registered in the preceding period. On the other hand, exports to Canada dropped by more than 10 percent from the $3.9 billion level of fiscal 1957, reflecting in large part the dip in the economy of that country. Declines also appeared in the values of exports to Western Europe and to the Far East, as shipments to those areas decreased by approximately 15 percent each from high fiscal 1957 levels of $6.1 and $3.2 billion, respectively.

Imports

United States imports of manufactured goods rose in fiscal 1958 by over 5 percent from the $2.8 billion level of the preceding period. The advance largely reflected growing automobile imports, mainly from Western Germany and the United Kingdom.

Also showing gains were imports of foodstuffs, as increases in purchases of meat, edible cattle, sugar, and cacao more than outweighed declines in coffee deliveries here.

The inflow of crude petroleum and fuel oil continued its strong upward trend, but the value of other raw materials fell sharply, reflecting, in the main, the slowing of United States manufacturing production. Particularly pronounced were reductions in metal imports—especially copper, nickel, tin, and steel-mill products.

On an area basis, the advance in imports was largely limited to purchases from Western Europe. These rose by nearly 5 percent from the fiscal 1957 value of $3.0 billion. Deliveries from other areas remained close to the levels reached in fiscal 1957, when goods from Latin America, our leading foreign source, had been valued at $3.7 billion, those from Canada at $2.9 billion, and those from the Far East at $1.9 billion.

Immediate Office of the Secretary

BUSINESS ADVISORY COUNCIL

The Business Advisory Council, which celebrated its 25th anniversary in May 1958, held five scheduled meetings during the year with the Secretary of Commerce and other senior United States Government officials. Views were exchanged on the state of the economy, taxation, foreign commerce, labor policy, and other topics of concern to the Department. As in the past, many subcommittee meetings were also held.

Seven new members were added and seven members were lost by death. As of June 30, 1958, the active membership was composed of:

*S. D. Bechtel, Chairman, San Francisco, Calif.
*Ernest R. Breech, Vice Chairman, Dearborn, Mich.
*Ralph J. Cordiner, Vice Chairman, New York, N. Y.
*T. V. Houser, Vice Chairman, Chicago, Ill.
*Devereux C. Josephs, Vice Chairman, New York, N. Y.

George A. Wyeth, Jr., Executive Director
Walter White, Consultant

Robert B. Anderson, Washington, D. C.
*James B. Black, San Francisco, Calif.
*Roger M. Blough, New York, N. Y.
*Harold Boeschenstein, Toledo, Ohio
Fred Bohen, Des Moines, Iowa
Kenneth C. Brownell, New York, N. Y.
*Paul C. Cabot, Boston, Mass.
James V. Carmichael, Atlanta, Ga.
Walker L. Cisler, Detroit, Mich.
*Lucius D. Clay, New York, N. Y.
John L. Collyer, Akron, Ohio
Charles E. Daniel, Greenville, S. C.
Paul L. Davies, San Jose, Calif.
Marion B. Folsom, Washington, D. C.
G. Keith Funston, New York, N. Y.
Elisha Gray II, St. Joseph, Mich.
Crawford H. Greenewalt, Wilmington, Del.
Alfred M. Gruenther, Washington, D. C.
Joseph B. Hall, Cincinnati, Ohio
Robert M. Hanes, Winston-Salem, N. C.
*Eugene Holman, New York, N. Y.
Herbert Hoover, Jr., Los Angeles, Calif.
Gilbert W. Humphrey, Cleveland, Ohio
F. R. Kappel, New York, N. Y.
E. H. Lane, Altavista, Va.
Joseph L. Lanier, West Point, Ga.
Fred Lazarus, Jr., Cincinnati, Ohio
Barry T. Leithead, New York, N. Y.
Augustus C. Long, New York, N. Y.
J. Spencer Love, Greensboro, N. C.
Roswell Magill, New York, N. Y.
J. W. McAfee, St. Louis, Mo.
Neil McElroy, Washington, D. C.
Earl M. McGowin, Chapman, Ala.
Aksel Nielsen, Denver, Colo.
C. H. Percy, Chicago, Ill.
A. Q. Petersen, New Orleans, La.
*T. S. Petersen, San Francisco, Calif.
Paul Pigott, Seattle, Wash.
Gwilym A. Price, Pittsburgh, Pa.
Reuben B. Robertson, Jr., Hamilton, Ohio
William E. Robinson, New York, N. Y.
Donald J. Russell, San Francisco, Calif.
Charles Sawyer, Cincinnati, Ohio
C. R. Smith, New York, N. Y.
*J. P. Spang, Jr., Boston, Mass.
A. E. Staley, Jr., Decatur, Ill.
*Frank Stanton, New York, N. Y.
R. Douglas Stuart, Chicago, Ill.
Gardiner Symonds, Houston, Tex.
A. Thomas Taylor, Chicago, Ill.
*Charles Allen Thomas, St. Louis, Mo.
E. J. Thomas, Akron, Ohio
Juan T, Trippe, New York, N. Y.
John C. Virden, Cleveland, Ohio
Thomas J. Watson, Jr., New York, N. Y.
John Hay Whitney, London, England
Langbourne M. Williams, New York, N. Y.

*Member of Executive Committee.

OFFICE OF THE GENERAL COUNSEL

The Office of the General Counsel serves as legal counsel to the Secretary of Commerce, the Under Secretaries, and the Assistant Secretaries as well as to the heads of primary organization units who provide policy guidance to their respective units of the Department.

The General Counsel, as the chief legal officer of the Department, has general overall responsibility for the supervision of the conduct of legal affairs throughout the Department, including those constituent units which support comprehensive legal staffs. This leadership is exercised directly, and all key officials of such staffs are considered to be members of the Office of the General Counsel of the Department.

As it is the mission of the Department of Commerce to foster, develop, and promote foreign and domestic commerce, the Office of the General Counsel concerns itself in detail with legal aspects of all Federal programs relating to business and industry to be able to advise and give counsel to the Secretary and to other policy officials with respect thereto.

Legislative Activities

The Office of the General Counsel has direct responsibility for departmental legislative services including legislative liaison with the Congress and within the executive branch and excluding only legislative service for fiscal matters of budget significance, for which the Assistant Secretary of Commerce for Administration is responsible.

In discharging these responsibilities, the Office handled over 12,000 requests for congressional services during fiscal 1958. It also prepared or reviewed 656 reports on pending or proposed legislation which were submitted to Congress or to agencies of the executive branch.

Domestic Affairs

The Domestic Affairs Division performed all legal work for the Business and Defense Services Administration, Office of Business Economics, Bureau of the Census, Office of Technical Services, Coast and Geodetic Survey, and National Bureau of Standards. For the Patent Office it performed legal work in matters other than the issuance or denial of patents and registrations of trademarks.

In addition to this legal work the Division provided legal services for other Government agencies in drafting and perfecting legislation for the purpose of establishing the Airways Modernization Board, the National Aeronautics and Space Administration, and the Federal Aviation Agency.

International Affairs

The International Affairs Division performed the legal work for the Bureau of Foreign Commerce and Office of International Trade Fairs in relation to export and import trade, international travel, private overseas

investment, and operations in the international field authorized by the Export Control Act, the Trade Fair Participation Act, the Foreign-Trade Zones Act, the China Trade Act, the Trade Agreements Act, and the so-called British Token Import Plan.

Export control legal work chiefly comprised the handling of administrative proceedings on the denial of export privileges and assistance to the Department of Justice in the preparation and prosecution of criminal cases. Investigative reports on 65 violations cases were received and reviewed; 15 warning letters, 18 charging letters, and 20 final orders were issued. Two cases were brought to the attention of the Justice Department for criminal prosecution.

The Division handled the negotiation and preparation of approximately 45 contracts for design, architectural and construction services, and also for procurement of special services required in the mounting of joint Government-industry exhibits at 16 international trade fairs around the world.

The Division was involved in the drafting of the British Token Import Plan regulations and the processing of scrip applications for exports to the United Kingdom covered by the plan. It also reviewed a number of Foreign-Trade Zones Board actions and dividend actions of certain China Trade Act corporations.

Transportation

The Transportation Division performed all legal work falling within the responsibilities of the Under Secretary of Commerce for Transportation for the Bureau of Public Roads, Civil Aeronautics Administration, Defense Air Transportation Administration, Maritime Administration, and Weather Bureau.

The Division was especially occupied with legislation relating to the Transportation Act of 1958, the Federal-Aid Highway Act of 1958, the Federal Aviation Act of 1958, and revision of the Federal highway laws. The Division was also occupied with preparation of standards for control by the States of advertising along the National System of Interstate and Defense Highways.

General Legal Services

The General Legal Services Division reviewed all contracts entered into by the Department which must be approved by the Secretary or submitted for legal approval pursuant to Department order. The Division prepared or reviewed 230 contracts, leases, bonds, agreements, and similar contractual matters and 71 requests from constituent units of the Department for opinions of the Attorney General or Comptroller General and other matters submitted to these officials, including reports on litigation. It also rendered 319 legal opinions and other legal memoranda and handled 506 miscellaneous legal matters.

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This Division reviewed for legal effect all Department orders; received and processed applications for free use of Government-owned patents; maintained legal liaison with the appropriate administrative divisions concerned with personnel, budget, and appropriation problems; reviewed matters arising under the Federal Tort Claims Act; and rendered day-to-day legal consultative services to the various administrative divisions.

OFFICE OF PUBLIC INFORMATION

The Office of Public Information, by issuing factual information to the private media of communication, helped bring to public notice such authorized departmental programs as scientific and technological research, business growth, foreign trade expansion, aviation safety, highway development, weather forecasting, and merchant marine shipbuilding.

Maintaining an "open door" policy on departmental news, OPI aided correspondents, editors, radio and television broadcasters, and business-paper writers in reporting Commerce activities through the medium of news conferences, radio and television appearances, background briefings, addresses, statements, and magazine articles.

OPI conducted editorial research to provide up-to-date material for use in speeches and statements by top officials in their appearances before business and community groups.

A science feature service, based on the Department's scientific and technological activities, was initiated in response to growing public interest in this phase of the Department's endeavors.

With the cooperation of constituent bureaus and offices, circulation and distribution procedures were further improved to assure more efficient coverage of outlets for the Department's informational services.

Office of the Assistant Secretary for Administration

The Assistant Secretary of Commerce for Administration serves as the principal assistant to the Secretary on all matters of departmental administration and management. The primary responsibility of this Office is to assure the effective administration of the Department's programs and proper departmental representation before other Government agencies.

The Assistant Secretary also provides policy direction to the activities of the Agency Inspection Staff, Appeals Board, Emergency Planning Coordinator, and the Offices of Budget and Management, Administrative Operations, Personnel Management, Publications, and Security Control.

OFFICE OF ADMINISTRATIVE OPERATIONS

The Office of Administrative Operations is the central facility responsible for staff management of administrative services throughout the Department. It assists primary organization units in the review, appraisal and administration of programs relating to property and space, records, general services including procurement and communications, safety and motor vehicles, and library services and facilities.

The cost of operating and maintaining the Department's motor vehicle fleet continued to hold below the average for all Government agencies. In recognition that further economies can be made through preventive maintenance, the Office developed a departmentwide plan for the uniform maintenance of all vehicles. This includes inspection schedules, supporting records, and training for bureau fleet managers. Reduction of maintenance costs by at least 1 cent per mile has been established as the target. Cooperative studies in 13 cities with the General Services Administration (GSA) of proposed interagency motor pools comprised a large part of the year's motor vehicle activities. Implementation of the preventive maintenance program and a new training film for drivers were planned for fiscal 1959.

The Office initiated a departmentwide, in-service training program for improvement in correspondence. More than 980 employees attended correspondence workshops, and 125 attended mail operations workshops.

Over 141,000 cubic feet of records were removed from operating space in the Department. This released for reuse or reassignment personal services, equipment, and space worth $430,000.

Top management in all units of the Department completed an evaluation of safety progress in initiating positive steps to increase effectiveness of accident-prevention efforts. As a result, full-time safety personnel was appointed in several field areas where hazardous operations justify more intensive safety supervision. The previous overall rate of accidents was reduced by 5 percent. Primary emphasis was placed upon the development of a complete training kit dealing with the supervisor's responsibility for safety and a complete eye-protection program for all employees.

Real property holdings of the Department now stand at 1,060 installations valued at $500 million. The Office participated in a primary organization unit review of all real property holdings to determine needs under current programs. In cooperation with Bureau of the Budget repre-

sentatives, the Office inspected real property holdings of major field installations. Arrangements were made to cross-service warehousing facilities between the Maritime Administration and the Bureau of the Census for specific requirements. Operations were improved by consolidating four regional warehouses into one central warehouse.

The Department was assigned 237,000 square feet of additional space to provide for expanding programs. As a result, it was possible to bring together within the main Commerce Building all of the units of the Patent Office, Office of Business Economics, and the Bureau of Foreign Commerce, thereby saving both manpower and time. Assignment of this new space to the Department was somewhat offset by the release of 76,600 square feet of space to GSA for reassignment.

Personal property valued at $1,526,600 was declared excess to the needs of the Department and turned over to GSA. Personal property with a new value of $4,432,000 was disposed of by other means, and the Department saved approximately $230,000 by using excess property to fill requisitions which otherwise would have resulted in new purchases.

Approximately 35 percent of the transactions made in the Office of the Secretary area were handled with imprest funds. This is 10 percent more than were handled similarly in the previous year. Total transactions were reduced 5 percent by incorporating individual orders in one purchase order each month. Although paperwork savings derived from handling small purchases in this manner cannot be measured, they are nevertheless substantial.

Placing of telephone services in the Office of the Secretary area on an actual-cost basis greatly simplified billing procedures. Inauguration of interdepartmental through-dialing and other refinements reduced the number of operators from 15 to 9.

Transfer of certain units from the main building combined with expansion of certain functions increased mail and messenger service requirements, but this was absorbed through simplification of mail-handling procedures.

The contribution of the library to the total effort of the Department can be assessed in terms of the loan of 108,900 publications, use of reading rooms by 44,900 readers, and the receipt of 21,500 requests for information, indicating that the facility is serving its purpose well.

Sales and distribution of scientific and other publications increased 35 percent during the year. About two-thirds of the additional workload was absorbed by work simplification. Removal from stock of nearly 200,000 obsolete publications was one of the highlights of the simplification process. Relief in the stockrooms is probably temporary, however, as it is estimated that new items received in the 1959 fiscal year will exceed the total inventory of publications already on hand.

APPEALS BOARD

The Appeals Board for the Department of Commerce serves as an impartial body to make final decision on certain appeals from the public when adversely affected by orders, regulations, or administrative action of the Department in connection with export control matters, importation of foreign excess property, or other statutory authority of the Department. It also hears appeals relating to contracts of the Bureau of Public Roads, and other appeals specifically assigned to it by appropriate authority.

During the past fiscal year the Board disposed of 36 appeals involving one formal hearing.

OFFICE OF BUDGET AND MANAGEMENT

The Office of Budget and Management is the central facility for the direction of the Department's financial affairs and organizational development. It develops departmental policy within its area of responsibility, reviews budget estimates, establishes procedures for the control of all funds, reviews organizational structures, develops organizational plans, and makes continuing studies of functional and organizational relationships.

The Office reviews departmental administrative and operating practices, procedures, and methods; evaluates the Department's programs in terms of efficiency of management and economy of operations; promotes participation in the Department's management improvement program and governmentwide joint program for improvement of accounting; furnishes a central fiscal advisory service to all bureaus; and assists the Assistant Secretary of Commerce for Administration in providing staff support to top management.

Budget Activities

The Office of Budget and Management considered regular annual budget estimates for the fiscal year ending June 30, 1959, and after review and analysis by the Office, the Secretary of Commerce approved $1,159,-148,000 for transmittal to the Bureau of the Budget. The President's budget, transmitted to the Congress in January 1958, included $890,791,000 for the Department of Commerce. Congress appropriated $851,754,000.

In addition to the regular annual budget estimates, supplemental appropriation requirements for fiscal 1959 of $231,943,300 were reviewed and approved by the Secretary for transmittal to the Bureau of the Budget.

The President approved $86,308,000 for transmittal to the Congress, which appropriated $81,932,500.

In addition to the regular appropriations for the Department, the Congress appropriated $2,350,000,000 from the Highway Trust Fund to finance the Federal-aid highway program for fiscal 1959.

Funds in the amount of $1,644,454 were withdrawn as of June 30, 1958, under the provisions of Public Law 798, 84th Congress, which requires the withdrawal of funds unobligated at the close of each fiscal year.

Summary of Balances, Appropriations, and Expenditures, Department of Commerce, Fiscal Year Ended June 30, 1958

	Unexpended balance June 30, 1957	Appropriation fiscal year 1958	Total (columns 1 and 2)	Expenditures fiscal year 1958
General accounts:				
General Administration	[1] $5,614,567	$2,777,700	$8,392,267	[1] $2,717,698
Bureau of the Census	1,384,319	12,521,250	13,905,569	11,112,651
Civil Aeronautics Administration	136,101,099	353,794,917	489,896,016	275,122,234
Coast and Geodetic Survey	4,404,672	14,228,037	18,632,709	12,611,865
Business and Defense Services Administration	560,125	5,889,506	6,449,631	5,788,122
Office of Area Development	.....	396,380	396,380	376,977
Bureau of Foreign Commerce	304,599	5,615,250	5,919,849	5,347,293
Office of Business Economics	74,302	1,071,217	1,145,519	1,013,162
Maritime Administration	255,819,936	56,832,258	312,652,194	173,719,230
Patent Office	1,373,462	19,545,000	20,918,462	18,531,749
Bureau of Public Roads	76,440,146	40,033,000	116,473,146	51,120,873
National Bureau of Standards	6,113,213	10,183,561	16,296,774	5,423,069
Weather Bureau	11,838,293	39,814,896	51,653,189	39,276,303
Total, General Accounts	500,028,733	562,702,972	1,062,731,705	602,161,226
Highway Trust Fund	84,493,266	1,690,000,000	1,774,493,266	1,511,395,685
Total Department of Commerce	584,521,999	2,252,702,972	2,837,224,971	2,113,556,911

[1] Includes Inland Waterways Corporation in liquidation.

Management Activities

Further refinement of budget planning and programing techniques resulted in development and publication of an improved *Commerce Operating Budget in Brief* for information and reference by Department officials. This publication provides a concise description of the services and activities conducted through the 11 major bureaus and several staff offices within the Department, together with personnel and funds programed therefor. Previously, this information was developed only for services and activities financed from funds appropriated directly to the Department and its primary organization units. The Office now, however, has refined the technique to cover all services and activities without regard to the source of funds or methods of financing.

In accordance with the President's program to stimulate business activity and employment, the Office took coordinating action to accelerate within all component units of the Department the procurement of equipment, supplies, and materials required for fiscal 1958 operations as well as those

planned for fiscal 1959. As part of this endeavor, all programs were examined for opportunity to accelerate procurements; reserved funds were released; financial programs were adjusted; and emphasis was placed on expeditious payment of supply fund bills after deliveries were completed.

The Office developed a monthly reporting system to apprise the Secretary, other secretarial officers, and other Commerce officials briefly but comprehensively of the condition of public business in each primary organization unit of the Department. The report, consisting of two parts, covers (1) availability and source of funds, rate of obligating, and current employment as compared with budgeted employment, and (2) rate of progress of program accomplishments. The latter part is designed to indicate not only the general rate of progress on basic programs but also on any part of a program that may be in arrears and steps being taken to bring it up to date.

Under the Department's long-range user-charge program, the Office established the general policy, standards, and criteria for the recovery of cost to the Department of rendering a special service that provides a special benefit to recipients. User charges established in two areas in the Department where special services are being furnished will result in a net increase in Treasury receipts of $300,000 or more annually.

The Office undertook many studies concerning situations and problems coming to the attention of the Department. These included:

An inventory of the time required by various bureaus of the Department for payment of contractor accounts, looking to simplification of billing requirements, improvement of billing and payment procedures, and speeding up payments of contractors' invoices.

A review of Department and bureau regulations, instructions, and orders to check on their necessity and conformity.

An analysis of observations of appropriations and other congressional committees concerning departmental and bureau operations and planned programs, with review and appropriate coordinating action taken thereon.

A survey of telephone costs in the Department to determine where economies could be effected.

Development of tabulations and analytical materials concerning personnel engaged in financial management functions. The data included organization charts, general description of the financial management system, functions included therein, and a comparative report on personnel engaged in these functions. A significant disclosure of this review was that from fiscal 1950 to 1957, the number of employees engaged in financial management decreased from 1,863 to 1,358, or 27 percent.

Development of comprehensive information on major research, scientific, technical, and developmental programs conducted within Commerce bureaus, including descriptions of organizations, their relationship to programs in other agencies, the methods through which their activities were carried on, the funds and staff applied to these programs, and description of projects undertaken. The information thus developed was used in appraising Commerce programs as well as in meeting requests by other agencies for similar and related information.

The Office also:

Participated in a study of the condition of the fleet operated by the Coast and Geodetic Survey, resulting in development of a long-range program for modernization and improvement of the fleet.

Participated in a survey of electronic data-processing equipment installed in the several bureaus of the Department, including detail analysis of several electronic processing programs.

Participated in an interdepartmental study to determine the feasibility and desirability of establishing a central traffic and transportation agency to handle that portion of the International Cooperation Administration-financed transportation now handled by three Government agencies. Final recommendations have been made and a determination was to be made in the second quarter of fiscal 1959.

The Office continued to assume the liaison and leadership functions in developing the Department's financial management improvement program.

One more primary organization unit—bringing the total to four—installed an accrual accounting system approved by the Comptroller General, and three others developed and tested similar systems that will be presented for Comptroller General approval shortly. The remaining primary units have been studying all phases of their accounting functions preparatory to revising the systems now in use.

Efforts were continued toward achieving the Department's target date of fiscal 1961 (1962 for the Bureau of Public Roads) for implementing cost-based budgeting.

As a consequence of emphasis given by the Office to the advantages of synchronized classifications, both budget activities and organizational components now have accounting support in all but one of the primary organization units.

EMERGENCY PLANNING COORDINATOR

The Emergency Planning Coordinator is responsible for development of the Department's plans for continuity of its essential functions in the event of a national emergency, coordination of the development and execution of the Department's plans for civil defense activities, and assistance in natural disasters.

During fiscal 1958 the Emergency Planning Coordinator:

Coordinated the activities of all participating departmental organizations in Operation Alert 1957, established an organization for the receipt and dissemination of damage intelligence, and prepared a report for and participated in the critique of Operation Alert 1957.

Continued the development and training of the Department's Communications Corps and arranged for its participation in training exercises and tests.

Expanded radiological defense training throughout the Department and made available the Department's instructors and course of instruction to other Federal agencies.

Participated in the national phase of Operation Sentinel II, held at FCDA headquarters.

Participated in the revision of national planning for assistance by Federal departments and agencies in natural disasters.

Arranged for a series of briefings for Secretarial Officers and key personnel of all primary organizations of the Department on the "threat" to our Nation and the capabilities of our Government to meet that threat.

Developed plans for the administrative support of the emergency transport and production organizations.

Planned for and coordinated the Department's participation in the first phase of OPAL 1958 and continued the coordination of planning for the second and third phases.

Continued the development of relocation sites and emergency warehouse stockpiling by utilization of surplus property and materials.

OFFICE OF PERSONNEL MANAGEMENT

The Office of Personnel Management is responsible for coordinating personnel management throughout the Department of Commerce. This includes management direction and control of the personnel program, formulating and issuing policy, compensation, staffing, employee performance evaluation, employee development, employee relations and services, employee recognition and incentives, personnel records and reporting, and evaluation of the personnel program.

Employment in the Department increased from 52,250 to 56,556 during the 1958 fiscal year. This increase was due primarily to expansion of the programs authorized by Congress for improved aviation service and facilities and for the public highway system.

The Office furnished guidance on personnel policy and procedure to bureau personnel through the issuance of 12 administrative orders and 68 information bulletins. In addition, it prepared analyses and recommendations on 41 items of proposed legislation involving personnel management.

In the area of compensation, the Office assisted in the development of job evaluation standards for 14 different occupational fields of special importance to the Department and reviewed and evaluated job standards prepared outside the Department for 27 additional occupational fields.

The staff participated in an interagency study which led to issuance by the Civil Service Commission of procedures to streamline operations under the Classification Act of 1949 and reduce paperwork.

A survey was conducted of the need for top-level positions (above GS–15) throughout the Department, and statements were prepared for the Civil Service Commission and for the House Subcommittee on Manpower Utilization, Committee on Post Office and Civil Service.

Virtually all regular positions in the Department were reviewed during the year in order to insure correctness of classification and compensation.

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In the area of local prevailing rate compensation four major projects are noteworthy. A new pay plan was developed for vessel employees of the Coast and Geodetic Survey, in line with the rates paid in the maritime industry. A revised supervisory pay plan for wage-schedule employees was adopted for Departmentwide application. A salary standardization survey conducted at several installations in Alaska resulted in the establishment of three separate pay areas with separate schedules for each. The Department's representative served as chairman of the Interdepartmental Lithographic Wage Board, an organization to achieve uniformity in job standards and pay rates for printing and reproduction employees in the Washington, D. C., metropolitan area.

In the area of staffing, the Office developed guidelines and schedules for the establishment and operation of individual merit promotion plans for the several bureaus and offices of the Department and set forth the standards and procedures to be followed in establishing areas of consideration, qualification standards, evaluation methods, and selection methods. In addition, it developed guidelines and procedures for the use of paid advertising in the recruitment of scientists and engineers in critical shortage occupations.

The Department continued active support of the National Defense Executive Reserve Program. Reserve units have now been established in the Office of the Secretary, Business and Defense Services Administration, Bureau of Foreign Commerce, Maritime Administration, Defense Air Transportation Administration, Bureau of the Census, and Weather Bureau, and plans have been worked out for a unit in the Bureau of Public Roads. The number of Reservists designated increased from 403 to 825 during the year.

Throughout the Department employee development was generally limited because of the lack of legislative authority for training and for payment of the expenses of attendance at meetings and conferences. (This lack was remedied by the Congress on July 7, 1958, just after the close of the fiscal year.) Reading improvement, writing improvement, and report writing training courses were offered, however, in addition to the regular orientation and supervisory training courses in most of the bureaus.

Under the President's Fund-Raising Program for charitable purposes, a successful campaign was carried on. Contributions from Commerce employees for the National Health Agencies and for CARE and the Crusade for Freedom in the Washington metropolitan area aggregated more than $40,000, the largest amount contributed by any of the civilian agencies in the area.

Cash awards aggregating $256,915 were granted to employees for their contributions to efficiency, economy, and effectiveness in the public service. The estimated value of contributions under the incentive awards program was $853,176.

Eleven gold medals were awarded for Exceptional Service and 105 silver medals for Meritorious Service. Ninety-five awards were made for special

acts or services, 1,468 for superior performance, and 1,096 for meritorious suggestions.

The largest suggestion award of $1,000 was given to two Maritime Administration employees who developed a device to remove dry scale from the tanks of laid-up ships. First year savings were $75,000, and during the next 3 years savings are estimated at $600,000. In addition, the device has eliminated previously existing safety hazards, will permit conditioning of the fleets in much shorter time, and will reduce repair costs in the future.

The Civil Service Commission completed an inspection of personnel management activities in all bureau headquarters. The Office reviewed the reports of the Commission and took appropriate follow-up action on all recommendations and suggestions. Bureau self-evaluation reports, prepared in accordance with Administrative Order 202–42, proved to be helpful both to the bureaus and to the Commission in identifying areas of personnel management where further attention is needed.

OFFICE OF PUBLICATIONS

The Office of Publications provides central review and control of publications, formulating editorial and distribution policy and promoting the sale of the Department's publications. It also supervises the printing done in and procured for the Department and operates an offset plant and related facilities with volume of $962,000 in fiscal 1958.

Sales of Commerce publications through the Superintendent of Documents system rose by $121,000 to $1,700,000 in fiscal 1958, a new record and again the greatest of any department, accounting for 26 percent of his sales. Including maps and charts, patents and trademarks, and technical reports sold by the Department itself, sales of Commerce printed materials rose by $224,000 to $4,099,000, also a record.

The Publications Division handled 228 publications-project proposals with estimated printing costs of $507,000. Of the project total, 195 were approved, 29 approved with conditions, and 4 withdrawn.

Continued modernization of equipment and streamlining of operations in the Printing Division helped make it possible for the Division to absorb a $50,000 increase in wage payments and contributions to the Civil Service retirement fund without increasing prices. The number of employees was unchanged.

The Forms Design and Standardization Staff started work on forms for the Censuses of Manufactures, Business, and Mineral Industries. It also did advance work on developing forms for use with the Bureau of the Census FOSDIC machines.

The Office completed issuance of its *Handbook of Publications and Printing* with three issuances directed to management—on the Department's publications policy, economies, and legal considerations. All 17 separate sections were reissued in a single volume for those concerned with all phases of publishing and printing procurement.

Office of the Under Secretary

The Under Secretary of Commerce serves as the principal deputy of the Secretary in all matters affecting the Department of Commerce and exercises general policy direction over its bureaus and offices. In addition, he gives particular attention and policy guidance to the Coast and Geodetic Survey, the Patent Office, and the National Bureau of Standards, which are directly responsible to him.

COAST AND GEODETIC SURVEY

The Coast and Geodetic Survey is responsible for surveying and charting the coastal regions of the United States, its Territories, and possessions. It provides a framework of geodetic control in the interior of the country and in Alaska to be used as starting points for mapping and for engineering construction; compiles and publishes observational data on tides and currents; makes observations of the earth's magnetism; investigates earthquakes and their destructive effects; and compiles and publishes aeronautical charts for civil and military aviation.

The basic program of the Bureau was carried forward during the year in every department of its normal activities. In addition, it participated in the International Geophysical Year program in several areas of its assigned responsibilities.

Hydrography, Topography, and Tides

Surveys of coastal waters were continued by 15 vessels and 2 field parties in widely scattered areas along the Atlantic, Gulf, Pacific, and Alaska coasts, and in the Hawaiian Islands. More than 100,000 square miles of hydrography were completed.

Major accomplishments of the year include detailed surveys of Georges Shoal, Cultivator Shoal, and the eastern half of Georges Bank off the coast of Massachusetts; and completion of the survey in Narragansett Bay, R. I., the offshore surveys around the Hawaiian Islands, and the first basic survey of Port Heiden on the north coast of the Alaska Peninsula.

Special surveys were accomplished in the St. Johns River, Fla., for the Department of the Navy; in Ashley River, S. C., for shipping interests; and in Guemes Channel, Wash., for an oil company in advance of passage by tankers of 46-foot draft. A survey of the approaches and the lower reaches of the Columbia River is in progress for the Department of the Army.

Other hydrographic surveys were in progress along the coast of Maine; in the vicinity of Nantucket Island, Mass.; in Chesapeake Bay; in Tampa Bay, Fla.; in Tillamook Bay, Oreg.; and around the San Juan Islands, Wash. In Alaska, surveys were made in Clarence Strait, Sumner Strait,

and Soda Bay, Southeast Alaska; Prince William Sound; along the north coast of the Alaska Peninsula; and among the Aleutian Islands.

In support of the Bureau's nautical and aeronautical charting programs, topographic mapping by photogrammetric methods was conducted in the United States and Alaska. The aerial photographs and map manuscripts provide a permanent large-scale survey record of coastline changes which find application in various engineering studies and in the settlement of waterfront boundary problems.

Under the airport mapping program, field surveys and compilation were completed for 50 airports. Eleven new obstruction plans were published and 39 existing plans revised. A total of 421 modern airport obstruction plans are now on issue.

A special project, which comprised mapping an approximate low-water line and adjacent land areas of most of the Gulf coast of Louisiana, was completed for the State of Louisiana and the Department of the Interior for use in the administration of offshore oil leases.

Of special interest is the large-scale mapping of the Chantilly Airport site for the Civil Aeronautics Administration. The maps constitute a base for the location of runways and other construction. Twenty-three square miles were photographed and 21 maps, at a scale of 1:2,400 and showing 2-foot contours, were surveyed, compiled, printed, and delivered in 5½ months.

The Bureau's system of control tide stations at selected locations provides basic observational data for tide predictions, surveying and engineering activities associated with mapping and coastal industry, and for scientific investigations. New stations were established at San Clemente Island, Calif.; and at Padre Island (south end), Aransas Pass, Galveston (outer coast), and Sabine Pass along the Texas coast. Five stations were also established in Long Island Sound for hurricane protection studies. Tidal records for 36 places in Latin America were received through cooperative arrangements with the Army Map Service.

Tidal current observations were obtained at 51 locations distributed in the waters of Georges Bank, New York Harbor, Chesapeake Bay, South Carolina, Florida, Washington, and Alaska, and at two Atlantic coast lightships. An intensive survey of currents, water temperatures, and salinities in New York Harbor was begun in conjunction with the Maritime Administration and the Atomic Energy Commission.

Four volumes of *Tide Tables* and two volumes of *Tidal Current Tables* were published to provide advance information on the tidal movement along the waterways of the world. Special tide tables for the Arctic were prepared at the request of the Navy.

Geodesy, Magnetism, and Seismology

Geodetic surveys were extended in unsurveyed areas of the United States where primary control for topographic mapping was urgently needed.

Additionally, several special-purpose projects were accomplished. Among these were highly concentrated triangulation, leveling, and astronomic surveys in support of the Air Force missile program; geodetic monuments along interstate highway routes in cooperation with several States; and the locations of Nike installations for the Army in three metropolitan areas. In all, approximately 3,000 new geographic positions were determined and elevations were established for 12,800 benchmarks, bringing the totals up to about 153,000 and 358,800, respectively, for the United States and Alaska.

The tellurometer—a precise, electronic, distance-measuring device—was employed for the first time by the Bureau for geodetic surveys in Alaska and in the United States. In the Aleutian Islands, on the south side of Atka Island, horizontal control was successfully established. A similar traverse is nearly completed around the perimeter of neighboring Amlia Island. The instrument was also used for measuring traverse lengths in Virginia and Maryland. There is every indication that the use of the tellurometer will result in substantial savings in time and money when compared with the conventional methods of making such surveys.

A trilateration proving ground, to provide highly accurate distances for testing electronic surveying equipment, was established in northern Virginia for the Fort Belvoir Engineer Research and Development Laboratory. It consists of a super-first-order triangulation in which the lengths and orientation were strengthened by precise geodimeter measurements and Laplace azimuths.

Astronomic operations were continued along the 35th parallel geoid profile as far west as the Texas Panhandle. Gravity surveys were extended over about 18,000 square miles in northern Minnesota and gravity base measurements were made between Ottawa, Canada, and Miami, Fla.

The Bureau's geomagnetic program furnishes information on the deflection of the compass needle and on other magnetic elements for use in navigation, for surveyors and engineers using compasses, and for other scientific purposes. Seven permanent magnetic observatories were in operation. Field parties obtained new magnetic observations at 79 "repeat stations," made intensive magnetic surveys of 54 compass-rose stands at air bases, and measured the magnetic declination at 22 other stations. Preliminary work was done on compiling the 1960 series of United States and world magnetic charts. A declination chart of South America was completed for the Army Map Service.

As part of its earthquake investigation work, the Bureau operated 8 seismographs for the detection of distant earthquakes, and collaborated in the operation of 12 stations in private institutions. By using instrumental reports from cooperating stations in this country and abroad, the Bureau determined and announced approximately 1,330 earthquake locations throughout the world. For engineering purposes, 65 strong-motion stations were operated in the western earthquake regions and 7 in Latin

America. The distant seismic effects of numerous atomic tests in the United States and Pacific islands, and several believed to be of Russian origin, were observed.

The seismic sea wave warning system for the Pacific area was continued in cooperation with civil and military agencies. Arrangements were made for incorporating the Chilean tide stations at Valparaiso and Easter Island into the system.

Nautical and Aeronautical Charts

The program of charting the sealanes and the airlanes was carried forward during the year with increased emphasis on present-day navigational needs. Although military requirements were less than last year, civilian requirements totaled 4 percent more for aeronautical charts and 12 percent more for nautical charts. At the end of the year there were 812 nautical and 1,492 aeronautical charts on issue, at various scales, to meet the different needs of the navigator.

Under the program of reconstructing and modernizing the Bureau's charts, 13 new nautical charts were issued. The reconstruction of the radio facility chart series, begun the previous year, was completed. There are now 19 charts in this series covering the United States instead of the former 10. This change was made necessary in order to show adequately the greatly increased number of radio facilities in use on the Nation's airways. The 3 page-size sheets of radio facility charts for the Hawaiian Islands were replaced with 1 standard-size folded chart. In the sectional chart series, 11 were reconstructed during the year.

Sixty-one million press impressions of multicolored, close-register printing were produced.

International Technical Cooperation

The Bureau continued its participation in the technical training programs for foreign nationals. Under international cooperation acts and other arrangements, 17 trainees from 8 countries were accepted; 12 trainees authorized under previous grants completed their training; 7 participants from other training agencies received instruction for periods of 1 to 4 months; and 98 visitors from 36 countries consulted with Bureau personnel and observed operations for 1 to 60 days.

The technical mission to Ethiopia was maintained to establish geodetic control in the Blue Nile River Basin. A Bureau seismologist carried out an advisory mission for the Government of Australia on seismic problems related to power and water supply works.

International Geophysical Year

The Bureau cooperated in the International Geophysical Year, preparatory work for which was done in fiscal 1957, through observational work in

geomagnetism, seismology, gravity, latitude and longitude, and oceanography. It is believed that important new scientific information has been collected.

The first 12 months of the national program included the operation of 7 temporary magnetic observatories, 14 semiautomatic magnetic recording stations, and 6 seismological stations. The installations are in complex arrays in the United States, Alaska, several islands of the western Pacific Ocean, and in Antarctica.

At a temporary astonomic observatory near Honolulu, T. H., under the latitude and longitude program, nightly measurements with a dual-rate moon camera and a high-precision astrolabe were made. These observations are coordinated in a worldwide program involving about 20 similar stations.

Arrangements were made to reactivate the tide station on Texas Tower No. 2 on Georges Shoal and to establish a new station on Texas Tower No. 4 off New York Harbor. Because of their offshore locations these stations will provide valuable data for the island observatory programs.

The Western Hemisphere World Data Archive Center for geomagnetism, seismology, and gravity was established, and worldwide exchanges of IGY data made.

Research and Development

The Bureau conducts research and development in the various fields of its activities in order to improve its instrumentation, equipment, and techniques, and to add to its general fund of knowledge. Wherever possible it makes use of new developments in private industry and adapts them to its specialized needs. Among the more significant studies and improvements were the following:

Modifying the radio current meter to record a velocity as low as 0.1 knot; heretofore, 0.3 knot was the lowest limit. This is particularly useful in harbor circulation studies.

Installing a device on the Bureau's tide predicting machine to semiautomatically type the predictions in a form suitable for offset printing, thus eliminating considerable work in preparing manuscripts.

Development of a semiautomatic tide curve scanner to speed up the processing of tide records.

Research into the cause of the unusual warming of the water along the West Coast and Alaska during 1957 and 1958.

Designing a telemetering apparatus for the remote recording of seismic disturbances.

Development and successful operation of a proton precession magnetometer and a rubidium vapor magnetometer employing a novel principle of atomic physics.

Installing high and low temperature facilities for testing instruments between −16° F. and +572° F.

Purchase of a new electronic position-fixing equipment for controlling large-scale offshore surveys.

Research is in progress on the development of sonic-sounding equipment to provide better definition of the sea bottom, and of a superior method for measuring velocity of sound through sea water in connection with echo sounding.

Development of an electronic computer technique for adjusting photogrammetric instrument data to conform to ground control points, resulting in a 40 percent increase in output and the use of a minimum of field control surveys.

Oceanographic research on submarine formations and processes along the continental margins.

Installing a new 23-inch by 36-inch two-color press for the more efficient printing of some of the smaller size charts and maps.

Improving engraving coatings on plastic sheets, halftone screens, and gradient tint negatives.

Plans and Recommendations

The Bureau's future plans include a continuation of the surveys of Georges Bank, Tampa Bay, and the lower Columbia River; a hydrographic, tide, and current survey of the Potomac River for pollution and water-quality studies; establishment of geodetic positions under the Interstate Highway program, special geodetic surveys in the Hawaiian Islands and Alaska, and studies for the establishment of horizontal and vertical control in the Glen Canyon area of the Colorado River in connection with large-scale mapping by the Bureau of Reclamation; operation of all phases of the IGY program for the remaining 6-month period, and a post-IGY Antarctic program in geomagnetism and seismology; operation of the World Data Archive Center; a program of monitoring atomic tests; measurements of the bottom currents at the edge of the continental shelf; and a study to increase the accuracy and economy of instrumental aerial triangulation from aerial photographs.

Plans for the next 10 years of hydrographic survey operations have been made. They are of sufficient flexibility to permit minor deviations such as local surveys of an urgent nature. Naval architects are making a comprehensive study to determine the most efficient type or types of vessels for the Bureau's survey missions.

The rapid development of civil aviation and modernization of the Federal airways system have shown a great need for expansion in the aeronautical chart field. In addition, a special study to determine the nautical chart requirements of the 7 million small-boat operators will be undertaken with a view to promoting greater safety.

The increasing value of coastal property gives added emphasis to the need for expanded tidal investigations to meet associated engineering and scientific problems. Due to the indications that the land in southeast Alaska is rising, plans for a tidal survey of the area to determine any changes in sea level are under study.

PATENT OFFICE

The Patent Office was established to administer the patent laws enacted by Congress in accordance with Article 1, Section 8, of the Constitution. The first of these laws was enacted in 1790, but the Patent Office as a dis-

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tinct bureau in the Department of State dates from the year 1802. In 1849, the Office was transferred from the Department of State to the Department of the Interior.

General revisions of the patent laws were made in 1836 and 1870, and since that date numerous acts of Congress relating to patents have been passed. These were revised and codified in 1952. The Office was transferred to the Department of Commerce in 1925. In addition to the patent laws, the Office administers the Federal trademark laws.

Patent Examining Operation

The Patent Office received 76,956 applications for patent and disposed of 85,457 during fiscal 1958. The disposals consisted of 52,868 applications allowed for the issuance of patent, contingent upon payment of the final fee, and 32,589 abandoned applications. There were 43,620 patents granted during the year and 1,711 allowed applications forfeited due to nonpayment of the required final fee. Allowed applications on hand June 30, 1958, awaiting payment of final fees numbered 20,128, and an additional 6,636 applications were in the process of issuance as patents subsequent to such payment.

There were 207,166 patent applications pending on June 30, 1958. This was 8,369 fewer applications than were on hand a year ago. While this reduction in backlog was not as great as originally contemplated in the 8-year improvement program of the Patent Office, it represents a significant degree of accomplishment in view of the staff situation which faced the Office during the year. As the result of turnover due to heavy losses of experienced examiners and the complete success in recruiting additional examiners to enlarge the examining corps to the full strength called for by the 8-year program, more than half of the examiner assistants had less than 2 years of experience in the Office. Between May 1, 1957, and November 1, 1957, alone, 345 graduates of technical courses in colleges and universities were employed as new examiners.

The consequence of rapid staff buildup was a drastic decrease in average productivity of examiners. This was due not only to the low contribution of new and inexperienced examiners, but also to the time spent by senior examiners in training, supervising, and instructing new men.

The heavy dilution of experience resulting from unprecedented enlargement of the examining corps in itself presented the Patent Office with the sizable problem of integrating and utilizing so many new examiners within the examining operation. This problem became a major challenge in the face of the commitments of the 8-year program which called for disposing of 100,000 applications a year, an average of 95 per examiner assistant. Although it was early recognized that this objective which had originally been established in 1955 could not be attained under the prevailing conditions of fiscal 1958, the Office aimed at making the best disposal

achievement possible while maintaining a high standard of excellence in examining work. Every reasonable technique was applied to accomplish this objective. An intensified training program was one of the major reasons for success in absorbing a large number of new men with relatively good results.

With an average disposal rate of 80 applications per examiner assistant over 85 percent of the total application disposal objective was attained. The 85,457 disposals during fiscal 1958 represent the greatest number for any year since 1933.

Other noteworthy gains made in the conduct of the patent examining operation during fiscal 1958 included not only substantial reduction in the number of applications awaiting action by the examiners but also in the average length of time they await action. On June 30, 1958, there were 88,714 applications awaiting action by the examiners. Representing a decrease of 17,676 during the year, this was the lowest number of applications awaiting action since 1945. In addition to these applications, the Office backlog includes applications in which the next action due must be taken by the applicant. These increased during the year from 46 percent to 52 percent of the total applications pending. The volume of applications in this condition is significant because it indicates that future disposals will be at levels higher than those which obtained in recent years. The proportion of pending applications in this condition at the end of the year was greater than at any similar time in the last 15 years.

The condition of work was greatly improved in regard to the length of time an applicant awaits action by an examiner upon his application. The maximum waiting time for action on amended applications was reduced during the year from 18 months to 12 months and, for new applications, from 14 to 11½ months. The average waiting time for the first action on applications was about 5 months, the same as a year ago, whereas for amended applications this time was reduced to less than 4 months.

The design division received 4,838 applications and disposed of 4,767. Both receipts and diposals were slightly larger than last year, but as disposals lagged behind receipts there was a small increase in backlog. There were 6,918 design patent applications pending on June 30, 1958. Grants of design patents for the year numbered 2,571.

Modernization of the patent classification system, which is also scheduled over an 8-year period, was conducted at about 50 percent of the level of operation contemplated in this plan for fiscal 1958. Experienced patent examiners who would normally be reassigned to perform these duties were not available in sufficient numbers to provide both for this need and the patent examining program. Their use in the latter was considered more urgent for reasons already considered. During fiscal 1958, an average of 69.5 examiner assistants were employed in the Classification Group. Of

this number, 24.1 were engaged in examining pending applications, 3.1 were assigned to current classification work, and 42.3 were assigned to reclassification work. Although there was an increase in manpower of 6.1 examiner assistants over 1957, the distribution of effort between the tasks was about the same as last year. Work was completed by classification examiners during the year in reclassification projects which involved the primary (original) classification of 79,904 United States patents and 10,999 foreign patents and the cross-reference classification of an estimated 178,715 patents. A number of these projects were commenced in earlier years and represent cumulative effort which was finished during 1958. As a result of this work, one new class comprising 531 subclasses, namely Class 62, Refrigeration, was promulgated and three new classes, Class 172, Earth Working, Class 196, Mineral Oils: Processes and Products, and Class 239, Fluid Sprinkling, Spraying, and Diffusing, will become effective early in fiscal 1959.

Trademark Examining Operation

The Office received 21,770 applications for the registration of trademarks. As an indication of the new goods and services entering commerce, it is noteworthy that this was a greater number of applications than was received last year and constitutes the largest volume of applications in any one year except fiscal 1948, the first year of operation under the present trademark law. There were 3,237 applications received for the renewal of registrations of trademarks and 556 applications for publication under the provisions of section 12 (c) of the Trademark Act of 1946 to obtain the benefits of that act for existing trademarks originally registered under prior acts.

The marks of 15,142 applications were published for opposition and 869 oppositions were received. Oppositions were fewer both in number and in proportion to published marks than last year. Thus, 5.2 percent of the published marks were opposed, compared with 5.9 percent opposed during 1957. The past 4 years have witnessed a continual decline in the proportion of marks opposed, reflecting both the more thorough examination of applications in the Patent Office and stronger policy on its part relative to the requirement for a showing of interest by potential opposers.

The Trademark Examining Operation disposed of 15,999 applications by registration for which were issued 15,969 Certificates of Registration, 15 of them being consolidated certificates which included 45 applications. Other disposals included 3,895 abandoned applications for registration, 3,122 renewals, 555 publications, and 499 miscellaneous applications.

On June 30, 1958, there were 12,678 applications awaiting action by the examiners, 7,006 applications awaiting response by the applicant, and 1,408 applications involved in *inter partes* proceedings or on appeal.

Continued improvements in the conduct of this operation included a thorough overhauling of forms, correspondence, and related paperwork

tasks, adoption of a new system for recording and controlling the inventory of pending applications, a more useful and meaningful reporting system, and the release for disposal of a substantial volume of expired registration files heretofore considered essential to retain. The format of the *Official Gazette* was modified to make a clearer distinction between the classes of marks published for opposition.

Public Law 85–609, approved August 8, 1958, created a new Trademark Trial and Appeal Board in the Office to conduct all adversary proceedings in trademark matters and to hear and decide appeals from the refusal of the trademark examiners to register marks. Appeals to the Commissioner are eliminated by this act, which provides for a single proceeding in the Office and appeal therefrom to the courts.

Research and Development

The Office of Research and Development gave particular attention to the practical and pressing problem of immediately developing usable search files in selected areas of technology. One such file covering steroid compounds was used through the year in a mechanized examining division which was established to conduct full-scale operational searches employing the experimental interrelated logic accumulating scanner (ILAS) designed by the research and development staff.

Mechanization of the resin art, another segment of the organic chemical field, was commenced and work had progressed to the stage of making pilot searches for compounds, minerals, and processes in extending mechanized systems to include polyethylenes. A dissimilar but compatible system was developed and tested for thiazines, but productive searching is not yet in operation because of the limited availability of machine time on equipment capable of handling its highly complicated logic. Preparations are being made for using the National Bureau of Standards SEAC computer in this program.

The search projects in operation are helpful not only in speeding the search of patent applications but also in developing information that is valuable both in modifying and perfecting the machines systems in use and in conceiving and developing more sophisticated systems.

Some of the other developments to which attention was given included the formulation of a system for search file access which is faster and affords other advantages over systems requiring a serial order search of an entire file; the creation of a syntactic logic compatible with the interrelated logic of the system employed in the ILAS; and the development of an unambiguous metalanguage which is believed to be fundamental to the extension of mechanized search systems to several broad fields of technology. A contract was let to a consulting firm for research on interim search systems and an evaluation of available commercial equipment usable with such systems.

Close cooperative effort was continued in furthering those projects in which the Patent Office and the National Bureau of Standards are jointly

engaged, and consultative assistance was given NBS as needed in conducting the related studies that bureau is independently pursuing.

Board of Appeals

The Board of Appeals received 8,139 appeals from the final decisions of patent examiners adverse to the granting of patents. This was 2,225 more appeals than was received last year. The increase approximately parallels the greater number of actions taken by the examining corps during 1958 compared with the previous year.

There were 6,124 appeals terminated, and on June 30, 1958, 8,028 appeals were pending. This number represents an increase of 2,015 appeals in the backlog of the Board, making this recognized problem a matter of even greater concern to the Patent Office. Various measures have been tried in efforts to cope with the rising backlog but none has been sufficiently satisfactory to warrant continuance. The ultimate limitation has been that the regular members of the Board must participate in deciding each appeal and this responsibility cannot be discharged with the competence required when such officers must spend much of their time training, conferring with, and reviewing the work of an unduly large number of temporary associates who are not fully conversant with these duties.

Legislation containing the needed remedial provisions was enacted after the close of the fiscal year. Public Law 85–933, approved September 6, 1958, permits an increase in the maximum number of Board members from 9 to 15 and authorizes temporarily designated Board members to be paid the salary of a regular Board member while so serving. With enlargement in the permanent membership of the Board of Appeals, it will be possible also to increase the number of designated members.

Operating Cost and Income

The operating cost of the Office for fiscal 1958 was $19,525,854, approximately $3 million more than for the preceding year. About half of this additional cost was due to new legislation of a general nature which affected the Office operating cost for the first time in 1958. This included the requirement for making contributions to the employee retirement fund and the increased salary rates of about 10 percent, effective January 1, 1958. During the year the Office received $6,973,885 in fees and deposits from all sources. Net income was about 1½ percent higher than last year and was equivalent to about 36 percent of total operating costs.

A Summary of Services

In the course of serving the public and agencies of government during fiscal 1958, the Patent Office:

Produced and supplied 2,121,303 photographic copies of records, patents, drawings, and other documents concerning patent matters, a substantial part of which was furnished for fees which totaled $487,770.

Prepared 29,079 reports and abstracts based on searches of assignment records and recorded 58,389 instruments conveying ownership of patents and trademarks or applications therefor.

Supplied 9,404,142 printed copies of patents and trademarks of which over 73 percent were sold, producing revenue totaling $1,354,687.

Provided 48,646 certificates attesting the authenticity of records furnished on order.

Rendered drafting services required in preparing or correcting a total of 12,376 sheets of patent drawings.

Plans for 1959

Future plans of the Office contemplate further substantial reduction in the backlog of pending applications for patent. The 8-year program which embodies these plans aims at reducing the number of applications on hand to approximately 100,000 by June 30, 1964. It is estimated that by the end of fiscal 1959 the backlog will be about 199,000 pending applications, representing a reduction during the year of 8,000 as a result of disposing of 85,000 applications while receiving 77,000 new applications.

Continued effort will be devoted to modernization of the classification system as an approach to increasing the effectiveness of the examining operation. An increase of about 50 percent in technical manpower available for this program is planned for fiscal 1959. The research and development staff will be about doubled in size over 1958. With the feasibility of mechanized searching already established in the limited applications previously described, this buildup is geared to the capability of this program advantageously utilizing additional manpower resources to extend mechanization and to intensify related studies.

NATIONAL BUREAU OF STANDARDS

The principal function of the National Bureau of Standards is the development and improvement of standards and methods of physical measurement. Other basic activities are the determination of physical constants and measurement of the properties of materials. To strengthen Bureau work in these primary areas, and to achieve a balanced research program, a consistent effort is being made to increase the level of basic research and to convert personnel from "other-agency" work to Bureau basic activities. This policy was reflected during the year in increased activity in high-temperature measurements and radio-frequency standards.

Accomplishments

Accomplishments for fiscal 1958 may be summarized as follows:

STANDARDS AND MEASUREMENTS.—Development of an absolute standard of capacitance accurate to 3 parts per million; establishment of a new resistance thermometry laboratory for calibrating temperature-measuring instruments; development of techniques for evaluating telemetering transducers used in missile and aircraft testing; initiation of a procedure for de-

termining corrections to the Bureau's standard frequency broadcasts in terms of an atomic standard of frequency.

PROPERTIES OF MATTER AND MATERIALS.—Development of a number of techniques for preparing very high purity materials and for determining very small amounts of impurities; completion of a long-range investigation of the thermodynamic properties of rubber polymers; extension of "nuclear parity" experiments into the problem of time reversal invariance in nuclear physics; redetermination of the gyromagnetic ratio of the proton, which should make possible more accurate knowledge of the fundamental constants of physics.

DATA PROCESSING SYSTEMS.—Completion of system design plans for the new NBS Pilot Electronic Data Processor. This general-purpose machine will process digital information at extremely high speed and will be used for experimental investigations of a wide variety of large-scale problems for the Government.

RADIO PROPAGATION.—Development of radio meteorology techniques which provide data important to the application of radar, missile guidance systems, and radio communication by "forward scatter."

FACILITIES.—Completion of an Electronic Calibration Center to service the master instruments and gages of the Department of Defense and other organizations; initiation of studies toward obtaining a nuclear research reactor.

The Future

Plans for the immediate future include: Completion of design and specifications for laboratories to be erected at the new Bureau site near Gaithersburg, Md.; operation of a nuclear research reactor; construction of a high-energy nuclear accelerator; high-accuracy calibration of large force measuring devices used in missile development; construction of the NBS Pilot Electronic Data Processor; continued strengthening of programs related to the Bureau's primary basic mission; and continued conversion from "other-agency" work to basic Bureau programs. Increased emphasis will be placed on high-pressure studies, high-temperature research, and the determination of basic data in atomic and nuclear physics.

Office of the Under Secretary for Transportation

The Under Secretary of Commerce for Transportation serves as the Secretary's principal adviser on transportation matters and is responsible, by delegation from the Secretary, for coordinating overall transportation policy within the executive branch. In addition, he provides policy direc-

tion for the transportation agencies of the Department and coordinates their programs and activities. These agencies are: Bureau of Public Roads, Civil Aeronautics Administration, Defense Air Transportation Administration, Maritime Administration, and Weather Bureau.

CIVIL AERONAUTICS ADMINISTRATION

Increased efficiency contributed to safe and fast handling of the ever-increasing volume of air traffic by the Civil Aeronautics Administration during fiscal 1958. The airways modernization and flight safety programs meanwhile continued at an accelerated pace as CAA's personnel increased by 4,295 to 25,805.

Air Traffic Control

The demands on the air traffic control system again increased during fiscal 1958. Aircraft operations reported by CAA traffic control towers numbered 25,756,365, a gain of 8½ percent over fiscal 1957. The number of fixed postings (aircraft position reports to CAA centers) increased 12 percent to 31,413,911.

To provide increased safety, certain existing transcontinental airways between the altitudes of 17,000 and 22,000 feet were designated as positive control airways. Within these positive control areas, all aircraft must operate on an instrument flight rules (IFR) plan with appropriate air traffic control clearance regardless of weather conditions.

Emphasis on training continued to provide for increased system capacity. Regional office training staffs were expanded to supervise the training programs more adequately. Facility training schools were established at all centers and at many major towers. Approximately 59 air traffic control instructor positions were authorized at these resident schools. More than 3,000 nonjourneymen airways operations specialists received facility area ratings. Approximately 2,700 new AOS personnel, including 1,500 who attended the Aeronautical Center, received training at field facilities.

Radar simulators were ordered in connection with the long-range radar program at ARTC centers, and the radar training program was accelerated throughout the system. Training activities in connection with the automation program and radiological program were established.

Radar en-route air traffic control was exercised at New York, Washington, and Chicago. A program for direct controller-to-pilot communications was implemented for all centers. There are approximately 546 direct controller/pilot air route traffic control center communications channels commissioned at 197 sites.

Radar arrival and departure services were expanded; 45 radar towers are in operation. The use of approach control communications to furnish landing information and traffic advisory service was expanded to include 37 locations.

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Four "polar" routes were designated from Los Angeles and San Francisco to the Canadian border.

Plans were completed to install three electronic computers and associated equipment to process flight data, calculate flight times, produce printed flight progress strips for air traffic control displays, and automatically exchange data between air route traffic control centers.

Action was initiated to procure bright radar displays to replace obsolescent World War II type indicators currently being used in radar traffic control facilities.

A new contract with the Flight Safety Foundation was negotiated to study human capacities in relation to performance on radar air traffic control.

Air Navigation Facilities

The Federal Airway Plan to provide a modernized air traffic control system was revised and extended through fiscal 1963. The revised plan covers 5 years of work and with an estimated cost of more than $1 billion. Empahsis is on improvements in radar for traffic control on communications, and on implementation of VORTAC (VOR combined with tactical air navigation) as the common system azimuth/distance navigation system.

During fiscal 1958, the second year of the Federal Airway Plan, $162.9 million was available for the establishment of air navigation facilities, about double the amount for fiscal 1957. New funds in the amount of $175 million were made available for fiscal 1959. The 1959 program was accelerated by advanced authorization of about $31.7 million which was released to CAA procurement and regional offices during the last quarter of fiscal 1958. The remainder of the fiscal 1959 program was assigned by the end of fiscal 1958.

Major elements of the 1958 program included 10 long-range radars, 15 airport surveillance radars, 346 VORTACS, 23 instrument landing systems, 4 high power homers, 50 approach light systems, 12 air traffic control towers, 54 VOR's, 7 aircraft standardizations for use in flight checking facilities at medium altitudes, and conversion of 3 teletypewriter systems to 100 words per minute.

Engineering plans were developed in coordination with military representatives for special circuitry and components to permit joint use of long-range radar facilities by CAA and the Air Defense Command at 20 locations.

The computer program, which will provide automation in air traffic control, was well underway. One system was completing final program and machine checkouts before being placed in operation in the Indianapolis ARTC Center. File computers were being installed at the New York and Washington ARTC Centers. Automatic strip printing machines were installed at four ARTC centers and one has been used successfully at the New York ARTC Center since the middle of fiscal 1958.

A contract for automatic flight inspection equipment utilizing computers in aircraft was awarded for use in five Convair aircraft. This permits flight evaluation of 1,200 ground navigational aids once every 30 days.

The flight inspection of air navigation and traffic control facilities is being accomplished by a fleet of 79 specially equipped basic aircraft. Of these, 5 Convair C–131E aircraft are used for flight checks at the intermediate levels of 10,000 to 20,000 feet and 2 B–57 jet aircraft for the altitudes above 20,000 feet.

Additionally, the flight inspection requirements of the Army and Navy are now being accomplished by the CAA.

The *United States Standard Flight Inspection Manual*, which describes flight checking procedures and outlines CAA navigation facility performance tolerances, has become a worldwide standard.

A program was underway for providing larger Air Route Traffic Control Centers for Cleveland, Atlanta, Jacksonville, Fort Worth, San Antonio, Chicago, Indianapolis, Kansas City, Minneapolis, and Oakland. Except at San Antonio where the existing building is being enlarged, the new center buildings will cost approximately $1½ million each, not including equipment costs. July 1, 1959, has been set as the target date for occupancy of the new buildings.

Successful maintenance of the existing Federal airways system of 4,585 facilities continued.

Flight Operations and Airworthiness

The first delivery of a United States-manufactured jet transport aircraft, the F–27 Fairchild Friendship, was made to West Coast Airlines in June 1958, and Pan American World Airways expects to receive their first Boeing 707 jet transport in August of 1958. Other manufacturers of jet transports, such as Douglas (DC–8), Lockheed (Electra) and Convair (880) met or exceeded production schedules. Two special boards and a turbine group continued to pinpoint jet problem areas and to work with manufacturers and air carriers on operating and maintenance problems for each specific jet transport prior to its introduction into actual service. Programs of both government and industry, representing in some cases 10 years of jet planning, were carried out on schedule or at an accelerated rate.

Type certificates were granted for 4 transports, 4 helicopters, including 1 transport type, and 16 small aircraft. In addition, 570 supplemental type certificates covering major modifications or substantial changes to aircraft were issued. Testing on the Boeing 707 jet transport and the Lockheed Electra turbo-prop transport remained on schedule with certification programed for August 1958. Sixty engines were certificated, including one rocket engine and the first United States-manufactured propeller turbine engine. Type approvals were also issued on 43 propeller models, among which was 1 having a rating of 4,900 horsepower, the highest ever granted for a United States civil propeller.

There was an increase of approximately 36 percent in the number of pilot and student pilot certificates issued in fiscal 1958. Sixteen selected inspectors received training in accident investigation and analysis at the University of Southern California.

The Medical Division was reorganized to cope more efficiently with medical and related problems, and special attention was devoted to the specific aspects of high speed, high altitude flight. The Civil Aeronautics Medical Research Laboratory was relocated from Columbus, Ohio, to the CAA Aeronautical Center at Oklahoma City, where facilities are available for continuing studies on medical problems, particularly as they apply to jet operations.

Airports

Development of design data for airports to serve turbine powered aircraft was emphasized. New or revised criteria were published in interim form pending completion of a revised *Airport Design* manual. The *Small Airports* booklet was prepared for publication in revised form.

The 1958 National Airport Plan published during the year indicates the need for the construction or improvement of 1,998 airports for general aviation, 824 airports for air commerce, 147 heliports, and 92 seaplane facilities—a total of 3,061 aircraft landing facilities.

Under the Federal Aid Airport Program, $63 million is available for each of the fiscal years 1957, 1958, and 1959. The program for fiscal 1959, released on March 21, 1958, allocated, $63,566,135 in Federal funds for 358 projects, making it the largest annual allocation under the Federal Aid Airport Program since its inception in 1946.

International Activity

At year's end international activities included administering the safety certificates of 14 United States international carriers and 47 foreign air carriers operating to or through the United States and supervising 33 repair stations holding United States certificates, of which 29 are foreign.

Technical assistance to foreign countries continues to show a steady growth. A total of 325 foreign participants from 41 countries received aviation training in the United States. Civil Aviation Assistance Groups are now established in 27 countries. The International Cooperation Administration has made available to the CAA approximately $4,850,000 for the procurement of aeronautical equipment for 18 countries.

International Civil Aviation Organization (ICAO) programs maintained a high rate of activity and at one time during the year 23 international meetings were being planned or coordinated. Worldwide adoption of the United States common system of navigation aids was aggressively pursued. At the ICAO European-Mediterranean Regional meeting, plans were adopted for the use of the VOR as a basic airways aid and 315 VOR installations were recommended.

Planning and Development

As the pace of planning for civil jet operations increased, the CAA Jet Planning Group produced its *Third Progress Report* and consolidated all its information for use when civil jets begin flying within a few months.

CAA's Technical Development Center accelerated its activity during the year, completing significant simulation studies of new jet transport planes introduced into the air traffic control system, increasing the capacity and utilization of its dynamic air traffic control simulator to handle the increasingly complex problems of the future, emphasizing developmental work on electronic computers for quicker solving of air traffic control problems, and completing studies on fire resistance and fire detection for pod-mounted jet engines.

Other Activities

During fiscal 1958 an increased number of employees, primarily in the air traffic control and safety functions, necessitated the expansion of technical training programs at the Aeronautical Center and Facility training schools. A supervisory-managerial skills training program is being implemented throughout CAA.

A system of improved program administration known as the Program Plan of Operation was installed. This system requires the realistic planning, direction, and evaluation of operations as well as the independent internal audit of management.

The Public Information Staff concentrated on informing the public of CAA's preparations for the jet age, including the rapid expansion and improvement of the air navigation and air traffic control system, and on assisting in recruiting the thousands of new personnel required. During the course of the year, reaching a climax in June, the Twentieth Anniversary of the founding of CAA was observed. This was an extremely successful vehicle for telling the CAA story.

Enforcement of the Civil Air Regulations resulted in the suspension or revocation of 598 certificates and the collection of $50,225, in civil penalties.

DEFENSE AIR TRANSPORTATION ADMINISTRATION

The primary function of the Defense Air Transportation Administration is to develop and keep current the plans and directions for the mobilization of the United States civil aviation resources in wartime.

The Defense Production Act and related orders delegate to the Secretary of Commerce authorities for allocations and priorities with regard to civil air transportation facilities. These activities have been redelegated to DATA. An allocation of airlift is made between the Civil Reserve Air Fleet (CRAF) for the direct support of the military in time of war, and the War Air Service Pattern (WASP), which is the continued commercial

operation of the airlines to carry war-essential traffic under an air priorities system. There is a periodic adjustment of the allocations to CRAF and WASP, dependent upon changes in the war plans of the Nation, essential industry needs, and changes in the inventory of aircraft. The DATA staff spends a large part of its time improving the efficiency and effectiveness of plans for mobilization of CRAF and WASP.

The CRAF includes about one-third of the long range, four-engine aircraft of the civil airlines, to be operated under contract in direct support of the Military Air Transport Service (MATS), and to be available to MATS as soon as possible but not later than 48 hours following activation, using civil aircraft, personnel, and maintenance facilities. DATA, MATS, and the airlines have cooperated on drawing up detailed operational plans and essential stockpiles for effective operation of the CRAF under current military emergency war plans.

The WASP is that part of the total airlift of the civil air carriers which would be required for a war economy. Planning has been accomplished by DATA and the Department of Defense for carrying only essential air traffic under an air priorities system, with policies jointly determined by the Departments of Commerce and Defense, and with administration within the Office of the Secretary of Defense. The system would require certification as to the essentiality and urgency of priority traffic.

The requirement for highly skilled aviation manpower in the event of civil aviation mobilization continues to present a critical problem. DATA is continuing to work with representatives of industry and the military in an effort to reduce the estimated shortage of skilled manpower. The Administrator of DATA serves as chairman of the Interdepartmental Aviation Manpower Committee, established by the Office of Civilian and Defense Mobilization (OCDM) to study the broad aspects of aviation manpower problems.

In addition to plans for the civil defense use of scheduled and nonscheduled airline aircraft for the CRAF and WASP, DATA participates in the planning for use of noncarrier transport-type aircraft owned by private individuals and corporations. These aircraft will be utilized through the National Emergency Defense Airlift (NEDA) plan, developed by DATA and coordinated with OCDM.

The Administrator of DATA serves as the Chairman of the United States delegation on the Civil Aviation Planning Committee (CAPC) of the North Atlantic Treaty Organization (NATO), and a DATA staff member is the United States representative on the Planning and Logistics Working Group of the CAPC.

MARITIME ADMINISTRATION

The Maritime Administration is responsible for fostering an American merchant marine sufficient to carry a substantial part of the waterborne

commerce of the Nation and capable of serving as a naval auxiliary in time of emergency or war. Its functions include the construction, repair, and operation of merchant ships, administration of operating- and construction-differential subsidy programs and other Government aids to shipping, the designation of essential routes for waterborne commerce, the maintenance of reserve fleets and shipyards, the training of merchant officers, and the direction of maritime research and development programs.

During fiscal 1958 continued efforts and resources were devoted to the development and promotion of programs which would achieve a well-balanced, modern, and efficient merchant marine. Considerable progress was made in (1) a planned long-range ship construction program providing for a phased-out replacement of current ships with modern, more efficient types in numbers adequate to meet the country's immediate and future requirements; (2) a progressive program to foster and promote the well-being of the American merchant marine through the administration of the operating- and construction-differential subsidy, insurance of loans and mortgages, trade-in-and-build and other forms of Government aid prescribed by the Congress; (3) a planned program for continual improvements in the efficiency and economy of the operation of the American merchant marine through the development of new ship designs and modifications to existing design types, including those concerning the hull, propulsion systems and auxiliaries, cargo-handling equipment, and other ship components and systems; and (4) a program devised to achieve increased improvements in the management of the agency.

In all areas the Maritime Administration continued to follow the basic policy of utilizing private initiative and capital to the utmost, with Government assistance and participation limited to the extent necessary to meet the economic and national security requirements of the maritime laws.

Aid to Shipping

The Government-aid programs designed to assist and encourage American-flag operators in the operation and maintenance of an efficient and modern American merchant marine were continued with significant results.

Among the most important were the accomplishments with respect to the construction of new ships and the replacement of existing ships with modern types. These programs also assure the retention of adequate ship construction facilities, management abilities, and shipbuilding workforce. New operating-differential subsidy contracts were executed with 4 operators providing for the replacement of 96 vessels. The replacement provisions of these contracts plus the replacement provisions in the contracts of the other 11 subsidized operators will provide for the collective replacement of 278 ships by 1972, at a construction cost approximating $4 billion.

Separate construction-differential subsidy contracts were executed with 4 operators for aid in building 15 new ships at an estimated construction cost of $167 million, and there was approved for trade-in 17 obsolete

vessels for an allowance of credit on the new construction of $21.6 million; construction aid was also approved in connection with the reconstruction of the SS. *Independence* and the SS. *Constitution* and 2 cargo ships, involving a total estimated cost of $13,267,619. In addition, there were executed 12 contracts providing Federal insurance of loans in the construction of 14 ships having a total estimated construction cost of $171 million.

Subsidy contracts were executed by the Federal Maritime Board with American Export Lines, Inc., to cover the construction of four new cargo vessels. A contract for the construction of two of these ships was awarded to the New York Shipbuilding Corp. through normal competitive bid process, and a contract was awarded to National Steel & Shipbuilding Corp. for the construction of the other two as an allocation under section 502 (f), Merchant Marine Act of 1936.

The base domestic cost of the two vessels being constructed by the New York Shipbuilding Corp. was $11,420,983 inclusive of national defense costs for each vessel. The estimated foreign cost of each such vessel was $5,878,075 exclusive of national defense costs, and the final construction-differential allowance was $4,832,779.

The Government will pay the cost of national defense features amounting to $151,475 and the increased cost of $558,654 representing the difference in cost between the bid for four ships and the award of two ships. The domestic cost of the other two vessels to be constructed by National Steel & Shipbuilding Corp. was $11,754,501 for each vessel inclusive of national defense costs. The estimated foreign cost of each of the two latter vessels was $6,174,959 exclusive of national defense costs, and the final construction-differential allowance was $5,110,470. The Government will pay the cost of national defense features amounting to $62,435 and the increased cost of $406,637 resulting from allocation of this contract under section 502 (f). Four vessels were traded in against this construction for a total allowance of $6,774,000.

Approval was given to an application of American President Lines, Ltd., for construction-differential subsidy to aid in the building of two new Mariner-type cargo vessels for operation in its subsidized service, at a base domestic contract price of $14,566,000 per vessel inclusive of national defense features costing $160,000, with a tentative construction-differential subsidy of 33⅓ percent, subject to adjustment when a final subsidy rate is developed, but not to exceed a construction-differential subsidy of 50 percent. A construction contract was awarded to the Bethlehem Pacific Coast Steel Corp., as an allocation under section 502 (f), Merchant Marine Act of 1936. Three vessels were traded in against the above construction for a total allowance of $4,050,000.

A construction-differential subsidy contract was executed by the Board with Lykes Bros. Steamship Co., Inc., in connection with the building of five new cargo vessels for operation in its subsidized services. The base domestic construction cost of each vessel amounted to approximately

$9,636,000 inclusive of national defense features costing $25,950, the estimated foreign cost per vessel being $5,330,000, and the final construction-differential allowance was $4,280,000 per vessel. Five vessels were traded in against this construction for a total allowance of $4.5 million.

Construction-differential subsidy contracts were executed with Moore-McCormack Lines, Inc., to cover the construction of four new cargo vessels. A contract for the construction of two of these ships was awarded to the Sun Shipbuilding & Dry Dock Co., through normal competitive bid process, and a contract was awarded to Todd Shipyards, Inc., for the construction of the other two as a result of allocation under section 502 (f) of the 1936 act.

The base domestic cost of the two vessels being constructed by Sun Shipbuilding & Dry Dock Co. on an adjusted price basis is $10,621,943 for each vessel inclusive of national defense costs. The estimated foreign cost for each such vessel was $5,550,190 exclusive of national defense costs, and the final construction-differential allowance was $4,573,733 per vessel. The Government will pay the cost of the national defense features amounting to $130,902, and the increased cost of $367,118 representing the difference in cost between the bid for four ships and the award of two ships.

The base domestic cost of the two vessels being constructed by Todd Shipyards, Inc., on an adjusted price basis was $11,012,421 for each vessel inclusive of national defense costs. The estimated foreign cost of each of these two latter vessels was $5,657,090 exclusive of national defense costs, and the construction-differential allowance was $4,573,733. The Government will pay the cost of national defense features amounting to $75,127 and the increased cost of $706,471 resulting from allocation of this contract under section 502 (f) of the 1936 act. Five vessels were traded in against the above construction for a total allowance of $6,285,500.

The Federal Maritime Board, in connection with the application of Grace Line, Inc., for aid under section 501 (c) of the 1936 act, authorized the payment of a construction-differential subsidy for the reconstruction of the SS. *Santa Eliana* and the SS. *Santa Leonor* from C2 cargo ships to container ships, for operation on Trade Route No. 4.

The Federal Maritime Board also approved the application of American Export Lines, Inc., for aid under section 501 (c) covering the reconstruction of the SS. *Independence* and the SS. *Constitution*, to provide for additional first-class passenger space, and authorized the payment of a construction-differential subsidy.

On June 30, 1958, there were pending from 8 American-flag operators applications for construction-differential subsidy contracts to aid in the construction of 22 cargo ships, 1 transpacific liner, and 4 tankers.

Federal Ship Mortgage and Loan Insurance

The Maritime Administration during the fiscal year 1958 executed contracts authorizing Government insurance of private construction loans

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by banks and other lending agencies aggregating $58,449,500, and private mortgage loans aggregating $133,328,465.

As of June 30, 1958, there were pending from 13 American-flag operators applications under title XI of the act for Federal Ship Mortgage Insurance aid covering the construction or conversion of 24 ships at a total estimated cost to the applicant of approximately $197,500,000, on which insurance has been requested covering estimated construction loans of $111,122,000 and estimated mortgage loans of $165,800,000. The proposed construction involves 4 tankers, 9 roll-on-roll-off cargo ships, 4 roll-on-roll-off ferries, 3 dry cargo ships, 1 trailer ship, 2 combination cargo-passenger ships, and 1 barge.

A default occurred in October 1957, involving the SS. *Carib Queen*, owned by TMT Trailer Ferry, Inc., for which a mortgage loan of $4,112,500 had been insured in December 1956. This default required the payment to the trustee of insurance in the amount of $4,087,292.58, consisting of principal of $3,947,416 and interest of $139,876.58. Upon default and foreclosure of the mortgage the vessel was acquired by the Maritime Administration.

Operating-Differential Subsidy

Effective January 1, 1958, the States Steamship Co. was awarded a 20-year operating-differential subsidy agreement to cover its operations between ports on the United States Pacific coast and ports in the Far East. This agreement includes the vessels of its subsidiary, Pacific Transport Lines, Inc., a subsidized operator. The operating-differential subsidy agreement with Pacific Transport Lines, Inc., was taken over by States Steamship Co. effective August 22, 1957, and terminated on December 31, 1957.

New 20-year operating-differential subsidy agreements were executed with Farrell Lines Inc., operating between U. S. Atlantic ports and the southeast and west coasts of Africa; Lykes Bros. Steamship Co., Inc., operating between gulf ports and the Caribbean, United Kingdom, Mediterranean, south and east coasts of Africa and Far East; and Mississippi Shipping Co., Inc., between gulf ports and the east coast of South America, south and east coasts of Africa, and Far East. These contracts, effective January 1, 1958, replace old subsidy agreements which expired or were terminated December 31, 1957. These contracts provide for, among other things, the replacement of each operator's current fleet of vessels.

As of the close of the fiscal year continued progress had been made in the negotiations with American Mail Line, Ltd., Gulf & South American Steamship Co., Inc., and the Pacific Far East Line, Inc., for the execution of new operating-differential subsidy agreements to become effective January 1, 1959.

Ship Operations

Throughout the fiscal year there existed a drastically reduced volume of oceangoing traffic. This situation resulted in a surplus of dry cargo tonnage and materially contributed to reduced charter hire rates and reduced sales values for both American-flag and foreign-flag ships. The worldwide charter hire rates fell below the Maritime Administration's fair and reasonable rates and generally were not compensatory for United States operators in the bulk trades.

The Federal Maritime Board and Maritime Administration took action to alleviate the situation insofar as was possible by effecting a reduction of Government-owned vessels under bareboat charter and adopting procedures, in connection with other Government agencies, whereby privately owned American-flag vessels receive priority in the fixing of cargoes under Government sponsored programs.

Ship Custody

At the close of fiscal 1958 there were 2,074 ships in the reserve fleets. During the year 361 ships were taken into the fleets and 176 were withdrawn, for a net increase of 185 ships.

Nuclear Ship

Considerable progress was made during the fiscal year in connection with the design and construction of the nuclear-powered merchant ship, the NS. *Savannah*, through the joint efforts of the Maritime Administration and the Atomic Energy Commission, acting within their respective spheres of responsibility.

The Maritime Administration and the Atomic Energy Commission directed continued efforts to achieving the design and construction of nuclear-powered merchant ships which would be economically competitive with ships having conventional power. To this end the staffs of these agencies were augmented by the abilities of some of the foremost research, engineering, and technical firms in the country.

Considerable efforts are being directed to provide the maximum safety to passengers, crew, and others on or near nuclear merchant ships. Involved are procedures for docking, loading and discharge of active and spent fuel waste, accidental emission of radioactive materials, handling of ship casualties, and related matters.

The total number of ships under construction, conversion, or on order in all United States shipyards decreased as a result of cancellations of contracts or postponement or suspension of construction due to the decline in traffic volume and oversupply of worldwide tonnage. However, the seriousness of the situation was considerably relieved by the progress made in the long-range ship replacement program of subsidized operators. In summary, the program showed that (1) at the end of fiscal 1958 there were

100 ships under construction or conversion or on order, providing approximately $1,109 million of work to the industry; and (2) of this number 19 ships, having a construction value of $287 million, were under construction or on order under the subsidized operators replacement program.

Maritime Training

The United States Merchant Marine Academy had enrolled in training during the fiscal year an average of 913 cadets, including 5 Latin-Americans, with 156 successfully completing the 4-year course of instruction. All graduates received United States merchant marine officer licenses, issued by the United States Coast Guard, as third mates or third assistant engineers of ocean ships. They also received bachelor of science degrees and, if qualified, commissions as ensigns in the Naval Reserve.

Ship Sales

During the fiscal year there was initiated, with the approval of the Department of the Navy, a program to scrap 200 of the least desirable of the 1,400 World War II Liberty-type ships in the National Defense Reserve Fleet. Under this program 26 ships were sold for scrapping purposes in accordance with authority contained in the Merchant Marine Act of 1936, resulting in a total return of $2.7 million.

BUREAU OF PUBLIC ROADS

The Bureau of Public Roads has represented the Federal Government in matters relating to highways since 1893. Reflecting the nationwide importance of highway transportation for better living, and for production, distribution, and defense, the Bureau's functions cover a broad range of engineering, administrative, and research activities. It administers Federal aid to the States for highway improvement, a program which has been in existence since 1916; supervises road construction in national forests, parks, and parkways; furnishes highway engineering aid to other Federal agencies; and advises foreign countries in highway planning and improvement.

A basic and continuing objective of the Bureau is to help the States plan and develop modern highway systems adequate for the Nation's growing motor transport needs. The general character of this cooperative Federal-State relations is well established by law and long experience, and the Bureau focuses much of its engineering and research efforts on essential aspects of highway planning, design, improvement, and operation.

During fiscal 1958 the Bureau and the States cooperated in planning and carrying out a record volume of highway improvement under the huge program launched by the Federal-Aid Highway Act of 1956. Attention and effort were devoted both to the Federal-aid primary and secondary systems and their urban extensions (the so-called ABC program) and to

the National System of Interstate and Defense Highways. This 41,000-mile nationwide network of superhighways will link nearly all cities of 50,000 population or more. Designed to handle 1975 traffic adequately when over 100 million vehicles are anticipated, the Interstate program proceeded on schedule during its second year, as did the ABC program.

The first of a series of estimates of the cost of completing the Interstate System was presented to the Congress on January 7, 1958, as required by the 1956 act. This estimate, prepared cooperatively by the States and the Bureau, showed a total Federal-State financing cost of $37.6 billion for the 38,548 miles then designated, as compared with the $27.6 billion provided for by the 1956 act. The 37 percent increase resulted from three major causes: (1) traffic forecasts were higher, necessitating more traffic lanes; (2) the 1956 act specified that local needs should be given equal consideration with interstate commerce needs, thus requiring many more interchanges; and (3) construction costs had risen 12 percent.

The cost estimate study, made on the 40,000 miles of the Interstate System routes approved prior to the 1956 act, determined by more accurate location that the route lengths totaled only 38,548 miles. The act had also provided for an increase in total system length to 41,000 miles. After consideration of additional routes proposed by the States and consultation with the Department of Defense, the Bureau announced on October 18, 1957, a tentative selection of 2,102 miles of routes. Throughout the year exact locations of these routes were discussed with the States concerned.

Another study reported to the Congress on January 7, 1958, was made in connection with the declaration, in the 1956 act, of Congress' intent to determine whether reimbursement should be made to the States for toll or free highways constructed on the Interstate System between August 2, 1947, and June 30, 1957. The act had authorized inclusion of toll roads in the Interstate System and the Bureau announced on August 21, 1957, that 2,102 miles of toll roads had been included as Interstate routes—most of the Nation's better-known turnpikes. Some of this mileage, however, was not eligible for consideration in the reimbursement study. The study, made in cooperation with the States, showed that 1,950 miles of toll roads and 8,909 miles of free roads, costing $6.1 billion, were eligible for reimbursement consideration. Most of these highways were recently built or are still under construction. The Bureau made no recommendations regarding the reimbursement problem.

Studies of highway safety and the equitable allocation of highway costs and taxation called for by the act, moved along on schedule during the fiscal year.

Federal-Aid Highway Act of 1958

The Federal-Aid Highway Act of 1958, signed by the President on April 16, 1958, continued the biennial authorization of Federal aid to the States for the ABC program, providing $900 million for fiscal 1960 and $925

million for fiscal 1961. These amounts are to be divided 45 percent for the primary system, 30 percent for the secondary system, and 25 percent for their urban extensions and to be matched 50–50 by the States.

This act authorized a special $400 million in Federal aid for primary, secondary, and urban highway improvement, with the provision that work with these funds must be under contract by December 1, 1958, and scheduled for completion by December 1, 1959. Instead of the regular 50–50 ratio of the ABC program, the $400 million is to be matched on a two-thirds Federal, one-third State ratio. An additional $115 million was authorized to aid the States in meeting up to two-thirds of their one-third matching share; but this is an advance, to be deducted from the States' fiscal 1961 and 1962 Federal-aid apportionments.

The 1958 act also increased the authorizations for the Interstate System program from $2 billion to $2.2 billion for fiscal 1959, and from $2.2 billion to $2.5 billion for each of fiscal 1960 and 1961. Interstate funds are matched on a 90-percent Federal, 10-percent State basis. Further, the act provided additional Federal participation where States undertook the control of advertising along the Interstate System under regulations to be developed by the Secretary of Commerce. Such regulations were being formulated at the year's end.

The 1956 act created a highway trust fund, to receive certain Federal highway-user excise revenues, and from which Federal aid to the States is paid. Net receipts of the fund in the fiscal year were $2.044 billion, close to the even $2 billion originally forecast. However, the long-term forecast patterns of trust fund income and Federal-aid payments do not coincide, and the "pay-as-you-go" clause in the 1956 act permits actual apportionment to the States of only that proportion of an annual authorization which can be met by the trust fund when money is needed for payments. Consequently, of the $2.2 billion authorization made by the 1956 act for fiscal 1960 Interstate Federal aid (and raised to $2.5 billion by the 1958 act), only about $1.6 billion could have been apportioned.

The 1958 act, however, set aside the "pay-as-you-go" clause for fiscal 1959 and 1960. It also authorized the Secretary, as provided in the 1956 act, to apportion the 1960 Interstate funds on the basis of the cost estimate reported above, each State to receive a share of the total apportionment equivalent to its proportion of the total cost estimate.

The 1958 act also authorized funds for construction of roads in national parks, forests, and other public lands and called for a study of forest highway needs. The study was being launched at the end of the year.

Federal-aid legislation has been a continuing series of some 40 acts amendatory to the original Federal-Aid Road Act of 1916. At the request of Congress, the Bureau prepared a codification, consolidating all pertinent legislation into one act. Its passage by Congress seemed assured at the end of the year.

Progress of Federal-Aid Highway Program

Progress of the Federal-aid highway program reflected the impact of the greatly increased authorizations provided in the 1956 act. To permit continuing advance planning of work, the Federal-aid funds for fiscal 1959, authorized by the 1956 act, were apportioned to the States on August 1, 1957. The amounts involved were $875 million for the ABC program and $2 billion for the Interstate System. The additional $200 million for the Interstate System for 1959 and the special $400 million authorization for primary, secondary, and urban work, provided in the 1958 act, were apportioned on April 16, 1958, the day the act became law.

A good indication of progress of the Federal-aid Interstate and ABC programs lies in the obligation of Federal funds. In fiscal 1958 a total of $2.75 billion was obligated for these programs. Interstate funds obligated amounted to $1.86 billion and ABC funds to $889 million. Measured by these accomplishments, the program is proceeding ahead of schedule.

Work completed during the year on the Interstate System cost $486 million, of which $384 million was Federal aid. Construction contracts were completed on 987 miles, but a considerable proportion of the funds spent was for preliminary engineering and acquisition of rights-of-way.

Completions of all classes of Federal and Federal-aid projects during the year accounted for the improvement of 24,204 miles of roads and streets at a cost of $1.99 billion, including $1.19 billion of Federal funds. Federal-aid primary improvements on 6,799 miles of highways cost $680 million, of which $356 million was Federal; Federal-aid secondary improvements on 15,008 miles of farm-to-market and feeder roads cost $444 million, including $229 million of Federal funds; Federal-aid urban improvements on 343 miles of city arterials cost $306 million, of which $154 million was the Federal share. Projects were also completed on 1,067 miles of roads in national forests, parks, and parkways, and on flood-relief projects, at a cost of $80 million, including $65 million of Federal funds.

In light of today's traffic volumes and tomorrow's needs, the miles of highway completed is not in itself a true measure of the facilities provided. Some 10 percent of the work was multilane expressways which are helping to relieve congestion in large cities and along major traffic corridors.

Research Activities

The Bureau carried forward its research studies of highway use, finance, and administration, and the broad array of physical problems associated with materials and methods of construction. The expanded highway program gives added importance to research seeking improvement in the design, durability, economy, and use of highways and structures.

A striking example is the American Association of State Highway Officials (AASHO) Road Test in Illinois, a $22 million investigation of the performance of both rigid and nonrigid pavements, and bridges, under con-

trolled traffic by vehicles of varied weights. The Bureau is actively participating in this project, which is sponsored by the AASHO, industry, and the Department of Defense, and directed by the Highway Research Board.

WEATHER BUREAU

The Weather Bureau is responsible for the issuance of severe weather and flood warnings, for the forecasting of daily weather changes affecting all parts of the United States and adjacent waters, and for observing, recording, and reporting weather conditions.

Each year brings additional demands for more weather services to meet the special requirements of our growing economy. During fiscal 1958 much of the new work of the Bureau was devoted to meeting the more pressing of these national weather service requirements. Recent developments in satellite and missile technology have also brought increased demands for greater meteorological research programs in order to keep abreast of national requirements in the coming space age.

Research Activities

Providing daily weather forecast and warning services to all the people in every county of the United States is an enormous task which requires an extensive network of observation and telecommunication stations and the issuance of thousands of forecasts every 24 hours.

Much of the daily work of the Bureau naturally involves the issuance and distribution of forecasts and warnings for the use of all citizens in planning their daily activities and in protecting themselves from unexpected storms and floods.

Recent improvement in general forecast services to the public in large measure is a product of earlier research and development work, and current research and development activities are expected to contribute greatly toward further improved national weather services.

Research activities of the Bureau, although modified by changing technological developments and service requirements, are directed toward reaching a better understanding of the atmosphere in order (1) to permit improved warnings of storms and floods for the protection of the general public; (2) to better our daily weather and river forecasting services; and (3) to provide our citizens with required information and services concerning the weather and climate of the United States.

Hurricane Research

For many years there was a great need for a systematic study of the mechanics of hurricane inception, movement, intensification, and decay to protect people in coastal areas by the issuance of more timely and accurate forecasts of tropical disturbances.

The National Hurricane Research Project, established at West Palm Beach, Fla., in 1956, has continued its concentrated attack on the hurricane problem with the help of leading specialists in tropical meteorology. A major contribution to this work has been the use of specially equipped Air Force aircraft for observing and recording great quantities of data at all heights and in all sectors of these dangerous revolving storms.

Already the data and experiences acquired by the National Hurricane Research Project have led to important discoveries on the makeup and behavior of tropical storms. For example, hurricane Carrie of 1957, which spent 16 days at sea, provided the Research Project with the first opportunity for *simultaneous* reconnaissance flights into a mature hurricane by all three of the Project's aircraft. Flying at separate levels up to 40,000 feet, two B–50's and one B–47 simultaneously gathered data that permit more accurate appraisals of previous hypotheses on storm structure, intensity, and movement and also have led to important revisions of long-held concepts of storm inception and behavior.

The large amount of new information on storms obtained by Research Project aircraft has been supplemented by expanded surface weather observing networks throughout the storm formation areas and by the strengthened storm vigilance of coastal radar stations.

Intensified research into the storm surge problem (the high storm tides accompanying tropical storms are the greatest danger to life and property) has revealed relationships between central storm pressures and subsequent tides that will lead to more precise forecasts of extreme tides for specific segments of our coastline.

The storm data collected so far also have revealed many new aspects of the physical structure within a hurricane. For example, it now appears that the major release of energy taking place inside a hurricane occurs within a small area close to the hurricane's center. This newly discovered major energy area is less than 1 percent of the wide area of such activity often pictured in earlier hurricane models. This and other information recently gathered relating to the energy distributions within hurricanes will help to evaluate current and future proposals to modify or divert hurricanes.

Other Severe Storm Research

Much effort was directed by the Weather Bureau during fiscal 1958 toward the development of plans for an effective research attack on the tornado and severe local storm problem. The aim is to improve storm warnings issued for particular points in specific time periods. These development plans also will have a bearing on further investigations of possibilities for the artificial modification and prevention of severe local storms.

Bureau scientists engaged in severe local storms research in Washington, D. C., and Kansas City, Mo., have made detailed studies of the small

scale (mesoscale) features of atmospheric behavior which have revealed some hitherto unsuspected aspects of intense local storms.

The Bureau tornado research airplane completed another season of successful probing of severe storm areas to provide data at various flight levels surrounding tornadoes and intense thunderstorms.

Experimental Doppler radar equipment, similar to types commonly used for speed monitoring work by highway police, was designed for Bureau use in detecting high-speed motions associated with tornadoes. This unique Doppler equipment was placed in field operation early in the severe storm season. On April 2, 1958, a tornado at Wichita Falls, Tex., passed within 5 miles of the Doppler set, providing the first concrete evidence that Doppler radar can detect tornado motions and distinguish them from surrounding, less destructive parts of storms or squall lines.

Weather research on hurricanes, tornadoes, solar radiation, and other fields also has been conducted during the past year at a number of universities and private research organizations under Bureau sponsorship.

Related Research

Research recently undertaken by the Bureau regarding severe storms extends from the microphysics of clouds and precipitation to broad scale weather systems making up the atmospheric circulation around the entire hemisphere.

The successful launching of American and Soviet earth satellites signaled a new and revolutionary approach to many fields of meteorological research. Satellites now make it possible, for example, to observe the weather from the top side of the atmosphere to supplement the usual observations taken from the ground or within the lower layers of the atmosphere. Plans for the direct measurements of the sun's energy absorbed and reflected by the earth and the air above us are expected to develop into a better understanding of the earth's heat budget and the driving forces that lead to changing weather around the world.

An important user of satellite-secured atmospheric data will be the General Circulation Research Unit of the Weather Bureau, which is now studying advanced and complex mathematical models of the general circulation of the entire atmosphere. A newly installed high-speed electronic computer permits the rapid computations necessary to simulate the movements of primary atmospheric circulations as well as the movements of changing weather regimes.

The Office of Physical Research is investigating the physics—or, more appropriately, the microphysics—of cloud particles, and the development of precipitation and electric charges within clouds. Such basic investigations are expected to result in further advancement of our understanding of such meteorological problems as quantitative precipitation forecasting, aircraft icing, air pollution, and drought. These studies also will provide

the more complete understanding needed about cloud processes to permit more satisfactory evaluations of attempts at weather modification or control.

Global Weather and the IGY

Under the meteorological program of the International Geophysical Year a great expansion in the worldwide collection of weather data has been possible in the past year. The frontiers of data coverage have been pushed further back into the world's vast barren and uninhabited areas (including the Arctic and Antarctic) and much data of great meteorological significance has been secured.

In cooperation with several other nations the United States established seven weather stations on the Antarctic continent, including one at the South Pole. The Bureau is operating the Antarctic weather central at Little America and has been assigned other major roles in the broad scientific program of the IGY.

Important weather observations from the top side of the world were taken by Bureau personnel located on floating ice-island "T–3" and from Station "A" on the Arctic Ocean icepack.

The Bureau has assisted in the operation of five upper-air sounding stations in South America under the IGY. These new stations, together with new and existing stations in the Western Hemisphere, provided a pole-to-pole "sentry line" of observing points, across which the moving weather of both hemispheres was measured.

Data from allied sciences such as glaciology and oceanography were obtained on a much more extensive scale and are being used by meteorologists in studies of climatic change and the important reactions and exchanges of heat and moisture between the atmosphere and the oceans.

Forecast and Warning Services

Throughout the year the Bureau maintained and strengthened its efforts to provide more accurate and more timely forecasts and warnings.

An improved and simplified system of coastal warning displays to warn navigation of dangerous winds and seas was introduced on January 1, 1958, at stations along the United States seacoasts, the Great Lakes, the Hawaiian Islands, and Puerto Rico.

Early in 1958 the Federal Communications Commission and the Air Force authorized the Bureau to make special use of existing national defense CONELRAD alerting procedures to alert radio and television listeners of emergency storm and flood warnings. During 1958 the CONELRAD facilities were used effectively in several localities to warn of approaching tornadoes. It is expected that many lives will be saved each year by the general use of the CONELRAD emergency weather warning procedures.

Additional modified war surplus radar equipment installed at 10 new locations led to improved short range forecasts and better warnings of severe local storms and heavy rains to surrounding areas.

Conferences held between representatives of the Bureau and State or local officials in 10 States in the Northern Plains and Great Lakes regions led to the establishment of additional cooperative storm-observing networks.

The Bureau has been making detailed studies of the meteorological needs of the aviation services in the jet age. A working plan through fiscal 1963 entitled "Design for a Modern National Aviation Weather System" was drawn up and coordinated with aviation groups in Government and industry.

Plans for a pilot project in agricultural weather service in the Delta area of Mississippi were developed after a comprehensive on-the-spot survey.

Bureau personnel in the United States Delegation to the Commission for Synoptic Meteorology of the World Meteorological Organization played a major role in developing plans for the establishment of a Northern Hemisphere Telecommunications Network. The network will consist of five centers, at New York, Frankfort, Moscow, New Delhi, and Tokyo. Each center will be responsible for the collection, transmission, and dissemination of weather data from its zone of responsibility to other centers and zones throughout the world.

Modern Meteorological Equipment and Observation Programs

Construction of 42 sets of new automatic tracking radiotheodolites for obtaining high level atmospheric soundings was undertaken. Plans were made for later evaluation tests under field conditions and associated facilities are being constructed.

Almost half of the 95 continuous-visibility and cloud-height measuring systems to be used at the Nation's busiest airports were delivered and installed.

Additional automatic teletypewriter weather reporting stations, especially equipped to flash weather reports from mountainous areas and part-time stations, were installed at Havre, Mont.; Meacham, Oreg.; Guadalupe Pass, Tex.; Raton, N. Mex.; Alpena, Mich.; and Rome, Ga.

The Bureau's program of atmospheric chemistry was expanded and observations of total ozone were started at Green Bay, Wis., and Caribou, Maine.

The continuing program of solar radiation observations was broadened through cooperative efforts with several scientific agencies and other countries.

Comprehensive tests of upper-air wind-finding equipment were held to compare and evaluate separate features of the latest equipment being used by the Bureau, United States military forces, and Canada. The test program permitted evaluations of various kinds of high level observing equipment designed to meet the needs of jet aviation.

Facilities at the Bureau's Observational Test and Development Center at Silver Hill, Md., were modernized to permit a more complete equipment test program. Field tests were made of several newly developed instru-

ments including: An infrared absorption hygrometer designed to measure precipitable water in the atmosphere; a continuous recording remote hygrothermometer for jet airports; a radar rain gage beacon; radiosonde recorder equipment; dial-type maximum-minimum thermometers; and various kinds of radiometers.

Construction of 31 high-powered newly designed weather search radars was well underway. Associated facilities such as towers and radomes have been procured. A total of 65 low-powered weather search radars was in operation at the end of the year.

National Meteorological Center

In February 1958 the Bureau reorganized existing analysis, forecasting, and numerical prediction units at Suitland, Md., into the comprehensive National Meteorological Center (NMC). This new center will coordinate and extend the use of high-speed electronic computing systems and data processing techniques to the entire field of synoptic meteorology, including both short period and extended period forecasting.

The NMC is composed of three branches, the National Weather Analysis Center, the Extended Forecast Section, and the Joint Numerical Weather Prediction Unit—all of which now have the use of analyses prepared by high-speed electronic computers.

A major improvement in the preparation of 5-day analyses and forecasts has resulted from the use of high-speed electronic computers. Automatic printing and analysis of 5-day data by machine techniques have permitted better use of scientific manpower devoted to plotting and map analysis work.

The broad weather analyses and facsimile map preparation operations in the Bureau's National Weather Analysis Center (NAWAC) have been furthered by the application of numerical and electronic computer methods. The past year has seen a gradual and progressive use of numerically computed prognostic charts in the weather services, and the trend for a further accelerated use of numerical methods now seems to be well established.

The entire professional staff of NAWAC at Suitland was given a thorough familiarization course on automatic data processing procedures.

Hydrological Services

The Bureau's modernized mainstream flood-forecasting program was extended to cover important coastal areas sometimes affected by hurricane-induced rains. The River Forecast Center at Augusta, Ga., took over flood forecast responsibility for the Macon, Montgomery, and Atlanta River districts. The River Forecast Center at Hartford, Conn., took over forecast responsibility for the Burlington and Portland River districts.

Headwater and flash-flood warning systems were added in Oklahoma, Iowa, Pennsylvania, Virginia, West Virginia, and Kentucky. These new

facilities provided excellent warnings during the year and resulted in noticeable savings of life and property during the floods of May 1958.

A working model of the newly developed mechanical analog—designed to permit faster streamflow routing in the preparation of flood forecasts—is being tested by several River Forecast Centers.

The Bureau continued to supply detailed estimates of hurricane potentials to the Corps of Engineers for use in the design of storm-tide protective works along the Atlantic and Gulf coasts. Plans were drafted for model community warning and evacuation procedures.

Two hundred wedge-type plastic rain gages were installed at key observing points to increase the density of available rainfall reports for use in flood and hurricane forecasting. Sixty newly designed visual rain gages that permit quick visual inspection by the observer while he remains indoors during heavy rainfall were also installed at points where frequent reports of rainfall amounts would be helpful in providing accurate flash flood warnings.

The 10 new completely automatic river gages installed brought the total to 80 such installations in the United States. This equipment makes river readings available by telephone and eliminates the need for human observation of river stages at frequent intervals during the day and night.

Climatological Services

The Weather Bureau's National Weather Records Center at Asheville, N. C., was designated as "World Data Center" for the collection of archives for the IGY.

The remarkable FOSDIC (Film Optical Sensing Device for Input to Computer) and the FOSDIC filmer, designed in cooperation with the Bureau of Standards to convert regular punchcards to 16 mm. microfilm at the rate of 420 cards a minute, has been placed in operation at the National Weather Records Center. The FOSDIC reader recovers information from the film for input to computers at the rate of 32,000 characters a minute.

At the request of the Department of Agriculture, the Office of Climatology provided a continuing climatological assessment of drought severity.

Area and State climatologists of the Bureau have been cooperating with groups of Agricultural Experiment Stations to develop and appraise the relationships between weather and climate with crop distribution and production.

Cooperation With Other Agencies

The increasing use of nuclear energy has required Bureau research and meteorological support of current activities of the Atomic Energy Commission. The research-operational units at the Nevada Test Site and at the National Reactor Testing Station and the Shippingport Atomic Power Station have been provided with Bureau observations and forecasts.

Studies are being made as to the effects of meteorological conditions on the travel and dispersion of radioactivity for both land-based and shipborne reactors.

The Bureau provided forecasts for operational fallout during the Pacific nuclear test series as well as during tests made in Nevada. Research work regarding fallout predictions was continued.

The Bureau supported Public Health Service studies of community air pollution and completed a pilot community survey in Louisville, Ky. This involved intensive meteorological measurements and their correlation with air quality measurements. Studies of meteorological situations conducive to high pollution levels were completed, and an experimental pollution forecast program was established.

The Bureau expanded its support program to Federal Civil Defense Administration activities by broad participation in the Federal Fallout Monitoring Network. Sufficient instruments had been received by June 30, 1958, to equip 70 Bureau stations to measure fallout radiation levels in the event of nuclear attack on the United States.

Plans were made to deliver radiological survey meters and dosimeters at approximately 230 additional Bureau observatories located throughout the Nation.

The Weather Bureau continued its cooperative program with the Department of Agriculture's Forest Service in investigations of the basic properties of thunderstorms and lightning-caused forest fires. Project "Sky Fire" at Missoula, Mont., seeks to provide further information on the electric field of thunderstorms and to obtain data concerning the possible effects of cloud modification on the reduction of fire hazards by lightning in forested areas of the Far West.

Future Plans

In recent years there have been several important advances in the development of modern meteorological equipment. These advances concern weather-search radar, storm-spotting satellites, cloud photography rockets, globe-circling balloons, ocean weather buoys, television weather briefing, high-speed telecommunication devices for the exchange of weather data, automatic weather observers, electronic weather data-processing machines, electronic computers to forecast the weather, and many other new weather observing, recording, or analyzing devices.

Further light on hurricane formation, structure, and movement has resulted from data gathered in the past 3 years by the National Hurricane Research Project through aircraft reconnaissance, expanded observational networks, radar photography, and intensified storm surge research. Bureau scientists expect that continued research will unlock many of the remaining secrets of hurricane formation and behavior and that more precise forecasting of storm intensity and movement will be forthcoming.

This additional knowledge of the detailed physical structure of hurricanes also will permit more satisfactory evaluations of proposals for hurricane modification.

The results obtained from the use of weather search radar—including the experimental use of Doppler radar during the past tornado season—have shown that radar will be one of the most important observing tools ever made available to the storm forecaster.

Plans are being made to meet the new and specialized service demands of jet aircraft operations. The Bureau's comprehensive plan entitled "Design for a Modern National Aviation Weather System" offers a detailed programing guide for the establishment of meteorological services and facilities designed to meet the growing and rapidly changing requirements of the aviation services.

New applications of modern high-speed electronic computers and data-processing methods offer great promise for improved weather forecasts covering advanced periods as far ahead as 1 month.

Office of the Assistant Secretary for Domestic Affairs

The Assistant Secretary of Commerce for Domestic Affairs is the Secretary's principal assistant in fostering, promoting, and developing the domestic industry and commerce of the United States. Under the Secretary, his function is to assure that the domestic program and activities of the Department result in the fullest contribution to a sound economy.

The Assistant Secretary of Commerce for Domestic Affairs serves the business community in gaining proper representation of business views, opinions, and problems in governmental affairs. Stability and growth of the Nation are promoted through the maintenance of a proper economic environment in which free competitive enterprise may grow and prosper. These views and opinions play an important part in the policymaking and guidance of the Business and Defense Services Administration, Office of Field Services, Office of Technical Services, Office of Area Development, Office of Business Economics, and Bureau of the Census.

OFFICE OF AREA DEVELOPMENT

As a focal point in the Federal Government where communities can get help on economic development problems, the Office of Area Development counsels on problems of industrial development financing, techniques for organizing community action programs, industrial parks, and location re-

quirements of growth industries. It prepares and distributes technical data and publications dealing with various aspects of industrial development; supplies information on Federal programs that would strengthen local economies, and makes available data and research results of the various governmental departments.

State and Community Counseling

Counseling to community, State, and regional development organizations continued at a high rate in fiscal 1958. Technical assistance concerned with industrial and area development problems was requested and supplied to 701 communities throughout the 48 States, about 50 percent of the requests coming from labor-surplus communities. The requests involved counseling on how to develop new industries as a means of diversifying local economies, guidance in creating new employment opportunities in low-income and exhausted mining areas, and industrial and area development assistance to labor-surplus communities.

The office acknowledged an increasing number of requests for staff advice within individual communities. Staff members, usually accompanied by officials of the State development agency, met with chambers of commerce, industrial development committees, regional groups, and many others to explain development techniques which have been successfully used in various parts of the country. Usually these conferences resulted in an informal report which outlined actions the communities could take to develop their industrial potentials.

Participation in the rural development program of the Department of Agriculture was continued. The special technical assistance materials developed in the Office were used to help rural communities identify their undeveloped commercial, recreational, and industrial potentialities. The Office continued to bring to the attention of industry the special advantages available in many local industrial efforts.

The Ninth Annual Washington Conference was held by the Office to bring together officers of the State development agencies with officials of Federal programs that are linked to State development and growth. These meetings provided an opportunity for frank discussion and exchange of ideas between important public officials and for informing officers of Federal actions within the States.

Industrial Location and Site Development Counseling

OAD serves also as a central point within the Federal establishment where manufacturers, community development groups, and others can obtain technical and advisory services on plant location and site development problems. These services include: Advice on how to plan and conduct industrial site surveys; an informational library of locational data on regions, States, and labor surplus communities; a catalog of Federal data useful in

plant location analyses; advice to manufacturers on the security and defense aspects of plant locations; and advice on industrial zoning problems and on the development of planned industrial parks.

The security and defense aspects of its industrial location counseling were carried out under an assignment to OAD by the Office of Defense Mobilization. In connection with this program, data compiled by an interagency committee were used as basic reference criteria, thus making it possible for manufacturers to get in one place the latest thinking on the security factor of plant location.

On all phases of industrial location and plant site development, the Office provided assistance and guidance to over 400 individual companies, governmental agencies, and development organizations. Staff members met frequently during the year with regional and national organizations to discuss trends and techniques in plant location work. The Office also prepared a number of releases, useful to both manufacturers and communities, on successful experiences in plant site selection.

Technical Publications

The industrial-location trend studies initiated the previous year were completed and now give supporting data for the community counseling program of the Office to meet direct inquiries from community and industrial leaders. The series features reports on growth rates between 1947 and 1954 for the chief expanding-industry categories and some individual product classes, classified according to regional, State, metropolitan, and nonmetropolitan areas. A new series of publications on the location of manufacturing plants arranged by kind, size, and location was initiated and scheduled for publication in fiscal 1959.

The increasing interest in local area and industrial development was reflected by the growing popularity of other publications of the Office. Many communities found ideas in the new booklet *Your Community Can Profit From the Tourist Business*. The Office, with the help of the State planning and development agencies, also compiled for the use of the Congress a list of local development corporations having available capital for investment in new enterprises and industrial plants.

In line with its continuing services to State and local groups, the Office helped in the local sponsorship of "New Products, New Methods, and New Patents" exhibits.

BUSINESS AND DEFENSE SERVICES ADMINISTRATION

The Business and Defense Services Administration at the close of the 1958 fiscal year consisted of the Office of the Administrator, 24 industry divisions, and the Offices of Technical Services, Field Services, Industrial Mobilization, Distribution, and Construction Statistics.

The normal basic functions of the BDSA are fourfold:

To foster and promote domestic industrial production and distribution—generally, to promote maximum production, employment, and purchasing power within the domestic economy.

To serve as a focal point for commercial and industrial firms to seek information and advice as well as a place where they may express their points of view on matters of national concern, such as import impact, taxes, credit, inflation, costs, shortages, surpluses, and many related subjects of an economic nature.

To support national defense programs.

To engage in nonmilitary defense mobilization planning and the development of programs to meet all emergencies.

In a period of fluctuations in domestic production and distribution, of international tensions with the Soviet bloc, and of economic competition with the Soviets in neutral uncommitted countries, BDSA is in a position to advise other Government agencies and the President on the strengths and weaknesses of our industrial and commercial economy.

Operations and Accomplishments

In a wide range of business and industry areas, BDSA issued a series of economic and technical publications and carried on domestic and world trade and marketing studies and market impact studies of proposed sales of Federal surplus property. It also provided advice and recommendations to other Government agencies on their activities which affect business stability and markets; cooperated with the Department of Defense in endeavoring to lessen the impact of domestic surplus military property; and responded to extensive and widely varied inquiries from business firms for information, advice, and consultation.

In response to Congressional requests BDSA prepared two special reports: *Pulp, Paper, and Board Supply Demand*, dated June 9, 1958 (supplemental study to the June 7, 1957, basic report), presenting a complete reappraisal of the world newsprint situation through 1960; and *Supplemental Report on Iron and Steel Scrap*, dated February 21, 1958 (supplemental to the January 31, 1957, report on Iron and Steel Scrap), confirming the tentative conclusion in the earlier report that under mobilization conditions the total future scrap supply would be adequate, though there could be shortages of some higher grades. This report completed the study requested by Congress and presented additional information regarding the generation of copper and aluminum scrap. The two scrap reports fill a need long felt by both Government and industry for data on an important aspect of the overall scrap situation.

The Office of Industrial Mobilization, with the assistance of the industry divisions, continued its current activities in support of national defense programs and in executing BDSA's nonmilitary defense mobilization responsibilities.

Noteworthy progress was made in the Executive Reserve phase of the industrial defense programs. This activity is designed to recruit, train,

and assign men who, in the event of an emergency, would constitute the nucleus of any future defense production agency. During fiscal 1958 the authorized complement of this body was increased to 1,500, of which 700 were formally designated and 185 more were being processed. The first National Defense Executive Reserve Conference, held in November 1957, was sponsored jointly by the Secretary of Commerce and the Director, Office of Defense Mobilization, and participated in by the President, the Vice President, the Secretaries of Defense, State, and Commerce, Director of the Bureau of the Budget, the Chief of Staff of the U. S. Army, and the Selective Service Director. Over 400 BDSA Executive Reservists attended. As the year closed, plans were going forward to complete the roster and to assign fully trained Reservists to the eight geographical regions of the Office of Civil and Defense Mobilization to cover production and distribution functions.

Marketing and distribution services are performed by the Office of Distribution, which serves as a central point within the Department for the distributive industries. This Office works closely with trade associations and professional groups serving those engaged in the distribution of goods and services. It cooperates with other units of BDSA, and other agencies of the Government in stimulating and promoting the development of a more effective and efficient system of distribution and improving the quality and availability of statistics and data of value to business and industry for scientific marketing.

The Office maintains a specialized distribution library as a support for research programs and other activities. In order to stimulate more widespread and effective use of market information, the Office issues the monthly *Distribution Data Guide*, which lists current basic Government and non-Government materials of interest in the field of distribution.

The Office discontinued publication of "Establishing and Operating" manuals and *Business Service Bulletins*, both of which functions were transferred to the Small Business Administration. Concurrently, program emphasis was shifted to an increase in basic distribution research and an expansion of activities in the dissemination of marketing data developed by Federal agencies. A major study on marketing in the United States, based largely on Government data was under way with publication planned for fiscal 1959. This study was designed to assist American manufacturers and distributors in selling in the domestic market and to assist foreign manufacturers in their trade with the United States.

Considerable time was directed to the development of methods of measuring inventories of survival items at the retail and wholesale levels.

In August 1957 the Office established a cooperative program with the European Productivity Agency for the planning and execution of training programs in the United States for marketing consultants, trade association executives, and others interested in improving distribution methods within EPA member countries based on observations of effective marketing tech-

niques used in the United States. During the fiscal year 3 missions including 55 individuals from 11 EPA countries participated in this program. In a subsequent evaluation conference held in Copenhagen, participants affirmed their appraisal of the significant value of this type of training and recommended that it be extended and expanded. At present it is anticipated that this program will extend into fiscal 1960.

The Office participated in the planning and execution of the President's Conference on Technical and Distribution Research held in September 1957 and later assisted regional and local groups in the development and conduct of area conferences dealing with the same subject.

OFFICE OF FIELD SERVICES

In carrying out its responsibility to serve business, the Department maintains 33 field offices to provide local points of contact for the services and facilities developed to promote commerce and industry. Representing the BDSA, Office of Business Economics, Bureau of Foreign Commerce, and Office of Area Development, the field offices executed the varied programs of these units in the broad field of both domestic and foreign commerce. In addition they made available the statistical output of the Bureau of the Census and acted as the official sales agencies of the Superintendent of Documents.

The added emphasis placed by American businessmen on an analysis of their markets and distribution patterns resulted in a greatly increased demand for basic material published by the Department as well as requests for the counseling services of specialized field office personnel. Utilizing the services afforded by the field offices were manufacturers, wholesalers, retailers, trade associations and chambers of commerce, research and advertising agencies, publishers, and foreign traders.

Another important development was the increased utilization of the reports and services of the Office of Technical Services for technological, scientific, and engineering research. A greater volume of requests for this type information was handled than in any previous year, an indication of the importance business places on research results already in existence.

More firms than ever before sought guidance and assistance on Government contracts. Utilizing the information published daily by the Office of Field Services in the *Synopsis of U. S. Government Proposed Procurement, Sales and Contract Awards*, manufacturers, producers, the construction industry, and technical research groups were aided in participating in the expanded defense procurement program.

The field offices continued the practical assistance required by those engaged in foreign trade to keep informed on changing economic conditions and markets throughout the world. Great interest was shown in the development of the European Common Market, trade and investment opportunities, foreign licensing arrangements, tariff and exchange problems, and export control. The active participation of an increased number of For-

eign Service officers on home leave in trade conferences set up by the field offices accomplished excellent results in providing American businessmen firsthand information on current conditions in many of our important foreign markets.

The continuation of the cooperative arrangements with nearly 700 chambers of commerce and similar organizations provided additional outlets for the services of the Department in practically every important commercial or industrial community throughout the country. This joint cooperative enterprise has been of great value to the business public as well as to the Department.

OFFICE OF TECHNICAL SERVICES

This Office collects technical reports of Government-sponsored research, reproduces them, and sells them at the cost of printing and handling to scientific and industrial laboratories and business enterprises. It also helps industries develop and agree upon commercial standards for their products as to quality, testing, and ratings; serves as the point of contact with trade associations and other nonprofit trade groups to encourage their cooperation with the Department and to obtain recommendations with respect to the domestic programs and activities of the Department; and brings to the attention of American inventors the technical problems of the national defense agencies.

Technical Information

The volume of Government-sponsored research exceeds $3 billion a year, representing a major share of all research conducted in the Nation. Most of this research is done for national defense. However, many technical reports growing out of research for the Army, Navy, Air Force, Atomic Energy Commission, and other agencies are of direct interest to American industry, for they describe new developments in such fields as metals, chemicals, plastics, electronics, textiles, ceramics, aeronautics, and nuclear energy. Many businesses—large, medium, and small—have obtained reports of Government-sponsored research from OTS which they have used in the development of new products and processes and in making important technological improvements.

Use of these reports by American science and industry has continued to increase. In the 1958 fiscal year approximately 30,000 more copies of reports were sold than during the previous year; approximately 270,000 reports were sold for $388,000, which covers the costs of reproducing and handling the reports. Yearly increases in sales grow out of expanded acquisition efforts and wider publicity regarding these reports in the business and trade press and through other media. They represent a wider use of these reports by all types of industries.

During the year 7,486 new reports were added to the OTS collection and made available to the public. This includes 4,280 reports acquired

from the Atomic Energy Commission which can be used by those companies engaged in development of the new nuclear industry. Over 48,900 inquiries were answered regarding technical reports in the OTS collection.

To make OTS reports more readily available for reference by the Nation's scientists and engineers, four more depositaries were established. These are at the University of Cincinnati; Detroit Public Library; John Crerar Library, Chicago; and Linda Hall, Kansas City, Mo. The three previously established are at the New York Public Library, Georgia Tech Library, and Carnegie Library in Pittsburgh.

The OTS staff of technologists continued to answer technical inquiries from American industry as well as to provide, under contract, technical information to the International Cooperation Administration for use in its program of assistance to underdeveloped countries.

Commercial Standards

The Commodity Standards Division printed 11 Commercial Standards and 4 Simplified Practice Recommendations and reprinted 8 others. Work is in various stages on the revision of 19 Commercial Standards and 9 Simplified Practice Recommendations and on development of 23 new Commercial Standards and 6 Simplified Practice Recommendations. The most active fields now are plastics, building products, and containers and packaging.

The program on standards for women's patterns and apparel has been successfully completed after 5 years of work. This standard will have far-reaching effect on all apparel buying in that the dress size is also used for garments other than dresses. It provides the means for fitting the maximum number of women with good-fitting clothes without the need for repeated try-ons and expensive alterations and cuts down on the number of returns of merchandise. Mail order houses have been using it successfully for several years.

Another very widely used standard on power cranes and shovels is now in printed form. This standard is used in other countries as well as in the United States.

Trade Associations

Since 1913 the Trade Association Division has been the Government center of information on all types of nonprofit organizations of business firms. Its directory of *National Trade Associations: 1956* has sold 25,000 copies. The Department has long assisted in the development of all types of mutual-aid endeavors by businessmen. The 2,000 associations listed in the 1956 directory is almost double the number of those in existence 20 years ago.

Continuing studies of associations, national and local, are being made in cooperation with the American Society of Association Executives and other federations.

National Inventors Council

The Council, continuing in its advisory capacity to inventors and the military establishment, expanded its program to enlist the Nation's creative ability on national defense problems. Through a more direct working relationship with the Armed Services, the Council assembled and published its largest compilation of problems to stimulate public interest in current military needs. Industrial firms and creative individuals responded with an increased flow of new and promising ideas, many of which are being integrated into military research and development programs.

Plans for the Future

BDSA anticipates increased requirements in its various activities in fiscal 1959 and beyond.

OTS has added a new Foreign Information Center to its Technology and Technical Information Divisions, and plans to issue 10,500 new technical reports from United States sources, and 7,000 titles and 40,000 abstracts and translations in fiscal 1959. Approximately 90 percent of the latter will be translations of Russian scientific articles. The National Inventors Council estimates that approximately 12,500 inventive ideas will be evaluated and that about 3 percent of these will be submitted to the military for consideration. The Commodity Standards Division, in connection with its work on 51 commercial standards and 33 simplified practices recommendations, expects next year to receive some 7,800 inquiries. The Office of Field Services—working in close cooperation in the field with OTS and other offices of BDSA, the Office of Business Economics, and the Bureau of Foreign Commerce—will reflect in its activities the work of those agencies as well as business economic conditions in their various locations.

The Office of Industrial Mobilization will continue its accelerated activities. The formation of the new, consolidated Office of Civil and Defense Mobilization, and the need for emergency planning on a more decentralized basis reemphasized the importance of the programs of this Office, particularly those relating to the development of emergency production controls, extensive survival-items surveys, other statistical studies, and participation in the training of the Executive Reserve for use during emergency periods and in Operation Alert programs.

The President's Conference on Technical and Distribution Research of September 1957 indicated a need for increased emphasis and attention to the development and utilization of marketing information of all kinds. The business recession early in 1958 also highlighted the importance of marketing and distribution in sustaining production and employment. In the light of these developments, the Office of Distribution was reorganized early in fiscal 1959 with a new Distribution Research Division to undertake basic research projects designed to provide new market information, which will assist the business community in the development of a more effective

and efficient distribution system. Greater emphasis will also be placed on the dissemination of current market data available from Government agencies in order that this national asset may be more widely used.

The 24 Industry Divisions of BDSA and related staff offices anticipated stepped-up requirements in all three of their principal functions. Within the limits of their ability they will be required to put full emphasis upon the economic analysis work in all fields of the domestic economy; upon the Government-business liaison functions; and upon their contributions to the nonmilitary defense mobilization program. To meet this situation the group has reprogramed and reorganized the activities consistent with the new requirements.

OFFICE OF BUSINESS ECONOMICS

The Office of Business Economics is basically engaged in economic analysis, utilizing for this purpose primarily the national income and product data which it originates. These national income accounts provide the framework for most of the major economic research projects that are directed by Government, by business firms, and by economic institutions, and aimed at furthering understanding of the workings of the Nation's economy. OBE carries the major share of responsibility for general economic analysis within the United States Department of Commerce.

OBE's national income accounts provide a comprehensive factual summary of today's complex economy, in much the same way that business accounts summarize the operations of a private company. They trace the flow of production from basic resources to finished products, and the flow of goods into consumption and capital equipment. They detail the types, industrial sources and geographical distribution of income, as well as its use for taxes, consumption, and savings. As an integrated body of data, they are essential to studies relating to the flow of goods and services throughout the national economy, since they form the basis for the appraisal of present and potential markets.

The work of OBE in this field was reviewed last year by a committee established at the request of the Bureau of the Budget by the National Bureau of Economic Research, which prefaced its report with a statement that such national accounts have become "one of the chief tools for the formulation of Government economic policy and of business policy." In recommending extension of the work developed by OBE since its inception by Senate resolution in 1932, the report commented that "market analysis as we know it today is hardly possible without national accounting data."

Included in the national income accounts, as part of the data underlying calculation of the gross national product, is OBE's compilation of data on the balance of international payments of the United States, carried on since 1922. This material on the Nation's international transactions constitutes a complete and systematic account of all types of economic dealings

between the United States and foreign countries, including merchandise trade, purchases or sales of services such as transportation and tourism, private foreign investments and their earnings, private remittances, the United States Government's foreign expenditures and aid programs, and changes in the monetary reserves of foreign countries. The work of OBE in this field of economic analysis provides a basic factual framework used by Government and business in forming their foreign economic policies.

The publication and distribution of OBE's economic intelligence is effected through its monthly publication, the *Survey of Current Business*, which is the most widely circulated economic periodical published by the Department of Commerce. Each issue contains an appraisal of recent developments as part of the 24-page section analyzing particular phases of economic behavior, together with 40 additional pages devoted to the consecutive presentation of approximately 2,600 key business indicators. The latter are kept up to date between monthly issues by separate weekly supplements.

From its wealth of data, OBE regularly derives measures of personal income, consumer expenditures, inventory movements and investment trends—to cite only a few of the analytical tools produced—for prompt distribution, in the form of releases under the serial title of Business News Reports, to newspapers and business publications. At least once each year major supplements to the *Survey* are published, as for example *National Income* and *Personal Income by States Since 1929*, which represent the results of several previous years' work.

Accomplishments in Fiscal 1958

The period from July 1957 through June 1958 encompassed both the peak of a 3-year rise in business and a subsequent sharp decline. As the alltime high was reached in the third quarter of calendar 1957, with gross national product at an annual rate of $446 billion, concern that a turning point had been reached heightened dependence upon OBE's facts and figures. The downward trend which followed brought increased speculation as to the dimensions and duration of the decline in progress. In some degree as a reflection of this change in the economy's direction of movement, the number of paid subscriptions to the monthly *Survey of Current Business* increased substantially.

As part of its policy of prompt publication of data so as to make information widely available rather than the subject of special requests, OBE distributed a 344-page *Business Statistics* supplement to the *Survey* in September 1957. Here was presented a comprehensive array of facts covering virtually every phase of the American economy since 1929, with descriptive material explaining the nature and utility of most of the basic business statistics in current use. Used in conjunction with the latest issue of the magazine itself, this volume provides each month's figure for the

past 5 years, together with monthly averages covering more than 20 prior years, for each of several thousand business barometers.

The task of incorporating the results of the 1954 Censuses of Business and Manufactures into the national accounts was completed last year with the issuance of revised income and output data. The pace of income and product expansion indicated by the previous estimates for 1955–57 was substantially confirmed; the revisions serve to accentuate the picture of strong economic recovery.

A full set of revised income and product data for the postwar period will soon be made available in a comprehensive volume entitled *U. S. Income and Output*, a forthcoming new major supplement to the *Survey of Current Business*.

The results of a unique study of the effects of private United States investments in fostering economic development abroad, in facilitating the flow of goods to the United States, and providing dollar-earning exports for foreign countries were published in a volume entitled *U. S. Investments in the Latin American Economy*. While the facts deal with Latin America—where the book value of United States investments has grown from $3 billion in 1946 to over $7 billion—the findings as to the effects of United States foreign investments have general application to other countries in which our investments have been a stimulating factor. Issued as a handy volume with over 100 charts in color, this study contains separate sections on Argentina, Brazil, Chile, Colombia, Cuba, Mexico, Peru, Venezuela, and Central America, as well as reviews of the development of such industries as manufacturing, petroleum, mining and smelting, agriculture, and public utilities. The first edition was exhausted shortly after publication.

Another publication dealing with American transactions abroad was completed by OBE last year and issued as the *Balance of Payments* statistical supplement. Here in a single volume of nearly 200 pages is provided the background for full understanding of the current data on the balance of payments and the major types of international dealings that are regularly reported in the *Survey* but for which historical data previously has been available only from several separate publications. This publication shows the total flow of funds and resources between the United States and other parts of the world by years since 1919, and on a quarterly basis, by geographical areas, since the end of World War II. United States Government grants and credits are presented for the whole of the postwar period by programs and by recipient countries.

At the request of the Philadelphia District of the U. S. Army Corps of Engineers, OBE prepared an intensive Economic Base Survey of the Delaware River Basin, which was submitted in final form in June 1958. In carrying out this project OBE undertook to analyze the economic characteristics, developments and trends of the Delaware area and to present

projections of future growth both for the Nation and that section. As this report presents OBE's first comprehensive regional measures for areas smaller than States, it is expected to be of wide utility to all engaged in the construction of regional gauges of economic trends. The findings will become a part of an extensive study of water resources of the Delaware River Basin to be submitted by the Army Engineers to the Congress.

The foregoing contributions were made in addition to the preparation of the contents of 12 monthly issues of the *Survey of Current Business*, with its accompanying weekly Business Statistics supplements. A complete record of the contents of the magazine during the past fiscal year will be found on the back covers of the December 1957 and June 1958 issues.

Notable among the articles published was one entitled "Analysis of Long-Term Markets—Measuring Product Trends and Potential" which appeared in November 1957. Its value as a demonstration of techniques used in market projections was widely recognized; when the available supply of copies of the magazine was exhausted, the article was reprinted by the Business and Defense Services Administration for further distribution to business and industry.

In a year of extensive discussion of long-term extension of the Reciprocal Trade Agreements Act, a January 1958 *Survey* article, "Foreign Trade and Domestic Business," provided a succinct summary of the importance of merchandise imports and exports to the economy. After publication of the standard February Annual Review Number, the results of the OBE-SEC survey of anticipated 1958 business expenditures for new plant and equipment were published in March in an article which for the first time gave the dimensions of the downturn in such investment spending—from $37 billion in 1957 to not much above $30 billion in 1958.

In the final quarter of the fiscal year, special articles were devoted to such subjects as the size distribution of personal income, the extent of public and private debt in the United States, and the amount spent by United States residents on their travels abroad.

Throughout the year OBE gave regular service to the Council of Economic Advisers in furnishing material for their studies and reports and assisted in similar fashion the staff of the Congressional Joint Economic Committee. Because of the importance of policy decisions affecting business, the number of Government requests for timely data and analyses was unusually large in this year of economic uncertainty.

Work in Process

Having received congressional approval and the initial funds with which to launch the project, OBE will undertake in fiscal 1959 a 2-year survey of American business investments in foreign countries. The information to be collected will provide a complete measure of the size and composition of our private direct foreign investments, which since the time of the last OBE survey in 1950 have doubled in value.

Going beyond the coverage of the previous survey, the new census of American holdings abroad will collect information on our payments in foreign countries for wages, taxes and materials, gross investment expenditures and sources of financing, total output broken down to show separately local sales and exports to the United States or other countries, imports, earnings and income remittances, and employment provided to United States and local personnel. It is expected that these statistics will greatly enhance understanding, here and abroad, of the constructive role of United States private investments in foreign economic development, and may thereby foster the freer flow of sound capital investment among nations. The survey having been approved by the Bureau of the Budget and the National Advisory Council on International Monetary and Financial Problems, replies are mandatory under the Bretton Woods Agreements Act.

To the extent possible OBE intends to extend its work on the national income accounts along lines urgently advocated in the recent report of the National Accounts Review Committee which the National Bureau of Economic Research set up last year at the request of the Bureau of the Budget. That report, with additional pertinent material, has been published by the Congressional Joint Economic Committee in a hearings volume entitled *The National Economic Accounts of the United States*—85th Congress, 1st session, October 29 and 30, 1957.

BUREAU OF THE CENSUS

The Bureau of the Census is a fact-finding and statistical service agency. Basic legislation authorizes the Bureau to conduct periodically the comprehensive censuses of population, housing, agriculture, irrigation, drainage, business, manufactures, mineral industries, and State and local government activity. Current surveys in most of these fields provide interim and special information on the Nation's economic and human resources. In addition, the Bureau compiles and publishes the official statistics on the foreign trade of the United States. It also performs services for other Government agencies, such as data collection, tabulation, and sample design for surveys.

Major activities during fiscal 1958 included the publication of statistics from the first national housing inventory and from the 1957 Census of Governments, as well as issuance of the final volumes of the 1954 Censuses of Agriculture, Business, Manufactures, and Mineral Industries. These volumes incorporate and amplify the statistics released earlier in preliminary form. The Bureau issued a special report presenting for the first time statistics for all companies in the scope of the 1954 censuses of industry and trade, both in terms of establishments and in terms of companies of which the establishments are components.

Preparatory work for the eight major censuses to be taken during 1958–60—business, manufactures, and mineral industries for 1958; agriculture,

irrigation, and drainage for 1959; and population and housing for 1960—included resolving problems of schedule content, design of schedules, and pretests of schedules for some of these comprehensive undertakings.

The Bureau's current statistics programs continued to provide an up-to-date picture of the Nation's economy, including figures on retail and wholesale trade, manufacturing, foreign trade, employment and unemployment, the number and characteristics of the country's nearly 175 million people, as well as an inventory of their housing, and the finances of State and local governments. The Bureau accomplished significant work in its program of furnishing, on a reimbursable basis, various types of special data and services to defense and other Government agencies and to research and business groups.

Major Census Programs

Census of Governments.—Detailed reports of the 1957 Census of Governments, the first since 1942, provided information on governmental units in the United States, by type, for States and counties, with State figures on number of special districts by function; on local governmental units in metropolitan areas; and on employment and payroll, by type of government and by function, annual rates of pay, retirement coverage, and other aspects of government employment.

The Census of Governments also provided advance releases on real estate assessments, property tax assessments, and, for the first time, figures on the ratio of assessed values of transferred real property to sales prices, classified by type of property. Advance statistics were also furnished on State and local government indebtedness. Additional data were in final stages of preparation on a broad range of topics in the basic fields of property values, public employment, and public finances.

Census of Business.—The final area and subject volumes of the 1954 Census of Business were issued to incorporate in permanent form the statistics previously published in separate bulletins as the data became available. In addition, the subject volume for retail trade provides information not previously published in separate bulletins, on central administrative offices, leased departments, drugstores, lumber and building materials dealers, and vending machine operators. The service trades subject volume includes statistics not previously published on advertising agencies, armature rewinding shops, coin-operated amusement device establishments, automobile and truck rental, and central administrative offices.

Census of Manufactures.—The final volumes of the 1954 Census of Manufactures, incorporating in permanent form the statistics previously published in separate subject, industry, and area bulletins, were issued during the year. In addition to the general statistics by industry and by area, statistics are included on manufacturing activity in government establishments, manufacturers' inventories, horsepower of power equipment, fuel and electric energy consumed and expenditures for new plant

and equipment, and industrial water use. A special report of the manufactures census, prepared at the request of the Subcommittee on Antitrust and Monopoly of the Senate Judiciary Committee, provided figures on the proportion of industry and commodity group totals accounted for by the larger companies.

Census of Mineral Industries.—The Bureau issued during the fiscal year the final volumes of the 1954 Census of Mineral Industries, the first since 1939. These volumes incorporate in permanent form the industry and area statistics previously published in separate bulletins. The volumes include historical statistics from the earliest minerals census, and figures on size of establishments, type of organization and operation, power equipment, and energy, water, and supplies used.

Special Reports of the 1954 Censuses.—The Bureau issued results of a special study made for the first time of returns from the 1954 Censuses of Business, Manufactures, and Mineral Industries. This report assembles into company totals statistics ordinarily gathered and presented only in terms of individual establishments. Entitled *Company Statistics*, the report presents general statistics both in terms of establishments and in terms of companies of which the establishments are components, for each of 122 industry categories developed especially for this study. Figures include number of companies, number of establishments, employees, payroll, and sales or receipts or value added by manufacture or mining. Capital expenditures are shown for the manufacturing and mining group. For multi-industry companies, employment figures are classified by the industry of the company and cross-classified by the industry of each establishment in the company.

A series of monographs based on the 1954 censuses of industry and trade was in preparation, under the sponsorship of the Social Science Research Council. Four of the monographs will relate to differential growth in manuturing by geographical areas, 1929–54; an analysis of the company statistics of the 1954 censuses; concentration and mergers in the manufacturing industries; and an analysis of price-cost behavior in the census of manufactures establishment data. A fifth monograph, in the exploratory stage, will analyze the structure of the distributive trades.

Census of Agriculture.—The Bureau completed early in the fiscal year the series of special reports comprising the remaining volume of the 1954 Census of Agriculture. These special reports, seven of which were cooperative efforts of the Bureau of the Census and the Department of Agriculture, present statistics on multiple-unit operations, ranking agricultural counties, farm-mortgage debt, and other subjects, and include also a graphic summary of agriculture in 1954, a report bringing together the available agriculture statistics from various Government sources on outlying areas and the District of Columbia, and a report on methods and procedures of the 1954 census.

PLANNING FOR FUTURE CENSUSES.—The Bureau accomplished much preparatory work during the fiscal year for the censuses which will cover business, manufactures, and mineral industries for 1958, the 1959 Censuses of Agriculture, Irrigation, and Drainage, and the 1960 Censuses of Population and Housing. Experimental enumerations were held to test schedules and procedures. The Bureau plans more extensive use of large-scale electronic equipment in tabulation, new processing procedures replacing punchcards, and a greater use of sampling to provide some of the information from the forthcoming major censuses.

The Current Program

AGRICULTURE.—The official cotton ginning statistics of the United States were compiled and released at dates specified by law. Also issued were the scheduled reports on cotton crop acreage, yield, and condition, in cooperation with the Department of Agriculture. The two annual bulletins on cotton production and distribution were issued on schedule.

BUSINESS.—The annual retail trade reports for 1956 and 1957 were issued, providing figures on estimated sales, merchandise inventories, and accounts receivable. The monthly retail trade reports continued to appear on schedule, including the advance reports of retail sales published 10 days after the close of each month. The monthly wholesale trade report provided figures on sales and inventories. The reports on stocks of selected canned food items appeared promptly as of five reporting dates during the marketing season. Results of the survey of green coffee inventories and roastings were issued semiannually. The quarterly survey of reconditioned steel barrels and drums was discontinued after the fourth quarter 1957.

FOREIGN TRADE.—The monthly and annual detailed reports and advance summaries of exports, imports, and shipping, comprising the official United States foreign trade statistics, appeared regularly during the year. A new monthly report presenting statistics on imports of cotton manufactures began appearing effective with July 1957 statistics. In addition, 267 special recurrent monthly reports and 87 special reports for specified periods were prepared for individual subscribers on a cost basis.

GOVERNMENTS.—The regular series of current reports on State and local governments presented statistics on public finance in terms of revenues, expenditures, tax collections by source, debt, and financial assets. Employment data, including figures on number of employees and amount of payroll which are usually issued in current annual series, were presented for 1957 in reports of the 1957 Census of Governments.

HOUSING.—The National Housing Inventory, final results of which were issued during the year, represents a significant advance in the area of housing market analysis. It is the first systematic measurement of the housing supply during an intercensal period and the only such inventory other than the two censuses of housing, conducted for 1940 and 1950. It provides, for the Nation as a whole and for each of nine large metropolitan

areas, figures on the number and characteristics of dwelling units in existence, as well as on the magnitude of change since 1950 through new construction, conversion, and withdrawals. It brings up to date information on financing of owner-occupied residential properties.

Statistics on housing compiled currently provide quarterly data on vacancy rates and condition and characteristics of available housing vacancies. From the same survey the Bureau also obtains current figures on the proportion of households with television sets. Data on rental and vacancy characterisics of housing for local areas are obtained from special surveys conducted at the request and expense of the areas involved.

INDUSTRY.—Release of the results of the 1956 annual survey of manufactures, taken in 1957, showed a substantial gain in timing over the publication schedule of the previous survey. About 80 series of current *Facts for Industry* reports continued to provide appropriate measures of productive activity for selected manufactured products. This program was expanded, mainly by funds provided by other agencies and private industry, to include certain additional commodities.

POPULATION.—The current population survey, which interviews monthly a scientifically selected sample of 35,000 households, continued to provide measures of employment, unemployment, and other facts about the labor force. It also provided figures on family and individual income and such population characteristics as school enrollment and educational attainment, marital and family status, mobility, and household size. The regular program of current estimates of the size of the population continued to provide monthly figures for the United States and annual estimates for States. Annual estimates of the farm population and of the total population by age, color, and sex were also prepared. A special report presented the results of a survey of the sources and types of current population estimates prepared by agencies in State governments and by official agencies in the largest cities.

Defense and Other Special Work

The Bureau continued to act as the principal collecting and compiling agency for the Business and Defense Services Administration. It also provided services for the Office of Civil and Defense Mobilization, the National Science Foundation, the Industry Evaluation Board, the Department of Defense, the Tennessee Valley Authority, the Federal Trade Commission, the Bureau of Labor Statistics, the Department of Agriculture, the Bureau of Mines, the Department of Justice, and other agencies.

The Bureau has developed procedures and techniques for the National Health Survey, which it began conducting on a continuing basis for the Public Health Service, Department of Health, Education, and Welfare. This survey of a sample of 45,000 households provides data on immunization status, prevalence of certain diseases and ailments, and related health facts.

Numerous special tabulations and compilations of other data from census records were supplied at cost to other Government agencies, business firms, trade associations, and individuals. At the request and expense of the communities involved, the Bureau conducted special censuses of 350 local areas, about the same number as the previous year.

International Statistics Programs

The Bureau increased its technical assistance to foreign governments to improve their census and statistical services, under programs sponsored by the Department of State, the International Cooperation Administration, the United Nations, and the Population Council. A total of 320 foreign census and statistical personnel representing 51 countries visited the Bureau for brief periods and observed operations and methods. Fifty-eight foreign technicians, representing 18 countries, spent 3 or more months receiving intensive instruction in United States census methods.

Under the technical assistance program, 24 Bureau experts were assigned as consultants to foreign governments. They supplied census and technical guidance to Cuba, Honduras, Iran, Pakistan, Peru, the Philippines, Uruguay, and Viet-Nam. The Bureau continued to collaborate with other countries of the Western Hemisphere in planning for the 1960 Census of the Americas.

The Foreign Manpower Research Office continued its studies and analyses of international population and manpower.

Other Activities

SPECIAL PUBLICATIONS.—Six additional volumes in the 1950 Census Monograph Series, prepared cooperatively with the Social Science Research Council, were published during the year. These analytical studies were *Farm Housing; Residential Finance, 1950; America's Children; The Changing Population of the United States; The Fertility of American Women;* and *The Older Population of the United States.* Two additional monographs in preparation at the end of the year will bring the total of such 1950 Census studies to 14.

Work was brought near completion on the new and expanded edition of *Historical Statistics of the United States*, which will cover the period from colonial days to the present. This work is also a cooperative effort with the Social Science Research Council.

The 1957 edition of the *Statistical Abstract of the United States* was published in August 1957, beating for the fourth consecutive year all past publication records. The 1956 edition of *County Business Patterns*, presenting figures on employment and payrolls for establishments covered by the old-age and survivors insurance program, was being printed at year's end.

Preliminary results of the 1957 travel survey, the first attempt to measure systematically the extent of civilian travel, appeared early in the fiscal

year. This project was financed by the National Association of Travel Organizations.

The *Catalog of the United States Census Publications*, with its annotated listings and subject and geographical indexes to the contents of all Bureau publications, continued to be a useful data-finding medium. Special appendixes—for example, the consolidated list of publications of the 1954 Censuses of Agriculture, Business, Manufactures, and Mineral Industries included in the 1957 annual issue—increased the usefulness of the catalog.

MECHANICAL AND TECHNICAL OPERATION.—Negotiations were completed for the installation of two advanced electronic computers at the Bureau in the fall of 1958; and arrangements were made to acquire additional electronic computer capacity at two universities. Development of radically new document reading equipment replacing punchcard techniques, reached the point where firm plans can be made for substantial speed-up of the processing of the 1960 censuses.

PERSONAL CENSUS RECORDS.—Applications received and processed for personal information from census records to establish proof of age or citizenship totaled 222,000, representing a 3 percent decrease from the record of the previous year as demands for this service resulting from changes in the Social Security Act leveled off.

PLANS FOR DECENTRALIZATION.—The eight major censuses to be launched in the next 2 fiscal years will necessitate decentralization of activities to take care of expanding operations and personnel. The Bureau has obtained facilities in Parsons, Kans., to process returns of the 1959 Censuses of Agriculture, Irrigation, and Drainage. Similar arrangements have been made in Jeffersonville, Ind., for the processing of the 1958 economic censuses covering business, manufactures, and mineral industries. Some of the operations of the 1960 Censuses of Population and Housing will also be performed in Jeffersonville. Plans were completed and space obtained in Pittsburg, Kans., for the transfer, early in fiscal 1959, of the personal census records activities.

Office of the Assistant Secretary for International Affairs

The Assistant Secretary of Commerce for International Affairs acts as principal adviser to the Secretary for the development and implementation of international trade policies and in this connection participates in interagency committees either as the Secretary's alternate or as the Department of Commerce representative. He also provides policy direction and guidance to the Bureau of Foreign Commerce and the Office of International Trade Fairs.

BUREAU OF FOREIGN COMMERCE

The Bureau put new empahsis on its informational and advisory services to business in carrying out its responsibilities to foster and promote the foreign commerce of the United States. Standard publications were analyzed and overhauled and new publications were tailored to fit current needs of United States enterprise faced with stiffening competition in world markets. A greater number of opportunities for United States business abroad were more widely disseminated, consultative services were expanded, and 3 years' experience resulted in more effective operation of the Trade Missions program.

Short-supply export controls were eased as output met foreign and domestic demand, controls over exports to Poland were relaxed, and those on strategic goods were tightened. The Bureau participated in international negotiations for the reduction of barriers to trade, travel, and investment.

Direct Service to Business in Promoting Two-Way Trade

Publications issued by the Bureau are designed both to help United States businessmen find, maintain, and expand markets and invest capital abroad and to facilitate import trade. In fiscal 1958 the Bureau had two measures by which to gage the success of its efforts in the publications field—one was the extent of business demand for reports, as evidenced by sales volume and inquiries received, and the other was a survey undertaken to assess the value of information made available to the business community.

Paid subscriptions to *Foreign Commerce Weekly* rose by more than 18 percent to 9,715. This magazine not only goes to firms and individuals interested in international trade, travel, and investment but, along with reports in the *World Trade Information Service* and other Bureau publications, is also used extensively as source material by many private trade journals, trade associations, and other media. During the year the *Weekly* published about 2,800 economic and commercial news and feature stories on developments in foreign countries, and carried over 6,200 opportunities for export and import business, licensing, and investment.

Both subscriptions and single-copy sales of economic, operational, and statistical reports in the *World Trade Information Service* increased substantially over the preceding year. A total of 245 WTIS reports was published giving information on foreign markets, public utilities, business laws, taxation, customs tariffs, and many other subjects.

Two new handbooks, *Doing Business With Sweden* and *Doing Business With France*, were published and were well received.

A survey of business opinion was made to provide a sounder basis for selection and preparation of commercial and economic information useful to business. Evaluations of published material were obtained from approxi-

mately 800 businessmen. In the coming year the Bureau expects to include new material in, as well as reorganize and rearrange, several of its publications series for more direct use in market research.

To meet the growing demand for information to support market research activities of American firms, the Bureau supplied more than 6,200 reports on commodities and industries abroad, as compared with 4,000 similar reports furnished last year.

The Bureau assisted United States firms in adjustment of foreign trade transactions and in obtaining relief from import-export restrictions and obstacles to the transmittal of remittances imposed by other countries. It also protected United States industrial property rights abroad; and provided information on foreign patent and trademark regulations and developments of the European Common Market.

The type and quantity of trade inquiries received not only indicated a growing number of businessmen looking to foreign markets to increase sales but also demonstrated a new kind of export-mindedness. For example, many inquiries covered geographic regions rather than individual countries and touched on matters such as the opening of sales offices, increasing the number of sales representatives, and participating in trade fairs. Meeting the demand for more analytical information, the Bureau prepared analyses covering short- and long-term market surveys, the effects of new tariff schedules utilized by foreign countries, the significance of changes in the volume and pattern of foreign trade, and the benefits or obstacles involved in foreign licensing and exchange controls.

World Trade Directory Reports were furnished to American foreign traders on nearly 20,000 individual businessmen and firms in foreign countries. More than 23,000 trade lists of foreign firms, classified by commodity, industry, or service organizations, were supplied to American concerns seeking oversea trade connections.

A total of 829 trade lists of standard categories compiled by the United States Foreign Service was supplemented by almost 3,000 special lists prepared in the Bureau from foreign directories and other material at hand to meet requests for information on oversea markets not covered by standard trade lists.

Five United States cities were assisted in planning international trade fairs for 1959. A pamphlet on *U. S. Business Participation in Trade Fairs Abroad* was issued and 400 special articles were published in *Foreign Commerce Weekly* on foreign and United States trade fairs.

Meetings were held with foreign government officials on procedures for establishing business contacts in developing import-export business for American firms. Conferences were arranged for foreign groups and individuals covering specific phases of world trade or investment promotion. Field Offices of the Department participated in these activities, which are designed to promote trade and investment or to illustrate to some of the

newer countries, the trade and investment promotion techniques helpful in expanding mutual trade relations.

About 400 United States business travelers were assisted in their itineraries abroad through the cooperation of American embassies and consulates.

Promoting Private Investment Abroad

Factors affecting direct private investment abroad were discussed with an increasing number of United States businessmen who sought assistance from the Bureau. Guidance was given to potential and actual investors on business organization, plant location, management contracts, licensing agreements on patents, branch plant operations, engineering contracts, technological assistance arrangements, ownership of land, and establishment of subsidiaries.

A marked increase of interest in the investment program has been observed. Inquiries from prospective American investors for information on the investment climate in foreign countries and laws and procedures governing investments have shown a steady gain. Individual business firms were counseled on the impact of the European Common Market on their business with specific emphasis on investments in the area. A large volume of investment inquiries was received regarding the newly independent states and other territories of Africa.

Bureau officials held discussions with missions visiting the United States and representatives of foreign governments stationed here interested in bringing American capital and technical know-how to their countries. These meetings have developed understanding of the basic conditions necessary to attract potential American investors and have provided incentives for action to stimulate private investment abroad.

Investment Opportunities Abroad, a special publication for United States investors, reported 1,200 investment opportunities to more than 3,000 firms and individuals requesting this service.

Investment handbooks were published on Peru and Nigeria, bringing to 17 the comprehensive country surveys providing basic information for potential United States investors and traders.

Promotion of International Travel

From the standpoint of governmental policy in the field of international travel, the highlight of the year was the President's message to the Congress transmitting a report on barriers to international travel and ways and means of developing and facilitating such travel. Immediately thereafter, a program was launched to carry out the recommendations set forth in the report, including establishment of an Interdepartmental Travel Policy Committee at the Assistant Secretary's level.

Close cooperation was maintained with private industry and governmental agencies on matters affecting international travel.

For the first time the Department was host to the International Union of Official Travel Organizations, at its 12th International Conference and Assembly in Washington, D. C., in November 1957. Representatives of the official travel bureaus of 59 nations participated in the adoption of resolutions bearing on development of travel throughout the world.

Contractual arrangements for a comprehensive tourism development survey to cover the Pacific Area and the free countries of East Asia were made by the Bureau at the request of the International Cooperation Administration.

Two statistical reports on international travel were published, and a third was prepared for publication.

Trade Missions for Promotion of Trade

The Bureau continued its program of organizing and training trade missions to go abroad as a part of the international trade fair program. Some 11 missions operated at different international trade fairs, bringing the number of missions to a total of 50 since the inception of the program in 1954. The story of the American free enterprise system has now been carried directly and personally to an estimated 170,000 foreign government officials and businessmen in 37 countries. In addition to clarifying misconceptions of United States foreign trade policy and private trade practices, the missions reported a wide variety of trade and investment opportunities which were transmitted to American businessmen through the Bureau's regular services.

More than 150 United States businessmen have participated in trade missions up to this time.

Reports from the United States Foreign Service indicate increased effectiveness of these missions as foreign businessmen and government officials acquire a better understanding of the purposes of the program and the advantages which accrue to them from consultations with successful American businessmen. Also, the findings of earlier missions pinpointed specific problems inhibiting trade with the United States, permitting more exact preparation of material to be used by mission members in their work overseas.

It is estimated that periodicals, reference books, and directories donated by the private trade press for informational use at United States trade information centers at international trade fairs now number some 50,000 copies. These commercial libraries continue to be an effective instrument in promoting United States trade. They are given by the missions at the conclusion of their visit to the United States Foreign Service, chambers of commerce, and trade promotion centers in many countries.

Promoting Commerce Through Reduction of Barriers

The Bureau participated in United States efforts to reduce world trade barriers. Although there was no general round of tariff negotiations during

the period, further progress was made in obtaining relaxation of quotas and other quantitative restrictions on imports of United States goods.

At the 12th Session of the Contracting Parties to the General Agreement on Tariffs and Trade (GATT) in Geneva, Switzerland, from October 17 to November 30, 1957, a series of consultations with 21 countries on quantitative import restrictions imposed for balance of payments reasons was concluded. This program was initiated in June 1957 as a result of a United States proposal accepted by contracting parties at their previous session.

In addition to these efforts to remove trade restrictions, bilateral talks were held with a number of other countries to achieve a less severe application of certain restrictions which continue to be necessary for balance of payments reasons. The results of these talks were generally good.

During the 12th Session of the GATT and at the Intersessional Committee meeting in April and May 1958, a thorough review of the European Common Market Treaty was begun. Continued efforts through international forums such as the GATT will be necessary to assure that removal of trade barriers among the six Common Market countries will not result in new barriers against United States trade.

The business community was kept informed of changes in tariffs and other trade restrictions, both here and abroad, and their views regarding the effects of proposed revisions were given careful consideration.

The Bureau assisted in formulation of the foreign trade and private investment position of the United States incident to negotiation of Friendship, Commerce and Navigation treaties with Austria, Belgium, Muscat, Pakistan, and Viet-Nam.

Special Operations for Trade Promotion

Plans are being carried out to bring to full complement the interchange of Bureau and Foreign Service officers in order that each category may obtain the benefits of training in the other's field.

Steps also have been taken and instructions issued to emphasize to Foreign Service officers throughout the world the importance of commercial work. Sections in the Foreign Service Manual dealing with trade promotion and protection, the trade mission program, and methods of handling trade inquiries were revised to meet the changing needs of the business community.

Efforts are being made to expand the number of commercial-officer positions in the Foreign Service, and the Bureau is taking an active part in the selection and transfer of officers performing economic and commercial work.

Training programs were conducted for over 300 Foreign Service officers, and 41 programs were arranged for returning commercial officers to meet with business groups in 17 field office cities.

In addition to carrying out its responsibilities, the Foreign-Trade Zones Board authorized transfer of Foreign-Trade Zone No. 3 within the Port of

San Francisco and expansion of the New Orleans Zone. Regulations, zone forms, and related material on foreign-trade zone operations were revised and submitted for republication.

The British Token Import Plan administered by the Bureau brought a heavy load of inquiries and applications from manufacturers and exporters interested in the United Kingdom market. Exports under BTIP for the first half of calendar 1958 continued at about the same rate as in the corresponding period of 1957. For the entire year of 1957, United States goods exported under the plan totaled $3.8 million.

Control of Strategic and Short Supply Exports

As in the past the Bureau continued to administer the Export Control Act of 1949, as amended. During the year this act was extended by the Congress to June 30, 1960.

Quantitative export restrictions were removed from the few remaining commodities subject to short supply controls—nickel, certain industrial diamonds, rerolling rails, and poliomyelitis vaccine.

Denial of strategic goods to the European Soviet Bloc and the total embargo against shipments to communist China, North Korea, and North Viet-Nam continued unchanged. A rapid upsurge in the receipt of license applications to export technical data to Eastern Europe was observed. Applications considered contrary to the national interest were denied.

In August 1957 the Department announced relaxation and simplification of export controls toward Poland to facilitate exports of commodities which would benefit the Polish civilian economy. As a result of these changes and other United States Government actions, our exports to Poland totaled $109 million, as compared with exports of $5.5 million in the previous year.

Licenses totaling $22.4 million were issued for Eastern European destinations other than Poland. Actual shipments to those destinations, however, amounted to only $9.3 million in fiscal 1958.

Special controls were continued over exports of goods to the Middle East which might contribute to a military buildup in that area.

New measures were adopted to extend export control regulations to foreign excess property sold abroad by the Department of Defense. These steps made it possible for the Bureau to take appropriate action against individuals or firms attempting to sell to the Soviet bloc strategic goods purchased under the Foreign Excess Property Disposal Program.

OFFICE OF INTERNATIONAL TRADE FAIRS

The Office of International Trade Fairs plans and produces trade fair exhibits in an official program for international trade fair participation by the United States. The program is authorized by the International Cultural Exchange and Trade Fair Participation Act of 1956.

The Trade Fair Committee of the Operations Coordinating Board, consisting of members from Departments of Commerce and State and the United States Information Agency, supplies broad operating guidance. The program has a twofold objective: To show the millions of people who attend trade fairs all over the world how American ownership, management, and labor work together under our free enterprise system; and to encourage two-way trade between the United States and other countries.

In 3½ years—December 1954 through June 1958—more than 40 million people saw United States exhibits at 59 international trade fairs in 27 countries, on every continent except Australia. Begun as an emergency measure by the President in August 1954 when Communist domination of international trade fairs had become pronounced, the program has acquired a positive position, with basic legislation to continue on a permanent basis.

It is now directed more and more toward participation at fairs in neutral, uncommitted, and even Communist satellite countries, where the motives, aspirations, and results of our free enterprise system are "showcased" in well-planned, official United States exhibits. In many instances these exhibits are in direct competition with those of Communist nations. Despite the fact that Communist participation is normally budgeted at 8 to 10 times United States expenditures, American exhibits have more than held their own.

Salesmen of Free Enterprise

In fiscal 1958 OITF efforts to improve the quality of presentation and pavilion space and to increase quantities of exhibit components and items for display met with outstanding success. This was seen in the exhibit at the 1957 Zagreb International Trade Fair in Yugoslavia, where a fully stocked, typical American supermarket was the Fair's stellar attraction. More than a million persons streamed through its steel turnstiles. At the Fair's closing the supermarket equipment was bought by a Belgrade concern.

At Salonika, Greece, in the 1957 Internationl Fair of Thessalonika, the United States exhibit drew almost 700,000 visitors with possibly the most popular Fair display—a live farm animal and poultry show which featured advanced feeding and management techniques. At Bari, Italy, where fruit preservation is a critical problem, the exhibit included production-line equipment demonstrating frosted-food packaging of peaches. At Izmir, Turkey, an exhibit of consumer goods chosen with a view to the interests of predominantly rural population proved immensely popular. At Tunis, Tunisia, an exhibit portraying "America at Home and at Work" drew 400,000 visitors in spite of bad weather. At Stockholm, an exhibit, with "Automation at Work" its theme, was shown to almost 300,000 visitors. At Casablanca, the United States exhibit, themed "Man Under the Sun,"

included an extensive display-demonstration of solar equipment for harnessing power of the sun to cook and heat, nuclear medical equipment, and the actual conducting of reading and writing classes in a one-room school equipped with the newest United States schoolroom equipment.

At Milan, Italy, Osaka, Japan, and Poznan, Poland, United States exhibits again met with success and large attendance as they continued to express the basic philosophy that "the products of free industry are the best salesmen for free enterprise."

The continued support of American business, with loans and gifts of products, has helped stretch budget allocations by millions of dollars. To date approximately 4,000 American business firms representing both large and small members of our industrial economy and all types of manufacturing and products have contributed to United States exhibits. During fiscal 1958 more than 600 firms and associations from 32 States were responsible for more than $1½ million in loans and gifts for the Government exhibits.

In fiscal 1958, exhibits were shown in American pavilions of permanent construction at Zagreb, Vienna, Poznan, Izmir, Stockholm, Milan, and Bari and in demountable pavilions at Salonika, Tunis, Osaka, and Casablanca.

Plans for 1959 include 11 central exhibits, 2 coordinated industry exhibits with space rented by individual exhibitors, and 13 trade missions. Eleven of the trade missions will be sent in conjunction with central United States exhibits at trade fairs; two are scheduled in places where there will be no central exhibit. In addition, two solo exhibits with trade missions present are proposed for India.

Inland Waterways Corporation

The liquidation of the affairs of the Inland Waterways Corp., since the sale of its physical facilities and operating rights as of June 30, 1953, has proceeded essentially without incident.

Federal Barge Lines, Inc., the purchaser, which is a subsidiary of St. Louis Shipbuilding and Steel Co., has met its payments on the principal of $9 million through June 30, 1958, at which time the balance was $6,956,000. The accrued interest paid in as of that date, at 3¾ percent, was $1,530,900.

Appendix

ORGANIZATION AND PROGRAM CHRONOLOGY

1903—The Department of Commerce and Labor was created by the act of February 14 (32 Stat. 826; 5 U. S. C. 591). It consisted of the Office of the Secretary, eight bureaus (Corporations, Labor, Census, Statistics, Fisheries, Navigation, Immigration, and Standards), the Lighthouse Service, the Lighthouse Board, the Coast and Geodetic Survey, and the Steamboat-Inspection Service. The Bureau of Manufactures was authorized but not organized.

1904—The Bureau of Manufactures was organized in February.

1906—The Bureau of Immigration was changed to the Bureau of Immigration and Naturalization by the act of June 29 (34 Stat. 596).

1910—The Lighthouse Board was abolished and the Bureau of Lighthouses was established within the Lighthouse Service by the act of June 17.

1912—The Children's Bureau was created by the act of April 9 (37 Stat. 79). The Bureau of Foreign and Domestic Commerce was created and the Bureaus of Manufactures and Statistics were consolidated with the Bureau of Foreign Commerce of the State Department, by the act of August 23 (37 Stat. 407).

1913—The Department of Labor was created by the act of March 4 (37 Stat. 737; 5 U. S. C. 616). To this Department were transferred the Bureau of Labor (thereafter called the Children's Bureau) and the Bureau of Immigration and Naturalization. The remaining functions of the Department of Commerce and Labor were assigned by this act to the Department of Commerce.

1915—The Bureau of Corporations was merged March 16 with the Federal Trade Commission, an independent agency.

1925—The Patent Office was transferred from the Department of Interior to the Department of Commerce by Executive order of April 1 in accordance with the act of February 14, 1903 (32 Stat. 830).

The Bureau of Mines was transferred from the Department of Interior to the Department of Commerce (Executive Order 4239 of June 4).

1926—A Federal policy on commercial aeronautics was established by the act of May 20 (44 Stat. 568), placing the administration of commercial aeronautics under the Department of Commerce. The Aeronautics Branch was created within the Department.

1927—Creation of the Federal Radio Commission (which after 1 year's operation would have some of its powers transferred to the Department of Commerce) was provided for by the act of February 23 (44 Stat. 1162).

The Radio Division of the Department of Commerce was created February 26 in the Office of the Secretary.

1931—The Federal Employment Stabilization Board was created February 10 to plan and regulate construction of public works to assist in preventing unemployment during business depressions (46 Stat. 1085).

1932—Consolidation of the Bureau of Navigation with the Steamboat Inspection Service was provided for by the act of June 30 (47 Stat. 415), effective August 1, under the name Bureau of Navigation and Steamboat Inspection.

The Radio Division was abolished and its functions and responsibilities were transferred to the Federal Radio Commission (Executive Order 5892 of July 20).

1933—Functions of the United States Shipping Board were transferred to the Department of Commerce and the Board was abolished (Executive Order 6166 of June 10).

The Business Advisory and Planning Council was organized June 26 under the authority of the organic act by which the Department of Commerce was created (37 Stat. 737; 5 U. S. C. 616).

The United States Shipping Board Bureau was established August 9 in the Department.

1934—The Federal Employment Stabilization Board was abolished and the Federal Employment Stabilization Office established in the Department of Commerce (Executive Order 6623 of March 23).

Transfer of the Bureau of Mines to the Department of Interior was authorized effective April 23 (Executive Order 6611 of February 22).

The Aeronautics Branch was renamed the Bureau of Air Commerce July 1.

1935—The name of the Business Advisory and Planning Council was changed to the Business Advisory Council April 11.

1936—The Bureau of Navigation and Steamboat Inspection was renamed the Bureau of Marine Inspection and Navigation May 27.

Transfer of the United States Shipping Board Bureau to the United States Maritime Commission was authorized by the act of June 29 (49 Stat. 1985), effective October 26.

The Bureau of Air Commerce assumed entire responsibility for airway traffic control July 6.

1938—The Bureau of Air Commerce was transferred August 22 to the Civil Aeronautics Authority, created under the Civil Aeronautics Act of 1938 (52 Stat. 973; 49 U. S. C. 401).

1939—The Federal Employment Stabilization Office was abolished and its functions transferred July 1 to the National Resources Planning Board by section 4 of Reorganization Plan No. I (53 Stat. 1423).

The Bureau of Lighthouses (Lighthouse Service) was transferred to the Department of the Treasury by section 2 of Reorganization Plan No. II (53 Stat. 1431). This Plan also transferred the Inland Waterways Corporation to the Department of Commerce (sec. 6), the Bureau of Fisheries to the Department of the Interior (sec. 4E), and the Foreign Commerce Service to the Department of State (sec. 1).

1940—The Weather Bureau was transferred June 30 from the Department of Agriculture to the Department of Commerce and the Civil Aeronautics Authority (including the Office of the Administrator of Civil Aeronautics and the Air Safety Board) from its independent status to the Department of Commerce. The Authority was comprised of the Administrator of Civil Aeronautics and the Civil Aeronautics Board.[1] The Board absorbed the function of the former Air Safety Board. These actions were authorized by sections 7 and 8 of Reorganization Plan IV (54 Stat. 1234).

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[1] The Administrator of Civil Aeronautics was placed under the direction and supervision of the Secretary of Commerce. The Board was directed to exercise its functions of rulemaking, adjudication and investigation independently of the Secretary. Its management functions, however, were to be performed through facilities designated by the Secretary.

That part of the Civil Aeronautics Authority under the direction and supervision of the Administrator of Civil Aeronautics was designated as the Civil Aeronautics Administration (Department of Commerce Order No. 52 of August 29).

1942—The Bureau of Marine Inspection and Navigation was transferred to the Department of the Treasury (Executive Order 9083 of March 1).

1945—The Office of Surplus Property was transferred from the Department of the Treasury to the Department of Commerce (Executive Order 9541 of April 19).

The Office of Surplus Property was established (Department of Commerce Order No. 359 of May 1).

The Office of Civilian Defense was transferred to the Department of Commerce (Executive Order No. 9562 of June 4).

The Office of Civilian Defense Property was established (Department of Commerce Order No. 372 of June 21).

The Office of Declassification and Technical Services was established in the Office of the Secretary (Department of Commerce Order No. 386 of September 18).

Part of the Foreign Economic Administration was transferred September 27 to the Department of Commerce and liquidated.

The Office of International Trade Operations was established (Department of Commerce Order No. 389 of October 1).

The Office of Surplus Property was transferred to the Reconstruction Finance Corporation (Executive Order 9643 of November 5).

Reorganization of the Bureau of Foreign and Domestic Commerce and the Office of International Trade Operations resulted in the establishment of the Office of International Trade, Office of Small Business, Office of Domestic Commerce, Office of Field Operations, and Office of Business Economics, all within the Bureau of Foreign and Domestic Commerce (Department Order 10 of December 18).

1946—The Office of Production Research and Development was transferred from the Civilian Production Administration to the Department of Commerce (Executive Order 9673 of January 3). It became the Production Research and Development Division of the Office of Declassification and Technical Services (Department Order 22 of January 3).

Part of the Smaller War Plants Corporation was transferred to the Department of Commerce for liquidation (Executive Order 9665 of January 28).

The Office of Civilian Defense Property was terminated (Department Order 33 of April 1).

The Office of Declassification and Technical Services was redesignated as the Office of Technical Services (Department Order 5, Amendment 1 of July 1).

1947—Parts of the former Office of Price Administration, Office of War Mobilization, and Civilian Production Administration were transferred to the Department of Commerce (Executive Order 9841 of April 23).

The Office of Materials Distribution was established within the Bureau of Foreign and Domestic Commerce to carry out the functions transferred by Executive Order 9841 of April 23 (Department Order 69 of May 4).

The Division of Liquidation was established to liquidate the activities of the wartime agencies transferred to the Department (Department Order 75 of June 1).

1948—The Office of Industry Cooperation was established to administer the voluntary agreements program pursuant to Public Law 395, 80th Congress (Department Order 96 of January 22).

The Appeals Board for the Bureau of Foreign and Domestic Commerce was established (Department Order 106 of January 28).

The Office of Materials Distribution was transferred to the Office of Domestic Commerce (Department Order 18, Amendment 1 of May 7).

The Office of Small Business was transferred to the Office of Domestic Commerce (Department Order 18, Amendment 2 of June 30).

1949—The Hoover Commission reported March 1 to the Congress its recommendations concerning reorganization of the Department of Commerce.

The Public Roads Administration was transferred August 20 from the Federal Works Agency to the Department of Commerce by Reorganization Plan No. 7 (5 U. S. C. 630b, Note). Its name was changed to the Bureau of Public Roads.

The Office of Industry Cooperation and the voluntary agreements program were terminated (Department Order 110 of September 30).

1950—The Government Patents Board was created and attached to the Department of Commerce for housekeeping purposes only (Executive Order 10096 of January 23).

The Federal Maritime Board [2] was established in the Department of Commerce, the Maritime Administration created as an agency in the Department, and the United States Maritime Commission abolished by Reorganization Plan No. 21 (5 U. S. C. 170) (Department Order 117 of May 24).

The Office of Industry and Commerce was established; the Office of Domestic Commerce was abolished and its functions transferred to the new office; the industry-commodity units of the Bureau of Foreign and Domestic Commerce were consolidated in the Office of Industry and Commerce; the responsibilities of the Office of International Trade relating to commodities, export control, transportation, and communications were transferred to the Office of Industry and Commerce (Department Order 18, Amended, of October 5).

The National Production Authority was created pursuant to the act of September 8 (64 Stat. 798; 50 U. S. App. Sup. 2061) and Executive Order 10161 of September 9 (Department Order 123 of September 11).

The Advisory Committee on Export Policy was established (Department Order 125 of October 5).

The Office of Transportation and the Transportation Council were established (Department Order 128 of November 20).

1951—The Industry Evaluation Board was established (Department Order 129 of January 10).

The National Shipping Authority was created in the Maritime Administration (Department Order 117, Amended, of March 13).

The loan guarantee program was established in the Department pursuant to the Defense Production Act of 1950 and Executive Order 10161 of September 9, 1950 (Department Order 132 of June 29).

The Defense Air Transportation Administration was created pursuant to Executive Order 10219 of February 28 (Department Order 137 of November 12).

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[2] The Board exercises its rulemaking, regulatory, investigative, and control functions independently of the Secretary of Commerce.

1952—The Office of Distribution was created to foster better distribution so that production and employment could be maintained on the decline of defense production (Department Order 145 of October 1).

1953—The Office of Transportation was abolished (Department Order 128, Amended, Amendment 1 of March 30) and its work thereafter focused directly in the Office of the Under Secretary for Transportation.

The Inland Waterways Corporation was sold July 1 to the Federal Barge Lines, Inc.

The Appeals Board was transferred from the Bureau of Foreign and Domestic Commerce to the Office of the Assistant Secretary of Commerce for Administration (Department Order 106, Amended, of August 18).

Four weaponry divisions and the Corona Laboratories of the National Bureau of Standards were transferred to the Department of Defense pursuant to a memorandum of understanding between the Secretary of Commerce and the Secretary of Defense (18 F. R. 5713, September 27).

The Business and Defense Services Administration was established. Transferred to BDSA were: Office of Field Service, Office of Technical Services, Office of Distribution, Office of Industry and Commerce, and Industry Evaluation Board. The National Production Authority was abolished. These actions were taken under Department Order 152 of October 1.

The Bureau of Foreign Commerce was established and transferred to it were the functions of the Office of International Trade, which was abolished (Department Order 153 of October 12).

The Office of Business Economics was established as a primary organization unit of the Department (Department Order 15, Amended, of December 1).

(NOTE.—Through Department Orders 152, 153, and 15, Amended, functions of the Bureau of Foreign and Domestic Commerce were absorbed by the Business and Defense Services Administration, Bureau of Foreign Commerce, and the Office of Business Economics.)

1954—The Office of Strategic Information was established (Department Order 157 of November 1).

1955—The Office of International Trade Fairs was established (Department Order 159 of January 27).

1956—A National Defense Executive Reserve unit was established in the Department pursuant to Executive Order 10660 of February 15 (Department Order 163 of May 16).

Appropriations for major expansion of the Federal-aid highway system, administered by the Bureau of Public Roads, were authorized June 29 by the Federal-Aid Highway Act of 1956 (70 Stat. 374).

The Office of Area Development was established (Department Order 164 of August 10).

1957—The Office of Strategic Information was abolished (Department Order 157 (Amended) Revocation Notice of July 1, 1957).

Functions and personnel of the Alaska Road Commission were transferred from the Department of the Interior to the Department of Commerce pursuant to the Federal-Aid Highway Act of 1956 and memorandum of agreement, between the two Departments, effective September 16.

1958—Saint Lawrence Seaway Development Corporation's operations were placed under the direction and supervision of the Secretary of Commerce by Executive Order 10771 of June 20.

SECRETARIES OF COMMERCE AND LABOR AND OF COMMERCE

	Tenure	
Commerce and Labor:	*Begun*	*Ended*
George B. Cortelyou	Feb. 18, 1903	June 30, 1904
Victor H. Metcalf	July 1, 1904	Dec. 16, 1906
Oscar S. Straus	Dec. 17, 1906	Mar. 5, 1909
Charles Nagel	Mar. 6, 1909	Mar. 4, 1913
Commerce:		
William C. Redfield	Mar. 5, 1913	Oct. 31, 1919
Joshua W. Alexander	Dec. 16, 1919	Mar. 4, 1921
Herbert C. Hoover	Mar. 5, 1921	Aug. 21, 1928
William F. Whiting	Aug. 22, 1928	Mar. 4, 1929
Robert P. Lamont	Mar. 5, 1929	Aug. 7, 1932
Roy D. Chapin	Aug. 8, 1932	Mar. 3, 1933
Daniel C. Roper	Mar. 4, 1933	Dec. 23, 1938
Harry L. Hopkins	Dec. 24, 1938	Sept. 18, 1940
Jesse H. Jones	Sept. 19, 1940	Mar. 1, 1945
Henry A. Wallace	Mar. 2, 1945	Sept. 20, 1946
W. Averell Harriman	Oct. 7, 1946	Apr. 22, 1948
Charles Sawyer	May 6, 1948	Jan. 20, 1953
Sinclair Weeks	Jan. 21, 1953	.....

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