

## Section 18

### Communications

This section presents statistics relating to the usage, finances, and operations of the various communications and related media. Included are data concerning postal service, telephone, telegraph, radio, television, newspapers, and books. The principal sources of wire and wireless data are the Federal Communications Commission's annual *Statistics of Communications Common Carriers* (prior to 1957 titled *Statistics of the Communications Industry in the United States*), and *Annual Report*. Data concerning the postal service are included in the *Annual Report of the Postmaster General*. Statistics as to revenues, volume of mail, and the distribution of expenditures by classes of mail and services are presented in the Post Office Department's annual *Cost Ascertainment Report*. Statistics on number and circulation of newspapers and periodicals and on sales of books and pamphlets are issued by the Bureau of the Census in reports of the Census of Manufactures. Annual data on number and circulation of daily and Sunday newspapers appear in *Editor and Publisher's International Yearbook Number*. Monthly data on new books and new editions of books are presented by R. R. Bowker Company in *Publishers' Weekly*.

Since the establishment of the Federal Communications Commission in 1934, statistical coverage of wire and wireless communications has been concentrated in that agency. According to the Communications Act of 1934, as amended, only carriers engaged in interstate, or foreign, communications service by means of their own facilities (or through the facilities of another carrier under direct or indirect common control) are subject to the full jurisdiction of the Commission. The Commission requires the filing of annual and monthly reports by these carriers except from the smallest carriers. The companies controlling any but the smallest of these carriers are also required to file annual reports.

**Postal Service.**—"Cost ascertainment" is the term applied in the Post Office Department to describe its plan or system, partly accounting and partly statistical, for developing through the medium of a sampling procedure, data on the revenues, expenses, volumes, and average hauls fairly attributable to each of the several classes of mail handled by the Postal Service (first, second, third, fourth, foreign, penalty, franked, free for the blind, and air mail) and similar revenue, expense, and volume data for each of its special services (special delivery, money order, insurance, collect-on-delivery, registry, certified, and postal savings).

**Telephone and telegraph systems.**—Practically all of the wire-telegraph, ocean-cable, and radiotelegraph carriers are subject to the full jurisdiction of the Federal Communications Commission. A large number of telephone carriers engaged in interstate or foreign service only by connection with the facilities of another unaffiliated carrier are not subject to the full jurisdiction of the Commission. However, it is estimated that the gross operating revenues of the telephone carriers reporting annually cover over 90 percent of the revenues of all telephone carriers in the United States.

The term "system" is used, in general, for aggregations of lines operated by the larger companies, with appropriate intercompany duplications excluded. The "Bell System" consists of the American Telephone and Telegraph Co. and its Principal Telephone Subsidiaries.

**Broadcasting.**—The number of broadcast stations refers to the number licensed or holding construction permits. Total broadcast revenues are defined as total time

sales of all networks and stations, less commissions to agencies and plus incidental revenues, such as sale of talent, program material, etc. Reports filed with the Federal Communications Commission by broadcast stations and networks cover substantially all units in the industry which operate in the United States and its outlying areas.

**Alaska and Hawaii.**—For a general statement concerning the treatment of data for Alaska and Hawaii, see preface.

**Historical statistics.**—Tabular headnotes (as “See also *Historical Statistics, Colonial Times to 1957*, series R 139–141) provide cross-references, where applicable, to *Historical Statistics of the United States, Colonial Times to 1957*. See preface.

FIG. XXX. NUMBER OF RADIO AND TV STATIONS: 1945 TO 1958

[Excludes FM (independents). See table 678]

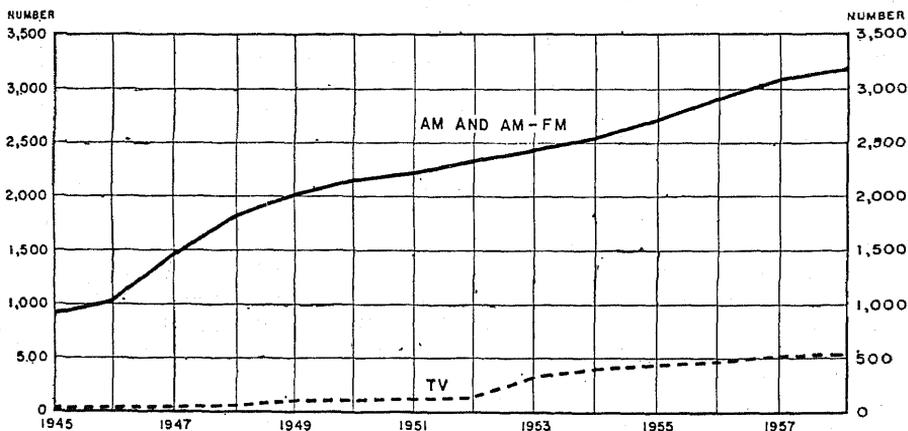
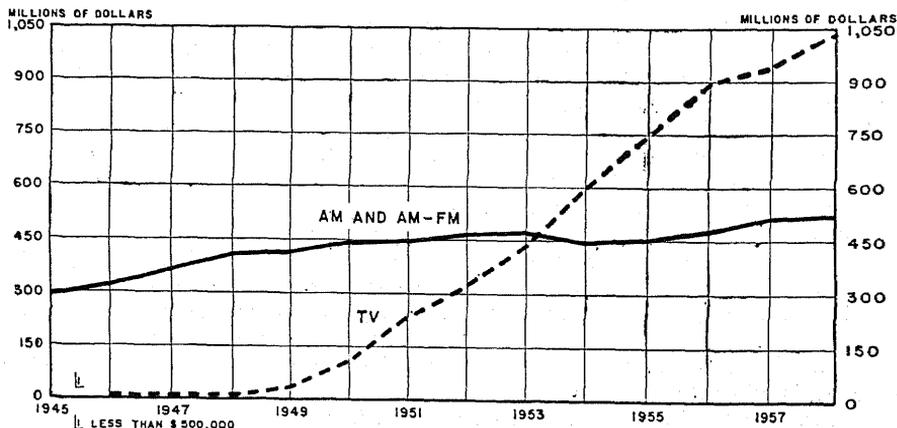


FIG. XXXI. BROADCAST REVENUES OF RADIO AND TV STATIONS: 1945 TO 1958

[Excludes FM (independents). See table 678]



Source of figs. XXX and XXXI: Charts prepared by Department of Commerce, Bureau of the Census. Data are from Federal Communications Commission.

No. 654. UNITED STATES POSTAL SERVICE—SUMMARY: 1900 TO 1959

[For years ending June 30. Includes Alaska, Hawaii, and outlying areas. See text, p. 505. See also *Historical Statistics, Colonial Times to 1957*, series R 139-141 and R 145]

YEAR	Number of post offices	FINANCES <sup>1</sup>			Revenue per capita	MONEY ORDERS ISSUED		Sales of postage stamps and other stamped paper	Postage paid under permit (1st, 2d, 3d, and 4th class)	Number of pieces of mail handled <sup>4</sup>
		Revenues	Expenditures <sup>2</sup>	Surplus (+) or deficit (-)		Domes- tic <sup>3</sup>	Inter- national			
		<i>Mil. dol.</i>	<i>Mil. dol.</i>	<i>Mil. dol.</i>	<i>Dollars</i>	<i>Mil. dol.</i>	<i>Mil. dol.</i>	<i>Mil. dol.</i>	<i>Mil. dol.</i>	<i>Millions</i>
1900	76,688	102	108	-5	1.34	239	17	94	-----	7,130
1905	68,131	153	167	-15	1.82	402	43	140	-----	10,188
1910	59,580	224	230	-6	2.43	558	90	202	-----	14,850
1915	55,380	287	299	-11	2.85	665	52	256	-----	8
1920	52,641	437	454	-17	4.11	1,342	23	380	-----	13
1925	50,957	600	639	-40	5.28	1,549	36	508	-----	25,835
1930	49,063	705	804	-98	5.75	1,575	52	575	-----	27,888
1935	45,686	631	697	-66	4.94	1,829	22	473	-----	22,332
1940	44,024	767	808	-41	5.84	2,103	13	522	-----	177,749
1945	41,792	1,314	1,145	+169	9.44	4,866	21	954	-----	37,912
1950	41,464	1,677	2,223	-545	11.14	5,165	16	862	-----	45,064
1951	41,193	1,777	2,341	-565	11.61	5,652	20	883	-----	741,46,908
1952	40,919	1,947	2,667	-720	12.50	5,946	27	948	-----	836,49,906
1953	40,609	2,092	2,742	-650	13.20	6,033	30	985	-----	931,50,948
1954	39,405	2,269	2,668	-399	14.08	6,048	33	999	-----	1,053,52,213
1955	38,316	2,349	2,712	-363	14.33	5,865	31	1,000	-----	1,134,55,234
1956	37,515	2,419	2,883	-464	14.51	5,926	32	1,011	-----	1,196,56,441
1957	37,012	2,497	3,044	-548	14.70	5,880	31	1,015	-----	1,263,59,073
1958	36,308	2,550	3,441	-891	14.76	5,442	29	1,017	-----	1,301,60,130
1959	35,750	3,035	3,640	-605	17.28	5,158	26	1,245	-----	61,247

<sup>1</sup> After allowance for reimbursements, embossed envelope purchases, indemnity claims, and miscellaneous revenue and expenditure offsets (see footnote 2, table 656). Revenues, expenditures, and deficits through 1953 on cash-disbursement basis, i.e., they include payments and receipts in a year applicable to prior years; beginning 1954, on accrual basis, i.e., expenditures are shown in year in which obligation was incurred, and revenues in year which gave rise to the earnings, whether collected or accrued. During fiscal 1954, the Department began receiving reimbursement for penalty and franked mail, and discontinued payment of subsidies to airlines. These and other changes affect the comparability of the figures from year to year.

<sup>2</sup> Includes capital expenditures for plant and equipment and cost of materials and supplies, but no provision for depreciation is made. Also includes costs of certain services rendered to other agencies without reimbursement but excludes costs of certain services rendered to the Post Office Department by other agencies.

<sup>3</sup> Includes postal notes issued under act of Congress, 1945-1951.

<sup>4</sup> Data for years prior to 1930 are estimates.

<sup>5</sup> Expenditures and deficit for fiscal 1957 have been increased by \$26 million for retroactive increases in rail rates for eastern roads granted by the Interstate Commerce Commission in 1958.

Source: Post Office Department; *Annual Report of the Postmaster General and Cost Ascertainment Report*.

No. 655. POSTAL SERVICE REVENUES, BY SOURCE: 1920 TO 1959

[In millions of dollars. For years ending June 30. Includes Alaska, Hawaii, and outlying areas. See text, p. 505]

ITEM	1920	1930	1940	1945	1950	1955	1957	1958	1959
<b>Total</b> .....	437	705	767	1,314	1,677	2,349	2,497	2,550	3,035
Ordinary postal revenue <sup>1</sup> .....	424	686	732	1,247	1,606	2,266	2,420	2,469	2,960
Stamps, postal cards, etc.....	380	575	522	954	862	999	1,013	1,015	1,243
Second-class postage paid in money (pound rates) <sup>2</sup> .....	25	29	23	25	40	64	70	69	72
Other postage paid in money under permit <sup>3</sup> .....	13	74	177	252	678	1,136	1,266	1,303	1,537
Box rents.....	6	9	8	11	14	26	27	27	28
Miscellaneous.....	1	1	3	4	11	41	45	55	80
Money-order revenues.....	10	17	24	47	63	66	64	71	67
Postal Savings System, income transferred to Post Office Department.....	2	2	11	21	8	18	12	10	8

<sup>1</sup> Net revenue after refunds of postage.

<sup>2</sup> Beginning 1950, includes fees; previously included with miscellaneous.

<sup>3</sup> Beginning 1955, includes controlled circulation publications.

Source: Post Office Department; *Annual Report of the Postmaster General*.

### No. 656. POSTAL REVENUES AND EXPENDITURES, BY CLASS OF MAIL AND TYPE OF SERVICE: 1957 to 1959

[In thousands of dollars. For years ending June 30. Includes Alaska and Hawaii. See also *Historical Statistics, Colonial Times to 1957*, series R 146-160]

MAIL AND SERVICE	1957			1958			Revenues, 1959
	Revenues	Apportioned expenditures <sup>1</sup>	Excess of revenues (+) or expenditures (-)	Revenues	Apportioned expenditures <sup>1</sup>	Excess of revenues (+) or expenditures (-)	
All operations.....	2,524,731	3,174,155	-649,424	2,582,204	3,477,882	-895,678	3,077,031
Net total.....	2,496,614	3,146,038	-649,424	2,550,233	3,445,910	-895,678	3,035,250
Deductions <sup>2</sup> .....	28,117	28,117		31,971	31,971		41,781
All mails and special services.....	2,523,263	3,155,766	-632,503	2,580,654	3,459,306	-878,652	3,075,289
Prepaid domestic mail.....	2,160,264	2,765,069	-604,805	2,188,661	3,050,122	-861,461	2,654,882
1st class <sup>3</sup> .....	1,066,044	1,086,655	-20,612	1,092,441	1,231,666	-139,225	1,438,733
Domestic airmail <sup>4</sup> .....	153,189	186,569	-16,630	151,236	142,118	+9,118	173,979
2d class.....	66,436	336,711	-270,276	65,623	351,924	-286,301	69,081
Controlled circulation publications.....	6,735	8,886	-2,150	7,359	10,649	-3,290	6,826
3d class.....	281,479	551,287	-269,807	287,761	611,871	-324,110	300,645
4th class (parcel post).....	586,381	644,971	-58,590	584,243	701,894	-117,651	575,618
Government mail.....	40,100	37,784	+2,316	51,804	46,279	+5,525	68,451
Penalty.....	38,019	34,025	+3,994	49,645	41,580	+7,965	66,150
Registry (free).....		1,553	-1,553		1,922	-1,922	
Franked.....	2,081	2,207	-126	2,259	2,777	-518	2,301
Free for the blind.....		939	-939		1,171	-1,171	
International mail.....	90,975	89,816	+1,159	88,228	96,858	-8,630	97,940
Special services.....	225,148	259,389	-34,242	243,505	257,717	-14,212	242,125
Registry (paid).....	31,766	39,521	-7,755	37,789	37,465	+324	38,623
Certified mail.....	4,777	4,504	+272	6,798	5,356	+1,437	7,649
Insurance.....	25,367	21,920	+3,447	25,671	22,497	+3,174	27,160
Collect on delivery.....	14,620	22,686	-8,066	13,181	22,765	-9,584	13,111
Special delivery.....	28,904	40,448	-11,544	35,212	42,506	-7,294	34,153
Money orders.....	63,880	83,408	-19,527	71,018	79,137	-8,119	67,089
Postal savings.....	12,531	5,414	+7,117	10,111	4,884	+5,227	8,084
Box rent service.....	26,716	27,081	-365	26,635	27,372	-737	27,877
Stamped envelope service.....	16,587	14,408	+2,179	17,094	15,733	+1,361	18,439
Unassignable.....	6,776	2,769	+4,007	8,457	7,159	+1,298	11,891
Nonpostal services.....	1,468	18,388	-16,920	1,550	18,576	-17,026	1,742
Alien address reporting.....	210	223	-13	239	239		256
U.S. savings bonds and stamps.....	652	1,085	-433	617	752	-135	692
Civil service.....		3,378	-3,378		3,820	-3,820	
Documentary stamps.....		385	-385		303	-303	
Migratory bird stamps.....	140	152	-12	137	124	+13	152
Official mail messenger service.....		190	-190		227	-227	
Custodial service (public bldgs).....	355	12,859	-12,504	410	12,961	-12,551	457
Miscellaneous items, other agencies.....	110	117	-7	147	150	-3	155

<sup>1</sup> Includes computed Civil Service Retirement costs of \$127,600,000 for 1957 and \$5,100,000 for 1958, included to effect comparability with subsequent years; effective July 13, 1957, the Department is required to reimburse the Civil Service Retirement Fund for such costs. Excludes \$26 million apportioned for retroactive increases in rail rates for eastern roads granted by Interstate Commerce Commission in 1958.

<sup>2</sup> Includes reimbursements, embossed envelope purchases, indemnity claims, and miscellaneous revenues and expenditure offsets.

<sup>3</sup> Includes free letter mail from members of Armed Forces.

<sup>4</sup> Includes paid airmail to and from Armed Forces overseas, and outlying areas of United States; also free airmail from members of Armed Forces, and airmail reimbursements.

Source: Post Office Department; *Cost Ascertainment Report*.

### No. 657. PIECES OF MAIL RECEIVED PER CAPITA: 1945 to 1959

[For years ending June 30. Includes Alaska and Hawaii]

ITEM	1945	1950	1952	1953	1954	1955	1956	1957	1958	1959
Major domestic mail received per capita.....	257	287	307	308	310	324	325	334	335	335
Letters (1st class and airmail) do.....	166	168	179	181	177	184	189	194	195	192
2d class do.....	42	42	45	43	40	41	41	41	41	40
3d class do.....	41	69	75	76	86	92	88	92	92	97
Parcels do.....	8	8	8	8	7	7	7	7	7	6

Source: Post Office Department; *Annual Report of the Postmaster General*.

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No. 658. CITY, RURAL, AND SPECIAL DELIVERY SERVICE: 1900 TO 1959

[As of June 30. Includes Alaska, Hawaii, and Puerto Rico]

YEAR	CITY DELIVERY			RURAL DELIVERY				SPECIAL DELIVERY	
	Number of offices	Number of regular carriers	Annual cost <sup>1</sup>	Number of routes	Length of routes	Annual travel	Annual cost	Number of specials	Cost of service <sup>2</sup>
			\$1,000		1,000 miles	1,000 miles	\$1,000	1,000	\$1,000
1900.....	796	15,322	14,512	1,259	29		420	5,192	
1910.....	1,492	28,715	31,684	41,079	993	303,007	36,915	15,440	
1920.....	2,729	37,085	74,933	43,445	1,152	348,627	75,795	68,818	
1930.....	3,813	54,705	146,532	43,278	1,335	404,738	106,338	101,770	12,058
1940.....	4,020	59,407	161,185	32,646	1,402	424,704	91,441	96,381	11,488
1945.....	4,124	58,181	214,255	32,106	1,435	435,209	106,853	120,579	16,521
1950.....	4,667	90,216	467,717	32,619	1,493	453,260	159,387	115,044	32,464
1951.....	4,707	84,944	459,619	32,513	1,487	451,250	168,856	124,594	34,066
1952.....	4,786	85,864	537,910	32,546	1,600	455,345	188,785	122,634	40,511
1953.....	4,851	87,537	541,250	32,542	1,513	459,307	192,066	114,158	34,193
1954.....	4,948	89,671	567,544	32,370	1,527	463,209	191,772	120,285	34,917
1955.....	5,032	91,418	601,051	32,076	1,545	469,283	194,945	105,289	37,499
1956.....	5,128	94,692	679,444	31,888	1,583	480,129	205,812	107,933	38,154
1957.....	5,277	97,294	714,553	31,669	1,586	481,609	209,064	110,865	38,704
1958.....	5,418	102,093	832,136	31,465	1,616	490,671	226,552	96,484	42,441
1959.....	5,528	106,295	875,473	31,377	1,753	532,677	245,003	92,831	43,153

<sup>1</sup> Includes cost of motor vehicle service.

<sup>2</sup> Fees paid special messengers plus apportionment of other expenditures.

Source: Post Office Department; *Annual Report of the Postmaster General and Cost Ascertainment Report.*

No. 659. POSTAL SERVICE EXPENDITURES, BY OBJECT: 1953 TO 1959

[In millions of dollars. For years ending June 30. Includes Alaska, Hawaii, and Puerto Rico. Data cover expenditures during specified year and include unliquidated obligations, whether on account of that year or of previous years. See text, p. 505]

OBJECT	1953	1954	1955	1956	1957	1958	1959
<b>Total apportioned expenditures <sup>1</sup></b> .....	<b>2,760</b>	<b>2,677</b>	<b>2,738</b>	<b>2,913</b>	<b>3,072</b>	<b>3,473</b>	<b>3,682</b>
Post Office operations.....	2,166	2,180	2,266	2,430	2,543	2,847	3,046
Salaries and travel of postmasters and assistants <sup>2</sup> .....	154	242	249	266	278	319	361
Salaries and travel of clerks, etc.....	905	802	826	871	906	1,017	1,200
City delivery service.....	484	506	535	604	631	728	783
Rural delivery service.....	192	192	195	200	209	227	245
Postal transportation service.....	181	179	180	191	192	212	210
All other.....	250	250	281	291	327	344	353
Transportation of mails.....	565	467	429	433	408	492	508
Railroad.....	345	318	297	293	318	336	335
Star route.....	41	41	40	41	42	44	47
Short haul truck.....	6	8	9	10	12	13	14
Domestic water transportation.....	3	3	3	3	3	3	3
Highway post offices.....	3	3	4	5	5	6	6
Domestic airmail.....	73	47	34	35	38	40	44
Foreign airmail.....	63	31	27	30	31	53	40
Other foreign mail <sup>6</sup> .....	32	17	16	16	18	19	19
Claims and miscellaneous.....	6	7	6	6	6	7	7
General administration and overhead apportioned.....	22	24	38	45	55	127	120

<sup>1</sup> Before allowance for reimbursements, embossed envelope purchases, indemnity claims, and miscellaneous revenue and expenditure offsets (see footnote 2, table 656).

<sup>2</sup> Expenditures for 1957 have been increased by \$26 million for retroactive increase in rail rates for eastern roads granted by the Interstate Commerce Commission in 1958.

<sup>3</sup> Beginning 1954, includes supervisors; formerly included with clerks.

<sup>4</sup> Includes stationary postal transportation service employees.

<sup>5</sup> Mobile units only.

<sup>6</sup> Includes terminal and transportation charges by foreign countries.

Source: Post Office Department; *Cost Ascertainment Report.*

## No. 660. POST OFFICE MAIL, BY CLASSES: 1950 TO 1959

[For years ending June 30. Includes Alaska and Hawaii. See also *Historical Statistics, Colonial Times to 1967*, series R 145-160]

CLASS OF MAIL	1950	1954	1955	1956	1957	1958	1959
PIECES OF MAIL (1,000,000)							
All mail.....	45,064	52,213	55,234	56,441	59,078	60,130	61,247
Domestic.....	44,646	51,711	54,722	55,907	58,519	59,595	60,694
1st class.....	24,500	27,085	28,713	30,078	31,561	32,218	32,274
Airmail.....	6,853	1,470	1,467	1,487	1,483	1,435	1,368
2d class.....	6,265	6,483	6,740	6,915	6,888	7,148	7,099
3d class.....	10,343	13,866	15,050	14,976	15,702	15,849	16,978
4th class (parcel post).....	1,179	1,195	1,136	1,173	1,184	1,170	1,038
Publications <sup>1</sup> .....	1,472	71	85	102	125	145	126
Penalty.....	32	45	48	61	61	67	86
Franked.....	2	3	3	4	4	4	4
Free for blind.....							
International.....	417	502	512	534	559	534	553
Regular mail <sup>2</sup> .....	190	224	235	224	240	224	215
Parcel post.....	9	10	8	8	9	8	9
U.S.A. gift parcels.....	12						
Publishers' 2d class.....	85	113	110	124	120	120	138
Airmail <sup>2</sup> .....	121	153	157	177	188	181	100
Air parcel post.....	1	1	1	1	1	1	1
WEIGHT OF MAIL (1,000,000 pounds)							
All mail.....	11,521	11,004	10,844	10,929	11,071	11,119	11,332
Domestic.....	11,176	10,803	10,668	10,758	10,893	10,945	11,150
1st class.....	620	749	804	874	905	921	920
Airmail.....	83	82	85	91	95	92	97
2d class.....	2,287	2,504	2,582	2,703	2,716	2,695	2,708
3d class.....	646	811	892	915	949	988	1,156
4th class (parcel post).....	7,370	6,404	6,035	5,904	5,931	5,861	5,887
Publications <sup>1</sup> .....		30	44	53	63	69	68
Penalty.....	183	189	201	194	206	289	201
Franked.....	5	5	5	6	5	6	8
Free for blind.....	12	20	20	20	23	24	25
International.....	345	200	177	171	179	174	182
Regular mail <sup>2</sup> .....	25	34	33	31	33	33	31
Parcel post.....	95	101	82	75	82	76	79
U.S.A. gift parcels.....	177						
Publishers' 2d class.....	43	59	54	57	55	57	63
Airmail <sup>2</sup> .....	4	5	6	6	7	6	7
Air parcel post.....	1	1	1	2	2	2	2

<sup>1</sup> Included with 3d and 4th class for 1950.

<sup>2</sup> Comprises letters, cards, and other articles.

Source: Post Office Department; *Cost Ascertainment Report*.

## No. 661. POST OFFICE EMPLOYEES, BY TYPE: 1940 TO 1959

[As of June 30. Includes Alaska and Hawaii. Beginning 1945, figures include classified and war-service regular employees of all activities. See also *Historical Statistics, Colonial Times to 1967*, series R 161, for total employees]

TYPE	1940	1945	1950	1955	1957	1958	1959
Total <sup>1</sup> .....	353,156	435,955	500,578	511,613	521,198	538,416	549,951
Full time.....	266,076	278,442	363,774	366,901	379,721	392,599	402,776
Departmental (bureaus and offices).....	1,431	1,526	1,775	1,530	1,300	1,329	1,380
Regional <sup>2</sup> .....				2,599	6,679	6,277	6,094
Postmasters.....	44,093	41,792	41,464	38,316	37,012	36,221	35,505
Post Office supervisors <sup>3</sup> .....	2,701	3,420	3,540	20,607	21,755	23,268	25,030
Post Office clerks and mail handlers <sup>4</sup> .....	82,910	93,941	141,092	128,457	132,097	138,264	171,018
City and village carriers.....	59,407	58,181	90,216	91,418	97,284	102,083	106,285
Rural carriers.....	32,570	32,031	32,553	32,022	31,615	31,411	31,206
Postal transportation.....	20,087	20,546	27,126	29,224	27,611	29,056	(9)
Custodial service.....	17,328	18,606	15,743	13,388	13,835	13,895	14,373
All other.....	5,549	8,399	10,265	9,390	10,533	10,795	10,793
Part time (field).....	87,080	157,513	136,804	144,712	141,477	145,817	147,175

<sup>1</sup> 40-hour workweek for full-time field employees.

<sup>2</sup> Comprises regional office and disbursement personnel, money order center, and supply center personnel, and beginning 1957, mailbag repair center and mailbag depository personnel formerly reported under Post Office clerks and mail handlers.

<sup>3</sup> Through 1950, assistant postmasters only.

<sup>4</sup> Through 1950, includes Post Office supervisors.

<sup>5</sup> Included in Post Office clerks and mail handlers, and in Post Office supervisors.

Source: Post Office Department; *Annual Report of the Postmaster General*.

No. 662. POST OFFICES, 1958 AND 1959, AND GROSS RECEIPTS, 1930 TO 1957, BY STATES AND FOR OTHER AREAS

[For years ending June 30, except as noted]

STATE OR OTHER AREA	NUMBER OF POST OFFICES		GROSS POSTAL RECEIPTS (\$1,000) <sup>1</sup>					
	1958	1959	1930	1940	1945	1950	1955	1957 <sup>2</sup>
<b>Grand total</b> .....	<b>36,308</b>	<b>36,750</b>	<b>686,351</b>	<b>729,780</b>	<b>1,243,674</b>	<b>1,603,628</b>	<b>2,266,121</b>	<b>2,412,573</b>
<b>United States</b> .....	<b>36,188</b>	<b>35,630</b>	<b>685,805</b>	<b>728,923</b>	<b>1,241,136</b>	<b>1,600,936</b>	<b>2,261,273</b>	<b>2,407,436</b>
<b>New England</b> .....	<b>2,120</b>	<b>2,089</b>	<b>51,375</b>	<b>54,022</b>	<b>77,245</b>	<b>112,173</b>	<b>151,063</b>	<b>158,444</b>
Maine.....	621	608	3,912	3,925	5,834	6,765	8,420	8,703
New Hampshire.....	308	300	2,286	2,718	3,815	5,203	7,772	7,655
Vermont.....	326	325	1,703	1,846	2,406	3,239	4,088	4,391
Massachusetts.....	532	525	29,627	29,796	42,120	63,032	82,737	86,064
Rhode Island.....	62	62	3,297	3,514	5,970	7,961	11,056	11,131
Connecticut.....	271	269	10,550	12,224	17,100	25,972	36,940	40,390
<b>Middle Atlantic</b> .....	<b>4,505</b>	<b>4,449</b>	<b>194,927</b>	<b>195,685</b>	<b>324,915</b>	<b>437,889</b>	<b>604,509</b>	<b>642,197</b>
New York.....	1,782	1,768	125,072	120,888	210,835	275,433	375,582	395,229
New Jersey.....	674	664	19,768	23,207	35,122	53,050	80,720	91,047
Pennsylvania.....	2,149	2,117	50,087	51,590	78,958	109,397	148,207	155,921
<b>East North Central</b> .....	<b>5,204</b>	<b>5,169</b>	<b>175,748</b>	<b>180,346</b>	<b>259,051</b>	<b>372,050</b>	<b>521,177</b>	<b>552,970</b>
Ohio.....	1,209	1,188	42,088	41,668	62,071	86,039	122,691	129,902
Indiana.....	835	833	15,613	16,810	26,745	35,755	50,291	55,726
Illinois.....	1,379	1,372	78,757	79,257	104,724	157,303	216,168	228,285
Michigan.....	941	938	24,133	26,870	42,109	58,635	84,707	88,601
Wisconsin.....	840	838	15,157	15,740	23,402	34,318	47,320	50,456
<b>West North Central</b> .....	<b>5,639</b>	<b>5,580</b>	<b>80,641</b>	<b>76,171</b>	<b>111,234</b>	<b>155,302</b>	<b>209,681</b>	<b>219,626</b>
Minnesota.....	954	951	17,614	17,600	24,886	35,556	48,715	52,119
Iowa.....	1,038	1,033	13,504	12,912	18,531	25,354	34,861	36,511
Missouri.....	1,187	1,160	28,988	25,806	37,517	56,684	75,156	78,010
North Dakota.....	546	544	2,721	2,747	3,583	4,579	5,577	5,760
South Dakota.....	486	482	2,750	2,614	3,686	4,663	6,019	6,176
Nebraska.....	621	613	7,279	6,925	10,397	13,704	18,522	19,085
Kansas.....	807	797	7,785	7,569	12,633	20,831	21,965	
<b>South Atlantic</b> .....	<b>5,815</b>	<b>5,666</b>	<b>52,293</b>	<b>65,939</b>	<b>124,543</b>	<b>150,838</b>	<b>222,678</b>	<b>237,673</b>
Delaware.....	61	61	1,233	1,759	2,574	3,727	5,502	5,702
Maryland.....	499	493	8,519	9,435	15,328	19,877	27,180	28,679
Dist. of Columbia.....	1	1	6,047	3,242	18,637	19,731	27,352	27,672
Virginia.....	1,356	1,281	7,985	9,617	18,013	21,198	29,681	31,245
West Virginia.....	320	1,300	4,611	5,142	8,725	9,349	12,164	12,560
North Carolina.....	1,864	845	6,830	9,407	19,175	23,247	31,324	32,940
South Carolina.....	440	437	2,174	2,532	4,897	6,656	13,020	13,816
Georgia.....	738	723	9,220	10,630	18,631	23,812	36,052	37,555
Florida.....	536	525	5,674	8,875	18,561	23,242	40,403	47,473
<b>East South Central</b> .....	<b>3,727</b>	<b>3,637</b>	<b>23,736</b>	<b>26,381</b>	<b>49,905</b>	<b>58,411</b>	<b>84,504</b>	<b>89,191</b>
Kentucky.....	1,725	1,668	6,327	7,304	12,472	14,804	21,399	22,309
Tennessee.....	665	658	8,546	9,796	17,528	22,629	32,112	33,960
Alabama.....	765	754	5,108	5,961	11,991	13,118	19,685	21,163
Mississippi.....	672	587	3,255	3,820	7,914	7,860	11,308	11,759
<b>West South Central</b> .....	<b>3,894</b>	<b>3,840</b>	<b>37,240</b>	<b>42,606</b>	<b>81,886</b>	<b>98,003</b>	<b>144,480</b>	<b>156,973</b>
Arkansas.....	324	309	3,828	4,115	7,995	8,441	11,048	11,638
Louisiana.....	605	593	5,486	6,684	13,778	14,781	21,272	23,404
Oklahoma.....	729	723	7,272	7,875	13,032	14,720	20,862	22,362
Texas.....	1,736	1,710	20,654	24,433	47,080	60,061	91,298	99,539
<b>Mountain</b> .....	<b>2,556</b>	<b>2,524</b>	<b>17,276</b>	<b>19,778</b>	<b>32,171</b>	<b>41,878</b>	<b>64,189</b>	<b>70,004</b>
Montana.....	461	452	2,446	2,813	3,682	4,856	6,555	6,899
Idaho.....	339	332	1,513	1,878	2,815	3,597	5,180	5,515
Wyoming.....	231	227	993	1,189	1,811	2,302	3,169	3,261
Colorado.....	483	479	6,819	7,158	10,701	14,801	22,688	24,634
New Mexico.....	411	406	1,089	1,631	2,997	3,881	6,227	6,931
Arizona.....	244	244	1,532	1,990	4,228	5,400	9,305	10,920
Utah.....	269	269	2,347	2,434	4,591	5,487	8,249	8,808
Nevada.....	118	115	537	686	1,345	1,495	2,816	3,036
<b>Pacific</b> .....	<b>2,728</b>	<b>2,676</b>	<b>52,256</b>	<b>66,393</b>	<b>178,282</b>	<b>171,500</b>	<b>257,097</b>	<b>277,983</b>
Washington.....	597	589	8,719	9,964	21,402	23,370	32,168	33,572
Oregon.....	477	456	5,436	6,719	11,152	15,591	21,201	22,198
California.....	1,844	1,328	37,223	48,060	122,559	127,622	195,658	213,598
Alaska.....	222	218	104	170	413	962	2,467	2,597
Hawaii.....	88	85	774	1,480	22,726	3,955	5,603	6,018
<b>Philatelic agency</b> .....			317	1,101	1,903	2,892	1,895	2,375
<b>Puerto Rico</b> .....	105	105	527	809	2,489	2,415	4,260	4,569
<b>Virgin Islands</b> .....	5	5	15	36	48	75	205	267
<b>Other areas<sup>3</sup></b> .....	10	10	3	13	(4)	201	383	301

<sup>1</sup> Excludes revenues from money-order business, postal savings, and certain miscellaneous items.

<sup>2</sup> Calendar year.

<sup>3</sup> Comprises Canton Island, Guam, Samoa (Tutuila), and Wake, Caroline, Mariana, and Marshall Islands.

<sup>4</sup> Less than \$500.

Source: Post Office Department; *Annual Report of the Postmaster General*, and records.

## No. 663. TELEPHONES, CALLS, AND RATES: 1930 TO 1959

[As of December 31, except toll rates. Excludes Alaska and Hawaii. See also *Historical Statistics, Colonial Times to 1967*, series R 1-13]

ITEM	1930	1935	1940	1945	1950	1955	1958	1959
Telephones.....1,000..	20,103	17,424	21,928	27,867	43,004	56,243	66,645	70,568
Total per 1,000 population.....	162.6	136.4	165.1	198.1	280.9	337.2	379.6	395.3
Bell companies <sup>1</sup> .....1,000..	15,983	14,280	18,811	23,547	36,795	48,028	56,759	60,110
Dial operated <sup>1</sup> .....do.....	4,932	6,758	10,915	15,180	27,893	41,788	53,332	57,606
Independent companies.....	4,120	3,144	3,617	4,320	6,209	8,215	9,886	10,447
Average daily conversations (1,000):								
Bell companies <sup>1 2</sup> .....	66,618	62,721	82,367	94,214	144,999	173,858	202,461	214,040
Local <sup>1</sup> .....	63,637	60,417	79,615	89,362	138,881	166,438	193,627	204,491
Long distance <sup>1 2</sup> .....	2,981	2,304	2,852	4,852	6,118	7,420	8,834	9,549
Independent companies <sup>2</sup> .....	16,902	13,279	16,942	18,970	30,295	39,417	50,097	53,091
Local.....	16,588	13,023	16,434	18,022	29,078	37,978	48,449	51,344
Long distance <sup>2</sup> .....	314	256	508	948	1,217	1,439	1,648	1,747
Toll rates in effect, from New York City to: <sup>3</sup>								
Philadelphia.....	\$0.50	<sup>4</sup> \$0.50	\$0.45	\$0.45	\$0.45	\$0.50	\$0.50	\$0.50
Chicago.....	3.00	<sup>4</sup> 2.50	1.90	1.75	1.55	1.50	1.50	1.45
Denver.....	6.00	<sup>4</sup> 5.25	3.25	2.35	2.20	2.20	2.20	1.95
San Francisco.....	9.00	<sup>4</sup> 7.50	4.00	2.50	2.50	2.50	2.50	2.25

<sup>1</sup> Comprises American Telephone and Telegraph Company and its Principal Telephone Subsidiaries, which constitute the Bell Telephone System, plus Southern New England and Cincinnati and Suburban Bell Telephone Companies, together with telephones serviced by these companies.

<sup>2</sup> Includes messages originating in independent company areas routed in part over Bell facilities.

<sup>3</sup> Source: Federal Communications Commission. Represents rate for station-to-station, daytime, 3-minute call.

<sup>4</sup> For 1936.

Source: American Telephone and Telegraph Company, New York, N.Y., except as noted; compiled from annual reports of A.T. & T. Co. and its Principal Telephone Subsidiaries, and Southern New England and Cincinnati and Suburban Companies, and other records.

## No. 664. BELL TELEPHONE COMPANIES—SUMMARY: 1930 TO 1959

[As of December 31. Comprises American Telephone and Telegraph Company and its Principal Telephone Subsidiaries, which constitute the Bell Telephone System, plus Southern New England and Cincinnati and Suburban Bell Telephone Companies. See also *Historical Statistics, Colonial Times to 1967*, series R 14-27]

ITEM	1930	1935	1940	1945	1950	1955	1958	1959
Central offices, number.....	6,770	7,028	7,189	7,523	8,656	9,958	10,807	10,987
Miles of wire <sup>1</sup> .....1,000..	75,567	80,439	91,274	101,813	144,256	201,235	260,464	282,287
Percent total wire mileage in cable.....	92.0	95.2	95.8	96.0	96.6	97.4	97.6	97.7
Miles of coaxial tube.....				10,146	62,741	78,547	90,442	94,093
Miles of microwave radio relay, broad band 1-way channel.....					7,517	125,438	230,788	252,632
Book value of plant (cost) \$1,000,000.....	4,149	4,305	4,887	5,865	10,375	15,773	21,225	22,819
Depreciation and amortization reserves.....do.....	740	1,062	1,397	2,108	2,905	4,007	4,760	5,085
Operating revenues.....do.....	1,115	947	1,206	1,979	3,342	5,425	6,938	7,372
Local exchange.....do.....	788	647	811	1,073	1,997	3,163	4,049	4,362
Toll.....do.....	347	276	361	845	1,208	2,000	2,543	2,843
Operating expenses <sup>2</sup> .....do.....	862	734	913	1,455	2,653	4,040	4,812	5,235
Federal income taxes.....do.....	22	21	64	259	248	644	940	1,027
Interest expense.....do.....	67	53	43	47	115	134	216	227
Net income.....do.....	195	148	224	188	367	697	1,002	1,171
Dividends declared <sup>3</sup> .....do.....	157	184	180	188	293	484	649	731
Employees, number.....	326,593	248,032	282,224	396,567	534,751	629,773	606,340	507,107
Wages and salaries.....\$1,000,000..	538	391	522	911	1,742	2,631	3,029	3,138

<sup>1</sup> Excludes drop and block wire.

<sup>2</sup> Includes operating taxes other than Federal income.

<sup>3</sup> Includes dividends on all minority holdings of preferred and common stocks, but excludes intercompany dividends.

Source: American Telephone and Telegraph Company, New York, N.Y.; compiled from annual reports of A.T. & T. Co., and its Principal Telephone Subsidiaries, and Southern New England and Cincinnati and Suburban Companies, and other records.

No. 665. INDEPENDENT TELEPHONE COMPANIES—SUMMARY: 1935 TO 1958

[Includes reporting companies in Alaska, Hawaii, and beginning 1950, Puerto Rico. Covers only those companies submitting operating information to the U.S. Independent Telephone Association; in 1958, reporting companies represented 83 percent of the Independent telephones in service. See also *Historical Statistics, Colonial Times to 1957*, series R 23-42]

ITEM	1935	1940	1945	1950	1955	1957	1958
Reporting companies, number	202	218	225	379	406	477	504
Number of telephones (incl. service telephones)							
1,000	1,762	2,194	2,974	4,907	6,750	7,929	8,434
Miles of wire <sup>1</sup> .....do	(2)	(2)	5,637	9,176	15,201	20,502	22,667
Telephone plant in service, book value...\$1,000,000	343	375	432	878	1,656	2,271	2,609
Depreciation reserves.....do	67	85	138	203	326	410	461
Operating revenues.....do	61	81	135	270	503	634	704
Local exchange.....do	46	60	84	171	329	412	460
Toll.....do	13	19	48	92	155	199	217
Operating expenses <sup>2</sup> .....do	44	61	93	211	354	454	503
Federal income taxes.....do	(2)	(2)	20	10	61	69	76
Interest expense.....do	7	6	6	12	22	35	43
Net income.....do	9	13	15	29	67	80	86
Dividends declared.....do	(2)	(2)	(2)	(2)	43	58	64
Employees.....1,000	(2)	(2)	36	63	72	81	81
Wages and salaries.....\$1,000,000	(2)	(2)	54	147	224	293	310

<sup>1</sup> Miles of open wire and miles of wire in aerial, underground, and other cable.

<sup>2</sup> Not available. <sup>3</sup> Excludes Federal income taxes.

Source: United States Independent Telephone Association, Washington, D.C., annual report, *Statistics of the Independent Telephone Industry* (copyright).

No. 666. TELEPHONE SYSTEMS—SUMMARY, CLASS A CARRIERS: 1930 TO 1958

[All money figures in millions. Includes Hawaii and Puerto Rico. Excludes intercompany duplications. Covers class A telephone carriers filing annual reports with FCC. Class A carriers are those whose annual operating revenues exceeded \$100,000 for years prior to 1951, and \$250,000 thereafter; comparability of data relatively unaffected by change in coverage. Gross operating revenues of class A carriers (excluding intercompany duplications of Bell System) reporting in 1937 represented approximately 94 percent of revenues of all telephone carriers as reported for Census of Electrical Industries for that year]

YEAR	Miles of wire (1,000)	Tele-phones (1,000)	Employ-ees, number <sup>1</sup>	Total compen-sation <sup>2</sup>	YEAR	Miles of wire (1,000)	Tele-phones (1,000)	Employ-ees, number <sup>1</sup>	Total compen-sation <sup>2</sup>
1930	80,060	17,139	347,106	\$556	1953	175,929	44,303	625,332	\$2,379
1935	82,578	15,157	265,099	403	1954	188,839	46,482	614,369	2,497
1940	93,688	19,336	304,695	537	1955	204,879	49,753	648,827	2,693
1945	104,388	24,814	398,263	936	1956	224,513	53,251	683,020	2,954
1950	147,380	38,525	564,964	1,798	1957	249,221	56,436	686,959	3,122
1951	154,810	40,426	586,309	1,976	1958	266,746	59,167	637,025	3,115
1952	164,776	42,404	616,141	2,201					

YEAR	Number of carriers	Investment in telephone plant	DEPRECIATION AND AMORTIZATION RESERVES		Operating revenues	Operating ratio <sup>3</sup> (percent)	Taxes	Net operating income after all tax deductions	Net income	Dividends declared
			Amount	Ratio to investment (percent)						
1935 <sup>4</sup>	91	\$4,472	\$1,106	24.74	\$973	69.65	\$99	\$196	\$151	\$187
1940	78	5,071	1,438	28.35	1,243	65.33	194	237	221	185
1945	76	6,057	2,167	35.77	2,037	65.89	421	274	191	193
1950	71	10,702	2,979	27.84	3,445	71.52	526	455	372	270
1951	56	11,547	3,186	27.60	3,818	70.68	659	460	377	303
1952	54	12,609	3,411	27.06	4,229	70.63	738	504	421	346
1953	54	13,760	3,618	26.31	4,628	69.04	838	567	497	399
1954	52	14,809	3,836	25.75	5,013	68.55	929	648	570	450
1955	53	16,224	4,098	25.26	5,562	66.60	1,094	764	694	498
1956	56	18,081	4,332	23.96	6,122	66.39	1,218	840	783	563
1957	50	20,317	4,607	22.68	6,642	65.89	1,331	934	891	626
1958	54	21,998	4,898	22.27	7,140	62.47	1,558	1,122	1,002	670

<sup>1</sup> As of Dec. 31 prior to 1943; end of October, thereafter. <sup>2</sup> Data for 1930 include estimates.

<sup>3</sup> Ratio of operating expenses to operating revenues.

<sup>4</sup> Not exactly comparable with later years because of revisions of Uniform System of Accounts, effective Jan. 1, 1937.

Source: Federal Communications Commission; annual report, *Statistics of Communications Common Carriers* (prior to 1957 titled *Statistics of the Communications Industry in the United States*).

No. 667. TELEPHONE SYSTEMS—SELECTED DATA OF CLASS A CARRIERS, BY STATES AND FOR PUERTO RICO: 1958

[For year ending December 31. Represents class A carriers (those having annual operating revenues exceeding \$250,000) reporting to Federal Communications Commission]

STATE OR OTHER AREA	Miles of wire in cable <sup>1</sup>	Miles of aerial wire	Central offices	NUMBER OF CALLS ORIGINATING FROM COMPANY AND SERVICE TELEPHONES <sup>2</sup>		COMPANY TELEPHONES <sup>3</sup>		
				Local	Toll	Total	Business	Residence
<b>Total</b> .....	1,000 259,869	1,000 6,877	12,299	1,000 91,657,907	1,000 3,346,953	1,000 58,547	1,000 16,878	1,000 41,669
<b>United States<sup>4</sup></b> .....	259,630	6,868	12,227	91,501,862	3,343,671	58,480	16,838	41,642
Alabama.....	3,191	171	141	1,486,346	24,295	652	159	493
Arizona.....	1,783	83	82	563,100	12,804	346	120	226
Arkansas.....	1,299	130	121	574,352	16,161	304	92	212
California.....	28,006	328	913	8,762,547	265,994	5,562	1,765	3,797
Colorado.....	2,425	146	218	1,068,300	24,586	677	212	465
Connecticut.....	6,207	78	161	1,589,200	107,373	1,188	325	863
Delaware.....	956	14	36	253,661	15,844	198	57	141
Dist. of Col.....	2,154	-----	37	864,200	17,720	598	282	316
Florida.....	6,317	110	170	1,948,594	52,288	1,136	402	734
Georgia.....	4,591	242	236	1,977,766	44,560	937	263	674
Hawaii.....	478	15	66	353,990	1,910	177	51	126
Idaho.....	595	84	116	320,596	10,352	166	55	141
Illinois.....	16,450	172	468	4,565,400	275,905	3,639	1,142	2,497
Indiana.....	5,595	174	313	2,219,263	79,684	1,401	369	1,032
Iowa.....	2,214	168	201	1,004,108	32,721	685	171	514
Kansas.....	2,865	178	210	981,100	25,976	669	173	496
Kentucky.....	2,286	179	221	1,137,454	24,353	569	137	432
Louisiana.....	4,029	150	221	2,254,338	41,973	907	243	664
Maine.....	1,072	68	144	307,700	18,426	261	70	191
Maryland.....	5,573	133	215	1,604,000	50,709	1,168	284	684
Massachusetts.....	8,811	86	366	3,132,900	160,093	2,182	613	1,569
Michigan.....	12,362	375	620	4,905,272	138,655	2,989	760	2,229
Minnesota.....	4,039	149	226	1,780,200	31,011	595	271	724
Mississippi.....	1,364	168	209	804,675	21,907	370	99	271
Missouri.....	6,351	180	288	2,236,831	68,847	1,355	387	968
Montana.....	469	91	116	305,975	8,614	200	58	142
Nebraska.....	1,053	67	126	464,750	13,436	298	83	210
Nevada.....	284	36	28	71,888	3,388	50	20	30
New Hampshire.....	719	50	123	226,000	17,739	194	51	143
New Jersey.....	12,250	67	307	3,113,702	430,270	2,632	679	1,933
New Mexico.....	832	71	73	398,093	11,796	237	85	152
New York.....	31,816	214	959	10,428,560	409,608	7,577	2,395	5,152
North Carolina.....	3,831	253	269	1,591,995	42,567	800	221	579
North Dakota.....	4,245	71	144	198,400	6,428	116	34	82
Ohio.....	13,637	240	625	4,853,918	136,395	3,182	816	2,366
Oklahoma.....	3,339	171	250	1,285,275	37,169	733	222	511
Oregon.....	2,563	95	194	1,010,653	33,577	603	175	428
Pennsylvania.....	16,699	176	539	5,061,877	227,520	3,969	997	2,972
Rhode Island.....	1,465	16	43	506,476	21,144	321	85	236
South Carolina.....	2,150	136	125	810,295	18,814	411	115	296
South Dakota.....	401	95	137	237,000	7,032	157	43	114
Tennessee.....	4,424	244	256	2,215,060	35,091	985	251	714
Texas.....	15,233	472	790	5,508,647	129,683	2,799	809	1,930
Utah.....	1,069	58	91	593,500	10,697	303	82	221
Vermont.....	375	42	89	134,100	9,274	108	30	78
Virginia.....	5,280	182	244	1,663,670	51,390	1,011	286	725
Washington.....	4,316	157	284	1,711,767	47,953	1,033	287	746
West Virginia.....	1,885	93	164	834,582	27,649	475	120	355
Wisconsin.....	4,650	140	176	1,353,200	39,775	1,038	297	741
Wyoming.....	368	50	66	161,606	5,464	112	35	77
Puerto Rico.....	239	9	72	156,045	3,282	67	40	27

<sup>1</sup> Excludes ocean cable.

<sup>2</sup> Partly estimated.

<sup>3</sup> Comprises main, P. B. X. (those directly connected with private branch exchanges), and extension telephones.

<sup>4</sup> Excludes Alaska (no class A carriers).

Source: Federal Communications Commission; annual report, *Statistics of Communications Common Carriers* (prior to 1967 titled *Statistics of the Communications Industry in the United States*).

No. 668. RURAL ELECTRIFICATION ADMINISTRATION—TELEPHONE PROGRAM,  
SUMMARY OF OPERATIONS: 1950 TO 1959

[Beginning 1954, includes Alaska]

ITEM	1950	1954	1955	1956	1957	1958	1959
Loans approved, cumulative, Dec. 31: <sup>1</sup>							
Borrowers.....	61	309	415	509	576	638	686
Amount..... (\$1,000).....	18,831	208,647	273,680	351,501	426,093	526,540	633,180
Route miles of line provided for, cumulative, Dec. 31, total.....	21,408	141,079	178,633	221,841	258,590	297,322	338,644
To be added <sup>2</sup> .....	19,833	131,314	163,484	196,243	224,515	257,392	292,922
To be retained <sup>3</sup> .....	1,575	9,765	15,149	25,598	34,075	39,930	45,722
Subscribers provided for, cumulative, Dec. 31, total.....	74,585	456,799	606,894	784,172	928,861	1,100,234	1,288,856
To receive initial service.....	45,449	240,969	310,700	373,618	427,321	495,994	578,851
To receive improved service.....	29,136	215,830	296,194	410,554	501,540	604,240	710,005
Borrowers' operations:							
Borrowers reporting, Dec. 31.....	( <sup>4</sup> )	176	285	406	515	587	<sup>5</sup> 623
Subscribers served, Dec. 31.....	( <sup>4</sup> )	156,746	283,531	435,155	604,702	775,806	<sup>5</sup> 875,334
Telephones in service, Dec. 31.....	( <sup>4</sup> )	168,160	303,823	467,511	655,064	849,944	<sup>5</sup> 963,250
Total operating revenues during year..... (\$1,000).....	( <sup>4</sup> )	8,162	16,359	26,714	40,835	55,749	<sup>6</sup> 64,677

<sup>1</sup> Net loans (recisions deducted). <sup>2</sup> Route miles of line to be constructed or rebuilt.

<sup>3</sup> Excludes route miles of line to be rebuilt. <sup>4</sup> Not available.

<sup>5</sup> As of June 30. <sup>6</sup> For 12 months ending June 30.

Source: Department of Agriculture, Rural Electrification Administration; annual report, *Agricultural Statistics*.

No. 669. RADIO AND OCEAN-CABLE TELEPHONE SERVICE, BY CLASS: 1956 TO 1958

[In thousands. Includes Hawaii. For 1958, covers radio and ocean-cable telephone service offered by 34 of the 54 class A telephone carriers; in addition, service between fixed stations and marine service with revenue amounting to \$1,393,950 is offered by 3 radio-telegraph carriers and 1 cable carrier, details for which were not reported]

CLASS OF SERVICE	1956		1957		1958	
	Number of chargeable calls	Gross revenues	Number of chargeable calls	Gross revenues	Number of chargeable calls	Gross revenues
FIXED STATIONS AND OCEAN-CABLE <sup>1</sup>						
Message service, total.....	1,728	\$16,729	2,544	\$23,710	2,802	\$28,914
Overseas, total.....	1,394	15,802	2,173	22,679	2,427	27,841
Bermuda and trans-Atlantic.....	524	6,269	699	9,224	773	10,142
Central and South American and Caribbean.....	480	5,037	<sup>2</sup> 1,057	<sup>2</sup> 8,710	1,156	9,896
Trans-Pacific.....	390	4,496	422	4,745	498	7,503
Within Hawaii.....	334	927	366	1,031	375	1,073
Private line service, overseas.....		188		718		1,479
MOBILE STATIONS						
Marine service to mobile stations.....	691	1,199	708	1,295	678	1,240
General service.....	611	1,131	646	1,242	621	1,191
Dispatching service.....	80	68	62	53	57	49
Domestic public land mobile radio services <sup>3</sup>	4,206	6,560	4,191	6,799	4,141	6,485
General service.....	3,509	5,631	3,540	5,891	3,499	5,604
Direct dispatching service.....	649	854	593	835	570	796
Signalling or paging service.....	48	63	58	73	72	85
Other.....		12				
Private mobile radiotelephone systems.....		7,520		8,647		8,779

<sup>1</sup> For 1956, fixed stations only.

<sup>2</sup> Includes 513,000 Cuban calls with revenues amounting to \$3,154,000. Corresponding data (not included in the figure shown) for 1956 are 438,000 calls, with revenues not available.

<sup>3</sup> In addition, there were in operation other mobile radio systems, of which most were operated by small miscellaneous common carriers. As of Dec. 31, 1956, 1957, and 1958, there were, respectively, 359, 390, and 438 such systems, with gross operating revenues of \$2,273,637, \$2,780,705, and \$3,378,350.

Source: Federal Communications Commission; annual report, *Statistics of Communications Common Carriers* (prior to 1957 titled *Statistics of the Communications Industry in the United States*).

No. 670. DOMESTIC AND INTERNATIONAL TELEGRAPH CARRIERS—SUMMARY:  
1930 TO 1958

[Includes Hawaii. Figures comprise principal carriers filing annual reports with Federal Communications Commission. See also *Historical Statistics, Colonial Times to 1957*, series R 53-65, for domestic telegraph, and series R 72-83, for data on international telegraph]

ITEM	1930	1940	1950	1955	1957	1958
<b>DOMESTIC TELEGRAPH</b>						
Number of carriers.....	2	2	1	1	1	1
Investment in plant and equipment.....\$1,000.....	379,869	375,021	294,451	310,968	350,860	364,498
Revenue messages transmitted <sup>1 2</sup> .....1,000.....	211,971	191,645	178,904	153,910	143,947	131,867
Message revenues.....\$1,000.....	131,453	97,906	152,248	188,855	194,249	185,156
Total operating revenues.....do.....	148,223	114,587	177,994	228,816	245,549	240,729
Operating income <sup>3</sup> .....do.....	8,596	3,731	8,664	13,179	11,336	10,608
Miles of wire in cable.....1,000.....	357	449	369	388	391	398
Miles of aerial wire.....do.....	1,912	1,820	929	712	687	677
Number of employees <sup>4</sup> .....	84,962	59,670	40,482	37,785	36,467	33,620
Total compensation.....\$1,000.....	108,557	74,736	116,937	143,289	159,157	154,032
<b>INTERNATIONAL TELEGRAPH</b>						
<b>Ocean-cable:</b>						
Number of carriers.....	5	5	4	3	3	3
Investment in plant and equipment.....\$1,000.....	119,966	111,129	97,283	93,226	96,324	97,515
Revenue messages transmitted <sup>1</sup> .....1,000.....	15,253	8,662	9,969	10,671	10,647	10,420
Message revenues.....\$1,000.....	27,245	16,733	23,392	23,105	23,398	23,813
Total operating revenues.....do.....	27,811	17,540	24,649	33,459	35,442	35,065
Operating income <sup>3</sup> .....do.....	7,712	1,434	1,937	1,450	955	2,056
Miles (nautical) of ocean cable.....1,000.....	98	95	88	76	76	76
Miles of wire in non-ocean cable.....do.....	4	8	6	5	6	14
Miles of aerial wire.....do.....	10	8	7	7	7	7
Number of employees <sup>4</sup> .....	6,880	4,534	5,495	5,919	6,101	5,912
Total compensation.....\$1,000.....	9,795	6,602	12,031	15,924	17,375	17,723
<b>Radiotelegraph:</b>						
Number of carriers.....	7	8	7	7	6	6
Investment in plant and equipment.....\$1,000.....	27,270	30,886	38,885	41,952	53,115	56,923
Revenue messages transmitted <sup>1</sup> .....1,000.....	5,151	8,952	12,609	14,971	17,191	16,455
Message revenues.....\$1,000.....	6,358	12,537	22,239	27,388	31,434	30,818
Total operating revenues.....do.....	7,549	14,247	25,684	34,691	41,403	42,210
Operating income <sup>3</sup> .....do.....	272	2,259	1,867	1,952	4,261	3,285
Number of employees <sup>4</sup> .....	2,119	3,549	5,264	5,925	5,401	5,270
Total compensation.....\$1,000.....	3,809	6,207	18,209	24,624	24,119	25,127

<sup>1</sup> Principally as estimated by reporting carriers on basis of actual counts for test periods.

<sup>2</sup> Beginning 1950, press messages included on unequated basis; equated basis for prior years.

<sup>3</sup> After recorded provision for Federal income taxes including those on non-communications activities.

<sup>4</sup> End of June for 1930, December for 1940, and October thereafter.

Source: Federal Communications Commission; annual report, *Statistics of Communications Common Carriers* (prior to 1957 titled *Statistics of the Communications Industry in the United States*).

No. 671. DOMESTIC TELEGRAPH AND TELETYPEWRITER (TWX) RATES, INTERNATIONAL CABLE AND RADIOTELEGRAPH RATES, AND INTERNATIONAL TELEPHONE RATES BETWEEN NEW YORK CITY AND SELECTED CITIES: 1919 TO 1960

[See also *Historical Statistics, Colonial Times to 1957*, series R 68-71 and R 86-89]

EFFECTIVE DATE	BETWEEN NEW YORK CITY AND—				EFFECTIVE DATE	BETWEEN NEW YORK CITY AND—			
	Phila- delphia	Chicago	Denver	San Fran- cisco		London	Cairo	Tokyo	Buenos Aires
<b>TELEGRAPH RATES<sup>1</sup></b>									
1919, April 1.....	\$0.30	\$0.60	\$0.90	\$1.20	1940.....	\$0.20	\$0.42	\$0.72	\$0.42
1946, June 12.....	.33	.66	.99	1.32	1943, August 16.....	.20	.42	.72	.26
1946, December 29.....	.36	.72	1.08	1.44	1945, May 1.....	.20	.42	.24	.20
1950, February 1.....	.40	.75	1.25	1.45	1946, May 1.....	.20	.30	.20	.20
1951, September 1.....	.60	1.00	1.45	1.60	1947, August 5.....	.25	.30	.30	.22
1952, July 6.....	.65	1.10	1.55	1.70	1948, April 28.....	.25	.30	.30	.28
1954, July 15.....	.85	1.25	1.70	1.70	1949, February 2.....	.25	.40	.40	.35
1956, August 26.....	.95	1.30	1.75	1.75	1950, July 1.....	.19	.30	.30	.27
1958, August 1.....	1.05	1.40	1.85	1.85	1958, August 1.....	.21	.34	.34	.31
In effect Jan. 1, 1960.....	1.05	1.40	1.85	1.85	In effect Jan. 1, 1960.....	.21	.34	.34	.31
<b>TELETYPEWRITER EXCHANGE SERVICE (TWX) RATES<sup>2</sup></b>									
1931, November 21 <sup>3</sup> .....	.35	1.10	1.80	2.40	1940.....	21.00	30.00	19.50	15.00
1946, February 1.....	.35	1.05	1.55	1.75	1944.....	21.00	30.00	19.50	12.00
1953, July 1.....	.45	1.20	1.65	1.75	1945.....	12.00	30.00	19.50	12.00
In effect Jan. 1, 1960.....	.45	1.20	1.65	1.75	1946.....	12.00	12.00	12.00	12.00
					In effect Jan. 1, 1960.....	12.00	12.00	12.00	12.00

<sup>1</sup> Beginning Sept. 1, 1951, minimum charge for 15 text words or less; prior to that, for 10 text words or less.

<sup>2</sup> For 3 minutes or less, 2-way. <sup>3</sup> Beginning of service.

<sup>4</sup> Per plain language telegraph-word, including address and signature. <sup>5</sup> For 3-minute conversations

Source: Federal Communications Commission; records.

**No. 672. WESTERN UNION TELEGRAPH COMPANY—LINE AND WIRE MILEAGE, OFFICES, AND FINANCES: 1930 TO 1959**

[As of June 30 through 1910; December 31 thereafter. Excludes Alaska and Hawaii. See also *Historical Statistics, Colonial Times to 1867*, series R 42-53, for related but not comparable data.]

YEAR	Miles of pole line and cable <sup>1</sup>	Miles of wire <sup>1</sup>	Channel miles in telegraph circuits <sup>2</sup>	Number of offices <sup>3</sup>	Receipts	Expenses	Net income <sup>4</sup>
	<i>1,000</i>	<i>1,000</i>	<i>1,000</i>		<i>\$1,000</i>	<i>\$1,000</i>	<i>\$1,000</i>
1930.....	257	1,949	4	24,298	133,236	123,988	9,248
1935.....	255	1,906	4	20,964	91,389	86,181	5,258
1940.....	249	1,915	27	19,140	101,278	97,656	3,622
1945.....	276	2,291	150	18,687	194,271	189,837	4,435
1950.....	132	1,338	1,788	16,202	187,821	180,501	7,320
1953.....	120	1,191	3,211	13,693	221,550	213,216	8,335
1954.....	116	1,167	3,420	12,802	223,288	213,603	9,885
1955.....	112	1,137	3,622	12,388	243,362	230,321	13,041
1956.....	111	1,125	4,023	11,956	254,161	240,390	13,771
1957.....	111	1,116	4,188	11,401	261,977	249,348	12,629
1958.....	110	1,114	4,446	10,515	256,982	245,056	11,927
1959.....	109	1,097	4,652	9,301	278,794	262,204	16,590

<sup>1</sup> Pole and wire mileages reflect acquisition on Oct. 7, 1943, of facilities of Postal Telegraph Companies.  
<sup>2</sup> In use chiefly on the company's trunk lines through 1950; beginning 1953, represents all telegraph circuits.  
<sup>3</sup> Excludes agency and commission offices, numbering 10,717 on Dec. 31, 1959.  
<sup>4</sup> Figures for 1915 and prior years represent net income before bond interest.  
 Source: Western Union Telegraph Company, New York, N. Y.

**No. 673. BROADCAST AND OTHER RADIO STATIONS AUTHORIZED AND OPERATORS LICENSED, BY CLASS: 1955, 1958, AND 1959**

[As of June 30. Includes Alaska, Hawaii, Puerto Rico, and Virgin Islands. See also *Historical Statistics, Colonial Times to 1957*, series R 120-126.]

CLASS OF STATION OR OPERATOR	1955	1958	1959	CLASS OF STATION OR OPERATOR	1955	1958	1959
<b>Safety and special radio services <sup>1</sup></b>	<b>300,227</b>	<b>437,851</b>	<b>507,171</b>	Public safety services—			
Amateur and disaster services	142,387	187,362	205,588	Continued			
Amateur	139,993	179,814	195,776	State guard	188	10	10
Disaster	317	380	390	Public safety (combined)	29	158	148
Radio amateur civil emergency service	2,677	7,668	9,422	Local government			502
Aviation services	43,855	62,684	77,682	<b>Broadcast services <sup>2</sup></b>	<b>6,257</b>	<b>9,037</b>	<b>10,120</b>
Aircraft	30,228	48,087	61,441	Commercial AM	2,840	3,353	3,500
Aeronautical and fixed	2,082	3,122	3,554	Commercial TV	582	665	667
Civil air patrol	11,108	10,944	12,006	Educational TV	34	53	59
Other	437	581	681	TV translator	(3)	156	245
Industrial services	24,854	39,978	49,697	Auxiliary TV	516	861	991
Business	8,132	11,320	11,878	Experimental TV	15	17	20
Petroleum	6,178	7,151	7,341	Commercial FM	552	634	769
Forest products	1,144	1,648	1,792	Educational FM	127	157	165
Special industrial	8,190	17,107	19,246	International	(3)	2	3
Low power industrial	938	2,333		Remote pickup	1,546	3,087	3,630
Relay press	82	130	142	Studio transmitter link	43	51	59
Motion picture	43	71	67	Developmental	2	1	
Other	152	218	370	Low power auxiliary (cueing)			12
Land transportation services	20,002	48,801	59,894	<b>Common carrier services <sup>1</sup></b>	<b>1,948</b>	<b>3,271</b>	<b>3,845</b>
Citizens	12,334	38,611	49,269	Experimental	1,175		
Railroad	1,405	2,265	2,440	Point to point micro-wave		1,741	2,084
Taxicab	4,526	4,733	4,827	Local TV transmission		79	77
Automobile emergency	411	962	1,052	Rural radio		308	369
Other	1,326	2,297	2,297	Developmental		35	45
Marine services	50,714	72,514	84,947	Domestic public land mobile	724	1,058	1,210
Ship	49,694	70,911	83,296	Fixed public telephone	19	11	11
Coastal	243	434	393	Fixed public telegraph	30	39	43
Alaskan	786	1,054	1,132	<b>Radio operators</b>	<b>1,123,125</b>	<b>1,681,592</b>	<b>1,897,406</b>
Other	91	115	126	Commercial operators	986,363	1,500,854	1,705,913
Public safety services	18,415	26,512	29,363	Amateur operators	136,762	180,738	191,493
Police	9,725	12,450	13,103	<b>Experimental services, miscellaneous</b>	<b>625</b>	<b>834</b>	<b>891</b>
Fire	2,337	4,225	5,283				
Forestry conservation	2,967	3,264	3,618				
Highway maintenance	1,330	2,580	3,068				
Special emergency	1,339	3,325	3,631				

<sup>1</sup> Each license, construction permit, or combination construction permit and license is counted as one station; therefore, a station might include a transmitter and many mobile units.  
<sup>2</sup> Stations licensed or holding construction permits. <sup>3</sup> Not available.  
 Source: Federal Communications Commission; *Annual Report*.

No. 674. COMMERCIAL BROADCAST STATIONS AUTHORIZED AND ON THE AIR:  
1945 TO 1960

[As of January 1. Includes Alaska, Hawaii, Puerto Rico, Virgin Islands, and beginning 1966, Guam. Figures differ from those shown in table 675 because of different tabulations. See also *Historical Statistics, Colonial Times to 1957*, series R 90-94, for number of operating stations]

YEAR	TOTAL		AM RADIO		FM RADIO		TELEVISION	
	Authorized	On the air						
1945.....	969	936	908	884	52	46	9	6
1946.....	1,236	967	969	913	258	48	9	6
1947.....	2,221	1,174	1,485	1,027	684	140	52	7
1948.....	3,010	1,977	1,927	1,586	1,010	374	73	17
1949.....	3,182	2,627	2,092	1,877	966	700	124	50
1950.....	3,098	2,881	2,199	2,051	788	733	111	97
1951.....	3,129	2,981	2,317	2,198	703	676	109	107
1952.....	3,132	3,042	2,374	2,297	650	637	108	108
1953.....	3,393	3,098	2,490	2,357	630	616	273	125
1954.....	3,738	3,396	2,602	2,487	580	560	556	349
1955.....	3,864	3,599	2,740	2,635	559	553	565	411
1956.....	4,044	3,772	2,901	2,790	557	540	586	442
1957.....	4,275	3,975	3,091	2,974	554	530	630	471
1958.....	4,503	4,185	3,256	3,156	590	537	657	492
1959.....	4,762	4,374	3,401	3,287	695	578	666	509
1960.....	4,994	4,612	3,488	3,417	838	678	668	517

Source: Federal Communications Commission.

No. 675. COMMERCIAL BROADCAST STATIONS ON THE AIR, BY STATES AND FOR  
OTHER AREAS: JANUARY 1, 1959

STATE OR OTHER AREA	Total	AM	FM	TV	STATE OR OTHER AREA	Total	AM	FM	TV
<b>Total.....</b>	<b>4,360</b>	<b>3,296</b>	<b>553</b>	<b>511</b>	Montana.....	41	32	---	9
<b>United States.....</b>	<b>4,319</b>	<b>3,264</b>	<b>550</b>	<b>505</b>	Nebraska.....	44	33	1	10
Alabama.....	130	107	14	9	Nevada.....	22	17	1	4
Alaska.....	18	13	---	5	New Hampshire.....	22	16	5	1
Arizona.....	58	46	4	8	New Jersey.....	33	24	8	1
Arkansas.....	70	61	4	5	New Mexico.....	49	40	3	6
California.....	262	182	51	29	New York.....	193	124	46	23
Colorado.....	70	56	5	9	North Carolina.....	189	139	39	11
Connecticut.....	42	30	7	5	North Dakota.....	27	18	---	9
Delaware.....	12	9	3	---	Ohio.....	147	88	40	19
Dist. of Columbia.....	19	7	---	4	Oklahoma.....	67	54	4	9
Florida.....	181	147	18	16	Oregon.....	80	66	7	7
Georgia.....	125	125	13	12	Pennsylvania.....	208	146	40	22
Hawaii.....	23	15	1	7	Rhode Island.....	19	12	5	2
Idaho.....	39	33	---	6	South Carolina.....	91	72	11	8
Illinois.....	142	92	33	17	South Dakota.....	25	19	---	6
Indiana.....	89	60	14	15	Tennessee.....	120	107	8	14
Iowa.....	80	61	7	12	Texas.....	304	235	23	43
Kansas.....	59	46	3	10	Utah.....	32	26	2	4
Kentucky.....	99	81	12	6	Vermont.....	14	13	---	1
Louisiana.....	100	80	8	12	Virginia.....	114	85	14	12
Maine.....	32	24	2	6	Washington.....	97	78	7	12
Maryland.....	48	35	9	4	West Virginia.....	67	49	10	8
Massachusetts.....	81	57	16	8	Wisconsin.....	101	74	13	14
Michigan.....	121	93	17	11	Wyoming.....	26	22	---	4
Minnesota.....	74	61	5	8	Guam.....	2	1	---	1
Mississippi.....	80	73	1	6	Puerto Rico.....	37	29	3	5
Missouri.....	99	75	8	16	Virgin Islands.....	2	2	---	---

Source: Federal Communications Commission.

No. 676. RADIO BROADCAST INDUSTRY FINANCES: 1950 TO 1958

[Money figures in millions of dollars. For years ending December 31. Includes Alaska, Hawaii, Puerto Rico, and Virgin Islands. Excludes FM (independents). See also headnote, table 678. See also *Historical Statistics, Colonial Times to 1957*, series R 103-107, for data including FM independents]

ITEM	1950	1953	1954	1955	1956	1957	1958
Number of networks.....	7	7	7	7	7	7	7
Number of stations.....	2,143	2,434	2,555	2,704	2,915	3,097	3,197
Broadcast revenues.....	443.1	474.6	448.8	452.3	479.2	515.2	520.6
7 networks (incl. owned and operated stations)...	110.5	97.3	88.6	78.3	70.2	73.5	69.4
Other stations.....	332.6	377.3	360.2	374.0	409.0	441.7	451.2
Broadcast expenses of networks and stations.....	372.3	418.8	406.3	406.0	429.6	460.9	482.6
7 networks (incl. owned and operated stations)...	91.5	86.9	80.4	72.4	69.8	73.6	73.0
Other stations.....	280.8	331.9	325.9	333.6	359.8	387.3	409.6
Broadcast income before Federal income tax.....	70.7	55.8	42.5	46.4	49.6	54.3	38.0
7 networks (incl. owned and operated stations)...	19.0	10.4	8.1	5.9	.4	-----	-3.6
Other stations.....	51.8	45.4	34.3	40.4	49.2	54.3	41.6
BROADCAST REVENUES							
Revenues from time sales, net.....	401.1	426.0	404.1	410.9	440.3	475.6	482.0
<i>Commissions to regularly established agencies, representatives, brokers and others</i> .....	52.5	51.2	47.2	45.6	51.4	61.3	59.6
Revenues from time sales, total.....	453.6	477.2	451.3	456.5	491.7	536.9	541.6
Revenues from network time sales, net.....	131.5	98.1	83.7	64.1	48.4	50.6	46.5
Network time sales to—							
Nationwide networks.....	126.0	92.9	78.9	60.3	44.8	46.9	42.7
Regional networks.....	4.0	4.2	3.9	3.2	2.8	2.9	2.9
Miscellaneous networks and stations.....	2.9	1.0	.9	.6	.8	.8	.9
Revenues from non-network time sales to:							
National and regional advertisers and sponsors.....	118.8	129.6	120.2	120.4	145.5	169.5	171.9
Local advertisers and sponsors.....	203.2	249.5	247.5	272.0	297.8	316.8	323.2
Revenues from incidental broadcast activities.....	42.0	48.6	44.7	41.4	38.8	39.5	38.5
Talent.....	25.2	33.6	30.5	26.9	24.0	24.8	24.7
Sundry broadcast revenues.....	16.8	15.0	14.1	14.5	14.8	14.7	13.8

Source: Federal Communications Commission; annual release, *Final AM and FM Financial Data*.

No. 677. TELEVISION BROADCAST INDUSTRY FINANCES: 1950 TO 1958

[Money figures in millions of dollars. For years ending December 31. Includes Alaska, Hawaii, Puerto Rico, and Virgin Islands. See also headnote, table 678. See also *Historical Statistics, Colonial Times to 1967*, series R 114-117]

ITEM	1950	1953	1954	1955	1956	1957	1958
Number of networks.....	4	4	4	4	3	3	3
Number of stations.....	107	334	410	437	474	501	514
Broadcast revenues.....	105.9	432.7	592.9	744.7	896.9	943.2	1,030.0
4 networks (incl. owned and operated stations) <sup>1</sup> .....	55.5	231.7	306.7	374.0	442.3	407.9	516.7
Other stations.....	50.4	201.0	286.2	370.7	454.6	475.3	513.3
Broadcast expenses of networks and stations.....	115.1	360.5	502.0	594.5	707.3	783.2	858.1
4 networks (incl. owned and operated stations) <sup>1</sup> .....	65.5	213.7	270.2	306.0	356.9	397.2	439.7
Other stations.....	49.6	146.8	232.4	288.5	350.4	386.0	418.4
Broadcast income before Federal income tax.....	<sup>2</sup> 9.2	71.3	90.3	150.2	189.6	160.0	171.9
4 networks (incl. owned and operated stations) <sup>1</sup> .....	<sup>2</sup> 10.0	18.0	36.5	68.0	85.4	70.7	77.0
Other stations.....	.8	53.3	53.8	82.1	104.2	89.3	94.9
BROADCAST REVENUES							
Revenues from time sales, net.....	76.3	322.2	452.2	572.4	689.1	726.3	791.7
<i>Commissions to regularly established agencies, representatives, brokers and others</i> .....	14.9	62.5	85.0	108.7	154.0	142.4	159.3
Revenues from time sales, total.....	90.6	384.7	538.1	681.1	823.1	868.7	951.0
Revenues from network time sales, net.....	35.2	171.9	241.2	308.9	367.7	394.2	424.5
Revenues from non-network time sales to—							
National and regional advertisers and sponsors.....	25.0	124.3	176.8	222.4	281.2	300.5	345.2
Local advertisers and sponsors.....	30.4	88.5	120.1	149.8	174.2	174.0	181.3
Revenues from incidental broadcast activities.....	29.6	109.6	140.7	172.3	207.8	216.9	238.3
Talent.....	15.2	70.6	85.0	112.5	146.4	156.0	172.2
Sundry broadcast revenues.....	14.4	39.0	55.7	59.8	61.4	60.9	66.1

<sup>1</sup> Three networks after Sept. 15, 1955, when DuMont ceased network operations.

<sup>2</sup> Loss.

Source: Federal Communications Commission; annual release, *Final TV Broadcast Financial Data*.

**No. 678. BROADCAST REVENUES OF ALL NETWORKS AND STATIONS, AM AND AM-FM, FM, AND TV: 1940 TO 1958**

[For years ending December 31. Includes Alaska, Hawaii, Puerto Rico, and Virgin Islands. Total broadcast revenues are defined as total time sales of all networks and stations, less commissions to agencies and plus incidental revenues, such as sale of talent, program material, etc. For each year, excludes data for a certain number of reports received too late to be included; 1958 data excludes 99 such AM-FM stations. See also *Historical Statistics, Colonial Times to 1957*, series R 104-105 and R 114-115]

YEAR	TOTAL		AM AND AM-FM		FM (INDEPENDENTS)		TV	
	Number of stations	Revenues (\$1,000)						
1940	765	147,147	765	147,147				6
1941	825	168,785	817	168,779	2		6	42
1942	862	178,894	851	178,839	5	13	6	84
1943	852	215,428	841	215,318	5	26	6	219
1944	885	275,550	875	275,299	4	32	6	
1945	912	299,715	901	299,338	5	39	6	338
1946	1,043	323,228	1,025	322,553	8	17	10	658
1947	1,531	366,032	1,464	363,714	52	422	15	1,896
1948	1,974	416,867	1,824	406,995	103	1,251	47	8,621
1949	2,223	449,544	2,021	413,785	104	1,429	98	34,330
1950	2,336	550,395	2,143	443,058	86	1,422	107	105,915
1951	2,374	686,176	2,200	449,226	66	1,266	108	235,684
1952	2,592	793,915	2,324	468,592	56	1,100	122	324,223
1953	2,813	908,025	2,434	474,585	45	800	334	482,640
1954	3,008	1,042,486	2,555	448,785	43	764	410	592,937
1955	3,179	1,198,066	2,704	452,338	38	1,013	437	744,714
1956	3,440	1,377,460	2,915	479,160	51	1,415	474	896,885
1957	3,665	1,460,468	3,097	515,167	67	2,035	501	943,266
1958	3,804	1,553,182	3,197	520,597	93	2,546	514	1,030,039

<sup>1</sup> Includes 4 nationwide networks and 3 regional networks.

<sup>2</sup> Includes 4 TV networks beginning in 1948 when commercial TV network operation started; covers 3 networks after Sept. 15, 1955, when DuMont ceased network operations.

Source: Federal Communications Commission.

**No. 679. PERCENT OF HOUSEHOLDS WITH TELEVISION SETS, BY AREA AND REGION: 1955, 1958, AND 1959**

[Excludes Alaska and Hawaii. For composition of regions, see figure I, p. XII; for explanation of urban and rural, see p. 2; and for definition of standard metropolitan statistical areas, see headnote, table 10. An urbanized area contains at least one city with 50,000 inhabitants or more in 1940 or subsequently, plus the surrounding closely settled incorporated places and unincorporated areas that comprise its urban fringe. See also *Historical Statistics, Colonial Times to 1957*, series R 98, for number of families with TV sets]

AREA OR REGION	June 1955	Jan. 1958	May 1959	AREA OR REGION	June 1955	Jan. 1958	May 1959
Households having 1 set or more	67	83	86	<b>By urban and rural:</b>			
<b>By area:</b>				Urban	74	87	89
Inside standard metropolitan statistical areas	78	89	91	In urbanized areas:	79	89	90
Outside standard metropolitan statistical areas	50	75	80	Area of 3,000,000 or more	81	89	90
<b>By region and division:</b>				Areas of 1,000,000 to 3,000,000	82	91	91
Northeast	80	90	92	Areas of 250,000 to 1,000,000	79	88	89
New England	(1)	90	92	Areas under 250,000	74	88	89
Middle Atlantic	(1)	90	92	Not in urbanized areas:			
North Central	72	87	88	Places of 10,000 or more	62	82	86
East North Central	(1)	89	90	Places under 10,000	52	79	82
West North Central	(1)	82	85	Rural nonfarm	61	80	86
South	53	74	79	Rural farm	42	68	73
South Atlantic	(1)	77	82				
East South Central	(1)	68	72	<b>By number of sets:</b>			
West South Central	(1)	75	80	No set	33	17	14
West	62	82	86	One set	65	76	78
Mountain	(1)	73	81	Two sets or more	2	7	8
Pacific	(1)	85	88				

<sup>1</sup> Not available.

Source: Department of Commerce, Bureau of the Census; *Housing and Construction Reports*, Series H-121.

**No. 680. NEWSPAPERS AND PERIODICALS—NUMBER AND CIRCULATION, BY FREQUENCY OF ISSUE, AND RECEIPTS: 1939 TO 1958**

[Circulation in thousands and money figures in millions. Excludes Alaska and Hawaii. See also *Historical Statistics, Colonial Times to 1957*, series R 173-186]

FREQUENCY OF ISSUE AND RECEIPTS	NEWSPAPERS				PERIODICALS			
	1939	1947	1954	1958	1939	1947	1954	1958
Total number.....	9,173	10,282	9,022		4,985	4,610	3,427	
Aggregate circulation <sup>1</sup> .....	96,476	119,567	136,353		239,693	384,628	449,285	
Daily (except Sunday):								
Morning: Number.....	473	400	385					
Circulation.....	17,152	21,796	22,475					
Evening: Number.....	1,507	1,454	1,435		<sup>2</sup> 220	<sup>2</sup> 112	<sup>2</sup> 84	
Circulation.....	25,814	31,400	33,935		<sup>2</sup> 1,979	<sup>2</sup> 842	<sup>2</sup> 748	
Sunday: Number.....	542	416	510					
Circulation.....	33,007	42,736	46,350					
Triweekly: Number.....	36	21	29		12	5	(3)	
Circulation.....	219	151	198		27	5	(3)	
Semiweekly: Number.....	343	230	288		50	21	<sup>3</sup> 32	
Circulation.....	1,990	926	1,327		2,995	182	<sup>2</sup> 263	
Weekly: Number.....	6,212	7,705	6,249		1,109	892	487	
Circulation.....	18,295	21,408	30,336		55,825	69,393	82,066	
Semimonthly: Number.....					193	233	148	
Circulation.....					8,135	13,532	19,842	
Monthly: Number.....					2,323	2,253	1,604	
Circulation.....					134,766	194,824	204,026	
Quarterly: Number.....					698	647	422	
Circulation.....					20,238	45,535	43,339	
Other: Number.....		56	120		380	447	650	
Circulation.....		1,000	1,732		9,726	60,015	99,001	
Receipts, total.....	\$846	\$1,732	\$2,926	\$3,491	\$409	\$1,046	\$1,413	\$1,588
Subscription and sales.....	306	600	841	988	185	420	531	557
Advertising.....	539	1,192	2,059	2,428	224	626	863	989

<sup>1</sup> Totals of average circulation per issue for individual publications from publishers reporting receipts on a combined frequency of issue basis as well as from publishers reporting receipts separately for each frequency of issue.

<sup>2</sup> Daily only, neither morning nor evening.

<sup>3</sup> Semiweekly and triweekly figures combined to avoid disclosure of individual company figures.

<sup>4</sup> Includes \$26 million receipts not distributed by publishers between subscription and sales and advertising for 1954, and \$75 million for 1958.

<sup>5</sup> Includes \$19 million receipts not distributed by publishers between subscription and sales and advertising for 1954, and \$43 million for 1958.

Source: Department of Commerce, Bureau of the Census; *U.S. Census of Manufactures: 1958*, Series MC-27A.

**No. 681. NEWSPRINT CONSUMPTION, NEWSPAPER PAGES PER ISSUE, AND CIRCULATION PER FAMILY: 1940 TO 1959**

[Excludes Alaska and Hawaii]

YEAR	NEWSPRINT CONSUMPTION (1,000 TONS)						PAGES OF NEWSPAPER PER ISSUE <sup>2</sup>		NEWSPAPER CIRCULATION PER FAMILY		
	Total <sup>1</sup>	By newspapers						Daily	Sun-day	Daily	Sun-day
		Total	For advertising content		For editorial content						
			Amount	Per-cent	Amount	Per-cent					
1940.....	3,739	3,507	1,403	40.0	2,104	60.0	27	86	1.17	0.92	
1945.....	3,451	3,237	1,067	51.5	1,570	48.5	22	70	1.28	1.06	
1950.....	5,863	5,521	3,219	58.3	2,302	41.7	36	112	1.23	1.06	
1953.....	6,109	5,713	3,394	59.4	2,319	40.6	37	121	1.16	0.98	
1954.....	6,103	5,732	3,376	58.9	2,356	41.1	36	122	1.17	0.98	
1955.....	6,484	6,173	3,809	61.7	2,364	38.3	40	132	1.16	0.97	
1956.....	6,807	6,320	3,025	62.1	2,395	37.9	41	135	1.16	0.96	
1957.....	6,708	6,300	3,843	61.0	2,457	39.0	40	138	1.17	0.95	
1958.....	6,515	6,059	3,635	60.0	2,424	40.0	39	135	1.14	0.93	
1959.....	7,045	6,552	4,010	61.2	2,542	38.8	42	141	1.13	0.93	

<sup>1</sup> Apparent consumption; equals production plus imports minus exports adjusted for year-end change in newspaper publishers' inventories and domestic mill stocks. <sup>2</sup> Circulation of 100,000 or more.

Source: Department of Commerce, Business and Defense Services Administration.

No. 682. DAILY AND SUNDAY NEWSPAPERS—NUMBER AND CIRCULATION, 1940 TO 1959, AND BY STATES, 1959

[Circulation figures in thousands. As of October 1. Beginning 1956, includes Alaska and Hawaii. For English language newspapers only. See also *Historical Statistics, Colonial Times to 1937*, series R 169-172]

YEAR AND STATE	DAILY NEWSPAPERS						SUNDAY NEWS-PAPERS	
	Total		Morning		Evening		Number	Net paid circulation
	Number	Net paid circulation	Number	Net paid circulation	Number	Net paid circulation		
1940.....	1, 878	41, 132	380	16, 114	1, 498	25, 018	525	32, 371
1945.....	1, 749	45, 354	390	19, 240	1, 419	29, 144	485	39, 860
1950.....	1, 772	53, 829	322	21, 266	1, 450	32, 563	549	46, 532
1951.....	1, 773	54, 018	319	21, 223	1, 454	32, 795	543	46, 279
1952.....	1, 786	53, 951	327	21, 160	1, 459	32, 791	545	46, 210
1953.....	1, 785	54, 472	327	21, 412	1, 458	33, 060	544	45, 949
1954.....	1, 765	55, 072	317	21, 705	1, 448	33, 367	544	46, 178
1955.....	1, 760	56, 147	316	22, 183	1, 454	33, 954	541	46, 448
1956.....	1, 772	57, 318	315	22, 538	1, 464	34, 780	550	47, 244
1957.....	1, 766	58, 029	310	23, 218	1, 463	34, 812	547	47, 134
1958.....	1, 756	57, 594	308	23, 207	1, 460	34, 388	558	47, 041
1959								
United States <sup>2</sup> .....	1, 755	53, 300	306	23, 547	1, 455	34, 753	564	47, 843
Alabama.....	18	655	3	201	15	455	14	562
Alaska.....	6	49			6	49	1	4
Arizona.....	12	298	3	155	9	143	5	233
Arkansas.....	35	375	6	141	29	234	12	313
California.....	128	4, 911	18	1, 960	110	2, 951	28	3, 898
Colorado.....	25	608	4	206	21	402	8	616
Connecticut.....	25	776	6	213	19	563	6	469
Delaware.....	3	112	1	30	2	82		
Dist. of Columbia.....	3	830	1	394	2	436	2	744
Florida.....	43	1, 490	13	892	30	598	30	1, 384
Georgia.....	30	916	6	398	24	518	11	822
Hawaii.....	5	187	1	51	4	136	2	96
Idaho.....	15	146	4	68	12	78	5	112
Illinois.....	34	3, 859	10	1, 830	74	2, 023	18	3, 050
Indiana.....	37	1, 606	9	432	78	1, 174	18	1, 071
Iowa.....	45	939	4	355	41	584	9	835
Kansas.....	52	717	4	205	49	512	14	494
Kentucky.....	27	855	7	422	21	433	13	523
Louisiana.....	18	722	4	344	14	378	8	580
Maine.....	9	243	5	189	4	54	1	95
Maryland.....	12	763	4	229	8	534	3	661
Massachusetts.....	51	2, 357	6	881	45	1, 476	8	1, 460
Michigan.....	54	2, 372	11	499	53	1, 873	12	2, 060
Minnesota.....	31	1, 066	5	380	26	686	5	923
Mississippi.....	19	280	3	72	16	208	7	167
Missouri.....	53	1, 843	7	755	46	1, 087	13	1, 600
Montana.....	18	166	4	95	14	72	10	149
Nebraska.....	20	459	3	164	17	295	4	338
Nevada.....	8	84	2	31	6	53	3	67
New Hampshire.....	9	120	1	23	9	97	1	40
New Jersey.....	26	1, 385	5	411	21	974	10	957
New Mexico.....	19	181	2	50	17	131	15	159
New York.....	90	3, 497	22	4, 843	68	3, 024	20	9, 277
North Carolina.....	47	1, 077	9	535	33	542	15	726
North Dakota.....	11	159	2	34	9	124	2	87
Ohio.....	96	3, 108	8	767	88	2, 341	20	2, 012
Oklahoma.....	51	725	7	305	44	420	40	646
Oregon.....	21	631	4	273	17	353	7	610
Pennsylvania.....	122	4, 204	27	1, 385	97	2, 819	14	3, 231
Rhode Island.....	7	292	1	59	6	233	2	194
South Carolina.....	17	478	8	334	9	143	7	364
South Dakota.....	12	163	1	3	11	160	4	113
Tennessee.....	29	1, 027	7	473	22	554	12	768
Texas.....	113	2, 848	22	1, 181	91	1, 667	80	2, 693
Utah.....	5	241	1	102	4	140	4	238
Vermont.....	9	86	2	52	7	34	1	12
Virginia.....	31	870	9	393	22	477	12	582
Washington.....	27	949	6	332	21	617	10	823
West Virginia.....	30	490	9	233	21	257	8	365
Wisconsin.....	38	1, 133	3	253	35	881	6	887
Wyoming.....	9	68	6	37	3	32	4	38

<sup>1</sup> Adjusted to account for all-day papers listed in morning and evening figures (circulations divided between them).

<sup>2</sup> Adjusted to allow for duplication of Texarkana, Ark.-Tex. and Bristol, Tenn.-Va., in individual State tabulations (circulations divided between States), and Covington, Ky., papers also included in Ohio.

Source: Editor and Publisher, New York, N. Y.; *International Year Book Number, 1960*.

No. 683. BOOKS AND PAMPHLETS—QUANTITY AND VALUE OF SALES BY ALL BOOK PUBLISHERS: 1947, 1954, AND 1958

[Excludes Alaska and Hawaii. Includes number of copies sold and dollar receipts reported not only by establishments classified in the "Books, publishing and printing" industry but also by establishments reporting these receipts as "secondary" activities in other industries. Detail does not add to total because of reclassification of items from census to census. "N.e.c." means not elsewhere classified]

PRODUCT	1947		1954		1958	
	Copies sold	Receipts	Copies sold	Receipts	Copies sold	Receipts
<b>Total</b> .....	1,000	\$1,000 455,790	1,000	\$1,000 665,419	1,000	\$1,000 998,428
<b>Books</b> .....	487,216	435,134	770,840	628,551	959,595	947,574
<b>Textbooks:</b>						
<b>Elementary:</b>						
Hardbound.....			40,541	57,365	47,135	76,288
Paperbound.....			23,037	10,242	26,761	11,580
<b>High school:</b>	74,254	55,068	15,627	31,927	23,057	58,191
Hardbound.....			2,687	2,118	2,533	2,024
Paperbound.....						
<b>College:</b>						
Hardbound.....	23,821	52,513	14,538	50,241	19,554	81,377
Paperbound.....			1,286	1,484	3,095	2,767
<b>Workbooks, paperbound</b> .....	41,010	13,227	159,373	126,902	182,572	143,293
<b>Standardized tests (incl. answer sheets), paperbound</b> .....	(2)	(2)	(2)	(2)	59,349	5,685
<b>Subscription reference books, hardbound</b> .....	14,020	63,851	25,860	39,825	30,620	152,677
<b>Religious books:</b>						
Bibles, complete editions.....					8,903	18,318
Testaments.....	9,248	0,285	11,359	19,125	10,181	4,746
Hymnals and devotionals (incl. prayer books and missals).....			(4)	3,048	5,070	7,995
<b>Other religious books:</b>						
Hardbound.....	33,295	10,608	(4)	(4)	9,877	16,075
Paperbound.....			(4)	(6)	36,776	11,516
<b>Technical, scientific, and professional books:</b>						
Law books.....					3,580	34,510
Medical books (incl. nursing and dental subjects).....	17,467	45,637	19,217	63,635	2,423	21,402
Business books.....					2,080	9,400
Other.....					15,596	48,821
<b>General books:</b>						
Publishers' sales of books or sheets to book clubs.....	(4)	(4)	(4)	(4)	(4)	971
Book club books.....	(7)	(7)	(7)	(7)	65,180	94,657
Wholesale paperbound books, digest size.....	(8)	(8)	(8)	(8)	237,714	48,613
<b>Adult trade books:</b>						
Hardbound.....	32,345	46,131	78,314	7133,117	32,298	64,609
Paperbound.....	108,069	23,832	188,239	30,049	5,661	5,374
<b>Juvenile books:</b>						
\$1.00 and over.....					34,321	40,218
Under \$1.00.....	53,752	20,289	220,114	50,895	138,611	21,422
<b>All other books, n.e.c.:</b>						
Hardbound.....	770,329	785,403	5,453	15,489	30,723	52,148
Paperbound.....			38,366	23,316	25,925	12,737
<b>Pamphlets</b> .....	402,290	20,656	267,088	25,094	376,370	25,420
<b>Religious</b> .....					189,180	10,246
<b>Other</b> .....					187,190	15,174
<b>Other books and pamphlets, not specified by kind</b> .....				11,774		25,534

<sup>1</sup> 1954 and 1958 may not be strictly comparable since 1954 includes 4,621,000 hardbound books and \$2,805,000 receipts.

<sup>2</sup> Educational and other standardized tests included in pamphlets.

<sup>3</sup> Since these books are frequently sold direct to consumers, some publishers reported receipts on a retail basis; hence, aggregate receipts for this type of book are a combination of wholesale and retail values but do represent total receipts at publishing plant level. Also, since books in this category are typically sold on an installment plan basis, the values reported here (actual receipts during the year) may not agree with publishers' sales for same reporting period. 1958 receipts not strictly comparable with prior years since deductions were made in 1958 for known payments for salesmen's compensation and operating expenses for sales offices and sales branches maintained to assist in door-to-door distribution. Copies sold represent number of volumes rather than sets. Also, for 1958, some dictionaries and other single volume books sold direct to the consumer were included in "All other books, n.e.c."

<sup>4</sup> Not available. <sup>5</sup> Excludes prayer books.

<sup>6</sup> "Other religious books, paperbound" included in "All other books, n.e.c."

<sup>7</sup> For 1947, "Book club books" included in "All other books, n.e.c."; for 1954, included in "Adult trade books, hardbound."

<sup>8</sup> "Wholesale paperbound books" included in "Adult trade books, paperbound."

Source: Department of Commerce, Bureau of the Census; U.S. Census of Manufactures: 1954, Series MC-27A, and U.S. Census of Manufactures: 1958, Series MC-(P)-27A-3.

No. 684. NEW BOOKS AND NEW EDITIONS PUBLISHED, BY SUBJECT: 1950, 1955, AND 1959

[Includes some books published in Alaska and Hawaii. Based on reports from approximately 800 publishers. To assure as complete a coverage as possible, reports are checked against book reviews and notices and against card index of the Library of Congress. New books are new titles; new editions are revisions of trade or textbooks, and cheaper editions of original trade books. Exclude pamphlets, theses, reports and reprint (containing no change whatsoever from original publication). Beginning 1959, data not comparable with prior years because of change in definition of a book. See also *Historical Statistics, Colonial Times to 1957*, series R 165-167]

SUBJECT	1950			1955			1959		
	Total	New books	New editions	Total	New books	New editions	Total	New books	New editions
<b>Total</b> .....	<b>11,022</b>	<b>8,634</b>	<b>2,388</b>	<b>12,589</b>	<b>10,226</b>	<b>2,363</b>	<b>14,876</b>	<b>12,017</b>	<b>2,859</b>
Agriculture, gardening.....	152	111	41	168	125	43	129	101	28
Biography.....	603	638	65	833	735	98	776	671	105
Business.....	250	190	60	312	225	84	422	327	95
Education.....	256	209	47	274	231	43	417	368	49
Fiction.....	1,907	1,211	696	2,073	1,459	614	2,457	1,675	782
Fine arts.....	357	317	40	347	305	42	309	254	45
Games, sports.....	188	153	35	200	175	25	259	204	55
General literature and criticism.....	591	510	81	690	529	161	836	690	206
Geography, travel.....	288	221	67	366	290	76	388	298	90
History.....	516	456	60	665	572	93	910	750	160
Home economics.....	193	150	43	255	205	50	181	141	40
Juvenile.....	1,059	907	152	1,485	1,372	113	1,647	1,540	107
Law.....	298	228	70	305	240	65	302	245	57
Medicine, hygiene.....	443	312	131	534	407	127	500	445	145
Music.....	113	88	25	103	85	18	114	93	21
Philology.....	148	102	46	168	118	50	197	146	51
Philosophy, ethics.....	840	278	62	314	244	70	454	359	95
Poetry, drama.....	531	453	78	493	423	70	490	395	104
Religion.....	727	626	101	849	747	102	1,125	984	141
Science.....	705	499	206	801	623	178	1,083	814	219
Sociology, economics.....	515	447	68	520	443	77	625	566	59
Technical and military.....	497	366	131	477	355	122	736	585	151
Miscellaneous.....	345	262	83	387	315	72	400	326	74

Source: R. R. Bowker Co., New York, N. Y. Monthly data published in *Publishers' Weekly*.

No. 685. REGISTRATION OF COPYRIGHTS, BY SUBJECT MATTER: 1940 TO 1959

[For years ending June 30. Data comprise copyrights issued to citizens of the United States and residents of foreign countries. For information on patents, see table 715. See also *Historical Statistics, Colonial Times to 1957*, series W 52-55]

SUBJECT MATTER OF COPYRIGHT	1940	1945	1950	1955	1958	1959
<b>Total</b> .....	<b>176,997</b>	<b>178,848</b>	<b>210,564</b>	<b>224,732</b>	<b>238,935</b>	<b>241,735</b>
<b>Books</b> .....	64,051	40,544	54,894	58,160	60,597	59,009
Printed in the United States.....	60,589	39,754	50,144	52,888	56,630	54,877
Books proper.....	11,976	6,962	11,323	11,323	53,275	51,835
Pamphlets, leaflets, etc.....	34,687	27,936	34,383	40,142	53,275	51,835
Contributions to newspapers and periodicals.....	13,926	4,856	4,498	3,746	3,355	3,042
Printed abroad in a foreign language.....	2,504	111	3,710	3,694	2,937	3,549
English books registered for ad interim copyright.....	958	679	1,040	1,578	1,030	683
Periodicals (numbers).....	40,173	45,763	55,436	59,448	60,691	62,246
Lectures, sermons, addresses.....	1,276	1,177	1,007	813	852	829
Dramatic or dramatic-musical compositions.....	6,450	4,714	4,427	3,493	2,754	2,669
Musical compositions.....	37,975	57,835	52,309	57,527	66,515	70,707
Maps.....	1,622	857	1,638	2,013	1,614	1,865
Works of art, models, or designs.....	3,081	1,821	4,013	3,456	5,019	4,693
Reproductions of works of art.....	445	186	326	900	1,044	1,184
Drawings or plastic works of a scientific or technical character.....	2,817	1,554	1,316	1,350	683	663
Photographs.....	2,580	1,253	1,143	1,105	1,037	741
Prints and pictorial illustrations.....	4,699	2,634	4,309	3,793	3,413	3,186
Commercial prints and labels.....	800	7,403	13,320	10,505	8,924	8,780
Motion picture photoplays.....	811	615	782	1,216	2,451	2,757
Motion pictures not photoplays.....	811	1,120	1,113	1,434	748	967
Renovals of all classes.....	10,207	11,367	14,531	19,519	22,593	21,633

Source: The Library of Congress; *Annual Report*.

## Section 19

# Power and Scientific Development

This section presents statistics relating to the supply, production, and distribution of power and energy; expenditures for scientific research and development; patents and trademarks; atomic energy; and artificial satellites. The principal sources of these data are the Federal Power Commission, the Bureau of Mines of the Department of the Interior, the National Science Foundation, and the Atomic Energy Commission.

The Federal Power Commission publishes various statistical reports which present data on the production of electric energy classified by type of prime mover and on the capacity of all generating plants classified by type of prime mover. These reports also include statistics on quantities of basic fuels used (coal, oil, natural gas, etc.) and on water as an actual and potential source of power. The Commission's data cover both generation for public use by electric utilities and for use by the producer where generated by nonutility establishments. Data on sales, revenues, and numbers of customers by classes of service, on rates and typical bills, and related matters are also issued at regular intervals by the Commission. Monthly statistics on production, fuels used in production, sales by classes of service, salaries and wages, taxes, and other costs of production appear in the Commission's series entitled *Electric Power Statistics*.

The Federal Power Commission has uniform systems of accounts for public utilities subject to its jurisdiction and for its licensees. The Commission compiles data from the following periodic reports: Annual reports of electric utilities containing information as to assets, liabilities, revenues, generating capacity, and number of consumers; power system reports of electric utility systems presenting generating capacity, transmission facilities, and loads and load characteristics; monthly and annual reports containing such information as production of electricity for public use, fuel consumed, and stocks of fuel on hand; and reports from electric utilities and industrial corporations with respect to their electric power requirements and supply.

The Bureau of Mines' annual *Minerals Yearbook* presents statistics on coal, oil, and natural gas production and utilization. Other important sources of data include the semiannual reports of the Atomic Energy Commission; the American Gas Association, which in its monthly bulletins and annual statistical issues (such as *Gas Facts*) presents data on natural gas utilization and the production of manufactured gas from coal, oil, and similar products; and the *Statistical Bulletin* of the Edison Electric Institute, issued monthly and annually, which presents data on the distribution of electric energy by public utilities.

The National Science Foundation publishes reports on each of its regular surveys of organizations in the Federal, industry, college and university, and other nonprofit sectors of the economy. Data on obligations and expenditures of the Federal Government for scientific research and development appear in the annual series, *Federal Funds for Science*. Summary and preliminary data on the various Foundation surveys are published in the pamphlet series, *Reviews of Data on Research and Development*.

**Alaska and Hawaii.**—For a general statement concerning the treatment of data for Alaska and Hawaii, see preface.

**Historical statistics.**—Tabular headnotes (as "See also *Historical Statistics, Colonial Times to 1957*, series S 1-14) provide cross-references, where applicable, to *Historical Statistics of the United States, Colonial Times to 1957*. See preface.

No. 686. MINERAL FUELS AND WATER POWER—PRODUCTION, 1900 TO 1959, AND CONSUMPTION, 1920 TO 1959, BY SOURCE

[In trillions of British thermal units. Production data include Alaska. Unit heat values employed are: Anthracite, 12,700 B.t.u. per pound; bituminous coal and lignite, 13,100 B.t.u. per pound; petroleum, 5,800,000 B.t.u. per barrel; natural gas, total production multiplied by 1,075 B.t.u. minus repressuring vent and waste gas multiplied by 1,035. Water power includes installations owned by manufacturing plants and mines, as well as Government and privately owned public utilities. Fuel equivalent of water power calculated from kilowatt-hours of power produced wherever available, as is true of all public utility plants since 1919. Otherwise, fuel equivalent calculated from reported horsepower of installed water wheels, assuming capacity factor of 20 percent for factories and mines and of 40 percent for public utilities. See also *Historical Statistics, Colonial Times to 1957*, series M 71-87]

YEAR	Total	COAL					PERCENT				
		Anthra-cite	Bitu-minous and lignite	Crude petro-leum <sup>1</sup>	Natural gas <sup>2</sup>	Water power	Coal		Crude petro-leum <sup>1</sup>	Natural gas <sup>2</sup>	Water power
							Anthra-cite	Bitu-minous and lignite			
<b>PRODUCTION</b>											
1900.....	7,893	1,457	5,563	369	254	250	18.4	70.5	4.7	3.2	3.2
1905.....	11,772	1,973	8,255	781	377	386	16.8	70.1	6.6	3.2	3.3
1910.....	15,375	2,146	10,928	1,215	547	539	14.0	71.1	7.9	3.5	3.5
1915.....	16,822	2,260	11,597	1,630	676	659	13.4	69.0	9.7	4.0	3.9
1920.....	21,365	2,276	14,899	2,569	883	738	10.7	69.7	12.0	4.1	3.5
1925.....	21,607	1,570	13,625	4,430	1,314	668	7.2	63.1	20.5	6.1	3.1
1930.....	22,119	1,762	12,249	5,208	2,148	752	8.0	55.4	23.5	9.7	3.4
1935.....	19,803	1,325	9,756	5,780	2,136	806	6.7	49.2	29.2	10.8	4.1
1940.....	25,088	1,308	12,072	7,849	2,979	880	5.2	48.1	31.3	11.9	3.5
1945.....	32,333	1,395	15,134	9,939	4,423	1,442	4.3	46.8	30.7	13.7	4.5
1950.....	34,510	1,120	13,527	11,449	6,841	1,573	3.2	39.2	33.2	19.8	4.6
1955.....	38,900	665	12,174	14,410	10,204	1,447	1.7	31.3	37.1	26.2	3.7
1957.....	41,826	644	12,909	15,178	11,571	1,524	1.5	30.9	36.3	27.7	3.6
1958.....	39,132	538	10,764	14,204	11,043	1,693	1.4	27.5	36.3	30.5	4.3
1959 (prel.).....	40,307	495	10,742	14,933	12,446	1,691	1.2	26.7	37.0	30.9	4.2
<b>CONSUMPTION</b>											
1920.....	19,782	2,179	13,325	2,634	869	775	11.0	67.4	13.3	4.4	3.9
1925.....	20,899	1,627	13,079	4,156	1,336	701	7.8	62.6	19.9	6.4	3.3
1930.....	22,288	1,718	11,921	5,652	2,212	735	7.7	53.5	25.4	9.0	3.5
1935.....	19,107	1,298	9,336	5,499	2,143	831	6.8	48.9	28.8	11.2	4.3
1940.....	23,908	1,245	11,280	7,487	2,969	917	5.2	47.2	31.4	12.4	3.8
1945.....	31,541	1,311	14,661	9,619	4,464	1,486	4.2	46.5	30.5	14.1	4.7
1950.....	34,153	1,013	11,900	12,706	6,933	1,601	3.0	34.8	37.2	20.3	4.7
1955.....	39,956	599	11,104	16,328	10,428	1,497	1.5	27.8	40.8	26.1	3.8
1957.....	41,920	628	10,838	17,328	11,658	1,568	1.3	25.8	41.4	27.8	3.7
1958.....	41,493	583	9,607	17,428	12,235	1,740	1.2	23.1	42.0	29.5	4.2
1959 (prel.).....	42,904	450	9,597	18,340	12,826	1,691	1.1	22.4	42.7	29.9	3.9

<sup>1</sup> Includes commingled condensate. Consumption, beginning 1950, includes petroleum products (net imports).  
<sup>2</sup> Marketed production; beginning 1920, includes amount stored and lost in transmission. Consumption includes dry and liquids.

Source: Department of the Interior, Bureau of Mines; *Minerals Yearbook*. Current data also published in *Mineral Industry Surveys* and annual bulletin, *Bituminous Coal and Lignite*.

No. 687. TOTAL HORSEPOWER OF ALL PRIME MOVERS: 1930 TO 1955

[In thousands. Excludes Alaska and Hawaii, except as noted. Prime movers are mechanical engines and turbines, and work animals, which originally convert fuels or force (as wind or falling water) into work and power. Electric motors, which are secondary movers and obtain their power from prime movers, are excluded to avoid duplication. See also *Historical Statistics, Colonial Times to 1957*, series S 1-14]

ITEM	1930	1940	1950	1952	1955
<b>Total horsepower.....</b>	<b>1,663,944</b>	<b>2,759,018</b>	<b>4,747,871</b>	<b>5,726,886</b>	<b>7,143,723</b>
Automotive <sup>1</sup> .....	1,426,568	2,511,312	4,403,617	5,361,386	6,632,121
Nonautomotive.....	237,376	247,706	344,254	365,500	511,602
Work animals.....	17,660	12,510	7,040	5,980	4,141
Inanimate.....	219,716	235,196	337,214	359,520	507,461
Factories <sup>2</sup> .....	19,519	21,768	32,921	35,045	35,579
Mines.....	5,620	7,332	9,167	9,523	30,783
Railroads.....	109,743	92,361	110,969	101,690	60,384
Merchant ships, powered <sup>3</sup> .....	9,115	10,094	11,032	13,207	10,801
Sailing vessels <sup>3</sup> .....	100	26	11	9	5
Farms <sup>4</sup> .....	28,610	42,483	63,090	73,590	206,690
Windmills.....	200	180	59	62	59
Electric central stations.....	43,427	53,942	87,965	103,453	137,676
Aircraft <sup>5</sup> .....	3,382	7,455	22,000	22,941	25,779

<sup>1</sup> Includes passenger cars, trucks, buses, and motorcycles. <sup>2</sup> Electric motors not included.

<sup>3</sup> Includes Alaska and Hawaii.

<sup>4</sup> Excludes horses and other work animals, which are included with "work animals."

<sup>5</sup> Includes private planes and commercial airliners.

Source: 1930-1952, The Twentieth Century Fund, J. F. Dewhurst and Associates, *America's Needs and Resources a New Survey*; 1955, John A. Waring, *Transactions of Canadian Sectional Meeting, World Power Conference, 1955*.

## No. 688. PROJECTIONS OF ELECTRIC ENERGY REQUIREMENTS: 1957 TO 1980

[Excludes Alaska and Hawaii. Estimates assume prosperous peacetime conditions; exclude generation by industrial facilities and railways having generating facilities of their own]

YEAR	ENERGY USE				PEAK LOAD		
	Billion kw.-hr.	Percent increase		Million kw.	Percent increase		
		From 1957	For each interval		From 1957	For each interval	
1957 <sup>1</sup> .....	637.0			114.2			
1960.....	799.5	25.5	25.5	145.3	27.2	27.2	
1965.....	1,064.1	67.0	33.1	193.9	69.8	33.4	
1970.....	1,348.6	111.7	26.7	245.7	115.1	26.7	
1975.....	1,667.6	161.8	23.7	303.7	165.9	23.6	
1980.....	2,012.6	215.9	20.7	366.3	220.8	20.6	

<sup>1</sup> Actual figures compiled from reports of electric utilities.

Source: Federal Power Commission; *Electric Power Requirements and Supply of the United States, by Regions—Present and Future to 1980*, April 1959.

## No. 689. ELECTRIC ENERGY PRODUCTION AND INSTALLED GENERATING CAPACITY, BY CLASS OF OWNERSHIP AND TYPE OF PRIME MOVER: 1930 TO 1959

[For years ending December 31, except installed capacity as of December 31. Excludes Alaska and Hawaii. See also *Historical Statistics, Colonial Times to 1957*, series S 15-35 and S 44-69]

ITEM	1930	1935	1940	1945	1950	1955	1958	1959 (prel.)
<b>Production (1,000,000 kw.-hrs.)</b> .....	114,637	118,935	179,907	271,255	388,674	629,010	724,752	794,508
Electric utilities (for public use).....	91,112	95,287	141,837	222,486	329,141	547,038	645,098	709,700
By class of ownership:								
Privately owned.....	86,108	89,330	125,411	180,926	266,860	420,869	490,402	544,024
Percent of total.....	94.5	93.7	88.4	81.3	81.1	76.9	76.0	76.7
Publicly owned.....	5,003	5,958	16,426	41,560	62,281	126,169	154,696	165,676
Municipal.....	3,604	4,229	6,188	9,624	15,244	25,852	28,329	(1)
Federal.....	465	555	8,584	28,001	40,388	89,064	110,437	(1)
Cooperatives, power districts, State projects.....	518	732	1,175	3,146	5,793	11,253	15,930	(1)
Noncentral stations.....	416	442	479	700	857	(2)	(2)	(1)
By source of energy (percent):								
Coal.....	55.8	48.0	54.6	51.7	47.1	55.1	53.4	53.3
Oil.....	3.1	4.2	4.4	3.5	10.3	6.8	6.3	6.6
Gas.....	6.9	7.6	7.7	8.9	13.5	17.4	18.6	20.6
Hydro.....	34.2	40.3	33.4	35.9	29.2	20.7	21.7	19.4
Industrial plants <sup>3</sup> .....	23,525	23,648	38,070	48,709	50,533	81,972	79,654	84,808
<b>Installed capacity (1,000 kw.)</b> .....	41,153	42,828	50,962	62,868	82,850	130,896	160,651	174,139
Electric utilities (for public use).....	32,384	34,436	39,927	50,111	68,919	114,472	142,597	156,622
By class of ownership:								
Privately owned.....	30,285	31,820	34,399	40,307	55,176	86,887	108,202	118,870
Percent of total.....	93.5	92.4	86.2	80.4	80.1	75.9	75.9	75.9
Publicly owned.....	2,099	2,615	5,528	9,804	13,743	27,585	34,395	37,752
Municipal.....	1,601	2,002	2,977	3,586	4,970	7,795	9,817	(1)
Federal.....	226	300	1,944	5,081	6,921	16,062	20,436	(1)
Cooperatives, power districts, State projects.....	154	175	435	801	1,538	2,828	(2)	(1)
Noncentral stations.....	118	139	173	245	314	(2)	(2)	(1)
Industrial plants <sup>3</sup> .....	8,769	8,392	11,035	12,757	13,931	16,424	18,054	17,517
<b>TYPE OF PRIME MOVER</b>								
Electric utilities (for public use):								
Number of plants, total <sup>4</sup> .....	4,043	4,023	3,918	3,886	3,867	3,587	3,481	(1)
Hydro.....	1,446	1,470	1,474	1,505	1,458	1,881	1,359	(1)
Steam.....	1,626	1,424	1,163	1,087	1,061	1,045	1,051	(1)
Internal combustion.....	971	1,123	1,261	1,291	1,358	1,161	1,071	(1)
Production (1,000,000 kilowatt-hours):								
Hydro.....	91,112	95,287	141,837	222,486	329,141	547,038	645,098	709,700
Steam.....	31,190	38,372	47,321	79,970	95,938	112,975	140,262	137,707
Internal combustion.....	59,283	56,144	93,002	140,435	229,543	430,119	500,764	571,993
Installed capacity (1,000 kilowatts):								
Hydro.....	32,384	34,436	39,927	50,111	68,919	114,472	142,597	156,622
Steam.....	8,585	9,399	11,224	14,912	17,675	25,004	29,359	30,977
Internal combustion.....	23,386	24,471	27,775	34,113	49,333	87,112	110,633	122,882
Production per kilowatt of installed capacity (kilowatt-hours) <sup>5</sup> .....	2,813	2,767	3,552	4,440	4,776	4,779	4,524	4,531

<sup>1</sup> Not available. <sup>2</sup> Distributed to other publicly owned classes.

<sup>3</sup> Comprises production and capacity of industrial electric power plants of 100 kilowatts and over, including amounts for stationary electric power plants of railroads and railways.

<sup>4</sup> Each prime mover type in combination plants counted separately. <sup>5</sup> Capacity in service at end of year.

Source: Federal Power Commission; annual summaries, industrial electric power summaries, related monthly reports, and records.

No. 690. INSTALLED GENERATING CAPACITY OF ELECTRIC UTILITIES AND INDUSTRIAL PLANTS, BY TYPE OF PRIME MOVER AND CLASS OF OWNERSHIP, BY STATES: 1958

[In thousands of kilowatts. As of December 31]

STATE	Total	TYPE OF PRIME MOVER				CLASS OF OWNERSHIP OF ELECTRIC UTILITIES				Industrial plants
		Electric utilities and industrial		Electric utilities		Total	Privately owned	Publicly owned		
		Fuel	Hydro	Fuel	Hydro			Municipal	Other	
<b>United States<sup>1</sup></b>	<b>160,651</b>	<b>130,561</b>	<b>30,089</b>	<b>113,237</b>	<b>29,359</b>	<b>142,597</b>	<b>108,202</b>	<b>9,817</b>	<b>24,578</b>	<b>18,054</b>
<b>New England</b>	<b>7,528</b>	<b>6,006</b>	<b>1,521</b>	<b>5,076</b>	<b>1,258</b>	<b>6,333</b>	<b>6,109</b>	<b>186</b>	<b>38</b>	<b>1,194</b>
Maine	1,089	594	495	391	352	742	722	4	17	347
New Hampshire	753	306	446	265	399	603	600	4		89
Vermont	324	85	199	75	186	2	246	16		22
Massachusetts	3,123	2,589	233	2,429	186	2,015	2,490	115	2	508
Rhode Island	465	460	5	420	2	423	416	2		42
Connecticut	1,814	1,671	143	1,495	132	1,628	1,575	45	8	180
<b>Middle Atlantic</b>	<b>24,350</b>	<b>22,236</b>	<b>2,113</b>	<b>19,384</b>	<b>2,033</b>	<b>21,417</b>	<b>20,650</b>	<b>226</b>	<b>540</b>	<b>2,983</b>
New York	11,116	9,447	1,670	8,416	1,595	10,010	9,374	106	530	1,106
New Jersey	3,994	3,986	9	3,612	3	3,613	3,568	48	2	377
Pennsylvania	9,239	8,204	435	7,357	432	7,789	7,708	78	3	1,450
<b>East North Central</b>	<b>35,896</b>	<b>34,960</b>	<b>936</b>	<b>30,893</b>	<b>840</b>	<b>31,733</b>	<b>29,559</b>	<b>1,847</b>	<b>326</b>	<b>4,163</b>
Ohio	10,587	10,576	12	9,323	9	9,331	8,834	484	14	1,250
Indiana	6,191	6,159	32	5,485	32	5,487	5,157	330		704
Illinois	8,495	8,424	42	7,764	38	7,803	7,500	296	30	963
Michigan	7,317	6,894	423	5,759	384	6,143	5,432	624	87	1,174
Wisconsin	3,335	2,907	428	2,592	377	2,969	2,630	144	199	306
<b>West North Central</b>	<b>10,407</b>	<b>9,068</b>	<b>1,340</b>	<b>8,392</b>	<b>1,296</b>	<b>9,688</b>	<b>6,126</b>	<b>1,756</b>	<b>1,806</b>	<b>73</b>
Minnesota	2,310	2,119	191	1,791	156	1,947	1,542	332	73	320
Iowa	1,940	1,803	137	1,677	137	1,814	1,437	272	105	123
Missouri	2,182	1,990	193	1,867	193	2,059	1,642	390	87	123
North Dakota	520	280	240	206	240	506	184	14	308	14
South Dakota	555	222	333	218	324	543	180	40	323	12
Nebraska	1,131	890	240	884	240	1,124		246	878	7
Kansas	1,769	1,763	6	1,683	6	1,689	1,141	521	32	76
<b>South Atlantic</b>	<b>22,595</b>	<b>18,863</b>	<b>3,732</b>	<b>15,923</b>	<b>3,548</b>	<b>19,471</b>	<b>17,029</b>	<b>1,017</b>	<b>1,426</b>	<b>3,123</b>
Delaware	378	378	1	342		342	324	18		30
Maryland	1,823	1,551	272	1,304	271	1,575	1,533	35	7	248
Dist. of Columbia	555	552	3	530	3	533	530		3	22
Virginia	3,641	3,221	420	2,711	398	3,109	2,812	56	242	532
West Virginia	3,366	3,158	208	2,260	101	2,360	2,360			1,006
North Carolina	4,381	3,159	1,222	2,911	1,208	4,119	3,646	104	368	202
South Carolina	2,523	1,558	965	1,155	938	2,073	1,542	5	523	450
Georgia	2,365	1,765	599	1,509	586	2,096	1,870	16	210	269
Florida	3,563	3,520	43	3,222	43	3,264	2,411	783	70	209
<b>East South Central</b>	<b>14,828</b>	<b>11,078</b>	<b>3,750</b>	<b>10,166</b>	<b>3,742</b>	<b>13,908</b>	<b>3,782</b>	<b>407</b>	<b>9,719</b>	<b>921</b>
Kentucky	3,285	2,745	541	2,708	541	3,249	1,276	83	1,890	37
Tennessee	6,425	4,515	1,910	4,067	1,910	5,977	1,72	250	5,555	448
Alabama	4,328	3,029	1,299	2,684	1,291	3,975	1,701	1	2,273	353
Mississippi	790	790		707		707	633	74		83
<b>West South Central</b>	<b>16,494</b>	<b>15,547</b>	<b>947</b>	<b>12,010</b>	<b>944</b>	<b>12,954</b>	<b>10,532</b>	<b>1,374</b>	<b>1,049</b>	<b>3,539</b>
Arkansas	1,427	1,036	391	790	388	1,178	783	73	322	249
Louisiana	3,294	3,294		2,221		2,221	1,947	274		1,074
Oklahoma	2,007	1,842	165	1,788	165	1,953	1,595	116	242	54
Texas	9,765	9,375	391	7,212	390	7,603	6,207	911	485	2,163
<b>Mountain</b>	<b>8,189</b>	<b>3,982</b>	<b>4,157</b>	<b>3,269</b>	<b>4,156</b>	<b>7,425</b>	<b>4,186</b>	<b>260</b>	<b>2,979</b>	<b>714</b>
Montana	1,033	134	899	118	899	1,017	594		423	16
Idaho	1,207	44	1,163	4	1,163	1,167	947	13	207	40
Wyoming	290	135	155	91	155	246	84	2	161	44
Colorado	1,204	956	248	860	247	1,108	761	148	199	96
New Mexico	738	713	25	651	25	676	553	45	77	62
Arizona	2,131	1,151	980	911	980	1,891	575	2	1,314	240
Utah	786	686	100	517	100	617	552	48	17	169
Nevada	750	162	588	116	587	703	120	1	582	48
<b>Pacific</b>	<b>20,414</b>	<b>8,822</b>	<b>11,592</b>	<b>8,124</b>	<b>11,543</b>	<b>19,667</b>	<b>10,229</b>	<b>2,744</b>	<b>6,695</b>	<b>747</b>
Washington	5,920	536	5,384	240	5,357	5,597	730	1,000	3,867	323
Oregon	2,780	361	2,419	204	2,398	2,602	799	51	1,751	178
California	11,714	7,925	3,789	7,680	3,788	11,468	8,699	1,692	1,076	246

<sup>1</sup> Excludes Alaska and Hawaii.

Source: Federal Power Commission; annual summaries and related monthly reports.

No. 691. ELECTRIC ENERGY—PRODUCTION BY ELECTRIC UTILITIES AND INDUSTRIAL PLANTS, BY TYPE OF PRIME MOVER AND CLASS OF OWNERSHIP, BY STATES: 1958

[In millions of kilowatt-hours. For year ending December 31]

STATE	Total	TYPE OF PRIME MOVER				CLASS OF OWNERSHIP OF ELECTRIC UTILITIES				Industrial plants
		Electric utilities and industrial		Electric utilities		Total	Privately owned	Publicly owned		
		Fuel	Hydro	Fuel	Hydro			Municipal	Other	
United States 1...	724,752	581,138	143,615	504,836	140,262	645,098	490,402	28,329	126,367	79,654
New England.....	29,322	22,909	6,413	20,571	5,150	25,721	25,045	552	124	3,601
Maine.....	4,152	1,419	2,733	756	1,904	2,660	2,594	18	48	1,492
New Hampshire.....	2,682	1,221	1,461	1,059	1,223	2,282	2,273	9	-----	400
Vermont.....	1,086	1,227	909	114	840	954	895	59	-----	82
Massachusetts.....	12,125	11,259	867	10,314	766	11,080	10,711	344	25	1,045
Rhode Island.....	1,901	1,891	10	1,767	8	1,776	1,737	6	-----	125
Connecticut.....	7,425	6,992	433	6,560	408	6,969	6,835	116	18	457
Middle Atlantic.....	106,248	96,846	9,401	86,782	9,045	95,827	93,762	646	1,419	10,420
New York.....	46,197	38,732	7,465	35,538	7,136	42,674	40,979	302	1,394	3,523
New Jersey.....	16,676	16,635	42	15,229	31	15,260	15,106	144	10	1,416
Pennsylvania.....	43,374	41,480	1,894	36,015	1,878	37,893	37,677	200	15	5,482
East North Central.....	164,241	160,615	3,626	143,693	3,188	146,880	140,583	4,908	1,389	17,361
Ohio.....	49,257	49,223	34	43,742	17	43,759	42,365	1,354	40	5,498
Indiana.....	31,128	31,015	114	28,031	113	28,145	27,291	853	-----	2,984
Illinois.....	41,445	41,256	188	38,803	166	38,969	38,091	778	100	2,476
Michigan.....	28,851	27,247	1,605	22,567	1,476	24,043	21,978	1,630	434	4,808
Wisconsin.....	13,560	11,874	1,686	10,549	1,415	11,964	10,857	293	814	1,596
West North Central.....	39,217	33,323	5,894	30,467	5,702	36,169	25,596	3,782	6,790	3,048
Minnesota.....	9,189	8,211	978	6,907	812	7,718	6,795	749	175	1,471
Iowa.....	7,194	6,487	707	5,940	705	6,645	5,717	569	362	549
Missouri.....	8,387	7,704	683	7,186	683	7,869	6,869	702	298	518
North Dakota.....	1,973	833	1,290	634	1,290	1,924	469	19	1,435	49
South Dakota.....	1,715	479	1,236	478	1,212	1,690	460	24	1,206	25
Nebraska.....	3,691	2,713	979	2,699	978	3,677	-----	464	3,213	14
Kansas.....	7,068	7,046	22	6,624	22	6,646	-----	1,260	1,101	422
South Atlantic.....	100,809	86,817	13,993	74,061	13,170	87,231	79,669	3,122	4,439	13,573
Delaware.....	2,160	2,159	1	2,007	-----	2,007	1,949	58	-----	153
Maryland.....	7,769	6,356	1,412	5,010	1,410	6,420	6,306	96	19	1,348
Dist. of Columbia.....	1,375	1,370	5	1,326	5	1,331	1,326	-----	5	44
Virginia.....	16,355	15,091	1,264	12,914	1,192	14,106	13,306	174	626	2,249
West Virginia.....	16,450	15,475	975	12,841	426	13,266	13,266	-----	-----	3,184
North Carolina.....	19,787	14,087	5,701	13,380	5,053	18,433	16,885	191	1,857	1,354
South Carolina.....	9,778	6,649	3,228	4,605	3,141	7,746	5,970	11	1,765	2,031
Georgia.....	11,406	9,636	1,771	8,181	1,706	9,837	9,428	55	354	1,569
Florida.....	15,730	15,493	237	13,847	237	14,084	11,233	2,537	813	1,646
East South Central.....	81,218	62,263	18,956	57,485	18,931	76,416	77,728	407	58,281	4,802
Kentucky.....	19,073	16,243	2,829	16,127	2,829	18,956	4,640	198	14,118	116
Tennessee.....	34,284	24,939	9,346	22,454	9,346	31,800	846	64	30,890	2,485
Alabama.....	24,731	17,951	6,781	16,310	6,756	23,066	9,793	-----	13,274	1,065
Mississippi.....	3,130	3,130	-----	2,594	-----	2,594	2,449	145	-----	537
West South Central.....	74,835	71,507	3,328	50,576	3,320	53,895	46,494	3,791	3,610	20,910
Arkansas.....	6,987	5,544	1,443	4,188	1,435	5,623	4,238	143	1,242	1,364
Louisiana.....	15,841	15,841	-----	8,898	-----	8,898	8,281	617	-----	6,943
Oklahoma.....	7,230	6,567	663	6,309	663	6,973	5,792	245	-----	258
Texas.....	44,777	43,555	1,222	31,180	1,222	32,402	28,183	2,785	1,433	12,375
Mountain.....	34,247	16,182	18,065	13,073	18,064	31,137	18,050	823	12,264	3,110
Montana.....	4,595	371	4,225	327	4,225	4,551	3,204	-----	1,347	44
Idaho.....	5,166	155	5,011	(*)	5,011	5,011	3,828	71	1,111	155
Wyoming.....	1,073	486	587	322	587	909	312	-----	597	164
Colorado.....	4,878	3,888	889	3,535	988	4,523	3,339	414	769	353
New Mexico.....	2,965	2,853	112	2,535	112	2,647	2,171	150	326	318
Arizona.....	8,616	4,814	4,301	3,422	4,301	7,724	2,040	7	5,677	862
Utah.....	3,935	3,540	395	2,460	395	2,874	2,645	178	51	1,061
Nevada.....	3,019	674	2,446	452	2,446	2,897	510	-----	2,385	122
Pacific.....	94,614	30,676	63,938	28,129	63,693	91,822	43,474	10,298	39,050	2,992
Washington.....	28,922	970	27,952	-----	27,777	27,775	2,875	3,076	21,824	1,147
Oregon.....	13,918	662	13,256	79	13,186	13,265	2,982	187	10,096	653
California.....	51,774	29,044	22,730	28,052	22,730	50,782	37,617	7,035	6,131	992

<sup>1</sup> Excludes Alaska and Hawaii.

<sup>2</sup> Less than 500,000.

Source: Federal Power Commission; annual summaries and related monthly reports.

### No. 692. ELECTRIC UTILITIES—INSTALLED GENERATING CAPACITY AND ELECTRIC ENERGY PRODUCTION, BY STATES: 1945 TO 1958

[Installed capacity as of December 31; production for years ending December 31]

STATE	INSTALLED CAPACITY (1,000 kw.)				ENERGY PRODUCTION (1,000,000 kw.-hr.)			
	1945	1950	1955	1958	1945	1950	1955	1958
<b>United States<sup>1</sup>.....</b>	<b>50,111</b>	<b>68,919</b>	<b>114,472</b>	<b>142,597</b>	<b>222,486</b>	<b>329,141</b>	<b>547,038</b>	<b>646,098</b>
<b>New England.....</b>	<b>3,198</b>	<b>4,052</b>	<b>5,271</b>	<b>6,333</b>	<b>11,805</b>	<b>16,211</b>	<b>22,610</b>	<b>25,721</b>
Maine.....	332	415	623	742	1,349	1,680	2,405	2,660
New Hampshire.....	305	398	474	663	1,038	1,329	1,718	2,282
Vermont.....	175	204	261	262	732	735	981	954
Massachusetts.....	1,930	1,653	2,167	2,615	4,577	6,588	9,461	11,080
Rhode Island.....	283	359	401	423	919	1,656	1,955	1,776
Connecticut.....	773	1,022	1,345	1,628	3,091	4,223	6,091	6,969
<b>Middle Atlantic.....</b>	<b>10,510</b>	<b>13,225</b>	<b>18,218</b>	<b>21,417</b>	<b>46,678</b>	<b>63,372</b>	<b>86,140</b>	<b>95,827</b>
New York.....	5,361	6,257	8,469	10,010	22,003	29,452	39,533	42,674
New Jersey.....	1,571	2,053	2,914	3,618	7,325	9,921	12,306	15,260
Pennsylvania.....	3,578	4,916	6,835	7,789	17,350	24,000	34,301	37,893
<b>East North Central.....</b>	<b>11,506</b>	<b>16,083</b>	<b>25,975</b>	<b>31,733</b>	<b>50,921</b>	<b>75,349</b>	<b>125,853</b>	<b>146,880</b>
Ohio.....	3,250	4,430	7,459	9,831	14,706	21,967	35,955	43,759
Indiana.....	1,610	2,142	4,351	5,487	7,442	10,374	21,193	28,145
Illinois.....	3,058	4,506	6,955	7,803	14,020	20,686	35,997	38,969
Michigan.....	2,383	3,222	4,590	6,143	9,827	15,316	22,365	24,043
Wisconsin.....	1,205	1,733	2,622	2,969	4,926	7,006	10,343	11,964
<b>West North Central.....</b>	<b>3,466</b>	<b>5,024</b>	<b>7,930</b>	<b>9,688</b>	<b>12,728</b>	<b>19,237</b>	<b>30,463</b>	<b>36,169</b>
Minnesota.....	752	1,151	1,764	1,947	2,666	4,540	6,642	7,718
Iowa.....	761	1,173	1,554	1,814	2,876	4,428	6,212	6,645
Missouri.....	816	958	1,743	2,059	3,021	3,718	6,852	7,839
North Dakota.....	100	187	264	306	313	660	863	1,024
South Dakota.....	99	169	491	543	265	536	1,399	1,690
Nebraska.....	416	572	702	1,124	1,334	2,011	2,816	3,877
Kansas.....	521	814	1,353	1,694	2,254	3,336	5,478	6,646
<b>South Atlantic.....</b>	<b>6,557</b>	<b>8,857</b>	<b>15,131</b>	<b>19,471</b>	<b>28,285</b>	<b>43,604</b>	<b>71,229</b>	<b>87,231</b>
Delaware.....	39	28	224	342	43	20	1,366	2,007
Maryland.....	900	1,099	1,373	1,575	4,334	5,040	5,845	6,420
District of Columbia.....	458	508	533	533	1,681	1,669	1,627	1,331
Virginia.....	785	1,204	1,931	3,109	3,717	6,233	9,380	14,106
West Virginia.....	960	1,256	2,177	2,360	5,780	7,821	14,239	13,266
North Carolina.....	1,347	1,790	3,505	4,119	4,966	9,829	15,592	18,433
South Carolina.....	792	847	1,652	2,073	2,251	2,910	5,870	7,746
Georgia.....	716	1,156	1,675	2,096	2,901	5,235	7,705	9,837
Florida.....	550	999	2,062	3,264	2,613	4,847	9,593	14,084
<b>East South Central.....</b>	<b>3,434</b>	<b>4,464</b>	<b>11,657</b>	<b>13,908</b>	<b>16,596</b>	<b>24,606</b>	<b>66,530</b>	<b>76,416</b>
Kentucky.....	531	904	2,745	3,249	2,367	4,390	17,693	13,956
Tennessee.....	1,452	1,670	4,628	5,977	6,922	9,379	24,625	31,800
Alabama.....	1,327	1,690	3,654	3,975	7,099	9,577	21,343	23,066
Mississippi.....	74	200	631	707	208	1,260	2,864	2,594
<b>West South Central.....</b>	<b>2,694</b>	<b>4,717</b>	<b>9,449</b>	<b>12,954</b>	<b>13,682</b>	<b>22,515</b>	<b>40,823</b>	<b>53,895</b>
Arkansas.....	222	450	1,165	1,173	776	1,975	4,909	5,623
Louisiana.....	542	909	1,594	2,221	3,250	4,936	6,677	8,898
Oklahoma.....	457	723	1,260	1,953	2,255	2,927	5,337	6,973
Texas.....	1,473	2,636	5,430	7,603	7,401	12,676	23,900	32,402
<b>Mountain.....</b>	<b>2,647</b>	<b>3,445</b>	<b>6,106</b>	<b>7,425</b>	<b>11,974</b>	<b>16,497</b>	<b>24,155</b>	<b>31,137</b>
Montana.....	373	442	925	1,017	2,318	3,136	4,696	4,551
Idaho.....	267	445	781	1,167	1,263	2,538	3,907	5,011
Wyoming.....	82	139	296	246	261	595	724	909
Colorado.....	332	404	959	1,108	1,129	1,856	3,719	4,523
New Mexico.....	162	281	459	676	659	1,014	1,765	2,647
Arizona.....	663	843	1,626	1,891	3,437	3,489	5,535	7,724
Utah.....	171	235	523	617	417	659	2,377	2,874
Nevada.....	590	596	597	703	2,590	3,210	1,431	2,397
<b>Pacific.....</b>	<b>6,100</b>	<b>9,054</b>	<b>14,733</b>	<b>19,667</b>	<b>29,818</b>	<b>47,751</b>	<b>79,245</b>	<b>91,822</b>
Washington.....	1,814	2,765	4,074	5,597	9,690	17,371	24,030	27,775
Oregon.....	903	973	2,046	2,602	4,185	5,545	12,703	13,265
California.....	3,384	5,316	8,612	11,468	15,943	24,836	42,512	50,782

<sup>1</sup> Excludes Alaska and Hawaii.

Source: Federal Power Commission; annual summaries and related monthly reports.

No. 693. WATER POWER—DEVELOPED, 1920 TO 1958, AND ESTIMATED UNDEVELOPED, 1958, BY STATES

[In thousands of kilowatts. As of December 31]

STATE	DEVELOPED WATER POWER (capacity of actual installations only)										Estimated undeveloped water power, 1958
	Electric utilities only		Electric utilities and industrial plants								
	1920	1930	1939		1950			1958			
			Total	Utilities	Total	Utilities	Industrial	Total	Utilities	Industrial	
<b>United States<sup>1</sup></b> .....	<b>3,704</b>	<b>8,585</b>	<b>12,075</b>	<b>11,004</b>	<b>13,675</b>	<b>17,675</b>	<b>1,000</b>	<b>30,089</b>	<b>29,359</b>	<b>730</b>	<b>110,906</b>
New England.....	291	753	1,115	833	1,239	971	268	1,521	1,258	264	2,708
Maine.....	40	174	301	188	391	270	121	495	352	143	1,257
New Hampshire.....	43	212	292	235	312	262	50	446	399	48	595
Vermont.....	49	156	173	158	192	177	15	199	187	12	454
Massachusetts.....	114	129	228	161	223	165	55	233	186	47	244
Rhode Island.....	2	2	14	3	11	3	8	5	2	2	
Connecticut.....	44	79	107	88	107	89	18	143	132	11	158
Middle Atlantic.....	662	1,290	1,633	1,563	1,678	1,602	76	2,113	2,033	81	7,869
New York.....	540	1,074	1,229	1,165	1,225	1,155	70	1,670	1,595	75	4,362
New Jersey.....	1	1	6	3	9	6	3	9	6	3	225
Pennsylvania.....	120	215	399	395	444	441	3	435	432	3	3,282
East North Central.....	372	602	790	703	901	828	73	936	840	96	2,999
Ohio.....	17	13	16	12	16	12	4	12	9	3	341
Indiana.....	11	35	38	35	37	37		32	32	(2)	710
Illinois.....	43	50	51	49	54	49	5	42	38	3	1,209
Michigan.....	167	258	368	344	399	384	15	423	384	39	328
Wisconsin.....	134	247	318	263	396	347	49	428	377	61	411
West North Central.....	257	279	537	501	629	577	52	1,340	1,296	44	6,324
Minnesota.....	88	122	158	126	181	138	43	191	156	35	231
Iowa.....	138	124	127	127	137	137		137	137	(2)	454
Missouri.....	12	13	151	151	161	161		193	193		2,938
North Dakota.....			(2)					240	240		359
South Dakota.....	5	4	4	4	11	3	8	333	324	8	1,382
Nebraska.....	7	11	87	86	142	142	(2)	240	240	(2)	670
Kansas.....	7	6	7	7	6	6		6	6		290
South Atlantic.....	589	1,603	2,224	1,803	2,767	2,297	470	3,732	3,548	184	8,393
Delaware.....			(2)		1	1	1	1	1	1	
Maryland.....	1	272	273	271	271	271	1	272	271	1	360
District of Columbia.....			3	2	3	3		3	3		
Virginia.....	45	83	204	182	207	183	24	420	398	21	1,476
West Virginia.....	9	56	209	101	208	101	107	208	101	107	2,160
North Carolina.....	144	397	651	400	962	662	300	1,222	1,208	14	1,264
South Carolina.....	231	506	520	495	679	663	26	965	938	27	788
Georgia.....	155	271	349	337	425	412	13	590	586	13	2,285
Florida.....	4	14	14	14	13	13		43	43		60
East South Central.....	170	863	1,270	1,140	2,729	2,721	8	3,750	3,742	8	3,961
Kentucky.....		105	111	111	271	271		541	541		1,270
Tennessee.....	97	127	432	310	1,238	1,238		1,910	1,910		3,373
Alabama.....	72	632	727	719	1,220	1,212	8	1,299	1,291	8	1,908
Mississippi.....											410
West South Central.....	4	19	140	139	466	463	3	947	944	3	3,893
Arkansas.....	1	11	67	67	148	145	3	301	308	3	1,542
Louisiana.....			1	1							46
Oklahoma.....	1	2	2	2	74	74		165	165		793
Texas.....	2	6	71	71	245	245	(2)	391	390	(2)	1,512
Mountain.....	487	784	1,583	1,581	2,286	2,282	4	4,157	4,156	1	23,141
Montana.....	212	300	321	321	427	426	1	899	899		6,474
Idaho.....	135	225	257	257	441	440	1	1,163	1,163	(2)	8,957
Wyoming.....	2	12	47	47	79	79		155	155		966
Colorado.....	48	52	67	66	92	91	1	248	247	(2)	1,801
New Mexico.....	1	1	1	1	25	25		25	25		178
Arizona.....	23	87	293	293	541	541		980	980		3,559
Utah.....	58	98	93	92	94	94		100	100		1,072
Nevada.....	9	9	505	504	587	586	1	588	587	1	134
Pacific <sup>1</sup> .....	872	2,391	2,783	2,741	5,979	5,933	46	11,592	11,543	49	51,618
Washington.....	241	596	812	784	2,591	2,564	27	5,964	5,837	27	18,145
Oregon.....	65	156	280	278	783	760	17	2,419	2,398	21	5,773
California.....	566	1,640	1,685	1,680	2,606	2,604	2	3,739	3,738	2	8,637
Alaska.....	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	18,753
Hawaii.....	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	280

<sup>1</sup> Excludes Alaska and Hawaii, except for estimated undeveloped water power.

<sup>2</sup> Less than 500. <sup>3</sup> Not available.

Source: Federal Power Commission; annual summaries and related monthly reports.

**No. 694. FEDERAL ELECTRIC UTILITY PROJECTS—INSTALLED CAPACITY AND INVESTMENT ALLOCATED TO ELECTRIC PLANT: 1955 TO 1958**

[As of June 30. Beginning 1958, includes Alaska. Comprises only the electricity generating plant of these projects and excludes projects not primarily manufacturing electricity (e.g., West Point, Annapolis). Investments represent allocation to power projects for capital equipment and improvements. Reserves for depreciation have not been deducted]

PROJECT GROUP OR SYSTEM	INSTALLED CAPACITY (1,000 kw.)			INVESTMENT ALLOCATED <sup>1</sup> (\$1,000)		
	1955	1957	1958	1955	1957	1958
<b>Total</b> .....	<b>15,033</b>	<b>18,955</b>	<b>19,975</b>	<b>3,811,843</b>	<b>4,776,203</b>	<b>5,048,817</b>
Percent capacity of all electric utilities.....	13.1	14.7	14.0			
Central Valley: Bureau of Reclamation.....	522	630	630	134,081	135,688	136,063
Columbia Basin.....	3,619	4,726	5,370	1,020,600	1,492,376	1,548,466
Bonneville Power Administration (transmission).....				308,014	419,380	443,133
Bureau of Reclamation.....	2,259	2,259	2,271	218,084	277,410	282,043
Corps of Engineers.....	1,300	2,407	3,099	453,602	795,580	823,290
Hoover and Parker-Davis: Bureau of Reclamation.....						
Missouri Basin.....	1,595	1,595	1,595	205,598	206,701	207,013
Bureau of Reclamation.....	687	1,107	1,107	369,577	590,443	628,554
Corps of Engineers.....	362	362	362	214,278	236,327	250,747
Corps of Engineers.....	325	745	745	155,299	360,110	368,807
Southeastern Power Administration.....	1,031	1,126	1,247	259,142	343,554	301,740
Southeastern Power Administration (transmission).....						
Corps of Engineers.....				63	77	79
Southwestern Power Administration.....	1,031	1,126	1,247	259,079	343,477	301,661
Southwestern Power Administration (transmission).....	426	501	501	144,029	170,115	175,615
Corps of Engineers.....						
Tennessee Valley Authority.....	426	501	501	23,444	24,017	24,946
Other projects.....	7,005	9,057	9,237	1,634,057	1,766,300	1,867,597
Bureau of Reclamation.....	148	213	288	44,150	65,026	93,169
Corps of Engineers.....	83	149	224	20,483	39,849	67,947
Bureau of Indian Affairs.....	18	18	18	11,834	11,846	11,815
International Boundary and Water Commission.....	15	14	14	6,342	6,683	6,686
	32	32	32	5,500	6,648	6,691

<sup>1</sup> Includes estimates.

Source: Federal Power Commission.

**No. 695. ELECTRIC UTILITIES—NUMBER OF ELECTRIC UTILITY SUPPLY SYSTEMS AND GENERATING PLANTS, BY CLASS OF OWNERSHIP: 1945 TO 1958**

[As of December 31. Excludes Alaska and Hawaii. Duplications of establishments operating in two or more States have been eliminated. Each type of prime mover in combination generating plants counted separately; nonutility generating plants, approximately 2,367 in 1958, producing primarily for industrial use, are excluded]

ITEM	Total, all classes	Privately owned	Cooperatively owned	PUBLICLY OWNED			
				Total	Municipal	Federal	Other <sup>1</sup>
1945: Total electric supply systems.....	4,051	1,060	800	2,191	2,092	74	25
Systems with generating plants.....	1,584	492	83	1,019	990	13	11
Number of generating plants.....	3,866	2,400	142	1,344	1,157	86	101
1950: Total electric supply systems.....	4,007	821	963	2,223	2,077	55	91
Systems with generating plants.....	1,495	393	92	1,010	955	13	42
Number of generating plants.....	3,867	2,334	166	1,367	1,130	83	148
1955: Total electric supply systems.....	3,648	581	950	2,117	1,968	57	92
Systems with generating plants.....	1,315	515	78	922	865	9	48
Number of generating plants.....	3,587	2,103	146	1,338	1,068	129	141
1957: Total electric supply systems.....	3,438	465	933	2,040	1,890	57	93
Systems with generating plants.....	1,255	286	74	895	838	9	48
Number of generating plants.....	3,517	2,049	142	1,326	1,047	139	140
1958: Total electric supply systems.....	3,400	456	926	2,018	1,875	55	88
Systems with generating plants.....	1,217	277	68	872	815	9	48
Number of generating plants.....	3,481	2,025	142	1,314	1,032	146	137

<sup>1</sup> Public utility districts and State projects.

Source: Federal Power Commission; annual summaries; and McGraw-Hill Publishing Co., Inc., New York, N.Y.; *Directory of Electric Utilities*.

No. 696. ELECTRIC LIGHT AND POWER INDUSTRY—ENERGY GENERATED, SALES, REVENUE, AND CUSTOMERS: 1940 TO 1959

[Excludes Alaska and Hawaii]

CLASS	1940	1945	1950	1955	1958	1959
Energy generated <sup>1</sup> .....million kilowatt-hours..	141, 837	222, 486	329, 141	547, 038	645, 098	709, 700
<b>Sales to ultimate customers</b> .....do.....	<b>118, 643</b>	<b>193, 558</b>	<b>280, 539</b>	<b>480, 921</b>	<b>569, 161</b>	<b>626, 743</b>
Residential or domestic.....do.....	23, 317	34, 184	67, 030	120, 524	159, 047	173, 414
Rural (distinct rural rates).....do.....	1, 991	3, 669	7, 400	10, 751	11, 084	12, 987
Commercial and industrial:						
Small light and power.....do.....	22, 373	30, 438	50, 446	80, 769	101, 213	112, 439
Large light and power.....do.....	59, 567	107, 490	139, 065	249, 206	275, 023	303, 045
All other.....do.....	11, 405	17, 777	16, 598	19, 681	22, 794	24, 858
<b>Revenue from ultimate customers</b> ...\$1,000,000..	<b>2, 440</b>	<b>3, 342</b>	<b>5, 086</b>	<b>8, 020</b>	<b>9, 734</b>	<b>10, 573</b>
Residential or domestic.....do.....	896	1, 167	1, 932	3, 187	4, 025	4, 338
Rural (distinct rural rates).....do.....	49	90	158	229	251	275
Commercial and industrial:						
Small light and power.....do.....	689	850	1, 334	1, 993	2, 440	2, 663
Large light and power.....do.....	631	1, 002	1, 405	2, 276	2, 604	2, 847
All other.....do.....	174	232	258	336	414	450
<b>Ultimate customers, Dec. 31</b> .....1,000..	<b>30, 191</b>	<b>34, 031</b>	<b>44, 986</b>	<b>52, 559</b>	<b>56, 208</b>	<b>57, 505</b>
Residential or domestic.....do.....	24, 952	28, 117	37, 533	44, 409	47, 789	48, 988
Rural (distinct rural rates).....do.....	686	1, 234	1, 596	1, 648	1, 634	1, 660
Commercial and industrial:						
Small light and power.....do.....	4, 260	4, 398	5, 466	6, 042	6, 281	6, 363
Large light and power.....do.....	178	162	235	288	315	318
All other.....do.....	115	119	156	172	189	196

<sup>1</sup> Figures obtained by Edison Electric Institute from Federal Power Commission.

Source: Edison Electric Institute, New York, N. Y.; annual statistical bulletin.

No. 697. CONSUMPTION OF FUELS BY ELECTRIC UTILITIES: 1920 TO 1959

[For years ending December 31. Excludes Alaska and Hawaii. Use of fuels for stand-by purposes is included. See also *Historical Statistics, Colonial Times to 1957*, series S 36-43]

YEAR	Net generation by fuel <sup>1</sup>	FUEL CONSUMED								
		Total coal equivalent	Coal			Oil	Gas	Per kilowatt-hour		
			Total <sup>2</sup>	Bituminous	Anthracite			Coal	Oil	Gas
<i>Mil. kw.-hr.</i>	<i>1,000 short tons</i>	<i>1,000 short tons</i>	<i>1,000 short tons</i>	<i>1,000 short tons</i>	<i>1,000 42-gal. bbl.</i>	<i>Mil. cu. ft.</i>	<i>Lb.</i>	<i>Gal.</i>	<i>Cu. ft.</i>	
1920.....	23, 495	35, 791	31, 640	30, 099	1, 540	12, 690	22, 136	3. 0	0. 254	36. 9
1925.....	39, 443	40, 014	35, 615	33, 803	1, 812	9, 794	45, 472	2. 0	0. 165	23. 9
1930.....	59, 583	47, 545	40, 278	38, 130	2, 148	8, 805	119, 553	1. 60	0. 132	19. 0
1935.....	56, 689	40, 797	32, 715	30, 936	1, 779	11, 257	124, 118	1. 44	0. 118	17. 0
1940.....	93, 963	62, 942	51, 474	47, 721	2, 348	16, 325	180, 096	1. 34	0. 112	16. 5
1945.....	142, 331	92, 642	74, 725	70, 621	3, 122	20, 228	326, 212	1. 30	0. 109	16. 5
1950.....	232, 813	138, 421	91, 871	86, 855	3, 609	75, 420	628, 919	1. 19	0. 094	14. 1
1951.....	270, 531	154, 498	105, 768	100, 378	3, 870	63, 945	763, 898	1. 14	0. 094	13. 5
1952.....	293, 640	160, 872	107, 071	101, 795	3, 762	67, 218	910, 117	1. 10	0. 095	13. 3
1953.....	337, 042	178, 491	115, 897	110, 774	3, 614	82, 238	1, 034, 272	1. 06	0. 090	13. 0
1954.....	364, 354	180, 367	118, 385	113, 660	3, 166	60, 745	1, 165, 498	0. 99	0. 089	12. 4
1955.....	433, 786	206, 929	143, 759	138, 883	3, 209	75, 274	1, 153, 280	0. 95	0. 085	12. 1
1956.....	478, 487	223, 733	158, 279	153, 492	3, 296	72, 711	1, 239, 311	0. 94	0. 085	11. 9
1957.....	501, 098	232, 576	160, 769	156, 055	3, 363	79, 693	1, 386, 141	0. 93	0. 083	11. 7
1958.....	504, 497	228, 136	155, 724	151, 756	2, 786	77, 668	1, 372, 853	0. 90	0. 081	11. 5
1959 (prel.)..	571, 993	254, 562	168, 427	164, 425	2, 639	88, 353	1, 627, 082	0. 89	( <sup>3</sup> )	( <sup>3</sup> )

<sup>1</sup> Output by use of wood and waste not included except small amount in 1958.

<sup>2</sup> Includes lignite, not shown separately.

<sup>3</sup> Not available.

Source: Federal Power Commission; annual report, *Consumption of Fuel for Production of Electric Energy*, and related monthly reports.

## No. 698. FARM ELECTRIFICATION: 1940 TO 1959

[Excludes Alaska and Hawaii. Beginning 1950, data reflect change in Census definition of farm, which tends to decrease number of farms]

ITEM	1940	1945	1950	1955	1958	1959
Total number of farms <sup>1</sup> .....1,000.....	6,097	5,859	5,382	2 4,782	4,749	4,671
Total number of farms served, Dec. 31.....do.....	2,050	2,929	4,424	4,487	4,640	4,576
By private companies.....do.....	1,449	1,707	1,998	1,940	( <sup>3</sup> )	( <sup>3</sup> )
By public authorities, total.....do.....	602	1,222	2,426	2,547	( <sup>3</sup> )	( <sup>3</sup> )
By REA cooperatives <sup>4</sup> .....do.....	518	1,051	2,168	2,287	( <sup>3</sup> )	( <sup>3</sup> )
Other public <sup>5</sup> .....do.....	84	171	258	260	( <sup>3</sup> )	( <sup>3</sup> )
<b>EASTERN FARMS</b>						
Number of customers (farms served), average.....1,000.....	1,431	2,160	3,288	3,445	3,559	3,516
Sales, kilowatt-hours.....1,000,000.....	1,535	3,394	7,677	12,574	16,759	17,141
Revenue.....\$1,000,000.....	67	124	244	347	411	439
Kilowatt-hours per customer.....	1,073	1,571	2,335	3,050	4,428	4,875
Annual bill, average.....dollars.....	46.46	57.50	74.25	100.74	115.57	124.80
Revenue per kilowatt-hour.....cents.....	4.33	3.60	3.18	2.76	2.61	2.56
<b>WESTERN FARMS <sup>6</sup></b>						
Number of customers (farms served), average.....1,000.....	414	638	958	1,009	1,057	1,056
Sales, kilowatt-hours.....1,000,000.....	1,820	2,514	4,632	8,254	8,916	9,812
Revenue.....\$1,000,000.....	36	53	88	147	171	178
Kilowatt-hours per customer.....	4,396	3,943	4,833	8,180	8,435	9,292
Annual bill, average.....dollars.....	85.72	82.41	92.31	146.42	161.95	168.19
Revenue per kilowatt-hour.....cents.....	1.95	2.09	1.91	1.79	1.92	1.81

<sup>1</sup> 1940-1955 are census figures and relate to Apr. 1 for 1940 and 1950, Jan. 1 for 1945, and Nov. for 1954; thereafter figures are Dept. of Agriculture estimates.

<sup>2</sup> 1954 data. <sup>3</sup> Not available.

<sup>4</sup> Represents cooperatives only and excludes customers of all other agencies (companies and municipals) financed in whole or in part by REA.

<sup>5</sup> Customers served by municipal systems and various power districts.

<sup>6</sup> "Eastern farms" are those located in the area not affected by heavy irrigation pumping and their statistics are a measure of use of electricity on the average farm. "Western farms" are those where irrigation may be involved. Possibly less than one-fifth of farms in irrigation States do actual pumping, but statistics are not available to make a more accurate separation. Figures for "Western farms," therefore, are more a reflection of fluctuation in the energy used than they are of the conventional farm requirements.

Source: Edison Electric Institute, New York, N. Y.; annual statistical bulletin.

## No. 699. RURAL ELECTRIFICATION ADMINISTRATION—SUMMARY OF OPERATIONS, ELECTRIC PROGRAM: 1935 TO 1959

[Includes data from date of first loan to borrowers in Virgin Islands (1940), Alaska (1941), and Puerto Rico (1952)]

YEAR	LOANS APPROVED, CUMULATIVE, DEC. 31 <sup>1</sup>		SYSTEMS IN OPERATION, DEC. 31 <sup>2</sup>			BORROWERS' OPERATIONS DURING YEAR <sup>7</sup>			
	Borrowers <sup>2</sup>	Amount	Systems <sup>4</sup>	Miles energized <sup>5</sup>	Consumers served <sup>6</sup>	Energy generated	Energy purchased	Energy distributed	Revenue
						Mil. kw.-hr.	Mil. kw.-hr.	Mil. kw.-hr.	Mil. dol.
1935.....	Number	Mil. dol.	Number	1,000 miles	1,000	Mil. kw.-hr.	Mil. kw.-hr.	Mil. kw.-hr.	Mil. dol.
1940.....	791	351	685	268	674	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )
1945.....	961	667	848	450	1,409	258	2,345	2,136	74
1950.....	1,076	2,312	1,007	1,089	3,413	1,077	8,165	7,779	241
1951.....	1,076	2,484	1,016	1,179	3,666	1,413	9,999	9,738	285
1952.....	1,081	2,669	1,020	1,245	3,858	1,640	11,757	11,534	324
1953.....	1,078	2,778	1,022	1,297	4,025	2,103	13,738	13,755	366
1954.....	1,075	2,946	1,024	1,333	4,174	2,721	16,129	16,508	413
1955.....	1,077	3,125	1,026	1,362	4,251	3,255	18,457	19,200	455
1956.....	1,077	3,343	1,026	1,383	4,362	3,612	20,976	21,907	498
1957.....	1,079	3,634	1,030	1,405	4,466	3,291	23,335	23,745	531
1958.....	1,081	3,847	1,030	1,424	4,596	3,482	26,064	26,465	571
1959 (prel.).....	1,085	4,011	1,032	1,445	4,736	4,933	29,234	30,605	626

<sup>1</sup> Net; i. e., excludes loans rescinded. For years prior to 1948, includes amounts not yet under loan contract.

<sup>2</sup> Organizations, mainly cooperatives, to which loans for extending central station electric service in rural area are made.

<sup>3</sup> Includes data at time of repayment of loan for borrowers whose loans have been repaid in full. As of Dec. 31 1950, there were 56 such borrowers, with 14,862 miles energized and 70,743 consumers served.

<sup>4</sup> Rural electric distribution, generation, and transmission systems operated by REA borrowers.

<sup>5</sup> Pole miles of electric distribution and transmission line in service.

<sup>6</sup> Through 1954, this item was headed "Consumers connected." The change was a result of a revised definition of a consumer as reported by REA borrowers, effective Jan. 1, 1955. It resulted in a downward adjustment in the national total of about 60,000 for 1955, chiefly through elimination of idle services.

<sup>7</sup> Includes energy sales and revenues of power sold by one REA borrower to another. <sup>8</sup> Not available.

Source: Department of Agriculture, Rural Electrification Administration; *Agricultural Statistics*.

No. 700. ELECTRIC UTILITIES—BALANCE SHEET AND INCOME ACCOUNT OF PRIVATELY OWNED CLASS A AND B COMPANIES: 1940 TO 1958

[In millions of dollars. For years ending December 31. Beginning 1958, includes Alaska. Data cover reports of all companies having annual electric revenues in excess of \$250,000, representing approximately 98 percent of the privately owned industry. See also *Historical Statistics, Colonial Times to 1957*, series V 123-142]

ITEM	1940	1945	1950	1954	1955	1956	1957	1958
<b>COMPOSITE BALANCE SHEET</b>								
<b>Assets and other debits</b> .....	<b>15,579</b>	<b>14,568</b>	<b>20,590</b>	<b>29,054</b>	<b>31,081</b>	<b>33,341</b>	<b>36,498</b>	<b>39,384</b>
Utility plant and adjustments.....	14,407	14,491	21,443	31,248	33,709	36,446	39,991	43,485
Reserve for depreciation and amortization.....	1,913	3,008	4,385	5,505	6,409	6,962	7,570	8,203
Utility plant less reserves.....	12,494	11,426	17,056	25,341	27,303	29,484	32,421	35,282
Investment and fund accounts.....	1,380	1,089	1,235	1,009	933	1,987	1,979	1,008
Current and accrued assets.....	1,123	1,696	2,058	2,437	2,567	2,613	2,799	2,773
Other assets.....	532	357	239	267	377	303	298	321
<b>Liabilities and other credits</b> .....	<b>15,579</b>	<b>14,568</b>	<b>20,590</b>	<b>29,054</b>	<b>31,081</b>	<b>33,341</b>	<b>36,498</b>	<b>39,384</b>
Capital stock.....	6,571	6,002	7,944	10,635	11,231	11,878	12,487	13,286
Capital surplus.....	257	239	324	326	330	329	352	356
Earned surplus.....	860	766	1,346	2,050	2,191	2,414	2,718	3,042
Long-term debt.....	6,895	6,141	9,189	13,322	14,330	15,231	17,051	18,579
Current and accrued liabilities.....	692	965	1,527	2,254	2,381	2,627	2,804	2,781
Accumulated deferred taxes on income.....				133	261	483	694	920
Other liabilities.....	304	395	261	333	356	370	392	420
<b>COMPOSITE INCOME ACCOUNT</b>								
Electric operating revenues.....	2,404	3,171	4,784	6,549	7,199	7,780	8,308	8,708
Electric operating revenue deductions.....	1,667	2,409	3,828	5,202	5,702	6,173	6,603	6,856
Net electric operating revenues.....	737	763	956	1,347	1,497	1,607	1,705	1,852
Income from electric plant leased to others.....	8	5	5	3	3	3	3	3
Electric utility operating income.....	744	768	961	1,350	1,500	1,610	1,708	1,855
Other utility operating income.....	61	65	72	109	119	137	144	161
Total utility operating income.....	805	833	1,033	1,459	1,620	1,748	1,852	2,016
Other income.....	68	54	68	67	63	61	64	58
Gross income.....	873	887	1,101	1,526	1,683	1,808	1,916	2,074
Income deductions.....	325	353	279	392	439	476	503	555
Net income.....	548	534	822	1,134	1,244	1,332	1,413	1,519

<sup>1</sup> Less reserves.

Source: Federal Power Commission; annual report, *Statistics of Electric Utilities in the United States*.

No. 701. GAS UTILITY AND PIPELINE INDUSTRY—COMPOSITE BALANCE SHEET AND INCOME ACCOUNT: 1940 TO 1958

[In millions of dollars. Excludes Alaska and Hawaii]

ITEM	1940	1945	1950	1954	1955	1956	1957	1958
<b>COMPOSITE BALANCE SHEET</b>								
<b>Assets and other debits</b> .....	<b>5,170</b>	<b>5,825</b>	<b>9,280</b>	<b>14,705</b>	<b>15,960</b>	<b>17,410</b>	<b>19,760</b>	<b>21,425</b>
Utility plant and adjustments.....	4,495	4,955	7,850	12,595	13,750	14,930	16,685	18,070
Investment and fund accounts.....	209	190	370	535	550	655	1,045	1,200
Current and accrued assets.....	335	615	995	1,420	1,515	1,655	1,850	1,970
Deferred debits <sup>1</sup> .....	90	65	65	155	145	170	180	185
<b>Liabilities and other credits</b> .....	<b>5,170</b>	<b>5,825</b>	<b>9,280</b>	<b>14,705</b>	<b>15,960</b>	<b>17,410</b>	<b>19,760</b>	<b>21,425</b>
Capital stock.....	1,810	1,780	2,485	3,725	4,060	4,300	4,750	5,180
Long-term debt.....	1,640	1,555	3,230	5,775	6,075	6,565	7,870	8,245
Current and accrued liabilities.....	255	365	755	1,205	1,440	1,685	1,940	2,020
Reserve for depreciation, retirement, depletion, etc.....	900	1,445	1,795	2,615	2,865	3,150	3,390	3,815
Capital surplus.....	( <sup>2</sup> )	125	145	195	205	220	245	190
Retained income.....	( <sup>2</sup> )	390	740	965	1,080	1,220	1,380	1,545
Other liabilities and credits.....	95	165	130	225	235	270	385	430
<b>COMPOSITE INCOME ACCOUNT</b>								
Operating revenues.....	1,088	1,414	2,634	4,613	5,239	5,847	6,413	7,106
Operating revenue deductions.....	867	1,196	2,254	4,013	4,555	5,060	5,573	6,186
Net operating revenues.....	221	218	380	600	684	787	840	920
Income from utility plant leased to others.....			1	2	2	2	2	2
Utility operating income.....	220	218	381	602	686	789	842	922
Other income (nonoperating).....	9	16	35	43	51	57	61	87
Gross income.....	229	234	416	650	737	846	923	1,009
Income deductions.....	81	77	90	200	213	227	275	317
Net income.....	148	157	326	450	524	619	648	692

<sup>1</sup> Includes capital stock discount and expense and reacquired securities. Subject to 1957, reacquired securities are deducted from the appropriate capital account.

<sup>2</sup> Not available.

Source: American Gas Association, New York, N.Y., yearbook, *Gas Facts*.

**No. 702. GAS UTILITY INDUSTRY—CUSTOMERS AND REVENUES, BY CLASS OF SERVICE: 1935 TO 1959**

[Excludes Alaska and Hawaii. Covers natural, manufactured, mixed, and liquid petroleum gas. Based on questionnaire mailed to all privately owned gas utilities and municipally owned gas departments in the United States, except those with annual revenues less than \$25,000, which in the aggregate account for only a negligible portion of the industry]

YEAR	CUSTOMERS (1,000) <sup>1</sup>					REVENUES (\$1,000,000) <sup>2</sup>				
	Total	Residential	Commercial	Industrial	Other	Total	Residential	Commercial	Industrial	Other
1935.....	15,819	14,725	1,014	72	8	727	503	91	130	2
1940.....	17,600	16,381	1,138	73	8	872	573	112	182	5
1945.....	19,977	18,607	1,278	80	12	1,153	706	149	281	18
1950.....	24,001	22,146	1,739	100	16	1,948	1,177	266	480	26
1953.....	26,705	24,647	1,926	107	25	2,716	1,574	339	739	63
1954.....	27,528	25,398	1,990	112	28	3,049	1,783	375	821	65
1955.....	28,479	26,283	2,048	121	27	3,460	2,007	424	938	81
1956.....	29,536	27,241	2,141	125	29	3,850	2,237	471	1,066	77
1957.....	30,476	28,101	2,211	132	32	4,134	2,379	506	1,150	99
1958.....	31,242	28,787	2,287	134	35	4,568	2,668	571	1,229	111
1959 (prel.)..	32,071	29,568	2,330	137	36	5,085	2,936	616	1,407	126

<sup>1</sup> Yearly averages. <sup>2</sup> Excludes revenues from sales for resale.

**No. 703. GAS UTILITY INDUSTRY—CUSTOMERS, SALES, AND REVENUES, BY TYPE OF GAS: 1957 TO 1959**

[Excludes Alaska and Hawaii. See headnote, table 702]

TYPE OF GAS	CUSTOMERS (1,000) <sup>1</sup>			SALES (1,000,000 therms)			REVENUES (\$1,000,000) <sup>2</sup>		
	1957	1958	1959 (prel.)	1957	1958	1959 (prel.)	1957	1958	1959 (prel.)
All types.....	30,476	31,242	32,071	77,034	80,285	87,402	4,134	4,568	5,085
Natural gas.....	27,046	28,023	29,113	74,649	77,807	84,958	3,794	4,219	4,751
Manufactured gas.....	516	401	292	215	192	161	43	39	30
Mixed gas.....	2,730	2,643	2,510	2,105	2,220	2,217	281	294	288
Liquefied petroleum gas.....	184	175	156	65	66	60	16	16	16

<sup>1</sup> Yearly averages. <sup>2</sup> Excludes revenues from sales for resale.

**No. 704. UTILITY GAS MAINS—MILEAGE, BY TYPE OF GAS AND BY TYPE OF MAIN: 1945 TO 1959**

[As of December 31. Excludes Alaska and Hawaii. Excludes service pipe. Data not adjusted to common diameter equivalent]

TYPE OF GAS AND MAIN	1945	1950	1953	1954	1955	1956	1957	1958	1959 (prel.)
All types, total.....	310,670	387,470	446,350	470,490	496,740	525,220	548,820	571,500	595,600
Field and gathering.....	27,000	32,850	41,460	43,790	45,680	47,570	50,020	52,010	54,500
Transmission.....	82,190	113,050	130,360	138,980	145,970	153,820	160,110	165,360	173,100
Distribution.....	201,480	241,570	274,530	287,720	305,090	323,830	338,690	354,130	368,000
Natural gas.....	218,000	314,480	394,970	420,860	448,770	490,550	514,960	540,790	569,520
Field and gathering.....	27,000	32,850	41,460	43,790	45,680	47,570	50,020	52,010	54,500
Transmission.....	77,280	109,360	126,730	135,370	142,490	151,180	157,540	162,990	170,860
Distribution.....	113,720	172,270	226,780	241,700	260,600	291,800	307,400	325,790	344,160
Manufactured gas.....	72,000	55,420	16,520	14,240	11,960	6,760	6,350	4,460	1,000
Transmission.....	3,410	2,230	820	650	420	170	180	50	30
Distribution.....	68,590	53,190	15,700	13,590	11,540	6,590	6,170	4,410	1,570
Mixed gas.....	18,660	11,990	29,680	30,740	31,440	24,190	24,090	23,080	21,760
Transmission.....	1,480	1,370	2,730	2,890	2,990	2,410	2,320	2,250	2,140
Distribution.....	17,180	10,620	26,950	27,850	28,450	21,780	21,770	20,830	19,620
Liquefied petroleum gas.....	2,010	5,580	5,180	4,650	4,570	3,720	3,420	3,170	2,720
Transmission.....	20	90	80	70	70	60	70	70	76
Distribution.....	1,990	5,490	5,100	4,580	4,500	3,660	3,350	3,100	2,650

Source of tables 702-704: American Gas Association, New York, N. Y.; yearbook, *Gas Facts*.

No. 705. GAS UTILITY INDUSTRY—CUSTOMERS AND REVENUES, BY TYPE OF GAS, CLASS OF SERVICE, AND STATES: 1958

[See headnote, table 702]

TYPE OF GAS AND STATE	CUSTOMERS (1,000) <sup>1</sup>					REVENUES (\$1,000,000) <sup>2</sup>				
	Total	Residential	Commercial	Industrial	Other	Total	Residential	Commercial	Industrial	Other
<b>United States <sup>3</sup>.....</b>	<b>31,242.1</b>	<b>28,786.5</b>	<b>2,286.6</b>	<b>134.2</b>	<b>34.8</b>	<b>4,568</b>	<b>2,658</b>	<b>571</b>	<b>1,229</b>	<b>110</b>
Natural gas.....	28,022.5	25,784.1	2,088.0	117.2	33.2	4,219	2,387	526	1,198	108
Manufactured gas.....	401.3	376.3	23.8	0.5	0.7	39	28	8	2	1
Mixed gas.....	2,643.4	2,467.0	159.0	16.5	0.9	294	231	33	29	1
L.P. gas.....	174.9	159.1	15.8	( <sup>4</sup> )	( <sup>4</sup> )	16	12	4	( <sup>5</sup> )	( <sup>5</sup> )
<b>Northeast.....</b>	<b>1,614.3</b>	<b>1,519.8</b>	<b>80.6</b>	<b>12.9</b>	<b>1.0</b>	<b>185</b>	<b>137</b>	<b>22</b>	<b>23</b>	<b>2</b>
Connecticut.....	376.1	352.4	21.4	2.2	0.1	46	32	6	8	( <sup>5</sup> )
Maine.....	35.3	33.6	1.6	0.1	( <sup>4</sup> )	4	3	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )
Massachusetts.....	991.9	934.8	47.3	9.1	0.7	113	86	13	13	2
New Hampshire.....	37.0	34.6	2.1	0.2	0.1	5	3	1	( <sup>5</sup> )	( <sup>5</sup> )
Rhode Island.....	156.0	147.2	7.4	1.3	0.1	16	12	2	( <sup>5</sup> )	( <sup>5</sup> )
Vermont.....	18.0	17.2	0.8	( <sup>4</sup> )	( <sup>4</sup> )	1	1	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )
<b>Middle Atlantic.....</b>	<b>7,461.2</b>	<b>6,923.0</b>	<b>500.1</b>	<b>29.0</b>	<b>9.1</b>	<b>912</b>	<b>640</b>	<b>121</b>	<b>143</b>	<b>9</b>
New Jersey.....	1,439.6	1,318.7	115.2	5.7	( <sup>4</sup> )	159	119	24	16	( <sup>5</sup> )
New York.....	3,906.3	3,619.7	265.6	14.9	6.1	398	290	61	41	6
Pennsylvania.....	2,115.3	1,984.6	119.3	8.4	3.0	355	231	36	86	3
<b>East North Central.....</b>	<b>6,927.0</b>	<b>6,448.5</b>	<b>443.7</b>	<b>26.2</b>	<b>8.6</b>	<b>1,123</b>	<b>720</b>	<b>136</b>	<b>257</b>	<b>9</b>
Illinois.....	2,155.2	2,034.4	107.6	11.9	1.3	301	196	26	78	1
Indiana.....	734.7	679.3	51.8	2.1	1.5	75	61	12	30	1
Michigan.....	1,426.2	1,318.9	102.0	5.3	( <sup>4</sup> )	240	166	31	43	1
Ohio.....	2,093.9	1,932.1	151.4	4.6	5.8	404	247	58	93	5
Wisconsin.....	517.0	483.8	30.9	2.3	( <sup>4</sup> )	73	50	9	13	1
<b>West North Central.....</b>	<b>2,505.3</b>	<b>2,286.2</b>	<b>203.9</b>	<b>14.4</b>	<b>0.8</b>	<b>435</b>	<b>244</b>	<b>59</b>	<b>116</b>	<b>16</b>
Iowa.....	408.6	368.1	39.4	1.1	( <sup>4</sup> )	73	41	13	17	3
Kansas.....	512.6	463.3	46.3	2.8	0.2	87	38	9	33	7
Minnesota.....	444.7	414.7	27.6	2.3	0.1	88	54	10	23	1
Missouri.....	775.4	720.3	51.8	3.2	0.1	118	75	14	27	2
Nebraska.....	271.8	237.2	29.4	4.8	0.4	53	27	9	14	3
North Dakota.....	36.8	33.3	3.5	( <sup>4</sup> )	( <sup>4</sup> )	5	3	1	( <sup>5</sup> )	( <sup>5</sup> )
South Dakota.....	55.4	49.3	5.9	0.2	( <sup>4</sup> )	11	6	3	2	( <sup>5</sup> )
<b>South Atlantic.....</b>	<b>2,295.4</b>	<b>2,109.5</b>	<b>173.5</b>	<b>7.6</b>	<b>4.8</b>	<b>370</b>	<b>220</b>	<b>48</b>	<b>96</b>	<b>6</b>
Delaware.....	60.9	57.4	3.4	0.1	( <sup>4</sup> )	7	6	1	1	( <sup>5</sup> )
District of Columbia.....	179.5	161.9	15.8	0.8	1.0	24	18	5	( <sup>5</sup> )	1
Florida.....	205.3	192.2	12.3	0.3	0.5	30	13	5	11	1
Georgia.....	480.4	439.4	38.0	2.9	0.1	80	41	10	29	1
Maryland.....	526.7	492.1	32.9	1.1	0.6	74	56	7	10	( <sup>5</sup> )
North Carolina.....	89.2	78.3	10.0	0.9	( <sup>4</sup> )	19	8	3	7	( <sup>5</sup> )
South Carolina.....	63.0	59.6	7.9	0.3	0.2	17	5	2	10	( <sup>5</sup> )
Virginia.....	336.0	310.6	23.8	0.7	0.9	56	37	7	11	1
West Virginia.....	349.4	313.0	29.4	0.5	1.5	63	36	8	17	2
<b>East South Central.....</b>	<b>1,354.6</b>	<b>1,224.1</b>	<b>123.8</b>	<b>4.4</b>	<b>2.3</b>	<b>255</b>	<b>118</b>	<b>33</b>	<b>93</b>	<b>11</b>
Alabama.....	415.7	385.4	29.4	0.8	0.1	76	35	8	33	1
Kentucky.....	394.7	358.7	34.2	0.6	1.2	66	40	9	16	2
Mississippi.....	255.3	226.1	27.3	1.6	0.3	46	17	5	21	2
Tennessee.....	288.9	253.9	32.9	1.4	0.7	67	26	11	23	6
<b>West South Central.....</b>	<b>3,600.3</b>	<b>3,248.5</b>	<b>319.3</b>	<b>26.3</b>	<b>6.2</b>	<b>536</b>	<b>203</b>	<b>50</b>	<b>267</b>	<b>17</b>
Arkansas.....	276.7	239.7	35.2	1.7	0.1	52	18	6	28	1
Louisiana.....	647.6	590.1	47.9	2.8	0.8	116	32	6	76	3
Oklahoma.....	570.6	511.8	54.0	3.3	1.5	71	38	10	20	3
Texas.....	2,105.4	1,900.9	182.2	18.5	3.8	297	115	28	143	11
<b>Mountain.....</b>	<b>1,125.5</b>	<b>1,007.1</b>	<b>112.4</b>	<b>4.1</b>	<b>1.9</b>	<b>202</b>	<b>93</b>	<b>31</b>	<b>69</b>	<b>9</b>
Arizona.....	259.9	234.3	24.0	1.4	0.2	39	15	4	18	( <sup>5</sup> )
Colorado.....	354.9	314.1	40.3	0.4	0.1	64	32	14	17	1
Idaho.....	10.9	8.4	2.4	0.1	( <sup>4</sup> )	7	1	1	5	( <sup>5</sup> )
Montana.....	111.2	99.4	11.3	0.5	( <sup>4</sup> )	19	10	4	5	1
Nevada.....	21.0	19.9	1.1	( <sup>4</sup> )	( <sup>4</sup> )	6	2	1	3	( <sup>5</sup> )
New Mexico.....	159.0	142.1	14.3	1.3	1.3	32	12	3	11	7
Utah.....	147.3	134.3	12.8	0.2	( <sup>4</sup> )	25	16	2	8	( <sup>5</sup> )
Wyoming.....	61.3	54.6	6.2	0.2	0.3	10	5	2	2	( <sup>5</sup> )
<b>Pacific.....</b>	<b>4,358.5</b>	<b>4,019.8</b>	<b>329.3</b>	<b>9.3</b>	<b>0.1</b>	<b>550</b>	<b>283</b>	<b>71</b>	<b>165</b>	<b>31</b>
California.....	4,174.9	3,865.2	301.4	8.2	0.1	502	268	63	140	31
Oregon.....	97.6	85.6	11.3	0.7	( <sup>4</sup> )	18	8	3	7	( <sup>5</sup> )
Washington.....	86.0	69.0	16.6	0.4	( <sup>4</sup> )	30	7	5	18	( <sup>5</sup> )

<sup>1</sup> Averages for the year. <sup>2</sup> Excludes revenues from sales for resale. <sup>3</sup> Excludes Alaska and Hawaii.  
<sup>4</sup> Less than 50 customers. <sup>5</sup> Less than \$500,000.

Source: American Gas Association, New York, N.Y.; yearbook, *Gas Facts*.

## No. 706. RESEARCH AND DEVELOPMENT EXPENDITURES: 1941 TO 1958

[Government data derived from actual Federal budget expenditures for research and development plus estimates of procurement expenditures used for research and development. Other data derived from many government and nongovernment sources]

YEAR	Total	SOURCE OF FUNDS			USE OF FUNDS BY—		
		Government	Industry	University	Government	Industry	University
EXPENDITURES (\$1,000,000)							
1941.....	900	370	510	20	200	660	40
1942.....	1,070	490	560	20	240	780	50
1943.....	1,210	780	410	20	300	850	60
1944.....	1,380	940	420	20	380	910	80
1945.....	1,520	1,070	430	20	430	990	100
1946.....	1,780	910	840	30	470	1,190	120
1947.....	2,260	1,160	1,050	50	520	1,570	170
1948.....	2,610	1,890	1,150	70	570	1,820	220
1949.....	2,610	1,550	990	70	550	1,790	270
1950.....	2,870	1,610	1,180	80	570	1,980	320
1951.....	3,360	1,980	1,300	80	700	2,800	360
1952.....	3,750	2,240	1,430	80	800	2,530	420
1953.....	4,000	2,490	1,430	80	770	2,810	420
1954.....	4,140	2,460	1,600	80	700	3,020	420
1955.....	5,400	2,720	2,600	80	1,000	3,950	450
1956.....	6,500	3,170	3,250	80	1,110	4,920	470
1957.....	8,200	3,750	4,300	150	1,370	6,280	550
1958.....	10,230	4,430	5,600	200	1,380	8,100	750
PERCENT OF TOTAL							
1941.....	100	41	57	2	22	73	5
1942.....	100	46	52	2	22	73	5
1943.....	100	64	34	2	25	70	5
1944.....	100	68	30	2	28	66	6
1945.....	100	70	28	2	28	65	7
1946.....	100	51	47	2	26	67	7
1947.....	100	51	47	2	23	69	8
1948.....	100	53	44	3	22	70	8
1949.....	100	59	38	3	21	69	10
1950.....	100	56	41	3	20	69	11
1951.....	100	59	39	2	21	68	11
1952.....	100	60	38	2	21	68	11
1953.....	100	62	36	2	19	70	11
1954.....	100	59	39	2	17	73	10
1955.....	100	50	48	2	19	73	8
1956.....	100	49	50	1	17	76	7
1957.....	100	46	52	2	17	76	7
1958.....	100	43	55	2	14	79	7

Source: Department of Defense, Office of the Secretary.

## No. 707. FEDERAL GOVERNMENT EXPENDITURES FOR SCIENTIFIC RESEARCH AND DEVELOPMENT, BY AGENCY: 1950 TO 1957

[In millions of dollars. For years ending June 30. Includes Alaska and Hawaii. Comprises expenditures for conduct of research and development and for increase of research and development plant. See also *Historical Statistics, Colonial Times to 1957*, series W 79-94]

AGENCY	1950	1951	1952	1953	1954	1955	1956	1957
Total expenditures:								
Including military pay and allowances and procurement funds.....	( <sup>1</sup> )	2,926	3,275	3,856				
Excluding military pay and allowances and procurement funds.....	1,083	1,301	1,816	2,089	2,084	2,133	2,347	2,836
Department of Agriculture.....	53	52	57	55	55	72	88	97
Department of Commerce.....	12	17	10	14	11	10	20	20
Department of Defense:								
Including military pay and allowances and procurement funds.....	( <sup>1</sup> )	2,343	2,557	2,910				
Excluding military pay and allowances and procurement funds.....	652	823	1,317	1,569	1,532	1,551	1,629	1,890
Department of Health, Education, and Welfare.....	2 40	2 53	64	65	63	70	86	144
Department of the Interior.....	32	32	33	35	39	32	36	42
Atomic Energy Commission <sup>2</sup> .....	221	243	250	262	274	290	385	512
National Advisory Committee for Aeronautics.....	55	62	67	79	90	74	71	76
National Science Foundation.....	( <sup>1</sup> )	( <sup>1</sup> )	1	2	4	9	15	31
All other agencies.....	18	18	18	19	17	26	17	25

<sup>1</sup> Not available.

<sup>2</sup> Public Health Service only; data for other offices not available.

<sup>3</sup> Data represent "accrued costs" rather than expenditures.

<sup>4</sup> Less than \$500,000.

Source: National Science Foundation; annual report, *Federal Funds for Science*.

**No. 708. FEDERAL GOVERNMENT OBLIGATIONS FOR SCIENTIFIC RESEARCH AND DEVELOPMENT: 1950 TO 1957**

[In millions of dollars. Includes Alaska and Hawaii. For years ending June 30. See also *Historical Statistics, Colonial times to 1957*, series W 95-106]

AGENCY	1950	1951	1952	1953	1954	1955	1956	1957
<b>Total obligations:</b>								
Including military pay and allowances	(1)	(1)	(1)	(1)	(1)	2,252	2,693	3,176
Excluding military pay and allowances	1,176	1,812	2,195	2,148	1,900	2,095	2,505	2,980
<b>Conduct of research and development:</b>								
Including military pay and allowances	(1)	(1)	(1)	(1)	(1)	2,045	2,419	2,724
Excluding military pay and allowances	973	1,482	1,887	1,900	1,744	1,887	2,281	2,529
Department of Agriculture	57	55	55	56	59	72	83	100
Department of Commerce	22	11	10	11	8	15	18	18
Department of Defense:								
Including military pay and allowances	(1)	(1)	(1)	(1)	(1)	1,529	1,773	1,885
Excluding military pay and allowances	600	1,126	1,509	1,477	1,283	1,372	1,585	1,689
Department of Health, Education, and Welfare	34	38	44	50	58	68	86	144
Department of the Interior	29	30	31	32	38	35	38	47
Atomic Energy Commission <sup>2</sup>	172	158	169	204	230	253	336	420
National Advisory Committee for Aeronautics	43	45	51	48	47	43	50	55
National Science Foundation		(9)	1	2	5	10	16	30
All other agencies	16	18	19	19	16	20	20	25
<b>Increase of research and development plant</b>	203	330	307	248	156	207	274	452

<sup>1</sup> Not available.    <sup>2</sup> Data represent "accrued costs" rather than obligations.    <sup>3</sup> Less than \$500,000.  
Source: National Science Foundation; annual report, *Federal Funds for Science*.

**No. 709. FEDERAL GOVERNMENT OBLIGATIONS AND EXPENDITURES FOR SCIENTIFIC RESEARCH AND DEVELOPMENT, BY AGENCY: 1958 TO 1960**

[In millions of dollars. For years ending June 30. Includes Alaska and Hawaii. Data not comparable to tables 707 and 708; see footnote 1, table 710]

AGENCY	OBLIGATIONS			EXPENDITURES		
	1958	1959 est.	1960 est.	1958	1959 est.	1960 est.
<b>Total conduct of R and D and increase of R and D plant</b>	<b>5,878</b>	<b>7,895</b>	<b>8,148</b>	<b>4,470</b>	<b>6,565</b>	<b>7,489</b>
Department of Agriculture	113	137	122	112	129	120
Department of Commerce	19	32	35	18	28	35
Department of Defense	4,450	5,727	5,950	3,144	4,839	5,457
Department of the Army	854	1,025	1,157	617	816	964
Department of the Navy	905	1,309	1,338	858	1,206	1,230
Department of the Air Force	2,618	2,778	2,794	1,628	2,406	2,678
Advanced Research Projects Agency	16	440	467	1	229	421
Departmentwide funds <sup>1</sup>	58	175	194	40	182	165
Department of Health, Education, and Welfare	218	289	275	180	244	273
Public Health Service	209	277	258	172	233	256
Other	9	13	17	9	11	16
Department of the Interior	55	65	63	49	60	61
Atomic Energy Commission <sup>2</sup>	829	1,124	1,009	804	977	1,088
Federal Aviation Agency	18	36	68	4	33	47
National Aeronautics and Space Administration	97	363	483	89	153	280
National Science Foundation	41	74	87	33	57	75
Veterans Administration	13	18	14	13	17	14
Other	26	30	42	24	28	30
<b>Conduct of research and development</b>	<b>5,542</b>	<b>7,233</b>	<b>7,701</b>	<b>4,128</b>	<b>6,166</b>	<b>7,027</b>
Department of Agriculture	110	119	120	109	119	117
Department of Commerce	18	28	31	18	28	30
Department of Defense	4,373	5,581	5,897	3,009	4,732	5,368
Department of the Army	842	1,021	1,091	600	802	953
Department of the Navy	885	1,249	1,298	824	1,155	1,189
Department of the Air Force	2,673	2,738	2,769	1,543	2,367	2,645
Advanced Research Projects Agency	16	427	455	1	222	415
Departmentwide funds <sup>1</sup>	58	175	194	40	182	165
Department of Health, Education, and Welfare	185	244	253	167	219	245
Public Health Service	176	231	236	158	208	228
Other	9	13	17	9	11	16
Department of the Interior	54	62	63	49	57	59
Atomic Energy Commission <sup>2</sup>	644	773	827	644	778	827
Federal Aviation Agency	16	28	49	4	32	30
National Aeronautics and Space Administration	77	303	428	72	128	245
National Science Foundation	33	57	74	29	46	58
Veterans Administration	10	14	11	10	13	11
Other	21	23	37	19	22	25
<b>Increase of research and development plant</b>	<b>336</b>	<b>662</b>	<b>447</b>	<b>342</b>	<b>400</b>	<b>462</b>

<sup>1</sup> Includes funds for Weapons Systems Evaluation (Institute for Defense Analyses), Mutual Weapons Development Program, and the Emergency Fund in 1959 and 1960.

<sup>2</sup> Data represent "accrued costs" rather than obligations and expenditures.  
Source: National Science Foundation; annual report, *Federal Funds for Science. VIII*.

No. 710. FEDERAL GOVERNMENT OBLIGATIONS FOR SCIENTIFIC RESEARCH AND DEVELOPMENT, BY CHARACTER OF WORK, 1956 TO 1960, AND BY AGENCY, 1959

[In thousands of dollars. For years ending June 30. Includes Alaska and Hawaii]

YEAR AND AGENCY	Total <sup>1</sup>	CONDUCT OF RESEARCH AND DEVELOPMENT				Increase of re- search and develop- ment plant
		Total <sup>1</sup>	Research		Develop- ment <sup>1</sup>	
			Total	Basic		
1956.....	2,602,740	2,419,276	843,679	201,205	1,387,597	273,464
1957.....	3,176,026	2,724,391	916,109	254,392	1,612,622	451,635
1958.....	5,878,242	5,541,949	1,033,779	331,062	4,319,677	336,293
1959 <sup>2</sup> .....	7,895,141	7,232,702	1,443,534	487,900	5,592,170	662,439
1960 <sup>2</sup> .....	8,147,614	7,700,798	1,602,948	494,397	5,903,351	446,816
BY AGENCY, 1959 <sup>2,3</sup>						
Department of Agriculture.....	137,364	119,420	113,913	27,325	5,507	17,944
Department of Commerce.....	32,360	27,918	18,453	6,589	9,465	4,442
Department of Defense.....	5,726,605	5,581,205	595,150	115,732	4,789,057	145,400
Department of the Army.....	1,024,812	991,812	140,820	18,135	809,664	33,000
Research, development, test, and eval- uation appropriations.....	948,300	948,300	140,073	18,077	808,227	-----
Civil functions.....	2,193	2,193	756	58	1,437	-----
Pay and allowances of military person- nel in research and development <sup>3</sup> .....	41,319	41,319	-----	-----	-----	-----
Military construction.....	33,000	-----	-----	-----	-----	33,000
Department of the Navy.....	1,309,494	1,249,494	125,884	47,537	1,078,616	60,000
Research, development, test, and eval- uation appropriations.....	981,400	981,400	125,884	47,537	855,516	-----
Research and development support from procurement appropriations.....	223,100	223,100	-----	-----	223,100	-----
Pay and allowances of military person- nel in research and development <sup>3</sup> .....	44,994	44,994	-----	-----	-----	-----
Military construction.....	60,000	-----	-----	-----	-----	60,000
Department of the Air Force.....	2,778,085	2,738,085	273,923	44,560	2,353,477	40,000
Research, development, test, and eval- uation appropriations.....	1,028,800	1,028,800	273,923	44,560	754,877	-----
Research and development support from procurement appropriations.....	1,598,600	1,598,600	-----	-----	1,598,600	-----
Pay and allowances of military person- nel in research and development <sup>3</sup> .....	110,635	110,635	-----	-----	-----	-----
Military construction.....	40,000	-----	-----	-----	-----	40,000
Advanced Research Projects Agency.....	439,700	427,300	50,700	5,500	376,600	12,400
Departmentwide funds <sup>4</sup> .....	174,514	174,514	3,814	-----	170,700	-----
Department of Health, Education, and Welfare.....	289,247	243,988	241,661	73,081	2,327	45,259
Department of the Interior.....	65,320	61,944	50,176	17,273	11,768	3,376
Atomic Energy Commission <sup>5</sup> .....	1,124,327	773,380	178,114	96,556	595,266	350,947
Federal Aviation Agency.....	36,154	27,769	481	-----	27,288	8,385
National Aeronautics and Space Adminis- tration.....	363,104	302,811	164,157	89,861	138,654	60,293
National Science Foundation.....	73,515	57,429	57,429	57,429	-----	16,086
Veterans Administration.....	17,572	13,605	12,584	3,145	1,021	3,967
All other agencies.....	29,573	23,233	11,416	909	11,817	6,310

<sup>1</sup> Data for 1958 and subsequent years not comparable to previous years because of revision of definition of development. Revised definition states "Development is the systematic use of scientific knowledge directed toward the production of useful materials, devices, systems or methods, including design and development of prototypes and processes. It excludes quality control or routine product testing." The definition previously used stated that "Development is the systematic use of scientific knowledge directed toward the production of useful materials, devices, systems, methods, or processes exclusive of design and production engineering."

<sup>2</sup> Estimated.

<sup>3</sup> Pay and allowances of military personnel included in totals but not distributed by character of work.

<sup>4</sup> Includes funds for Weapons Systems Evaluation (Institute for Defense Analyses), Mutual Weapons Development Program, and the Emergency Fund.

<sup>5</sup> Data represent "accrued costs" rather than obligations.

Source: National Science Foundation; annual report, *Federal Funds for Science*.

**No. 711. FEDERAL GOVERNMENT OBLIGATIONS FOR CONDUCT OF RESEARCH, BY FIELD OF SCIENCE, 1956 TO 1960, AND BY AGENCY, 1959**

[In thousands of dollars. For years ending June 30. Includes Alaska and Hawaii. Excludes obligations for development and for increase in research and development plant (see table 710)]

YEAR AND AGENCY	Total research	LIFE SCIENCES			PHYSICAL SCIENCES			Social sciences
		Bio-logical	Medical	Agri-cultural	Physical science proper	Mathe-matics	Engi-neering	
1956.....	843,679	54,672	98,863	44,089	(1)	(1)	(1)	80,104
1957.....	916,169	66,505	155,871	55,654	(1)	(1)	(1)	36,249
1958.....	1,033,770	69,643	213,843	59,469	333,045	40,419	277,617	39,743
1959 <sup>2</sup> .....	1,443,534	92,873	275,966	63,292	501,754	47,682	413,871	47,696
1960 <sup>2</sup> .....	1,602,948	102,891	281,904	63,995	538,449	53,505	508,991	58,213
BY AGENCY, 1959 <sup>2</sup>								
Departments:								
Agriculture.....	113,913	15,299	-----	61,095	15,932	-----	4,777	16,810
Commerce.....	18,453	-----	-----	-----	10,737	376	4,350	2,990
Defense <sup>3</sup> .....	595,150	11,638	24,242	-----	194,815	41,955	309,991	12,509
Army <sup>4</sup> .....	140,829	6,116	14,629	-----	30,942	6,638	76,119	6,385
Navy.....	125,884	2,811	5,256	-----	52,074	19,992	42,916	2,835
Air Force.....	273,923	2,711	4,357	-----	84,985	15,325	163,256	3,289
Advanced Research Projects Agency.....	50,700	-----	-----	-----	23,000	-----	27,700	-----
Departmentwide funds <sup>5</sup> .....	3,814	-----	-----	-----	3,814	-----	-----	-----
Health, Education, and Welfare.....	241,661	5,755	221,845	-----	2,870	55	1,150	9,986
Interior.....	50,176	14,148	10	221	25,829	350	8,779	839
Atomic Energy Commission <sup>6</sup> .....	178,114	23,087	16,440	571	133,825	2,741	1,450	-----
National Aeronautics and Space Admin.....	164,157	-----	-----	-----	89,286	-----	74,871	-----
National Science Foundation.....	57,429	22,772	-----	-----	26,890	2,289	4,579	899
All other agencies.....	24,481	174	13,429	1,405	1,670	216	4,024	3,663

<sup>1</sup> Not available. <sup>2</sup> Estimated.

<sup>3</sup> Excludes pay and allowances of military personnel in research and development.

<sup>4</sup> Includes civil functions.

<sup>5</sup> Includes Weapons Systems Evaluation (Institute for Defense Analyses).

<sup>6</sup> Data represent "accrued costs" rather than obligations.

Source: National Science Foundation; annual report, *Federal Funds for Science*.

**No. 712. FUNDS FOR RESEARCH AND DEVELOPMENT: 1953-54 TO 1959-60**

[For the Federal Government, colleges and universities, and other nonprofit institutions, data for all years include Alaska and Hawaii. For manufacturing and selected nonmanufacturing industries, which account for more than nine-tenths of the annual research and development performance in the industry sector, Alaska and Hawaii were covered beginning with 1958-59. Data are based on regular surveys by the National Science Foundation covering all sectors of the economy and cannot be related to the series appearing in table 706. Hyphenated time period indicates that data are for a variety of financial years beginning in the earlier year and ending during the later year. Data refer in general to the natural sciences; however, some funds for psychology and the social sciences could not be eliminated.]

YEAR	Total	SOURCES OF FUNDS				PERFORMANCE OF RESEARCH AND DEVELOPMENT BY—			
		Federal Government <sup>1</sup>	Industry	Colleges and universities <sup>2</sup>	Other non-profit institutions <sup>2</sup>	Federal Government	Industry <sup>3</sup>	Colleges and universities <sup>3</sup>	Other non-profit institutions <sup>3</sup>
<b>FUNDS (\$1,000,000)</b>									
1953-54.....	5,150	2,740	2,240	130	40	970	3,630	450	100
1954-55.....	5,620	(4)	(4)	(4)	(4)	950	4,070	480	120
1955-56.....	6,390	(4)	(4)	(4)	(4)	1,090	4,640	530	130
1956-57.....	8,400	4,930	3,230	170	70	1,280	6,380	600	140
1957-58 (prel.).....	10,040	6,390	3,390	190	70	1,440	7,670	780	150
1958-59 (prel.).....	11,000	(4)	(4)	(4)	(4)	1,720	8,240	840	200
1959-60 (prel.).....	12,430	(4)	(4)	(4)	(4)	1,780	9,400	1,000	250
<b>PERCENT OF TOTAL</b>									
1953-54.....	100	53	44	2	1	19	70	9	2
1954-55.....	100	(4)	(4)	(4)	(4)	17	72	9	2
1955-56.....	100	(4)	(4)	(4)	(4)	17	73	8	2
1956-57.....	100	59	38	2	1	15	76	7	2
1957-58 (prel.).....	100	63	34	2	1	14	76	8	2
1958-59 (prel.).....	100	(4)	(4)	(4)	(4)	15	75	8	2
1959-60 (prel.).....	100	(4)	(4)	(4)	(4)	14	76	8	2

<sup>1</sup> Figures differ from those shown for Federal obligations for the conduct of research and development in tables 708-710 largely because the data here are based on reports by performers of research and development on the volume of Federal funds which they expended, whereas data in tables 708-710 are based on Federal agency responses on how much they obligated. Differences in concept of research and development, in accounting systems, and in financial year are possible sources of the difference in reporting. Furthermore, for the years preceding 1957-58, the industry survey definition of development was broader than that for the Federal survey with the consequence that in industrial respondents reported receiving more funds for development from the Federal Government than the Federal agencies reported as obligating for this purpose.

<sup>2</sup> Includes State and local funds received by these institutions, which were used for basic research.

<sup>3</sup> Includes research centers administered by organizations in this sector under contract with Federal agencies.

<sup>4</sup> Not available.

Source: National Science Foundation.

### No. 713. FUNDS FOR PERFORMANCE OF INDUSTRIAL RESEARCH AND DEVELOPMENT, BY INDUSTRY: 1957 AND 1958

[In millions of dollars. 1958 includes Alaska and Hawaii. Includes Federal funds for industrial research and development amounting to 56 percent of the 1958 total, part of which is accounted for by Federal contract research centers administered by industrial firms. Such research centers, which are classified in the industry of the administering company, were not covered in previously published statistics on the research and development performance of individual industries (for example, table 701, *Statistical Abstract, 1959*). Covers all industrial research and development performance with the exception of that performed by certain industry-oriented organizations, such as trade associations, that account annually for less than 1 percent of the total]

INDUSTRY	1957 <sup>1</sup> (prel.)	1958 (prel.)
<b>Total</b> .....	<b>\$7, 673</b>	<b>\$8, 243</b>
Food and kindred products.....	67	80
Paper and allied products.....	45	51
Industrial chemicals.....	486	543
Drugs and medicines.....	104	128
Other chemicals.....	105	113
Petroleum refining and extraction <sup>2</sup> .....	228	245
Rubber products.....	107	88
Stone, clay, and glass products.....	60	65
Primary metals.....	110	130
Fabricated metal products.....	110	125
Machinery.....	690	781
Electrical equipment and communication <sup>3</sup> .....	1, 775	1, 947
Motor vehicles and other transportation equipment.....	703	850
Aircraft and parts.....	2, 540	2, 498
Scientific and mechanical measuring instruments.....	139	156
Optical, surgical, photographic, and other instruments.....	110	132
Other manufacturing industries <sup>4</sup> .....	151	160
Other nonmanufacturing industries, n.e.c. <sup>5</sup> .....	136	152

<sup>1</sup> Revised estimates differ from those previously published; see headnote.

<sup>2</sup> Geological and geophysical exploration activities of petroleum companies are presently excluded from the definition of research and development.

<sup>3</sup> These two industries have been combined because of the similarity of their R and D activities.

<sup>4</sup> Includes ordnance, tobacco manufactures, textile mill products and apparel, lumber and wood products, furniture and fixtures, printing and publishing, leather, and miscellaneous manufacturing industries.

<sup>5</sup> Includes such nonmanufacturing industries as mining, construction, transportation, and miscellaneous services.

Source: National Science Foundation; data from a survey conducted by Bureau of the Census.

### No. 714. SCIENTISTS AND ENGINEERS IN PRIVATE INDUSTRY, BY INDUSTRY AND OCCUPATION: 1959

[For January. Includes Alaska, excludes Hawaii. Scientists and engineers were defined as all persons engaged in scientific and engineering work at a level which requires a knowledge of physical, natural, or mathematical sciences equivalent at least to that acquired through completion of a 4-year professional college course. Administrators of research and development and other activities are included with each occupation. Research and development was defined to include basic and applied research in the sciences (including medicine) and in engineering, and design and development of prototypes and processes]

INDUSTRY	Total	Engineers	Chemists	Metal- lurgists	Earth scien- tists	Physi- cists	Math- emati- cians	Life scien- tists	Other scien- tists
<b>ALL SCIENTISTS AND ENGINEERS</b>									
<b>All industries</b> .....	<b>764,100</b>	<b>615,400</b>	<b>71,500</b>	<b>11,400</b>	<b>14,800</b>	<b>14,900</b>	<b>11,300</b>	<b>18,200</b>	<b>6,600</b>
Food and kindred products.....	10,200	4,100	3,900	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	100	1,600	300
Chemicals and allied products.....	83,100	36,600	31,100	700	300	1,200	600	9,600	3,000
Petroleum prod. and extraction.....	47,900	27,900	6,200	100	11,600	600	800	500	500
Primary metal products.....	33,200	23,300	3,900	5,000	300	200	100	100	200
Fabricated metal products and ordnance.....	34,700	31,800	1,600	300	-----	300	600	100	100
Machinery.....	67,400	62,200	1,000	1,300	-----	600	900	( <sup>2</sup> )	1,300
Electrical equipment.....	92,700	81,300	3,700	800	( <sup>2</sup> )	4,900	1,900	( <sup>2</sup> )	100
Aircraft and parts.....	94,900	83,100	2,600	1,300	( <sup>2</sup> )	4,000	3,300	100	400
Profess. and scientific instruments.....	23,700	19,000	2,700	200	100	1,100	200	200	300
Other manufacturing industries <sup>3</sup> .....	78,100	64,300	9,700	800	300	800	900	1,100	300
Nonmanufacturing industries.....	198,100	181,700	5,100	1,000	2,100	1,200	2,200	4,600	200
<b>RESEARCH AND DEVELOPMENT SCIENTISTS AND ENGINEERS</b>									
<b>All industries</b> .....	<b>277,100</b>	<b>205,500</b>	<b>38,980</b>	<b>5,200</b>	<b>4,800</b>	<b>12,700</b>	<b>6,900</b>	<b>6,200</b>	<b>600</b>
Food and kindred products.....	3,700	900	2,000	( <sup>2</sup> )	-----	( <sup>2</sup> )	( <sup>2</sup> )	700	100
Chemicals and allied products.....	33,900	10,900	17,300	400	( <sup>2</sup> )	900	300	3,900	100
Petroleum prod. and extraction.....	9,500	4,900	3,400	( <sup>2</sup> )	400	400	200	100	( <sup>2</sup> )
Primary metal products.....	5,900	2,900	1,400	1,400	( <sup>2</sup> )	200	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
Fabricated metal products and ordnance.....	18,600	16,900	800	200	-----	300	500	( <sup>2</sup> )	( <sup>2</sup> )
Machinery.....	26,900	24,300	700	700	-----	600	600	( <sup>2</sup> )	( <sup>2</sup> )
Electrical equipment.....	52,600	43,700	2,700	600	( <sup>2</sup> )	4,200	1,400	( <sup>2</sup> )	( <sup>2</sup> )
Aircraft and parts.....	60,400	51,100	1,900	1,000	( <sup>2</sup> )	3,700	2,500	100	100
Profess. and scientific instruments.....	12,300	9,300	1,700	100	-----	900	100	200	100
Other manufacturing industries <sup>3</sup> .....	30,300	23,300	5,200	500	( <sup>2</sup> )	600	500	200	( <sup>2</sup> )
Nonmanufacturing industries.....	22,700	17,400	2,000	300	200	1,000	800	1,000	( <sup>2</sup> )

<sup>1</sup> It is estimated that these data cover more than 95 percent of all scientists and engineers in private industry.

<sup>2</sup> Less than 50.

<sup>3</sup> Includes rubber products, formerly shown separately.

<sup>4</sup> Small number employed reflects the exclusion of exploration from research and development under survey definition.

Source: National Science Foundation; data from a survey conducted by Bureau of Labor Statistics.

**No. 715. PATENT APPLICATIONS AND PATENTS AND CERTIFICATES OF TRADE-MARKS: 1931 TO 1959**

[For years ending Dec. 31. Data comprise patents issued to citizens of United States and residents of foreign countries. On July 1, 1940, jurisdiction of prints and labels was transferred to the Copyright Office, Library of Congress, and data concerning them are compiled by that organization. For information on copyrights, see table 685, p. 524. See also *Historical Statistics, Colonial Times to 1957*, series W 66-76 and W 77-78]

ITEM	1931-35	1936-40	1941-45	1946-50	1951-55	1956	1957	1958	1959
<b>Patent applications filed</b>	<b>342,861</b>	<b>359,544</b>	<b>294,273</b>	<b>400,342</b>	<b>379,053</b>	<b>80,035</b>	<b>79,242</b>	<b>82,804</b>	<b>83,833</b>
Inventions.....	318,064	319,753	265,417	360,095	351,649	74,906	74,197	77,495	78,594
Designs.....	22,262	37,436	27,536	39,127	25,951	4,824	4,714	4,923	4,879
Botanical plants.....	210	526	202	395	467	104	101	134	114
Reissues.....	2,325	2,029	1,058	722	986	201	230	262	246
<b>Patents issued<sup>1</sup></b>	<b>256,139</b>	<b>229,442</b>	<b>184,492</b>	<b>163,034</b>	<b>208,964</b>	<b>50,053</b>	<b>45,385</b>	<b>50,994</b>	<b>55,454</b>
Inventions <sup>1</sup> .....	239,026	200,837	164,360	144,076	192,051	46,817	42,744	48,330	52,408
Individuals.....	113,093	85,148	61,127	58,967	78,459	16,643	15,154	(9)	(9)
Corporations:									
United States.....	114,988	104,638	95,107	78,376	100,278	25,502	23,255	(9)	(9)
Foreign.....	10,778	10,836	5,147	4,669	10,537	3,690	3,372	(9)	(9)
U.S. Government <sup>4</sup> .....	167	215	346	1,761	3,359	982	963	(9)	(9)
Designs.....	15,071	26,455	18,880	18,010	15,084	2,977	2,362	2,374	2,768
Botanical plants.....	161	275	229	334	441	101	129	120	101
Reissues.....	1,881	1,875	1,023	608	788	158	150	170	177
<b>Certificates of trade-marks issued<sup>1</sup></b>	<b>61,601</b>	<b>61,071</b>	<b>52,191</b>	<b>85,611</b>	<b>100,942</b>	<b>24,509</b>	<b>20,968</b>	<b>18,421</b>	<b>21,981</b>
Trademarks.....	52,381	52,603	34,435	61,339	83,311	20,753	17,480	15,351	18,709
Trademark renewals.....	9,220	8,408	17,756	24,272	17,631	3,756	3,488	3,070	3,272

<sup>1</sup> Excludes all registration numbers left blank due to withdrawal of patent or trademark before issue.

<sup>2</sup> Since 1942, includes patents issued to the Alien Property Custodian, not shown separately.

<sup>3</sup> Not available.

<sup>4</sup> Excludes patents issued to the Alien Property Custodian.

Source: Department of Commerce, Patent Office; records. Fiscal year figures are published in the *Annual Report of the Commissioner of Patents*.

**No. 716. ATOMIC ENERGY PROGRAM—APPROPRIATIONS, INVESTMENTS, COSTS, AND EMPLOYMENT: 1950 TO 1959**

[Money figures are in millions of dollars. For years ending June 30]

ITEM	1950	1954	1955	1956	1957	1958	1959
<b>Appropriations received</b>	<b>703</b>	<b>1,042</b>	<b>1,210</b>	<b>834</b>	<b>1,899</b>	<b>2,334</b>	<b>2,635</b>
Operations.....	886	1,099	1,146	1,146	1,741	2,225	2,385
Plant and equipment.....	156	111	111	1,312	158	100	250
<b>Plant investment, year end</b>	<b>2,104</b>	<b>5,705</b>	<b>6,487</b>	<b>6,713</b>	<b>6,908</b>	<b>7,111</b>	<b>7,293</b>
Completed plant.....	1,809	4,090	5,858	6,466	6,597	6,840	7,043
Production plants.....	1,251	2,958	4,646	5,213	5,393	5,495	5,553
Research facilities.....	184	616	707	753	793	938	1,124
Communities.....	262	300	299	299	267	229	179
Other.....	112	216	206	201	144	178	187
Construction in progress.....	295	1,615	629	247	311	271	250
<b>Cost of operations<sup>2</sup></b>	<b>415</b>	<b>1,039</b>	<b>1,290</b>	<b>1,608</b>	<b>1,918</b>	<b>2,299</b>	<b>2,497</b>
Procurement of raw materials.....	39	143	194	279	398	596	700
Production of nuclear materials.....	130	409	588	731	763	750	713
Weapons development and fabrication.....	112	250	269	281	337	444	492
Development of nuclear reactors.....	31	99	115	169	255	306	356
Civilian.....	9	20	28	46	58	79	105
Military.....	9	42	53	101	168	185	203
Other.....	21	37	34	22	29	42	48
Physical research.....	29	44	48	57	70	88	112
Controlled thermonuclear.....	1	5	8	7	11	19	27
High energy physics.....	5	3	8	8	18	19	27
Other.....	24	34	35	35	41	50	57
Research in life sciences.....	18	27	29	30	33	36	43
Community operations (net).....	20	12	10	9	9	11	10
Administrative expenses.....	23	35	34	38	38	47	50
Other expenses and income (net).....	13	20	13	14	15	21	21
<b>Employment</b>	<b>63,739</b>	<b>141,949</b>	<b>112,555</b>	<b>110,143</b>	<b>119,368</b>	<b>120,973</b>	<b>121,858</b>
Federal Government.....	4,941	6,123	6,013	6,583	6,823	7,021	6,785
Contractor operating.....	39,095	73,312	82,936	90,238	98,176	103,290	105,195
Contractor construction and design.....	19,703	62,514	23,606	13,322	14,369	10,662	9,878

<sup>1</sup> Reflects transfer to operations of \$571 million appropriated in prior years for plant and equipment.

<sup>2</sup> Includes depreciation.

Source: Atomic Energy Commission; *Annual Financial Report, 1959*.

## No 717. ATOMIC ENERGY PROGRAM—SUMMARY: 1950 TO 1959

[For years ending June 30, except as noted]

ITEM	1950	1954	1955	1956	1957	1958	1959
Operating contractors <sup>1 2</sup> .....	34	61	64	68	72	84	94
Construction and design contractors <sup>1 2</sup> .....	28	22	18	25	20	38	34
Offsite research contracts with educational, medical, and other nonprofit institutions:							
Number of institutions.....	100	171	187	192	203	225	218
Number of contracts.....	251	618	731	771	817	882	941
Nuclear reactors in U.S.: <sup>2</sup>							
Federally owned.....	13	31	37	43	53	64	75
Production reactors.....	5	10	13	13	13	13	13
Reactors for research.....	7	18	19	21	27	32	34
Experimental civilian power reactors.....	1	2	2	4	7	6	6
Military reactors.....	1	1	3	5	6	13	22
Nonfederally owned.....	1	1	2	4	17	27	39
Power reactors.....	1	1	2	4	1	1	2
Reactors for research.....	1	1	2	4	16	26	37
Licenses in effect: <sup>2</sup>							
Power reactors:							
Construction permits.....				4	4	4	3
Licenses to operate.....					1	1	2
Research reactors:							
Construction permits.....			4	2	10	10	16
Licenses to operate.....			2	6	19	31	39
Test reactors:							
Construction permits.....					1	3	1
Licenses to operate.....							2
Critical experiment facilities:							
Construction permits.....			2	4	4	2	1
Licenses to operate.....					6	10	13
Operators' licenses.....			3	27	148	354	465
Licenses to possess special nuclear materials.....			7	51	134	236	294
Licenses to possess source materials.....	<sup>3</sup> 647	<sup>3</sup> 1,087	<sup>3</sup> 1,763	<sup>3</sup> 1,523	1,150	1,412	1,345
Licenses to export reactors issued.....				1	15	8	12
Source material export licenses issued.....	( <sup>4</sup> )	641	715	740	800	676	721
Organizations with byproduct (radioisotope) licenses <sup>2 5</sup> .....	614	2,416	3,016	3,663	3,392	4,357	5,505
Medical institutions and physicians.....	206	870	1,173	1,533	1,598	1,900	2,236
Industrial concerns.....	206	1,020	1,266	1,498	1,221	1,398	1,623
Colleges and universities.....	123	212	227	248	229	251	283
Federal and State laboratories.....	49	237	258	282	269	690	1,179
Foundations and institutions.....	29	53	57	62	41	49	52
Other.....	1	24	35	45	34	69	82
Radioisotopes: <sup>6</sup>							
Sales.....\$1,000.....	222	1,173	1,295	2,198	2,660	2,426	2,498
Shipments by ORNL <sup>2</sup> .....	7,995	12,585	12,749	13,585	14,126	14,131	12,950
Curies shipped by ORNL <sup>2</sup> .....	1,111	28,879	49,383	109,500	166,652	228,717	299,363
Shipments to foreign countries <sup>2</sup> .....	290	772	787	1,293	2,365	2,691	3,741
Access permits in effect <sup>2</sup> .....			602	1,145	1,404	1,402	1,268
Agreements in effect for foreign cooperation <sup>2</sup> .....			22	32	39	42	44
Power agreements.....			3	4	10	13	13
Research agreements.....			19	28	29	29	31
Sales of heavy water..... tons.....				90	78	95	59
Uranium statistics (U. S.):							
Concentrate receipts..... tons of U <sub>3</sub> O <sub>8</sub> .....	3,060	4,660	5,940	10,435	16,159	26,376	33,326
From domestic sources..... do.....	320	1,450	2,140	4,200	7,584	10,244	15,162
From foreign sources..... do.....	2,740	3,240	3,800	6,235	8,575	16,132	18,164
Estimated uranium ore reserves <sup>2</sup> .....1,000 tons.....	2,000	10,000	27,000	60,000	78,000	82,500	86,000
Uranium ore milling capacity <sup>2</sup> ..... tons per day.....	800	2,650	5,500	8,960	11,000	21,000	21,410

<sup>1</sup> Represents those whose employment plus first-tier subcontractor employment totals 50 or more; operating contractors comprise those engaged in production, research and development, maintenance, and service; excludes supply contractors.

<sup>2</sup> As of December 31.

<sup>3</sup> Number of licenses issued.

<sup>4</sup> Not available.

<sup>5</sup> Beginning 1957, data include only parent organizations, which are issued single basic licenses. Subordinate organizations at various locations included for prior years.

<sup>6</sup> The Oak Ridge National Laboratory is the AEC's principal distributor of radioisotopes. Sales are made by ORNL, other AEC laboratories, and by commercial suppliers. Sales figures include sales made to commercial suppliers but not by them. Shipments to foreign countries are comprised of shipments made by AEC laboratories and by commercial suppliers.

Source: Atomic Energy Commission; *Semiannual Report*, *Annual Report*, and records.

No. 718. SHIPMENTS OF ATOMIC ENERGY EQUIPMENT AND PRODUCTS: 1957 AND 1958

[In thousands of dollars. Excludes Alaska and Hawaii. Excludes construction expenditures, engineering and design costs, research and development expenditures, and products used in atomic energy work which are not uniquely designed for nuclear applications]

ITEM	1957			1958		
	Total	U.S. Government agencies	Other, including export	Total	U.S. Government agencies	Other, including export
<b>Total</b> .....	96,070			148,932		
Nuclear reactors.....	2,997	(1)	(1)	1,156		1,156
Accelerators and accelerator parts.....	(2)	(2)	(2)	45	(1)	(1)
Reactor components and equipment:						
Reactor vessels and tanks.....	11,145	10,295	850	17,099	13,325	3,774
Reactor control rod drive mechanisms.....	1,263	722	541	7,481	6,969	512
Accessory instrumentation for reactor control.....	9,953	6,771	3,182	15,284	12,326	2,958
Heat exchangers.....	8,284	7,925	359	13,799	7,358	6,441
Pressurizers.....	(2)	(2)	(2)	1,758	(1)	(1)
Pumps.....	6,291	5,599	692	9,516	7,861	1,655
Valves.....	7,876	6,201	1,675	11,401	7,695	3,706
Complete reactor fuel elements shipped directly for installation or use in a reactor.....	11,057	10,629	428	23,873	21,218	2,655
Partially fabricated fuel materials not shipped directly for installation or use in a reactor.....	4,985	(1)	(1)	5,742	3,358	2,384
Core structurals (barrels, cans, boxes, plates, etc., not included above).....	1,185	991	194	3,908	1,545	2,363
Hot laboratory equipment.....	4,761	2,540	2,221	3,886	2,900	986
Radiation detection and monitoring devices:						
Radiation survey, monitoring, and control devices.....	17,471	8,422	9,049	13,846	8,699	5,147
Radiation counting equipment.....				10,387	2,661	7,726
Radioactive isotopes shipped from plants producing isotopes.....	73	(1)	(1)	171	(1)	(1)
Radiation sources and other radioactive materials produced from purchased isotopes.....	2,722	418	2,304	3,071	403	2,668
Control and measuring devices containing radioactive isotopes.....	6,007	(1)	(1)	4,909	372	4,537
Commercial irradiation service.....	(2)	(2)	(2)	97	(1)	(1)
Enriched uranium metal and compounds.....	(2)	(2)	(2)	1,503	199	1,304

<sup>1</sup> Withheld to avoid disclosing figures for individual companies.

<sup>2</sup> Not available.

Source: Department of Commerce, Bureau of the Census; *Facts for Industry*, Series M38Q-08.

No. 719. RADIATION DETECTION AND MEASURING INSTRUMENTS PRODUCED, AND NUMBER OF ESTABLISHMENTS, BY STATES: 1957

REGION AND STATE	Self-reading dosimeters with chargers	Low-range survey meters	High-range survey meters	Dose rate and total dose calculators	High-sensitivity laboratory type equipment for counting Alpha, Beta, Gamma
Production (units), total.....	160,132	39,865	24,124	750	50,100
Establishments, total.....	9	19	15	10	26
<b>New England and Middle Atlantic</b> .....	4	8	7	3	8
Massachusetts.....	1	2	1	2	2
Connecticut.....					1
New York.....	3	3	3	1	3
New Jersey.....		3	3		2
<b>North Central</b> .....	2	4	5	5	10
Ohio.....	2	2	2	2	2
Indiana.....		1		2	2
Illinois.....			2		5
Missouri.....		1	1	1	1
<b>Pacific</b> .....	3	7	3	2	8
Oregon.....		1	1		1
California.....	3	6	2	2	7

Source: Department of Commerce, Bureau of the Census; *Facts for Industry*, Series BDSAF-SI-3-07.

No. 720. ARTIFICIAL SATELLITES, LUNAR PROBES, AND SPACE PROBES LAUNCHED: 1957 TO 1960

[Excludes projects which are primarily military in nature and unsuccessful launchings]

NAME	Description	Launching date and lifetime	Dimensions 1 (inches)	WEIGHT (pounds)		Inclination to Equator	Perigee (miles)	Apogee (miles)
				Total payload 2	Scientific instrumen- tation			
U.S. LAUNCHINGS								
Explorer I	Satellite	Jan. 31, 1958 (3-5 yrs.)	801-61D	30.8	18.13	33.34°	224	1,573
Vanguard I	do	Mar. 17, 1958 (200-1,000 yrs.)	6-4D	3.25	(c)	34.25°	409	2,453
Explorer III	do	Mar. 26, 1958-June 27, 1958	801-61D	31.0	18.56	33.4°	121	1,746
Explorer IV	do	July 26, 1958-Oct. 23, 1959	80-301-6-25D	38.4	25.8	50.29°	163	1,380
Pioneer I	Lunar probe	Oct. 11, 1958-Oct. 12, 1958 (43 hrs.)	301-29D	* 84.4	39	(c)	(c)	(c)
Pioneer II	do	Nov. 8, 1958 (42 min.)	301-29D	12.85	34.3	(c)	(c)	(c)
Pioneer III	Space probe	Dec. 6, 1958-Dec. 7, 1958 (38 hrs.)	231-10D	8,730	(c)	32.3°	110	920
Project SCORE (Atlas)	Satellite	Dec. 18, 1958-Jan. 21, 1959	* 851-10D	20.74	(c)	32.88°	347	2,064
Vanguard II	do	Feb. 17, 1959 (10 yrs. or more)	201-30D	13.40	(c)	(c)	(c)	(c)
Pioneer IV	do	Mar. 3, 1959 *	201-31D	142	(c)	(c)	(c)	(c)
Explorer VI	Satellite	Aug. 7, 1959 (over 1 yr.)	10-38D	91.5	(c)	(c)	156	26,357
Vanguard III	do	Sept. 18, 1959 (30-40 yrs.)	301-30D	61.4	(c)	(c)	319	2,329
Explorer VII	do	Oct. 13, 1959 (20 yrs.)	301-26D	91.8	(c)	(c)	342	680
Pioneer V	Planetary	Mar. 11, 1960 (100,000 yrs.)	19L-14D	270	(12)	48°	13 74, 967	13 92,338
TITROS I	Satellite	April 1, 1960 (3 mos.) <sup>14</sup>					455	468
U.S.S.R. LAUNCHINGS 15								
Sputnik I	do	Oct. 4, 1957-Jan. 4, 1958	22-8D	8,000	184	65°	142	588
Sputnik II	do	Nov. 3, 1957-Apr. 14, 1958	(16)	8,000	1,120	65°	140	1,098
Sputnik III	do	May 15, 1958 (15 mos.)	(17)	7,000	2,925	65.3°	136	1,167
Lunik or Meebta I	Space probe	Jan. 2, 1959 <sup>18</sup>	(16)	3,245	(c)	(c)	(c)	(c)
Lunik II	Lunar probe	Sept. 12, 1959 <sup>19</sup>	(16)	858.4	(c)	(c)	(c)	(c)
Lunik III	Translunar earth satellite	Oct. 4, 1959 <sup>20</sup>	(16)	614	345	(c)	24,840	292,000
Spacecraft	Satellite	May 14, 1960 <sup>21</sup>	(16)	10,008	3,250	64.9°	23 188.5	23 228.7

1 D=diameter; L=length.  
 2 Total weight of instrument without rockets.  
 3 Not available.  
 4 Includes 43.7 pounds of verniers and retro-rockets.  
 5 Altitude, about 70,700 miles.  
 6 Altitude, 963 miles.  
 7 Altitude, 63,980 miles.  
 8 Dimensions in feet.  
 9 In orbit around sun.  
 10 53 inches deep.  
 11 With an extended 26-inch tapered tube.  
 12 Slightly over 40.  
 13 In thousands; perihelion and aphelion, respectively.  
 14 Estimated useful life; will remain in orbit for many years.  
 15 Unofficial information.  
 16 Not disclosed.  
 17 11 feet 9 inches long; 5 feet 8 inches at base.  
 18 Believed to be in orbit around sun.  
 19 Hit moon's surface on Sept. 13, 1959.  
 20 Photographed the hidden side of the moon on Oct. 7, 1959.  
 21 Lifetime estimated relatively brief.  
 22 Perigee 191 miles and apogee 420 miles after firing of retro-rockets May 19, 1960.  
 Source: National Aeronautics and Space Administration; records.

## Section 20

### Roads and Motor Vehicles

This section presents statistics relating to the mileage, control, and financing of public roads and to motor-vehicle travel and usage. The Bureau of Public Roads of the Department of Commerce is the principal compiler of data concerning public roads and motor-vehicle registrations. Since 1945, it has published such data in its annual *Highway Statistics*. The same Bureau's *Highway Statistics, Summary to 1955*, presents public roads data carried back over periods ranging from 20 to 50 years. The motor-vehicle registration figures which appear in *Highway Statistics* are compiled from reports and records of State highway departments.

The first road mileage survey was made in 1904. Data for 1904 and other road mileage surveys made in 1909, 1914, and 1921 appear in Department of Agriculture Bulletin 1279, *Rural Highway Mileage, Income, and Expenditures, 1921-22*.

Useful annual handbooks in this field are *Automobile Facts and Figures* and *Motor Truck Facts*, both issued by the Automobile Manufacturers Association of Detroit, Mich.; and *Accident Facts*, issued by the National Safety Council of Chicago, Ill. In addition, the Bureau of the Census compiles and publishes statistics on the motor vehicles and equipment industry which appear in the *Census of Manufactures* reports and in its *Annual Survey of Manufactures*. Data from these reports are also included in section 30, Manufactures, in this volume.

**Rural and urban roads.**—The terms rural, urban, and municipal are used in different ways in different tables in this section; because of special problems and purposes, it is not possible to apply identical definitions and segregations to all types of data. Definitions are given in table headnotes where pertinent.

**Highway systems.**—The Federal-Aid Highway Act of 1916 provides for the sharing of highway construction costs between the States and the Federal Government with the initiative retained by each State for choosing projects and carrying them out. The planning and development of Federal-aid systems began in 1921. Federal funds share with State funds in costs of engineering, construction, and right-of-way acquisition on the designated systems while other charges, such as maintenance and policing, are borne entirely by the States and local agencies.

The Federal-aid primary system connects all of the principal cities, county seats, ports, manufacturing areas, and other traffic generating areas. In general, these are at the same time the main State trunkline roads. Certain sections of the primary system are more important than others from the viewpoint of national interest. Consequently, in 1944, the Congress authorized the creation of the National System of Interstate and Defense Highways, not to exceed 40,000 miles in length. In 1956 Congress extended the system to 41,000 miles and authorized for the first time a long-range program to complete the system. Federal funds of \$25 billion, providing 90 percent of the total estimated cost, are authorized for the fiscal years 1957 to 1969.

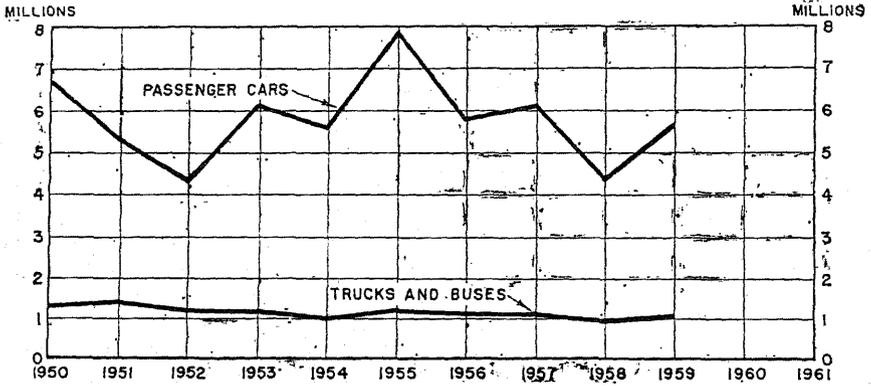
The Federal-Aid Highway Act of 1944 authorized the first specific funds for Federal-aid highways in urban areas, and established the Federal-aid secondary system, consisting of important feeder roads linking the farms, factories, distribution outlets, and smaller communities with the primary system.

**Alaska and Hawaii.**—For a general statement concerning the treatment of data for Alaska and Hawaii, see preface.

**Historical statistics.**—Tabular headnotes (as "See also *Historical Statistics, Colonial Times to 1957*, series Q 246-247") provide cross-references, where applicable, to *Historical Statistics of the United States, Colonial Times to 1957*. See preface.

FIG. XXXII. MOTOR-VEHICLE FACTORY SALES: 1950 TO 1959

[See table 738]

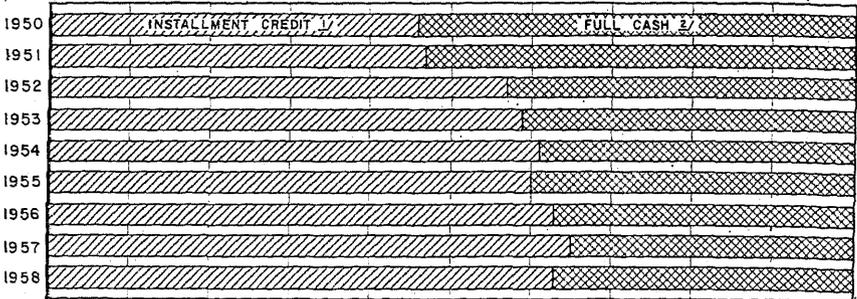


Source: Chart prepared by Department of Commerce, Bureau of the Census. Data are from Automobile Manufacturers Association.

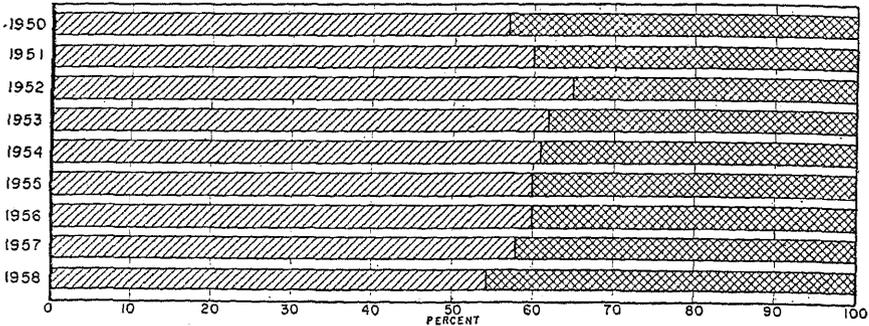
FIG. XXXIII. PERCENT DISTRIBUTION OF PASSENGER CAR PURCHASERS, BY METHOD OF FINANCING OF PURCHASE: 1950 TO 1958

[See table 741]

NEW CAR PURCHASERS.



USED CAR PURCHASERS



<sup>1</sup> Includes other types of borrowing.

<sup>2</sup> Includes trade-in allowance. Prior to 1958, includes purchases for which method of financing was not ascertained; for 1958, such purchases were assigned to either the cash or the credit group.

Source: Chart prepared by Department of Commerce, Bureau of the Census. Data are from Board of Governors of the Federal Reserve System.

**No. 721. EXISTING RURAL AND MUNICIPAL MILEAGE, BY GOVERNMENTAL CONTROL: 1930 TO 1958**

[In thousands. As of December 31. Excludes Alaska and Hawaii. Municipal roads are those within incorporated places, New England communities of 2,500 inhabitants or more, and certain of the more populous unincorporated areas. All other roads are classed as rural. See also *Historical Statistics, Colonial Times to 1967*, series Q 246-247 and Q 251, for similar but not exactly comparable data]

GOVERNMENTAL CONTROL	1930	1940	1945	1950	1954	1955	1956	1957	1958
<b>Total mileage</b> .....			<b>3,319</b>	<b>3,313</b>	<b>3,395</b>	<b>3,418</b>	<b>3,430</b>	<b>3,453</b>	<b>3,479</b>
Rural mileage.....	3,009	2,990	3,012	2,990	3,030	3,045	3,051	3,064	3,074
Under State control.....	324	524	544	581	607	619	628	636	643
Under local control.....	2,685	2,466	2,398	2,336	2,331	2,333	2,330	2,329	2,330
Under Federal control.....									
Municipal mileage.....	(1)		307	323	365	373	378	389	405
Under State control.....	(1)	27	33	36	41	42	43	45	47
Under local control.....	(1)	(1)	274	287	324	331	335	344	358

<sup>1</sup> Not available.

Source: Department of Commerce, Bureau of Public Roads; annual report, *Highway Statistics*.

**No. 722. EXISTING MILEAGE OF RURAL ROADS: 1921 TO 1958**

[In thousands of miles. As of December 31. Excludes Alaska and Hawaii. For definition of rural roads, see headnote, table 721. See also *Historical Statistics, Colonial Times to 1967*, series Q 247-250, for similar but not exactly comparable data]

TYPE AND CONTROL	1921	1930	1940	1945	1950	1955	1956	1957	1958
<b>All rural roads</b> .....	<b>2,925</b>	<b>3,009</b>	<b>2,990</b>	<b>3,012</b>	<b>2,990</b>	<b>3,045</b>	<b>3,051</b>	<b>3,064</b>	<b>3,074</b>
Primary State highways.....	203	324	329	339	363	387	389	391	395
Secondary State highways.....			81	84	88	91	94	97	98
County roads under State control.....			114	118	122	131	132	135	136
County and local roads <sup>1</sup> .....	2,722	2,685	2,466	2,471	2,417	2,436	2,436	2,441	2,445
<b>Surfaced rural roads</b> .....	<b>387</b>	<b>694</b>	<b>1,340</b>	<b>1,495</b>	<b>1,679</b>	<b>1,942</b>	<b>1,985</b>	<b>2,021</b>	<b>2,083</b>
Primary State highways.....	84	227	302	316	351	381	384	386	391
Secondary State highways.....			65	71	73	84	87	90	92
County roads under State control.....			55	63	83	103	105	107	109
County and local roads <sup>1</sup> .....	303	467	918	1,045	1,172	1,374	1,408	1,438	1,491
<b>Nonsurfaced rural roads <sup>2</sup></b> .....	<b>2,538</b>	<b>2,315</b>	<b>1,650</b>	<b>1,517</b>	<b>1,311</b>	<b>1,103</b>	<b>1,066</b>	<b>1,043</b>	<b>991</b>
Primary State highways.....	119	97	27	23	12	6	5	5	4
Secondary State highways.....			16	13	15	7	7	7	6
County roads under State control.....			59	55	39	28	27	28	27
County and local roads <sup>1,2</sup> .....	2,419	2,218	1,548	1,426	1,245	1,062	1,027	1,003	954

<sup>1</sup> Includes mileage in national and State parks, forests, reservations, etc., not included as part of State or local systems.

<sup>2</sup> Includes mileage not classified by type of surface.

Source: Department of Commerce, Bureau of Public Roads; annual report, *Highway Statistics*.

**No. 723. HIGHWAY CONSTRUCTION—CONTRACTS AWARDED, BY OWNERSHIP, SOURCE OF FUNDS, AND TYPE OF FACILITY: 1947 TO 1959**

[In millions of dollars. Excludes Alaska and Hawaii. Includes force-account work started on Federal and State projects]

OWNERSHIP, SOURCE OF FUNDS, AND TYPE OF FACILITY	1947	1950	1953	1954	1955	1956	1957	1958	1959
<b>All construction</b> .....	<b>1,108</b>	<b>1,816</b>	<b>2,713</b>	<b>2,746</b>	<b>2,993</b>	<b>3,303</b>	<b>3,917</b>	<b>4,585</b>	<b>3,795</b>
Federally owned.....	25	36	53	62	59	92	92	96	85
State owned.....	892	1,492	2,287	2,300	2,560	2,718	3,311	3,996	3,204
Federally aided projects:									
Total value.....	635	798	998	1,218	1,256	1,737	2,390	3,459	2,630
Federal funds.....	329	415	519	630	667	963	1,614	2,504	1,877
Independent State projects:									
Total value.....	257	694	1,289	1,082	1,304	981	921	507	574
Toll facilities.....	(1)	228	800	459	695	337	343	44	59
Locally owned <sup>2</sup> .....	191	289	373	384	374	493	514	494	506

<sup>1</sup> Not available.

<sup>2</sup> By municipalities and counties.

Source: Department of Commerce, Bureau of the Census.

**No. 724. EXISTING ROAD MILEAGE—MUNICIPAL MILEAGE, AND RURAL MILEAGE, BY TYPE AND GOVERNMENTAL CONTROL, BY STATES: 1958**

[As of December 31. For definition of municipal and rural roads, see headnote, table 721. Compiled for latest available year from reports of State authorities and planning survey data.]

STATE	Total rural and municipal	Municipal	RURAL					
			Total	Type		Governmental control		
				Surfaced	Nonsurfaced	State <sup>1</sup>	Local	Federal <sup>2</sup>
<b>United States<sup>3</sup></b> .....	<b>3,478,787</b>	<b>404,594</b>	<b>3,074,193</b>	<b>2,083,108</b>	<b>991,085</b>	<b>643,286</b>	<b>2,330,081</b>	<b>100,826</b>
Alabama.....	71,359	8,896	62,463	48,636	13,827	<sup>4</sup> 16,253	46,210	-----
Arizona.....	33,281	2,680	30,601	12,263	18,348	4,154	16,943	9,604
Arkansas.....	78,342	5,618	72,724	40,979	31,745	10,279	60,811	1,684
California.....	141,351	29,918	111,433	70,379	41,054	13,268	76,753	21,412
Colorado.....	76,600	5,013	71,586	33,939	37,657	7,824	62,594	1,178
Connecticut.....	16,405	5,342	11,063	10,829	234	2,764	8,299	-----
Delaware.....	4,613	662	3,951	3,638	313	<sup>4</sup> 3,951	-----	-----
Dist. of Columbia.....	1,250	1,250	-----	-----	-----	-----	-----	-----
Florida.....	64,840	15,265	49,575	28,086	21,489	12,869	36,706	-----
Georgia.....	97,316	13,398	83,918	30,407	44,511	13,892	69,998	28
Idaho.....	42,431	2,302	40,129	23,290	16,839	4,511	27,664	7,954
Illinois.....	123,327	20,885	102,442	92,864	9,578	10,825	<sup>5</sup> 91,617	-----
Indiana.....	100,668	14,530	86,138	77,500	8,688	9,991	76,147	-----
Iowa.....	111,683	11,822	99,861	88,017	11,844	8,775	91,086	-----
Kansas.....	133,079	8,598	124,481	69,405	55,076	9,864	114,605	12
Kentucky.....	67,269	3,868	63,401	45,625	17,776	18,799	44,338	264
Louisiana.....	47,477	8,015	39,462	29,735	9,727	<sup>4</sup> 14,004	25,458	-----
Maine.....	20,757	1,812	18,945	16,183	2,762	10,828	8,014	103
Maryland.....	21,702	3,687	18,015	17,766	249	4,453	13,543	19
Massachusetts.....	26,310	10,040	16,270	14,748	1,522	2,015	14,255	-----
Michigan.....	109,714	16,110	93,604	73,393	20,211	8,360	85,244	-----
Minnesota.....	123,367	13,598	109,769	89,694	20,075	11,395	<sup>6</sup> 97,047	1,327
Mississippi.....	62,762	4,495	58,267	49,405	8,862	9,874	48,276	117
Missouri.....	110,419	11,936	98,483	86,465	12,018	26,601	71,335	547
Montana.....	74,853	1,628	73,225	26,068	47,167	10,719	55,045	7,461
Nebraska.....	102,728	5,793	96,935	51,871	45,064	8,897	87,776	262
Nevada.....	44,291	836	43,455	12,628	30,827	<sup>4</sup> 6,047	37,408	-----
New Hampshire.....	13,897	1,363	12,534	9,635	2,899	3,748	8,682	104
New Jersey.....	29,132	11,745	17,387	14,068	3,319	2,063	15,324	-----
New Mexico.....	68,151	2,826	65,325	13,132	47,193	11,219	44,386	4,720
New York.....	105,616	17,301	88,315	74,641	13,674	13,423	74,882	10
North Carolina.....	79,456	9,987	69,469	58,101	11,368	<sup>4</sup> 68,278	-----	1,191
North Dakota.....	97,994	2,594	95,400	46,423	6,228	6,228	88,641	531
Ohio.....	101,152	17,592	83,560	81,550	2,010	15,987	67,573	-----
Oklahoma.....	102,358	8,412	93,946	54,319	39,627	11,146	82,275	526
Oregon.....	67,687	5,218	62,469	36,745	25,724	8,054	33,183	21,232
Pennsylvania.....	108,347	16,022	92,325	68,008	24,317	43,103	48,914	308
Rhode Island.....	4,177	2,366	1,811	1,687	124	709	1,102	-----
South Carolina.....	55,540	4,918	50,622	26,351	24,271	24,162	26,460	-----
South Dakota.....	92,096	2,683	89,413	45,466	43,947	6,702	81,511	1,200
Tennessee.....	73,661	7,750	65,911	61,493	4,418	8,044	57,150	717
Texas.....	227,827	33,834	193,993	113,350	80,643	51,152	142,841	-----
Utah.....	31,980	3,767	28,213	14,063	14,150	4,969	17,028	6,216
Vermont.....	13,785	853	12,932	10,466	2,466	2,006	<sup>6</sup> 10,903	23
Virginia.....	56,116	5,571	50,545	48,324	2,221	<sup>4</sup> 48,825	639	1,081
Washington.....	59,060	6,718	52,351	39,658	12,693	6,254	38,244	7,853
West Virginia.....	36,103	2,996	33,107	20,439	12,668	<sup>4</sup> 30,909	1,705	493
Wisconsin.....	97,152	11,150	86,002	78,724	7,278	10,095	75,647	260
Wyoming.....	54,288	931	53,357	11,118	42,239	4,999	45,819	2,539

<sup>1</sup> Includes 13,707 miles of State park, forest, institutional, and other roads, rural and municipal, that are not part of State or local highway systems. Also includes 3,268 miles of toll roads.

<sup>2</sup> Comprises mileage of roads not forming a part of State or local highway systems.

<sup>3</sup> Excludes Alaska and Hawaii.

<sup>4</sup> Includes mileage of county roads under State control in Alabama (8 counties), Delaware, Nevada (455 miles), North Carolina, Virginia (all but 2 counties), and West Virginia; 6,445 miles designated as farm-to-market system in Louisiana; and the State-aid system in Maine.

<sup>5</sup> Includes mileage of local roads designated as State aid in Illinois, 18,296 miles; Minnesota, 27,062 miles; and Vermont, 2,496 miles.

Source: Department of Commerce, Bureau of Public Roads; annual report, *Highway Statistics, 1958*.

**No. 725. MILEAGE AND COST OF DESIGNATED FEDERAL-AID HIGHWAY SYSTEMS: 1917 TO 1958**

[Includes Hawaii and Puerto Rico and beginning 1957, Alaska. See also *Historical Statistics, Colonial Times to 1967*, series Q 261-264]

YEAR	MILES OF HIGHWAY		COST (\$1,000) <sup>3</sup>		
	Total existent <sup>1</sup>	Completed during year <sup>2</sup>	Total	Federal funds	State funds
1917-1921.....		12,919	221,740	95,054	126,686
1925.....	178,797	11,001	220,921	100,030	120,891
1930.....	193,049	10,339	236,520	99,839	136,681
1935.....	214,000	12,811	242,420	218,112	24,307
1940.....	234,112	11,549	269,216	149,724	119,492
1945.....	232,772	3,035	101,037	76,485	24,552
1950.....	640,753	19,876	753,199	389,578	363,621
1951.....	651,826	17,060	771,708	389,564	382,144
1952.....	673,137	22,147	977,548	505,444	472,104
1953.....	694,677	21,136	1,077,733	558,913	518,820
1954.....	717,379	20,548	1,146,419	591,202	555,217
1955.....	741,824	22,571	1,257,364	665,913	621,451
1956.....	777,514	23,609	1,444,059	756,926	687,133
1957.....	809,672	22,424	1,714,240	968,564	745,676
1958.....	830,569	28,137	2,744,456	1,669,015	1,075,471

<sup>1</sup> Total existing mileage of Federal-aid primary system through 1945; beginning 1950 includes secondary system. Data as of June 30 through 1955, as of December 31 beginning 1956.

<sup>2</sup> Comprises construction and reconstruction mileage.

<sup>3</sup> Represents actual expenditures of funds on calendar-year basis. Beginning 1935, includes money spent on public works and defense highways. Beginning 1940, includes secondary highways.

Source: Department of Commerce, Bureau of Public Roads; annual report, *Highway Statistics*, and *Annual Report, 1969*.

**No. 726. MILEAGE OF DESIGNATED FEDERAL-AID HIGHWAY SYSTEMS, BY STATES AND FOR PUERTO RICO: 1958**

[In miles. As of December 31. See text, p. 547]

STATE OR OTHER AREA	PRIMARY HIGHWAY SYSTEM		Secondary highway system	STATE OR OTHER AREA	PRIMARY HIGHWAY SYSTEM		Secondary highway system
	Total miles	National system of interstate highways			Total miles	National system of interstate highways	
<b>Total.....</b>	<b>260,170</b>	<b>40,675</b>	<b>570,399</b>				
Alabama.....	6,332	873	19,226	Missouri.....	9,147	1,102	23,266
Alaska.....	1,960		3,290	Montana.....	6,246	1,130	4,997
Arizona.....	2,648	1,161	3,986	Nebraska.....	5,656	488	17,749
Arkansas.....	3,922	523	14,180	Nevada.....	2,196	534	2,656
California.....	7,531	2,183	11,043	New Hampshire.....	1,205	213	1,601
Colorado.....	4,266	964	4,083	New Jersey.....	2,060	368	2,074
Connecticut.....	1,288	304	1,151	New Mexico.....	4,027	1,003	5,378
Delaware.....	583	39	1,417	New York.....	10,403	1,227	19,376
District of Columbia.....	142	29	82	North Carolina.....	7,061	773	24,845
Florida.....	5,384	1,142	13,048	North Dakota.....	4,197	570	13,283
Georgia.....	8,767	1,111	13,735	Ohio.....	9,000	1,490	17,715
Hawaii.....	533		649	Oklahoma.....	3,253	766	12,464
Idaho.....	3,153	611	5,112	Oregon.....	4,028	732	7,442
Illinois.....	10,656	1,612	13,221	Pennsylvania.....	3,464	1,527	13,317
Indiana.....	4,888	1,097	16,543	Rhode Island.....	534	71	414
Iowa.....	10,314	709	33,092	South Carolina.....	5,336	679	15,416
Kansas.....	7,833	803	23,195	South Dakota.....	6,054	679	12,092
Kentucky.....	4,553	700	15,225	Tennessee.....	5,496	1,047	10,304
Louisiana.....	3,330	681	7,723	Texas.....	17,282	3,028	30,107
Maine.....	1,931	313	2,294	Utah.....	2,312	965	3,644
Maryland.....	2,201	354	6,224	Vermont.....	1,686	321	1,819
Massachusetts.....	2,323	462	2,187	Virginia.....	5,632	1,066	18,315
Michigan.....	7,552	1,076	24,853	Washington.....	3,990	727	10,711
Minnesota.....	8,788	891	19,741	West Virginia.....	2,767	395	10,688
Mississippi.....	5,820	673	13,651	Wisconsin.....	6,352	452	18,610
				Wyoming.....	3,637	931	2,183
				Puerto Rico.....	561		1,082

Source: Department of Commerce, Bureau of Public Roads; *Annual Report, 1959*.

No. 727. FEDERAL-AID HIGHWAY PROJECTS, BY STATES AND FOR PUERTO RICO:1959

[Money figures in thousands of dollars. As of June 30. Comprises projects financed from Federal-aid primary, secondary, urban, and interstate; Defense Highway Act; and 1950 access funds]

STATE OR OTHER AREA	COMPLETED DURING FISCAL YEAR			UNDER CONSTRUCTION			PLANS APPROVED—NOT UNDER CONSTRUCTION			Federal-aid funds available for future projects
	Total cost	Federal funds	Miles	Total cost	Federal funds	Miles	Total cost	Federal funds	Miles	
<b>Total</b>	<b>3,199,815</b>	<b>2,029,576</b>	<b>31,715</b>	<b>7,048,806</b>	<b>5,172,169</b>	<b>32,464</b>	<b>1,000,448</b>	<b>716,664</b>	<b>3,326</b>	<b>1,446,349</b>
<b>U.S.</b>	<b>3,186,466</b>	<b>2,023,292</b>	<b>31,677</b>	<b>7,015,920</b>	<b>5,156,162</b>	<b>32,383</b>	<b>998,922</b>	<b>715,908</b>	<b>3,325</b>	<b>1,443,710</b>
Ala.	49,322	29,858	1,013	130,527	96,743	1,116	27,753	19,454	231	24,073
Alaska	8,321	7,028	279	22,241	17,882	170	3,501	3,138	77	3,004
Ariz.	32,137	27,374	237	52,071	46,409	274	10,203	9,359	46	21,697
Ark.	24,936	14,699	595	95,988	72,000	628	10,177	8,253	44	14,496
Calif.	440,603	246,412	596	418,870	269,394	378	60,679	32,492	59	75,066
Colo.	70,657	51,004	453	53,046	38,499	372	5,331	3,681	42	25,766
Conn.	31,070	22,059	38	81,652	50,281	82	33,033	26,465	19	25,394
Del.	7,274	3,862	49	28,742	21,039	78	4,884	3,735	8	18,655
Dist. of Col.	7,761	4,836	8	44,017	31,639	14	8,185	5,108	2	23,787
Fla.	62,871	44,845	546	139,039	107,720	442	25,317	20,195	48	6,048
Ga.	40,858	22,807	545	219,309	146,360	1,300	12,573	10,285	41	7,351
Hawaii	4,704	2,359	14	13,414	6,796	16	398	173	1	2,900
Idaho	18,006	12,285	268	49,893	39,763	450	5,315	4,920	24	34,966
Ill.	124,060	78,867	1,018	403,214	301,041	1,349	61,462	45,620	98	28,938
Ind.	55,189	31,243	542	169,119	111,441	514	54,299	40,807	209	61,927
Iowa	92,042	61,871	1,772	103,650	78,558	1,084	19,056	16,562	68	1,732
Kans.	80,983	55,781	1,775	76,653	53,244	1,578	10,067	5,952	133	26,581
Ky.	32,338	19,600	188	168,782	126,650	495	8,545	7,458	10	10,956
La.	53,224	27,768	473	185,581	134,773	876	25,146	17,002	69	24,397
Maine	14,621	9,377	92	48,607	36,766	155	5,045	4,396	12	19,819
Md.	46,958	32,546	187	83,099	57,635	263	6,096	4,204	19	34,387
Mass.	33,274	19,080	36	178,518	131,546	118	64,035	47,236	33	21,292
Mich.	110,573	74,395	1,020	221,194	169,064	728	45,508	35,143	121	30,061
Minn.	52,181	29,697	1,889	183,473	136,904	1,683	12,908	9,533	75	49,421
Miss.	37,684	21,877	834	117,268	84,507	1,247	16,156	10,046	100	6,504
Mo.	86,982	58,314	1,309	160,512	115,913	1,183	22,658	15,626	78	40,096
Mont.	29,611	20,530	417	76,485	59,154	784	9,257	7,465	70	59,493
Nebr.	43,274	24,350	923	78,607	54,357	1,168	13,975	10,155	71	62,085
Nev.	21,204	18,422	286	43,647	40,512	163	2,105	1,757	32	32,513
N.H.	20,054	12,393	64	40,752	31,970	79	7,692	6,255	12	6,734
N.J.	44,495	29,548	47	142,360	103,402	125	45,175	30,281	26	88,187
N. Mex.	51,080	41,153	445	50,702	41,711	333	1,078	1,001	3	9,709
N. Y.	169,890	89,248	303	742,590	515,981	725	81,448	50,260	108	65,575
N. C.	84,246	54,904	1,066	88,174	63,521	706	13,807	10,660	80	47,417
N. Dak.	44,395	30,388	1,869	49,179	35,668	1,326	11,160	8,654	91	13,235
Ohio	198,930	134,432	726	408,017	319,617	738	21,317	11,043	34	11,634
Okla.	72,620	48,061	835	77,854	57,457	623	27,378	20,148	141	17,364
Oreg.	32,822	24,393	367	96,340	79,820	452	13,083	10,660	54	8,800
Pa.	160,590	97,347	242	361,646	263,970	613	18,720	11,097	20	137,046
R.I.	18,296	13,437	48	34,993	24,385	44	4,118	2,075	8	10,907
S. C.	34,851	21,051	608	104,319	79,166	1,470	16,272	11,796	77	6,727
S. Dak.	23,987	14,941	1,195	50,227	39,221	825	6,593	3,659	169	3,554
Tenn.	57,972	31,014	851	182,122	135,816	905	20,108	17,152	35	14,655
Tex.	196,748	133,171	2,710	343,068	254,775	2,270	42,619	31,800	104	31,692
Utah	28,008	23,402	224	42,942	38,087	211	16,197	14,036	65	8,074
Vt.	10,884	6,339	53	47,577	37,480	101	2,324	1,162	9	13,765
Va.	57,575	35,104	633	126,679	100,384	374	12,227	9,052	88	90,366
Wash.	54,186	37,109	657	113,379	89,425	409	6,669	4,333	17	14,042
W. Va.	27,387	15,145	169	90,813	67,695	126	19,585	13,396	178	7,010
Wis.	63,856	41,143	925	115,082	80,213	800	24,071	18,463	128	37,988
Wyo.	20,876	15,923	238	69,887	59,808	420	3,614	2,615	38	14,915
P. R.	13,349	6,284	38	32,886	16,007	81	1,526	766	1	2,639

Source: Department of Commerce, Bureau of Public Roads; Annual Report, 1959.

No. 728. HIGHWAY AND STREET RECEIPTS AND DISBURSEMENTS: 1940 TO 1960

[In millions of dollars. Federal and State data are for calendar years; local data for varying fiscal years. Excludes Alaska and Hawaii. Data for municipal places and streets include all municipalities and other political subdivisions urban in character. See also *Historical Statistics, Colonial Times to 1967*, series Q 280-309, for related but not exactly comparable data]

SOURCE AND PURPOSE	1940	1945	1950	1955	1957	1958	1959	1960 (est.)
<b>SOURCE OF RECEIPTS</b>								
<b>Total receipts</b> .....	<b>2,634</b>	<b>1,918</b>	<b>4,711</b>	<b>7,322</b>	<b>8,753</b>	<b>10,192</b>	<b>11,107</b>	<b>11,205</b>
Federal funds.....	773	83	489	782	1,440	2,455	3,230	2,828
Highway-user imposts.....	( <sup>1</sup> )	1,098	2,292	3,638	4,141	4,282	4,596	4,801
Toll receipts.....	( <sup>1</sup> )	( <sup>1</sup> )	59	116	270	358	402	491
Property taxes and general revenues.....	( <sup>1</sup> )	( <sup>1</sup> )	584	1,060	1,281	1,419	1,521	1,594
Miscellaneous.....	( <sup>1</sup> )	( <sup>1</sup> )	45	93	166	195	194	179
Bond issue proceeds.....	( <sup>1</sup> )	( <sup>1</sup> )	49	652	1,185	1,200	1,338	1,048
<b>Federal Government funds</b> .....	<b>773</b>	<b>83</b>	<b>489</b>	<b>782</b>	<b>1,440</b>	<b>2,455</b>	<b>3,230</b>	<b>2,828</b>
Expended under Bureau of Public Roads.....	169	68	448	719	1,812	2,311	3,103	2,693
Other Federal funds.....	604	15	41	63	128	144	127	135
<b>State governments</b> .....	<b>1,234</b>	<b>1,199</b>	<b>2,841</b>	<b>4,594</b>	<b>5,216</b>	<b>5,634</b>	<b>5,673</b>	<b>6,044</b>
Highway-user imposts <sup>2</sup> .....	1,076	1,086	2,270	3,578	4,056	4,192	4,502	4,702
Toll receipts.....	31	40	72	209	290	325	375	405
Property taxes and general revenues.....	7	48	75	96	75	109	104	113
Miscellaneous.....	11	14	24	65	93	95	90	90
Bond issue proceeds <sup>3</sup> .....	109	11	400	640	702	913	602	734
<b>Counties and other local rural units</b> .....	<b>280</b>	<b>289</b>	<b>542</b>	<b>796</b>	<b>785</b>	<b>788</b>	<b>814</b>	<b>855</b>
Highway-user imposts.....	( <sup>1</sup> )	1	2	4	17	20	22	24
Toll receipts.....	3	5	12	15	16	17	17	18
Property taxes and general revenues.....	267	253	408	525	586	609	639	664
Miscellaneous.....	10	12	30	48	43	42	40	39
Bond issue proceeds <sup>3</sup> .....	( <sup>1</sup> )	18	90	204	123	100	96	110
<b>Municipal places</b> .....	<b>347</b>	<b>347</b>	<b>839</b>	<b>1,150</b>	<b>1,312</b>	<b>1,315</b>	<b>1,390</b>	<b>1,478</b>
Highway-user imposts.....	( <sup>1</sup> )	11	20	56	68	70	72	75
Toll receipts.....	( <sup>1</sup> )	14	32	46	52	60	63	68
Property taxes and general revenues.....	( <sup>1</sup> )	263	586	660	758	803	851	910
Miscellaneous.....	( <sup>1</sup> )	19	39	53	59	57	54	50
Bond issue proceeds <sup>3</sup> .....	( <sup>1</sup> )	20	162	335	375	325	350	375
<b>PURPOSE OF DISBURSEMENT</b>								
<b>Total disbursements</b> .....	<b>2,496</b>	<b>1,677</b>	<b>4,473</b>	<b>7,374</b>	<b>9,324</b>	<b>10,233</b>	<b>10,851</b>	<b>10,931</b>
Capital outlay.....	1,457	368	2,296	4,337	5,643	6,345	6,769	6,683
Maintenance.....	612	795	1,419	1,872	2,200	2,287	2,387	2,469
Administration <sup>4</sup> .....	122	125	301	458	628	701	756	791
Interest.....	190	131	135	274	324	357	376	399
Obligations retired.....	115	258	322	433	529	543	563	589
<b>Federal expenditures not classified by system<sup>5</sup></b> .....	<b>30</b>	<b>14</b>	<b>58</b>	<b>95</b>	<b>155</b>	<b>178</b>	<b>229</b>	<b>238</b>
<b>State highways<sup>6</sup></b> .....	<b>1,134</b>	<b>753</b>	<b>2,557</b>	<b>4,670</b>	<b>6,121</b>	<b>6,868</b>	<b>7,306</b>	<b>7,202</b>
Capital outlay.....	636	214	1,648	3,300	4,391	5,008	5,324	5,142
Maintenance.....	224	290	514	693	830	886	955	992
Administration <sup>4</sup> .....	81	86	192	297	412	467	504	525
Interest.....	78	57	60	189	231	255	266	275
Obligations retired <sup>7</sup> .....	115	106	143	191	257	252	257	268
<b>County and local rural roads</b> .....	<b>765</b>	<b>522</b>	<b>980</b>	<b>1,333</b>	<b>1,502</b>	<b>1,560</b>	<b>1,600</b>	<b>1,658</b>
Capital outlay.....	447	82	265	449	518	537	546	562
Maintenance.....	249	311	557	700	784	806	826	856
Administration <sup>4</sup> .....	18	20	44	64	76	82	83	84
Interest.....	51	35	31	31	32	34	34	35
Obligations retired <sup>7</sup> .....	( <sup>1</sup> )	74	83	80	92	101	111	121
<b>Municipal streets</b> .....	<b>567</b>	<b>388</b>	<b>878</b>	<b>1,276</b>	<b>1,546</b>	<b>1,627</b>	<b>1,716</b>	<b>1,833</b>
Capital outlay.....	344	58	339	508	615	663	719	798
Maintenance.....	139	194	348	470	567	576	586	601
Administration <sup>4</sup> .....	23	19	51	82	123	130	140	150
Interest.....	61	39	44	54	61	68	76	84
Obligations retired <sup>7</sup> .....	( <sup>1</sup> )	78	96	153	180	190	195	200

<sup>1</sup> Not available separately.

<sup>2</sup> Excludes amounts allocated for collection expenses and nonhighway purposes.

<sup>3</sup> Par value of long-term obligation. Premiums and discounts on sale of bonds included in miscellaneous income. Short-term notes and refunding issues not included.

<sup>4</sup> Includes engineering and equipment costs not charged to capital outlay, maintenance, highway police and safety, and miscellaneous expenditures.

<sup>5</sup> Comprises funds of other agencies expended directly by Public Roads as well as funds expended by those agencies. Expenditures for capital outlay, maintenance, and administration, included in the totals for capital outlay prior to 1950; thereafter included in the respective totals for these items.

<sup>6</sup> Includes expenditures by States on urban extensions of State highways.

<sup>7</sup> Par value of long-term obligations. Redemption premiums and discounts are included with interest payments. Redemption of short-term notes, or by refunding, is not included.

Source: Department of Commerce, Bureau of Public Roads; annual report, *Highway Statistics*.

**No. 729. PUBLIC HIGHWAY DEBT—LONG-TERM HIGHWAY OBLIGATIONS OF STATE AND LOCAL GOVERNMENTS ISSUED, REDEEMED, AND OUTSTANDING: 1945 TO 1960**

[In millions of dollars. State data are for calendar year; local data are for varying fiscal years. Excludes Alaska and Hawaii. Excludes duplicated and interunit obligations except as noted. Municipal obligations include data for all municipalities and other political subdivisions urban in character. See also *Historical Statistics, Colonial Times to 1957*, series Q 279, for State obligations outstanding]

ITEM	1945 <sup>1</sup>	1950	1954	1955	1956	1957	1958	1959 (prel.)	1960 (est.)
<b>Total debt issued<sup>2</sup>.....</b>	<b>49</b>	<b>652</b>	<b>2,684</b>	<b>1,174</b>	<b>1,439</b>	<b>1,200</b>	<b>1,338</b>	<b>1,048</b>	<b>1,219</b>
State obligations.....	11	400	2,317	646	1,067	702	913	602	734
County and local rural obligations.....	22	90	94	205	105	123	100	96	110
Municipal obligations.....	20	162	273	323	267	375	325	350	375
<b>Total debt redeemed<sup>3</sup>.....</b>	<b>258</b>	<b>322</b>	<b>433</b>	<b>421</b>	<b>438</b>	<b>535</b>	<b>544</b>	<b>563</b>	<b>589</b>
State obligations.....	115	143	168	191	190	253	253	257	268
County and local rural obligations.....	87	83	109	89	97	92	101	111	121
Municipal obligations.....	78	96	156	141	151	190	190	195	200
<b>Total debt outstanding.....</b>	<b>3,640</b>	<b>4,436</b>	<b>8,905</b>	<b>9,658</b>	<b>10,659</b>	<b>11,422</b>	<b>12,216</b>	<b>12,701</b>	<b>13,331</b>
State obligations.....	1,638	2,096	6,164	6,619	7,496	7,945	8,605	8,950	9,416
County and local rural obligations.....	869	872	911	1,027	1,035	1,084	1,083	1,068	1,057
Municipal obligations.....	1,218	1,468	1,830	2,012	2,128	2,393	2,528	2,683	2,858

<sup>1</sup> Duplicated and interunit obligations have been excluded from totals only.

<sup>2</sup> Excludes refunding issues.

<sup>3</sup> Excludes redemptions by refunding.

Source: Department of Commerce, Bureau of Public Roads; releases.

**No. 730. STATE-HIGHWAY SYSTEMS—EXISTING MILEAGE, MILEAGE BUILT, FUNDS AVAILABLE, AND DISBURSEMENTS: 1940 TO 1958**

[Data refer to calendar years for most States. Excludes Alaska and Hawaii. For definition of rural and municipal roads, see headnote, table 721. See also *Historical Statistics, Colonial Times to 1957*, series Q 255-259, for data on total mileage built by State highway departments]

ITEM	1940	1945	1950	1955	1957	1958
<b>Total mileage at end of year.....</b>	<b>551,766</b>	<b>573,234</b>	<b>608,468</b>	<b>661,519</b>	<b>681,642</b>	<b>690,155</b>
Primary rural State-highway systems.....	329,472	338,310	363,213	386,611	301,397	395,390
Nonsurfaced roads.....	26,991	22,873	12,007	6,303	5,302	4,552
Surfaced roads.....	302,481	315,437	351,206	380,308	386,035	390,847
Low type <sup>1</sup> .....	180,091	182,786	168,554	169,458	165,423	163,163
High type <sup>1</sup> .....	122,390	132,651	182,652	210,850	220,612	227,684
Secondary rural roads.....	195,245	202,356	209,339	222,729	231,552	234,180
Municipal extensions of State-highway systems <sup>2</sup> .....	27,049	32,568	35,910	41,912	45,226	46,860
Other State roads <sup>3</sup> .....				10,267	13,407	13,707
<b>Total mileage built during year by State-highway departments.....</b>	<b>32,594</b>	<b>15,278</b>	<b>55,487</b>	<b>53,559</b>	<b>53,235</b>	<b>54,753</b>
Graded and drained.....	2,207	283	3,364	1,545	1,798	2,071
Surfaced.....	30,387	14,995	52,123	52,014	51,437	52,682
State controlled.....	29,695	14,827	44,265	41,120	39,675	39,824
Graded and drained.....	1,423	250	1,784	694	374	313
High-type surface <sup>1</sup> .....	5,223	3,971	13,379	17,672	19,476	23,644
Low-type surface <sup>1</sup> .....	23,049	10,606	29,102	22,754	19,825	15,897
State-highway funds available <sup>4</sup> .....mil. dol.....	2,038	2,243	5,068	9,547	10,460	11,216
Disbursements of State-highway funds <sup>4</sup> .....do.....	1,678	1,299	3,562	6,034	7,702	8,470

<sup>1</sup> Through 1945, low type was distinguished from high type by quality of surfacing material used; for 1950 also by rigidity of base; and beginning 1955, combined thickness of surface and base was an added consideration.

<sup>2</sup> Includes connecting streets not under State control. Beginning 1950, excludes districts of this type in Kentucky, Maryland, Mississippi, and District of Columbia. May include the municipal portion of a State route entering a city or town.

<sup>3</sup> Mileage of State park, forest, institutional, toll, and other roads under State control.

<sup>4</sup> Includes funds transferred to or from local units and proceeds of highway-user imposts allotted by the State treasurer for county and other local roads and streets, and nonhighway purposes. See also tables 731 and 732.

<sup>5</sup> Includes accumulated reserves.

Source: Department of Commerce, Bureau of Public Roads; annual report, *Highway Statistics*.

## No. 731. DISBURSEMENTS OF STATE HIGHWAY FUNDS, BY STATES: 1921 TO 1958

[In millions of dollars. Comprises disbursements, whether from current revenues or proceeds of loans, for construction, maintenance, interest and principal payments on highway bonds, transfers to local units, and miscellaneous disbursements. Includes transactions by State toll authorities. Beginning 1940 covers calendar years; figures for earlier years for many States represent fiscal years]

STATE	1921	1930	1940	1945	1950	1955	1956	1957	1958
United States <sup>1</sup> .....	444	1,331	1,678	1,299	3,562	6,034	6,896	7,702	8,479
Alabama.....	1	20	28	26	49	87	112	119	117
Arizona.....	3	6	9	6	20	33	43	51	58
Arkansas.....	8	40	18	15	46	55	64	67	76
California.....	15	56	99	138	268	558	644	715	726
Colorado.....	5	11	15	12	38	56	70	88	99
Connecticut.....	6	16	23	15	38	79	180	292	188
Delaware.....	4	8	4	3	32	26	33	41	44
Dist. of Columbia.....	( <sup>2</sup> )	2	7	4	11	24	25	24	31
Florida.....	2	20	39	36	93	152	213	238	237
Georgia.....	10	17	39	24	74	109	115	128	151
Idaho.....	5	8	8	6	19	27	31	34	41
Illinois.....	16	53	71	53	113	229	270	449	563
Indiana.....	8	27	40	35	69	200	223	136	188
Iowa.....	19	57	33	23	79	109	137	140	168
Kansas.....	7	17	21	16	50	110	163	104	129
Kentucky.....	6	20	26	20	67	102	95	106	143
Louisiana.....	5	30	30	22	71	115	146	157	183
Maine.....	7	18	14	10	24	65	50	59	61
Maryland.....	8	20	27	19	84	138	159	195	168
Massachusetts.....	8	24	38	21	98	203	267	240	236
Michigan.....	20	48	67	50	106	249	309	344	344
Minnesota.....	7	39	31	23	65	101	113	123	158
Mississippi.....	4	11	31	23	42	75	77	82	99
Missouri.....	5	44	28	21	53	105	115	132	181
Montana.....	4	8	12	7	22	30	42	42	52
Nebraska.....	6	16	20	16	36	59	61	62	81
Nevada.....	2	3	4	2	9	15	20	26	26
New Hampshire.....	2	10	8	7	14	30	32	41	44
New Jersey.....	16	49	58	44	188	303	245	191	212
New Mexico.....	4	10	13	8	26	39	46	66	71
New York.....	39	109	199	113	304	471	464	598	641
North Carolina.....	15	26	40	29	136	141	150	180	173
North Dakota.....	2	6	7	6	22	28	31	41	54
Ohio.....	19	68	93	76	147	383	369	444	526
Oklahoma.....	7	27	24	24	73	113	148	130	158
Oregon.....	19	19	18	14	50	79	83	92	98
Pennsylvania.....	50	104	128	74	278	350	400	406	454
Rhode Island.....	2	4	8	6	14	30	25	31	37
South Carolina.....	4	23	23	22	46	57	62	74	92
South Dakota.....	5	8	9	6	20	34	42	42	49
Tennessee.....	7	56	34	32	79	108	114	131	153
Texas.....	19	65	80	67	178	282	348	372	450
Utah.....	3	5	6	6	15	23	28	30	46
Vermont.....	1	9	8	4	10	17	20	26	33
Virginia.....	7	23	28	20	76	112	147	222	182
Washington.....	10	16	40	29	78	127	135	160	190
West Virginia.....	2	24	26	27	51	64	66	70	84
Wisconsin.....	14	27	41	28	68	109	139	138	166
Wyoming.....	4	4	6	3	14	22	26	36	47

<sup>1</sup> Excludes Alaska and Hawaii.

<sup>2</sup> Less than \$500,000.

Source: Department of Commerce, Bureau of Public Roads; annual report, *Highway Statistics*.

No. 732. STATE HIGHWAY FUNDS AVAILABLE, BY SOURCE AND DISBURSEMENTS, BY PURPOSE, BY STATES: 1958

[In millions of dollars. Comprises receipts and disbursements of all State imposts on highway users, all other funds available to State highway departments, and State funds other than those of highway department which were reported as being applied to highway purposes. Includes transactions of interstate and intrastate toll authorities that are operated by State or quasi-State agencies. See also *Historical Statistics, Colonial Times to 1957*, series Q 266-278]

STATE	FUNDS AVAILABLE					DISBURSEMENTS				
	Total	Motor-vehicle fees, motor-fuel and motor-carrier taxes	Federal funds	Income from issue of bonds, notes, etc.	All other sources <sup>1</sup>	Total <sup>2</sup>	For State-administered highways <sup>3</sup>			For county and local roads and streets <sup>3</sup>
						Capital outlay, roads and bridges <sup>4</sup>	Maintenance <sup>4</sup>	Other <sup>5</sup>		
United States .....	11,216	4,688	2,247	916	3,365	8,479	4,714	867	956	1,431
Alabama.....	147	77	40	4	26	117	52	9	10	43
Arizona.....	67	34	30	-----	4	58	34	5	5	11
Arkansas.....	98	50	25	-----	23	76	36	12	13	12
California.....	872	546	186	-----	140	726	381	35	57	134
Colorado.....	108	51	39	5	13	99	65	8	7	15
Connecticut.....	209	61	22	78	49	188	126	20	27	11
Delaware.....	56	13	5	19	19	44	23	5	15	-----
Dist. of Columbia.....	39	20	6	-----	12	31	-----	-----	-----	24
Florida.....	384	163	42	11	118	237	127	18	28	14
Georgia.....	254	94	37	45	79	151	67	12	11	54
Idaho.....	44	24	18	-----	3	41	24	6	3	9
Illinois.....	729	238	107	62	322	563	358	25	45	121
Indiana.....	257	133	32	-----	93	188	77	21	22	61
Iowa.....	191	101	61	-----	29	168	87	11	6	62
Kansas.....	187	58	48	-----	51	129	79	16	14	16
Kentucky.....	204	78	37	71	18	143	95	26	14	6
Louisiana.....	240	73	38	8	121	183	116	20	28	16
Maine.....	79	20	17	6	26	61	35	13	9	3
Maryland.....	219	77	29	28	84	168	81	11	36	37
Massachusetts.....	353	94	38	94	123	236	125	26	57	21
Michigan.....	513	205	72	100	135	344	170	24	35	107
Minnesota.....	232	94	46	12	79	158	83	13	9	42
Mississippi.....	123	55	35	4	30	99	45	7	10	35
Missouri.....	187	80	79	-----	29	151	113	23	11	1
Montana.....	60	24	22	-----	14	52	35	5	7	4
Nebraska.....	81	48	24	-----	9	81	42	9	3	26
Nevada.....	29	12	13	-----	3	26	17	3	2	2
New Hampshire.....	41	18	15	23	-15	44	23	9	9	2
New Jersey.....	450	145	31	-----	274	212	71	26	55	22
New Mexico.....	78	33	36	2	7	71	50	9	5	4
New York.....	1,092	280	150	105	556	641	360	64	88	62
North Carolina.....	212	128	40	-----	43	173	95	38	25	7
North Dakota.....	62	21	27	-----	13	54	33	4	2	10
Ohio.....	710	243	173	126	168	526	311	32	58	116
Oklahoma.....	178	91	52	-----	35	158	78	11	12	35
Oregon.....	128	63	32	-----	33	98	44	14	14	21
Pennsylvania.....	629	236	103	20	270	454	267	61	72	47
Rhode Island.....	51	19	14	10	8	37	21	5	5	1
South Carolina.....	126	57	25	15	28	92	51	14	14	6
South Dakota.....	54	24	22	-----	8	49	28	5	3	13
Tennessee.....	163	99	37	15	11	153	74	11	9	52
Texas.....	529	294	129	-----	106	450	279	56	23	33
Utah.....	50	24	17	-----	9	46	33	6	4	3
Vermont.....	30	15	7	8	( <sup>7</sup> )	38	17	5	4	7
Virginia.....	197	94	32	6	64	182	102	42	27	8
Washington.....	216	98	57	30	31	190	100	18	18	32
West Virginia.....	92	48	20	10	15	84	38	31	14	-----
Wisconsin.....	190	109	48	-----	34	166	76	14	7	57
Wyoming.....	56	14	30	-----	11	47	34	4	3	4

<sup>1</sup> Balances from 1957, totaling \$2,764,244,000, and miscellaneous current revenues, totaling \$600,651,000.

<sup>2</sup> Includes disbursements not shown separately and not elsewhere included: For collection and administration of highway-user revenues, \$191,035,000; for nonhighway purposes, \$319,845,000.

<sup>3</sup> Expenditures on county roads under State control in Ala. (8 counties), Del., N. C., Va. (all except 2 counties), and W. Va. included with those for State-administered highways.

<sup>4</sup> Includes some administration, engineering, and miscellaneous disbursements.

<sup>5</sup> Disbursements for administration, engineering, and miscellaneous; State highway police and safety; bond interest; and bond retirement. <sup>6</sup> Excludes Alaska and Hawaii. <sup>7</sup> Less than \$500,000.

Source: Department of Commerce, Bureau of Public Roads; annual report, *Highway Statistics, 1958*.

No. 733. FEDERAL AND STATE GASOLINE TAX, BY STATES: 1940 TO 1959

[Cents per gallon. Where 2 figures appear in a cell, the first is tax in effect at beginning of year, the last is tax at end of year. See also *Historical Statistics, Colonial Times to 1967*, series Q 328-329]

STATE	1940	1950	1955	1958	1959 <sup>1</sup>	STATE	1940	1950	1955	1958	1959 <sup>1</sup>
Federal tax.....	1-1.5	1.5	2	3	3	Missouri.....	2	2	3	3	3
State average <sup>2</sup> .....	3.96	4.65	5.35	5.65	5.86	Montana.....	5	6	4 0-7	4 6	4 6
Alabama.....	6	6	0-7	7	7	Nebraska.....	5	6-5	6	7	7
Alaska.....	(3)	2	2-5	5	5	Nevada.....	4	4.5	4 4.5-5	6	6
Arizona.....	5	5	5	5	5	New Hampshire...	4	4	5	6	6-7
Arkansas.....	6.5	6.5	6.5	6.5	6.5	New Jersey.....	3	3	4	5	5
California.....	3	4.5	4 6	4 6	4 6	New Mexico.....	5	7	6	6	6
Colorado.....	4	6	6	6	6	New York.....	4	4	4 4	4 4	4 4-6
Connecticut.....	3	4	4-6	6	6	North Carolina...	6	7	7	7	7
Delaware.....	4	5	5	5	5	North Dakota....	4	4	5-6	6	6
Dist. of Col.....	2	4	6	6	6	Ohio.....	4	4	5	5	5-7
Florida.....	7	7	7	7	7	Oklahoma.....	4	6.5	6.5	6.5	6.5
Georgia.....	6	7	6-5	6.5	6.5	Oregon.....	5	6	6	6	6
Hawaii.....	4	4	4-5	5	5	Pennsylvania....	4	5	5-6	5	5
Idaho.....	5.1	6	6	6	6	Rhode Island....	3	4	4	6	6
Illinois.....	3	3	5	5	5	South Carolina...	6	6-7	7	7	7
Indiana.....	4	4	4	6	6	South Dakota....	4	4	5	4 6	4 6
Iowa.....	3	4	4 5-6	4 6	4 6	Tennessee.....	7	7	7	7	7
Kansas.....	3	5	5	4 5	4 5	Texas.....	4	4	4 4-5	4 5	4 5
Kentucky.....	5	7	7	5 7	5 7	Utah.....	4	4	5	6	6
Louisiana.....	7	9	7	7	7	Vermont.....	4	5	4 5-5.5	4 6.5	4 6.5
Maine.....	4	6	6-7	7	7	Virginia.....	5	6	6	4 6	4 6
Maryland.....	4	5	6	6	6	Washington.....	5	6.5	6.5	6.5	6.5
Massachusetts...	3	3	5	5.5	5.5	West Virginia...	5	5	5-6	6	6-7
Michigan.....	3	3	4 5-6	6	6	Wisconsin.....	4	4	4-6	6	6
Minnesota.....	4-3	5	5	5	5	Wyoming.....	4	4	4 5	4 5	4 5
Mississippi.....	6	6-7	4 7	4 7	4 7						

<sup>1</sup> As of August 1.

<sup>2</sup> Weighted average, based on net gallons taxed. Includes Alaska and Hawaii for 1959.

<sup>3</sup> No tax.

<sup>4</sup> Diesel fuel tax differs from gasoline tax.

<sup>5</sup> In Kentucky trucks or combinations having more than 2 axles pay 9 cents per gallon, and in Virginia commercial vehicles with more than 2 axles pay 8 cents per gallon, on all motor fuel used.

Source: Department of Commerce, Bureau of Public Roads; annual report, *Highway Statistics*.

No. 734. MOTOR FUEL CONSUMPTION, BY USE: 1940 TO 1958

[In millions of gallons. Excludes Alaska and Hawaii. Gasoline and all other fuels under State motor fuel laws. Excludes exports and Federal purchases for military use. Obtained chiefly from reports of State authorities. See also *Historical Statistics, Colonial Times to 1967*, series Q 318-320, for highway and nonhighway usage]

ITEM	1940	1945	1950	1953	1954	1955	1956	1957	1958
Total consumption <sup>1</sup> .....	24, 404	22, 304	40, 280	47, 890	49, 636	53, 116	55, 711	57, 443	59, 087
Highway.....	22, 091	19, 149	35, 653	42, 732	44, 366	47, 731	50, 214	51, 865	53, 418
Nonhighway.....	2, 037	2, 898	4, 178	4, 649	4, 753	4, 835	4, 935	5, 090	5, 171
Passenger vehicles.....	16, 759	14, 023	25, 037	30, 584	31, 070	34, 319	36, 128	37, 594	38, 904
Passenger cars <sup>2</sup> .....	16, 323	13, 323	24, 305	29, 013	30, 915	33, 548	35, 326	36, 769	38, 095
Buses <sup>3</sup> .....	436	700	732	771	755	771	802	825	809
Trucks and combinations.....	5, 156	5, 055	10, 566	12, 245	12, 541	13, 308	13, 978	14, 271	14, 514
Average gallons consumed per vehicle.....	680	617	728	757	757	759	768	767	776
Passenger cars <sup>2</sup> .....	594	517	603	637	639	644	651	652	664
Buses <sup>3</sup> .....	3, 050	4, 300	3, 752	3, 156	3, 240	3, 021	3, 145	3, 125	2, 996
Trucks and combinations.....	1, 095	1, 020	1, 267	1, 279	1, 289	1, 278	1, 302	1, 302	1, 301
Average mileage per gallon consumed per vehicle.....	13.79	13.05	12.87	12.77	12.69	12.67	12.54	12.47	12.44
Passenger cars <sup>2</sup> .....	15.29	14.95	14.95	14.70	14.58	14.53	14.37	14.40	14.30
Buses <sup>3</sup> .....	6.10	5.48	5.57	5.77	5.84	5.85	5.74	5.32	5.33
Trucks and combinations.....	9.68	9.08	8.57	8.54	8.44	8.37	8.31	7.93	7.96

<sup>1</sup> Includes losses allowed for evaporation, handling, etc.

<sup>2</sup> Includes taxicabs.

<sup>3</sup> Includes school buses.

Source: Department of Commerce, Bureau of Public Roads; annual report, *Highway Statistics*.

No. 735. MOTOR-VEHICLE OPERATORS AND CHAUFFEURS LICENSES, BY STATES:  
1957 AND 1958

[In thousands. Incomplete data for some States]

STATE	PERIOD FOR WHICH ISSUED <sup>1</sup>		1957			1958		
	Operators	Chauffeurs	Li- censes in force <sup>2</sup>	Licenses issued		Li- censes in force <sup>2</sup>	Licenses issued	
				Opera- tors	Chauf- eurs <sup>3</sup>		Opera- tors	Chauf- eurs <sup>3</sup>
United States <sup>4</sup>			79,616	37,554	4,118	81,537	34,721	4,483
Alabama	2 years	Not required	1,328	593		1,331	622	
Arizona	3 years	2 years	592	195	39	644	208	34
Arkansas	1 year	1 year	786	760	26	779	750	29
California	4 years	4 years	7,321	1,892	106	7,622	1,970	115
Colorado	3 years	3 years	1,009	355	28	1,036	302	70
Connecticut	2 years	1 year	<sup>5</sup> 1,198	673	11	<sup>5</sup> 1,253	604	9
Delaware	( <sup>6</sup> )	( <sup>6</sup> )	211	42	3	217	90	20
District of Columbia	3 years	1 year	337	107		<sup>5</sup> 337	113	( <sup>7</sup> )
Florida	1 year	1 year	2,385	2,122	263	2,432	2,153	279
Georgia	( <sup>8</sup> )	( <sup>8</sup> )	1,682	1,020	82	1,716	964	82
Idaho	2 years	2 years	378	195	19	391	157	19
Illinois	3 years	1 year	4,586	1,838	299	4,534	1,535	301
Indiana	2 years	1 year	2,301	728	270	2,293	1,322	242
Iowa	2 years	1 year	1,404	630	153	1,453	662	161
Kansas	2 years	2 years	1,318	608	101	1,348	621	19
Kentucky	2 years	1 year	<sup>5</sup> 1,202	542	3	<sup>5</sup> 1,184	642	37
Louisiana	2 years	1 year	1,173	605	118	1,252	519	128
Maine	1 year	Not required	422	422		425	426	
Maryland	Indefinite	2 years	<sup>5</sup> 1,316	92	46	<sup>5</sup> 1,337	388	51
Massachusetts	2 years	1 year	<sup>5</sup> 2,119	2,175	( <sup>7</sup> )	<sup>5</sup> 2,203	831	( <sup>7</sup> )
Michigan	3 years	1 year	3,885	1,328	252	3,959	1,121	238
Minnesota	4 years	1 year	<sup>5</sup> 1,647	346	189	<sup>5</sup> 1,709	362	<sup>9</sup> 194
Mississippi	1 or 2 years	1 or 2 years	712	383	22	726	370	23
Missouri	3 years	1 year	1,957	284	146	1,970	601	152
Montana	2 years	2 years	353	141	17	355	174	19
Nebraska	2 years	Not required	802	739		855	117	
Nevada	2 years	1 year	171	90	13	150	47	13
New Hampshire	2 years	2 years	292	55	8	280	154	63
New Jersey	1 or 3 years	1 year	2,420	1,672		<sup>5</sup> 2,462	1,709	<sup>7</sup> 4
New Mexico	2 years	1 year	445	249	51	463	191	69
New York	3 years	3 years	6,628	1,390	364	6,688	2,555	767
North Carolina	4 years	1 year	1,845	486	65	1,885	463	63
North Dakota	2 years	Not required	347	314		358	29	
Ohio	3 years	3 years	4,404	2,409	227	4,537	614	68
Oklahoma	2 years	2 years	1,075	494	69	1,135	507	64
Oregon	2 years	1 year	<sup>5</sup> 837	439	44	<sup>5</sup> 901	462	42
Pennsylvania	1 year	Not required	4,944	4,944		<sup>5</sup> 5,251	5,251	
Rhode Island	2 years	2 years	394	179	10	399	198	11
South Carolina	4 years	1 year	883	912	5	<sup>5</sup> 1,001	119	( <sup>10</sup> )
South Dakota	4 years	Not required	406	63		415	244	
Tennessee	2 years	2 years	1,505	1,290	98	1,501	106	8
Texas	2 years	1 year	4,111	1,488	838	4,168	1,805	876
Utah	5 years	5 years	413	104	11	428	110	16
Vermont	1 year	Not required	168	168		171	171	
Virginia	3 years	1 year	1,679	720	75	1,726	491	77
Washington	2 years	Not required	1,279	580		1,318	684	
West Virginia	4 years	1 year	831	165	34	886	220	36
Wisconsin	2 years	1 year	1,867	455		1,849	834	71
Wyoming	3 years	1 year	200	43	13	204	43	13

<sup>1</sup> In effect in 1958.<sup>2</sup> Estimated from data reported by States for current and previous years; no allowance made for deaths, emigration, or revocation.<sup>3</sup> Includes public service and other special licenses that are issued to operators of vehicles for hire.<sup>4</sup> Excludes Alaska and Hawaii.<sup>5</sup> Chauffeurs' licenses not added to operators' licenses since an operator's license is required in addition to the chauffeur's license.<sup>6</sup> Issued for 2-year period, but drivers meeting certain requirements may obtain licenses for indefinite period.<sup>7</sup> Special bus operators' licenses are required; numbers issued not available.<sup>8</sup> Issued for 1- or 5-year period at option of applicant.<sup>9</sup> Includes 9,083 school bus operators' licenses.<sup>10</sup> A permit to operate "For hire" vehicles is required, but the number issued is not available.Source: Department of Commerce, Bureau of Public Roads; annual report, *Highway Statistics*.

No. 736. MOTOR VEHICLES—SUMMARY OF SELECTED ITEMS: 1950 TO 1959

[Excludes Alaska and Hawaii]

ITEM	1950	1954	1955	1956	1957	1958	1959
<b>SALES, EXPORTS, IMPORTS, AND SCRAPPAGE</b>							
Passenger car factory sales, total.....	6,666	5,559	7,920	5,816	6,113	4,258	5,591
4-door sedans.....do.....	3,247	2,593	3,044	2,005	1,952	1,481	2,066
2-door sedans, coupes and coupes <sup>1</sup> .....do.....	2,794	1,493	1,691	1,186	908	705	895
"Hard-top" coupes and sedans.....do.....	207	955	2,169	1,824	2,073	1,200	1,459
Convertibles (except "hard-top").....do.....	208	156	240	189	285	194	255
Station wagons <sup>2</sup> .....do.....	142	349	759	639	890	673	913
Chassis.....do.....	9	13	18	14	6	5	4
Passenger cars (new), exported.....do.....	153	207	254	193	161	126	117
Passenger cars (new), imported.....do.....	21	35	57	108	259	431	668
Exports, total value.....\$1,000,000.....	794	1,156	1,367	1,510	1,466	1,226	1,280
Passenger cars (new).....do.....	179	300	380	331	290	258	220
Trucks and buses (new).....do.....	217	332	340	438	434	204	321
Rubber tires and tubes.....do.....	47	71	82	100	100	79	77
Parts and accessories (incl. used vehicles).....do.....	350	453	565	646	638	595	662
Imports of new passenger cars, value.....do.....	21	45	69	127	301	487	735
Vehicles scrapped, total.....\$1,000.....	3,234	4,353	4,392	4,948	4,263	4,173	( <sup>3</sup> )
Passenger cars.....do.....	2,598	3,840	3,773	4,327	3,792	3,685	( <sup>3</sup> )
Trucks and buses.....do.....	636	513	619	621	561	538	( <sup>3</sup> )
<b>TIRES AND PARTS</b>							
<b>Tires, passenger car:</b>							
Production.....1,000.....	78,598	76,794	97,223	85,523	93,547	83,636	102,637
Shipments.....do.....	84,423	77,713	93,730	84,965	90,217	85,606	97,320
Original equipment.....do.....	36,478	29,741	42,574	30,874	32,724	23,408	29,748
Replacement.....do.....	47,108	47,044	50,158	53,217	56,605	61,570	66,797
Export.....do.....	642	928	966	875	888	717	786
Inventory, year-end.....do.....	3,050	12,217	15,963	16,494	19,818	17,778	23,578
<b>Tires, truck and bus:</b>							
Production.....do.....	14,156	12,347	14,955	14,859	13,394	12,927	15,238
Shipments.....do.....	15,164	12,628	14,769	14,325	13,430	13,232	15,076
Original equipment.....do.....	4,671	3,591	4,800	4,548	4,041	3,375	4,417
Replacement.....do.....	9,705	8,111	9,057	8,804	8,544	9,226	10,015
Export.....do.....	788	826	912	883	845	631	644
Inventory, year-end.....do.....	743	2,545	2,815	3,378	3,408	3,171	3,355
Replacement parts and accessories, domestic sales (wholesale value) <sup>4</sup> .....\$1,000,000.....	1,882	1,673	1,806	1,776	2,009	2,025	2,200
Auto battery shipments for replacement, United States.....1,000.....	24,442	23,771	25,828	25,014	25,943	25,270	27,493
<b>EMPLOYMENT AND PAY</b>							
Total employment, automotive mfg.....number.....	825,200	775,600	903,800	809,900	786,300	627,300	6731,600
Average employment, production workers.....do.....	701,600	624,400	746,400	648,500	630,100	476,700	573,600
Total payrolls, production workers.....\$1,000,000.....	2,672	2,887	3,795	3,210	3,342	2,462	( <sup>5</sup> )
Average weekly earnings.....dollars.....	73.25	88.91	97.78	94.71	98.40	99.31	110.43
Average weekly hours.....hours.....	41.2	40.6	42.7	40.3	40.0	39.1	40.9
Average hourly earnings.....dollars.....	1.778	2.19	2.29	2.35	2.46	2.54	2.70
<b>SPECIAL MOTOR-VEHICLE TAXES<sup>6</sup></b>							
Special motor-vehicle taxes, total.....\$1,000,000.....	4,342	6,290	7,280	7,829	8,731	8,527	9,328
Federal excise.....do.....	1,479	2,204	2,736	2,858	3,513	3,132	3,675
State gross registration receipts.....do.....	948	1,334	1,483	1,592	1,661	1,702	1,775
State gasoline, net.....do.....	1,667	2,306	2,543	2,792	2,907	2,982	3,100
Special city and county.....do.....	90	202	228	247	267	284	303
Bridge, tunnel, ferry, road tolls.....do.....	157	244	291	339	383	427	475
<b>TRAFFIC DEATHS</b>							
Traffic deaths, total <sup>8</sup> .....number.....	34,763	35,586	38,426	39,628	38,702	37,000	37,800
Noncollision accidents.....do.....	10,950	12,650	13,550	14,450	13,050	13,100	13,300
Collision accidents:							
With other motor vehicles.....do.....	11,250	11,750	13,000	13,650	13,500	12,600	13,300
With pedestrians.....do.....	9,100	8,000	8,200	7,950	7,900	7,800	7,706
With other vehicles or objects.....do.....	3,490	3,277	3,655	3,578	3,649	3,497	3,500
Traffic death rates:							
Per 100,000 population.....do.....	23.0	22.1	23.4	23.7	22.7	21.4	21.4
Per 10,000 motor vehicles.....do.....	7.1	6.1	6.1	6.1	5.8	5.4	5.4
Per 100 million vehicle miles.....do.....	7.6	6.3	6.4	6.3	6.0	5.6	5.4

<sup>1</sup> Includes business coupes. <sup>2</sup> Excludes station wagons on commercial vehicle chassis.

<sup>3</sup> Not available. <sup>4</sup> Government purchases not included. Estimates based on Federal excise tax receipts.

<sup>5</sup> Special taxes on motor-vehicle users; excludes income and property taxes on motor vehicle, body, parts and tire factories; garages; dealers; repair shops; terminal and truck, including taxicab and bus, operating companies.

<sup>6</sup> Preliminary. <sup>7</sup> Includes amounts collected on use of vehicles over 26,000 lbs. as follows: 1956, \$1,513,000 (tax effective Oct. 1); 1957, \$54,999,000; 1958, \$32,820,000; 1959, \$35,855,000.

<sup>8</sup> Totals do not equal the sum of the various types because the estimates were generally made only to the nearest 10 deaths, and to the nearest 50 deaths for certain types.

Source: Automobile Manufacturers Association, Detroit, Mich.; *Automobile Facts and Figures*.

No. 737. MOTOR-VEHICLE TRAVEL, BY TYPE OF VEHICLE AND CLASS OF ROAD: 1940 TO 1958

[In millions of vehicle-miles, except averages. Estimates for total United States travel based on automatic traffic recorder data from 48 States. Urban travel includes all travel in municipalities and most travel in urbanized areas. All other travel is classed as rural. See also *Historical Statistics, Colonial Times to 1967*, series Q 321-327]

ITEM	1940	1945	1950	1954	1955	1956	1957	1958
<b>Total travel</b> .....	302,188	250,173	458,246	560,857	603,434	627,843	647,004	664,653
<b>CLASS OF ROAD</b>								
Rural.....	152,195	120,012	230,998	317,218	336,153	352,379	350,305	357,594
Main rural roads.....	109,861	85,921	174,350	217,059	227,988	237,748	259,996	265,197
Local rural roads.....	42,334	34,091	56,648	100,159	108,165	114,631	90,309	92,387
Urban.....	149,993	130,161	218,248	243,639	267,281	275,464	296,699	307,059
<b>TYPE OF VEHICLE</b>								
Passenger vehicles.....	252,257	204,232	367,694	455,013	492,047	511,743	533,798	549,183
Rural.....	121,888	92,831	183,218	248,844	265,667	278,287	277,235	283,454
Urban.....	130,269	111,401	184,476	206,169	226,380	233,456	256,563	265,729
Passenger cars (incl. taxicabs).....	249,600	200,308	363,613	450,605	487,540	507,138	529,405	544,873
Rural.....	120,540	90,926	181,095	246,300	263,088	275,686	275,034	281,253
Urban.....	129,060	109,472	182,518	204,305	224,452	231,452	254,371	263,620
All buses.....	2,657	5,834	4,081	4,408	4,507	4,605	4,393	4,310
Rural.....	1,448	1,905	2,123	2,544	2,579	2,601	2,201	2,201
Urban.....	1,209	1,929	1,958	1,864	1,928	2,004	2,192	2,109
Commercial buses.....	1,944	3,192	3,271	3,196	3,256	3,271	3,041	2,914
Rural.....	808	1,328	1,394	1,453	1,452	1,417	1,098	1,060
Urban.....	1,136	1,864	1,877	1,743	1,804	1,854	1,943	1,854
School and nonrevenue buses.....	713	642	810	1,212	1,251	1,334	1,352	1,396
Rural.....	640	577	729	1,091	1,127	1,184	1,103	1,141
Urban.....	73	65	81	121	124	150	249	255
Trucks and combinations.....	49,831	45,941	90,552	105,844	111,387	116,100	113,206	115,470
Rural.....	30,207	27,181	56,780	68,374	70,486	74,092	73,070	74,130
Urban.....	19,724	18,760	33,772	37,470	40,901	42,008	40,136	41,340
<b>AVERAGE MILES PER VEHICLE</b>								
Passenger vehicles.....	9,129	7,870	9,078	9,354	9,400	9,389	9,425	9,524
Passenger cars (incl. taxicabs).....	9,080	7,771	9,020	9,308	9,359	9,348	9,391	9,494
All buses.....	18,589	23,521	20,910	18,918	17,658	18,059	16,640	15,963
Commercial buses.....	36,000	38,458	36,500	38,506	34,035	34,432	35,776	34,690
School and nonrevenue buses.....	8,011	8,025	7,775	8,080	7,836	8,338	7,553	7,595
Trucks and combinations.....	10,626	9,270	10,776	10,883	10,697	10,813	10,328	10,348

Source: Department of Commerce, Bureau of Public Roads; releases.

No. 738. MOTOR VEHICLES—FACTORY SALES AND REGISTRATIONS: 1900 TO 1959

[Beginning 1959, registrations include Alaska and Hawaii. See also *Historical Statistics, Colonial Times to 1967*, series Q 310-317]

YEAR	FACTORY SALES						REGISTRATIONS <sup>3</sup> (1,000)				
	Number (1,000)			Wholesale value <sup>2</sup> (\$1,000,000)			Total	Passenger cars and taxis <sup>4</sup>	Trucks and buses <sup>4</sup>		
	Total	Passenger cars	Trucks and buses <sup>1</sup>	Total	Passenger cars					Trucks and buses <sup>1</sup>	
					Total value	Average price				Total value	Average price
1900.....	4	4	6	5	1,169	-----	8	8	10		
1910.....	187	181	6	225	215	1,189	10	1,610	469		
1920.....	2,227	1,906	322	2,232	1,809	949	423	1,315	9,239		
1930.....	3,363	2,787	575	2,035	1,644	590	391	679	26,750		
1940.....	4,472	3,717	755	2,938	2,371	638	568	752	32,453		
1945.....	725	70	656	1,239	57	823	1,182	1,803	31,035		
1950.....	8,003	6,666	1,337	10,176	8,468	1,270	1,708	1,277	49,162		
1953.....	7,323	6,117	1,206	11,092	9,003	1,472	2,089	1,732	56,221		
1954.....	6,601	5,569	1,042	9,878	8,218	1,478	1,660	1,593	58,510		
1955.....	9,169	7,920	1,249	14,474	12,453	1,572	2,021	1,618	62,694		
1956.....	6,921	5,816	1,104	11,832	9,765	1,677	2,077	1,881	65,154		
1957.....	7,221	6,113	1,107	13,281	11,198	1,832	2,083	1,881	67,131		
1958.....	5,135	4,258	877	9,740	8,010	1,881	1,730	1,973	68,299		
1959.....	6,728	5,591	1,137	12,880	10,530	1,883	2,350	2,067	71,502		

<sup>1</sup> A substantial part of the trucks and buses reported comprises chassis without body; hence, excludes the value of bodies for these chassis. Includes military trucks.

<sup>2</sup> Beginning 1940, includes value of standard equipment. <sup>3</sup> Includes publicly owned vehicles.

<sup>4</sup> Prior to 1930, buses included with passenger cars. <sup>5</sup> Preliminary estimate.

Source: Factory sales—Automobile Manufacturers Association, Detroit, Mich.; *Automobile Facts and Figures*. Registrations—Department of Commerce, Bureau of Public Roads; annual report, *Highway Statistics*.

**No. 739. MOTOR-VEHICLE REGISTRATIONS (PASSENGER CARS, BUSES, AND TRUCKS),  
BY STATES: 1920 TO 1959**

[In thousands. Includes publicly owned vehicles. For uniformity, figures have been adjusted to a calendar-year basis as registration years in States differ. Figures represent net numbers where possible, excluding re-registrations and nonresident registrations]

STATE	1920	1925	1930	1935	1940	1945	1950	1955	1958	1959
United States.....	9,239	20,069	26,750	26,546	32,453	31,035	49,162	62,694	68,299	71,502
Alabama.....	75	196	281	249	346	366	686	1,041	1,146	1,221
Alaska.....	( <sup>1</sup> )									
Arizona.....	35	69	112	107	143	148	271	415	522	578
Arkansas.....	59	184	221	210	261	279	477	584	643	682
California.....	584	1,459	2,060	2,177	2,808	2,894	4,620	6,189	7,013	7,418
Colorado.....	129	241	311	288	358	348	504	737	841	885
Connecticut.....	119	252	334	371	495	510	716	921	1,029	1,061
Delaware.....	18	40	57	58	73	69	108	154	177	185
District of Columbia.....	34	105	159	174	165	114	195	197	198	201
Florida.....	74	288	331	362	503	526	985	1,616	2,077	2,253
Georgia.....	146	251	345	399	510	531	898	1,239	1,348	1,436
Hawaii.....	( <sup>1</sup> )									
Idaho.....	51	83	120	121	167	154	272	338	349	364
Illinois.....	569	1,267	1,646	1,538	1,939	1,794	2,651	3,268	3,570	3,678
Indiana.....	333	732	880	857	1,009	990	1,435	1,763	1,915	1,983
Iowa.....	437	662	783	705	803	701	1,072	1,195	1,244	1,296
Kansas.....	204	459	598	553	589	607	853	1,048	1,105	1,136
Kentucky.....	113	263	334	352	470	442	784	1,032	1,123	1,161
Louisiana.....	73	209	279	275	372	409	707	952	1,098	1,142
Maine.....	63	141	188	184	209	210	276	323	357	367
Maryland.....	103	238	324	349	449	462	685	938	1,045	1,102
Massachusetts.....	274	639	851	792	914	808	1,280	1,546	1,690	1,738
Michigan.....	413	993	1,338	1,254	1,671	1,475	2,433	3,114	3,109	3,201
Minnesota.....	324	571	736	733	879	757	1,169	1,365	1,476	1,525
Mississippi.....	68	178	239	190	264	268	484	637	672	692
Missouri.....	297	606	766	772	930	860	1,261	1,490	1,616	1,744
Montana.....	61	96	137	153	196	161	265	336	359	376
Nebraska.....	219	340	428	409	417	410	569	662	682	706
Nevada.....	10	22	30	36	46	47	77	124	149	162
New Hampshire.....	35	82	113	118	137	131	172	212	238	252
New Jersey.....	228	586	861	899	1,100	1,031	1,579	2,061	2,241	2,307
New Mexico.....	18	50	85	95	128	121	238	340	362	446
New York.....	670	1,638	2,330	2,359	2,775	2,860	3,785	4,843	4,877	5,011
North Carolina.....	141	344	462	475	607	620	1,066	1,437	1,546	1,641
North Dakota.....	91	145	184	165	184	182	276	309	329	339
Ohio.....	621	1,354	1,773	1,732	1,942	1,927	2,795	3,526	3,811	3,939
Oklahoma.....	213	427	555	508	584	512	831	1,026	1,090	1,143
Oregon.....	115	218	255	290	401	421	689	802	845	878
Pennsylvania.....	570	1,340	1,775	1,765	2,168	1,983	3,010	3,737	4,054	4,182
Rhode Island.....	50	102	137	150	189	180	251	308	324	332
South Carolina.....	94	170	221	240	343	341	579	782	839	887
South Dakota.....	120	169	206	181	198	181	290	325	337	349
Tennessee.....	102	247	374	360	461	467	858	1,102	1,203	1,264
Texas.....	428	987	1,378	1,398	1,716	1,605	2,968	3,869	4,144	4,351
Utah.....	43	74	115	108	143	157	247	336	380	402
Vermont.....	32	70	87	83	95	91	121	136	145	149
Virginia.....	115	287	381	393	509	556	918	1,243	1,380	1,387
Washington.....	174	332	452	468	573	626	924	1,164	1,281	1,329
West Virginia.....	81	210	260	254	309	290	482	552	604	590
Wisconsin.....	203	597	788	763	913	830	1,201	1,386	1,509	1,548
Wyoming.....	24	48	62	71	88	85	145	174	188	198

<sup>1</sup> Not available.

Source: Department of Commerce, Bureau of Public Roads; annual report, *Highway Statistics*.

## No. 740. MOTOR-VEHICLE REGISTRATIONS, BY STATES: 1958 AND 1959

[In thousands]

STATE	1958					1959				
	Total	Motor vehicles		Publicly owned vehicles, Federal, State, county, etc. <sup>1</sup>	Motor-cycles (including official) <sup>1</sup>	Total	Motor vehicles		Publicly owned vehicles, Federal, State, county, etc. <sup>1</sup>	Motor-cycles (including official) <sup>1</sup>
		Private and commercial	Automobiles (incl. taxicabs)				Trucks and buses	Private and commercial		
United States.....	68,299	56,645	10,778	877.3	521.3	71,502	59,322	11,250	930.4	565.4
Alabama.....	1,146	922	207	16.8	9.7	1,221	986	218	17.2	10.1
Alaska.....	(2)	(2)	(2)	(2)	(2)	71	51	18	2.1	0.8
Arizona.....	522	405	107	9.9	7.2	578	450	117	11.1	8.3
Arkansas.....	643	449	186	8.5	3.9	682	479	195	8.8	4.8
California.....	7,013	5,920	1,000	93.0	64.1	7,418	6,256	1,063	99.0	72.2
Colorado.....	841	647	180	13.7	8.9	885	681	190	14.3	10.4
Connecticut.....	1,029	898	120	10.1	5.5	1,061	932	119	10.4	6.0
Delaware.....	177	133	43	1.8	0.9	185	137	46	2.2	0.8
Dist. of Col.....	198	173	19	5.9	0.8	201	176	19	6.2	0.8
Florida.....	2,077	1,777	274	25.6	26.2	2,253	1,934	291	27.7	23.7
Georgia.....	1,348	1,077	254	17.7	8.8	1,436	1,152	265	18.6	8.8
Hawaii.....	(2)	(2)	(2)	(2)	(2)	214	182	28	3.9	3.2
Idaho.....	349	241	100	7.7	2.7	364	249	107	8.2	3.1
Illinois.....	3,570	3,119	420	31.2	33.4	3,678	3,213	432	33.2	27.0
Indiana.....	1,915	1,569	331	16.1	17.5	1,983	1,624	344	14.7	18.4
Iowa.....	1,244	1,004	225	15.0	9.9	1,296	1,047	233	15.8	10.5
Kansas.....	1,105	837	252	16.8	10.0	1,136	857	262	17.5	11.0
Kentucky.....	1,123	884	226	13.4	6.0	1,161	918	229	13.9	6.7
Louisiana.....	1,098	871	214	13.3	8.2	1,142	908	220	14.2	8.3
Maine.....	357	281	71	4.8	1.6	367	290	72	4.9	1.8
Maryland.....	1,045	902	134	8.8	4.2	1,102	953	140	9.4	5.8
Massachusetts.....	1,690	1,494	174	20.9	6.3	1,539	1,397	176	22.4	8.0
Michigan.....	3,109	2,708	368	32.4	34.7	3,201	2,787	380	33.8	36.3
Minnesota.....	1,472	1,205	254	17.1	10.5	1,525	1,245	261	18.7	11.6
Mississippi.....	672	484	176	11.0	2.8	692	504	176	12.4	3.3
Missouri.....	1,616	1,298	303	15.0	10.2	1,744	1,411	317	15.9	9.7
Montana.....	359	245	107	7.7	1.8	376	256	112	7.4	2.3
Nebraska.....	682	516	158	7.9	4.9	706	535	163	8.5	5.3
Nevada.....	149	113	32	3.8	2.0	162	123	35	4.0	2.5
New Hampshire.....	238	192	40	6.1	1.7	252	204	41	6.5	2.0
New Jersey.....	2,241	1,960	253	27.5	11.5	2,307	2,020	258	29.3	12.7
New Mexico.....	392	287	98	6.2	6.0	446	326	113	7.4	7.1
New York.....	4,877	4,347	472	57.7	16.3	5,011	4,472	479	60.4	17.7
North Carolina.....	1,546	1,228	285	33.5	5.2	1,641	1,308	297	36.1	6.1
North Dakota.....	329	220	105	3.9	1.0	339	227	108	4.4	1.2
Ohio.....	3,811	3,361	412	38.0	38.5	3,939	3,478	422	39.5	41.2
Oklahoma.....	1,090	814	260	15.7	11.7	1,143	851	275	16.4	12.6
Oregon.....	845	672	156	16.4	6.5	878	700	160	17.7	7.4
Pennsylvania.....	4,054	3,479	594	40.9	26.2	4,182	3,587	548	47.2	28.3
Rhode Island.....	324	285	36	2.9	1.6	332	293	36	3.1	1.7
South Carolina.....	839	679	144	16.4	6.6	887	724	146	16.9	7.0
South Dakota.....	337	244	88	5.4	2.0	349	252	91	6.2	2.3
Tennessee.....	1,203	977	208	18.3	8.2	1,264	1,028	217	18.6	9.5
Texas.....	4,144	3,278	812	53.7	41.0	4,351	3,435	862	54.0	47.1
Utah.....	380	299	74	6.9	2.1	402	316	70	7.3	2.8
Vermont.....	145	116	27	2.1	1.0	149	119	28	2.2	1.2
Virginia.....	1,380	1,148	211	20.3	10.2	1,387	1,156	209	21.7	7.1
Washington.....	1,281	1,032	223	25.6	6.1	1,329	1,070	234	24.7	6.4
West Virginia.....	594	473	111	9.3	3.0	590	467	113	9.4	3.3
Wisconsin.....	1,509	1,249	240	19.8	10.9	1,548	1,281	246	20.9	11.8
Wyoming.....	188	129	54	4.3	1.1	193	133	60	4.4	1.5

<sup>1</sup> Excludes vehicles owned by military services.<sup>2</sup> Not available.<sup>3</sup> Includes 2,087 automobiles of the diplomatic corps for 1958, and 2,306 for 1959.Source: Department of Commerce, Bureau of Public Roads; annual report, *Highway Statistics*.

No. 741. AUTOMOBILE OWNERSHIP, AGE, AND FINANCING: 1948 TO 1959

[Excludes Alaska and Hawaii. For definitions of families and spending units, see headnotes, tables 420 and 415, respectively]

ITEM	1948	1950	1954	1955	1956	1957	1958	1959
Total number of families in U.S. 1.....millions..	42.5	45.7	48.7	49.3	50.4	51.2	52.0	52.6
Total owning automobiles.....percent.....	54	60	70	71	72	75	74	74
Total number of spending units in U.S. 1.....millions..	49.0	52.6	54.0	54.3	55.0	56.1	56.9	56.9
Total owning automobiles 2.....percent.....	50	55	66	67	70	72	70	71
Automobiles owned, by age: 3								
Less than 2 years old.....do.....		17	13	12	16	14	12	10
2 and 3 years old.....do.....		19	23	22	21	24	25	23
4, 5, 6, and 7 years old.....do.....		6	40	43	41	40	37	38
8 years old and over.....do.....		58	24	23	22	22	26	28
Total automobile purchasers 2.....millions..	8.6	12.8	12.9	15.5	13.8	12.8	12.6	
New car.....do.....	3.1	5.3	4.3	6.1	5.2	4.4	3.9	
Average price paid.....dollars.....	2,130	2,220	2,720	2,940	3,070	3,230	2,990	
Used car.....millions..	5.5	7.5	8.6	9.4	8.6	8.4	8.7	
Average price paid.....dollars.....	880	730	800	780	800	900	850	
Method of financing by purchasers: 2								
All passenger-car buyers 4.....percent.....	100	100	100	100	100	100	100	(*)
Full cash (including trade-in allowance).....do.....	59	47	37	38	36	38	43	
Installment credit and other borrowing.....do.....	39	52	61	60	61	60	56	
New-passenger-car buyers 4.....do.....	100	100	100	100	100	100	100	
Full cash (including trade-in allowance).....do.....	66	54	38	39	34	34	36	
Installment credit and other borrowing.....do.....	33	46	61	60	63	65	63	
Used-passenger-car buyers 4.....do.....	100	100	100	100	100	100	100	
Full cash (including trade-in allowance).....do.....	55	41	30	37	38	39	45	
Installment credit and other borrowing.....do.....	42	57	61	60	60	58	54	

1 At time of survey, early in year.

2 Covers spending units buying cars during year and still owning them at survey time (January-February of following year). 3 Age is determined by subtracting model year from year of survey.

4 Not available. 5 Includes buyers from whom method of financing was not ascertained. Beginning 1958, such buyers were assigned to either the cash or credit group; prior to that, the data shown for cash and credit buyers reflect only those buyers who reported method of financing.

Source: Board of Governors of the Federal Reserve System. Based on sample data from Surveys of Consumer Finances, conducted by Survey Research Center of University of Michigan for Board of Governors. Data appear periodically in *Federal Reserve Bulletin*.

No. 742. AUTOMOBILE INSURANCE—PREMIUMS WRITTEN AND LOSSES PAID, BY TYPE: 1950 TO 1958

[In millions of dollars. Beginning 1956, includes Alaska and beginning 1957, includes Hawaii. 1950 to 1952, net basis; beginning 1953, direct writing basis]

YEAR	TOTAL INSURANCE			LIABILITY			PROPERTY DAMAGE 1			PHYSICAL DAMAGE 2		
	Premi-ums written	Losses paid	Percent losses paid of premi-ums written	Premi-ums written	Losses paid	Percent losses paid of premi-ums written	Premi-ums written	Losses paid	Percent losses paid of premi-ums written	Premi-ums written	Losses paid	Percent losses paid of premi-ums written
1950----	2,625	1,069	40.7	931	396	42.5	482	231	47.9	1,212	442	36.5
1952----	3,608	1,646	45.6	1,332	569	42.7	715	369	51.5	1,561	708	45.4
1953----	4,165	1,810	43.5	1,562	661	42.3	833	374	44.9	1,770	775	43.8
1954----	4,175	1,869	44.8	1,642	746	45.4	877	387	44.1	1,656	736	44.4
1955----	4,644	2,122	45.7	1,735	820	47.3	896	415	46.3	2,013	887	43.6
1956----	4,541	2,363	52.0	1,899	923	48.6	925	488	52.8	1,717	952	55.4
1957----	5,037	2,714	53.9	2,180	1,141	52.3	989	541	54.7	1,868	1,032	55.2
1958----	5,404	2,846	52.7	2,432	1,280	52.6	1,087	572	52.6	1,885	994	52.7

1 Covers real property against damage by autos. 2 Covers auto fire, theft, collision, and comprehensive.

Source: The Spectator, Philadelphia, Pa.; *Insurance Yearbook*, Fire and Casualty Volume; and beginning 1953, Insurance by States Volume.

No. 743. SPEED OF MOTOR VEHICLES: 1945 TO 1959

[Excludes Alaska and Hawaii. Based on actual speed of each vehicle recorded on tangent sections of main rural highways during off-peak hours]

ITEM	1945 <sup>1</sup>	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
Number of vehicles recorded.....1,000.....	96	280	273	341	241	236	395	381	344	515	391
Average speed, all vehicles.....m. p. h.....	44.0	47.6	48.9	49.5	49.7	49.7	50.7	50.5	51.4	51.7	51.9
Passenger cars.....do.....	45.0	48.7	50.1	50.8	51.1	51.1	52.1	51.8	52.6	52.8	53.2
Trucks.....do.....	39.8	43.0	44.4	45.0	44.9	45.2	45.8	46.2	47.0	47.3	47.2
Buses.....do.....	45.5	49.8	51.2	52.1	51.5	51.8	52.6	52.3	52.6	53.6	53.5
Vehicles exceeding—											
40 m. p. h.....percent.....	64	77	82	84	85	86	87	87	89	90	89
45 m. p. h.....do.....	42	58	63	68	69	69	73	72	75	77	76
50 m. p. h.....do.....	24	37	42	45	47	46	51	49	52	55	55
55 m. p. h.....do.....	11	20	24	26	27	26	31	30	33	33	36
60 m. p. h.....do.....	5	8	11	12	13	12	15	14	15	15	10

1 August 15 to December 31.

Source: Department of Commerce, Bureau of Public Roads.

## No. 744. MOTOR-VEHICLE ACCIDENT DEATHS, BY AGE AND SEX: 1958

[Excludes Alaska and Hawaii]

AGE	Both sexes	Male	Female	AGE		Both sexes	Male	Female
				25 to 34 years.....	35 to 44 years.....			
All ages.....	36,981	27,492	9,489	45 to 54 years.....	4,758	4,607	3,652	1,106
Under 5 years.....	1,791	1,031	760	55 to 64 years.....	4,204	3,064	2,608	1,140
5 to 9 years.....	1,524	1,022	502	65 years and over.....	3,718	3,893	21	1,110
10 to 14 years.....	1,186	805	381	Not stated.....	5,727	29	1,834	8
15 to 19 years.....	4,021	3,070	951					
20 to 24 years.....	4,367	3,719	648					

## No. 745. MOTOR-VEHICLE ACCIDENT DEATHS, BY PLACE OF DEATH AND PLACE OF RESIDENCE: 1950 TO 1958

STATE	BY PLACE OF DEATH					BY PLACE OF RESIDENCE <sup>1</sup>						
	1950	1954	1955	1956	1958	1950	1954	1955	1956	1957	1958	
United States.....	34,859	35,687	38,521	39,729	38,834	37,087	34,763	35,586	38,426	39,628	38,702	36,981
Ala.....	859	776	859	980	947	878	855	805	864	1,016	937	902
Alaska.....	22	44	31	28	36	33	(2)	(2)	(2)	(2)	(2)	(2)
Ariz.....	333	441	384	502	473	529	278	360	335	414	383	459
Ark.....	365	408	447	503	503	445	383	420	467	497	508	445
Calif.....	3,082	3,168	3,524	3,859	3,792	3,594	3,173	3,266	3,609	3,975	3,895	3,696
Colo.....	415	414	455	427	411	414	408	408	406	415	418	401
Conn.....	287	264	353	304	302	266	291	270	351	314	317	269
Del.....	84	103	112	92	101	89	80	83	104	96	92	94
D. C.....	102	83	99	86	87	83	134	106	119	104	130	100
Fla.....	882	1,004	1,048	1,238	1,145	1,189	842	915	977	1,135	1,113	1,159
Ga.....	928	1,005	1,122	1,161	1,067	1,021	906	952	1,094	1,120	1,031	979
Hawaii.....	74	57	64	73	96	73	(2)	(2)	(2)	(2)	(2)	(2)
Idaho.....	243	240	184	245	214	200	226	235	181	237	195	263
Ill.....	1,953	1,714	1,877	2,018	1,981	1,797	2,042	1,839	1,994	2,167	2,044	1,926
Ind.....	1,136	1,119	1,189	1,262	1,200	1,099	1,087	1,067	1,148	1,239	1,172	1,077
Iowa.....	620	613	613	700	718	630	634	630	636	681	710	650
Kansas.....	546	634	613	691	608	582	529	617	537	678	589	570
Ky.....	753	807	907	812	843	779	722	730	862	765	797	735
La.....	585	634	703	916	842	841	551	610	677	876	827	810
Maine.....	161	152	177	174	157	216	155	155	176	177	151	211
Md.....	480	511	500	544	558	517	442	501	498	581	526	485
Mass.....	492	555	621	394	421	579	544	507	675	454	463	617
Mich.....	1,627	1,830	2,036	1,781	1,582	1,417	1,692	1,911	2,145	1,842	1,662	1,407
Minn.....	558	667	613	672	727	734	587	693	612	711	750	752
Miss.....	525	461	562	586	562	574	519	447	544	565	550	548
Mo.....	902	1,023	1,079	1,164	1,070	1,013	942	995	1,084	1,112	1,060	964
Mont.....	209	229	244	276	221	208	191	219	239	260	226	203
Nebr.....	317	339	331	325	317	359	305	340	337	355	351	369
Nev.....	122	155	186	150	144	151	81	88	123	94	104	117
N. H.....	103	89	110	100	98	101	96	87	103	100	98	95
N. J.....	715	828	815	791	854	773	646	765	767	796	825	755
N. Mex.....	340	394	383	431	465	431	263	291	295	349	370	346
N. Y.....	1,961	2,080	2,163	2,160	2,208	2,114	2,098	2,222	2,310	2,313	2,344	2,260
N. C.....	1,153	1,062	1,222	1,185	1,134	1,150	1,113	1,074	1,217	1,177	1,144	1,129
N. Dak.....	105	157	153	172	165	169	111	158	171	170	158	175
Ohio.....	1,850	1,900	2,089	2,011	2,076	1,819	1,892	1,949	2,137	2,056	2,124	1,855
Okla.....	504	567	569	672	696	666	510	572	608	685	709	686
Oreg.....	461	446	434	444	489	460	465	421	434	435	473	436
Pa.....	1,656	1,662	1,872	1,984	1,857	1,746	1,744	1,772	1,948	2,034	1,927	1,798
R. I.....	67	68	94	76	84	74	89	79	98	80	85	82
S. C.....	627	571	696	729	698	590	633	550	670	694	662	573
S. Dak.....	198	188	200	191	190	236	196	172	200	193	188	221
Tenn.....	801	769	968	835	783	799	778	775	913	801	776	779
Tex.....	2,499	2,498	2,602	2,625	2,575	2,424	2,498	2,520	2,599	2,712	2,587	2,469
Utah.....	199	222	211	223	230	206	202	211	192	208	207	200
Vt.....	69	64	87	101	103	80	82	54	82	93	98	83
Va.....	929	826	909	840	933	884	857	775	830	775	842	774
Wash.....	534	455	514	572	553	610	543	488	545	599	590	667
W. Va.....	400	366	398	446	498	398	422	374	410	459	495	405
Wis.....	857	866	954	976	913	818	806	851	910	921	882	815
Wyo.....	149	159	145	177	167	149	117	119	114	143	117	110

<sup>1</sup> Excludes Alaska and Hawaii. <sup>2</sup> Not available.Source of tables 744 and 745: Department of Health, Education, and Welfare, Public Health Service, National Office of Vital Statistics; annual report, *Vital Statistics of the United States*.

## Section 21

### Transportation, Land and Air

This section presents statistics concerning the systems of mass transport of persons and goods by land and air. The modes of transport included are railroad, trucking, bus and streetcar, pipeline, and civil aviation. The principal sources of these data are *Transport Statistics in the United States*, Part 1, published annually by the Interstate Commerce Commission; the *Transit Fact Book*, relating to street railways and motor buses, published annually by the American Transit Association, and the *Statistical Handbook of Aviation* published by the Federal Aviation Agency. Various periodic reports such as the *Monthly Report on Transportation Statistics* and the quarterly and annual *Statistics of Class I Motor Carriers* (issued as Part 7 of *Transport Statistics*) are issued by the Interstate Commerce Commission. In addition, the Association of American Railroads supplements official railroad statistics with various releases, and the annual review and statistical number of *Fleet Owner (Bus Transportation)* prior to January 1957, a McGraw-Hill publication, summarizes operations of common carrier and school buses. The Interstate Commerce Commission also issues annually *Selected Financial and Operating Statistics from Annual Reports of Electric Railways* (issued as Part 4 of *Transport Statistics*), an abstract of the annual reports of electric railway companies, chiefly interurban, which report to it. Figures relating to oil pipelines are compiled by the Interstate Commerce Commission and appear in its annual report on *Statistics of Oil Pipe-Line Companies* (issued as Part 6 of *Transport Statistics*).

**Railroads.**—The total railroad mileage of the United States comprises: (1) Regular interstate carriers (and their nonoperating subsidiaries) reporting to the Interstate Commerce Commission; (2) switching and terminal railroads, also reporting to the Commission; and (3) private railroads (identified by the Commission as "circular" because they report on brief circulars, or as "unofficial" when their reports are received too late for tabulation). Except for certain mileage data, the circular and unofficial companies are not included in any of the statistics. The switching and terminal roads were formerly included with operating railroads, but are now separated, and data for them do not appear in most of the tables.

Nonoperating subsidiaries comprise proprietary companies, which are covered by the reports of operating carriers, and lessor companies which have no traffic and whose reports appear only in statistics of capitalization, dividends, and investment.

Operating railroads are classified on the basis of operating revenues. Prior to 1956, the classification was as follows: Class I, those having more than \$1,000,000 gross annual operating revenue; class II, from \$100,000 to \$1,000,000; and class III, less than \$100,000. Since 1956, the following classification has been in effect: Class I, \$3,000,000 or more; and class II, under \$3,000,000. Class III has been eliminated.

**Motor carriers.**—Statistics of class I for-hire carriers are compiled by the Interstate Commerce Commission from annual and quarterly reports submitted to it by these carriers. Prior to 1950, class I motor carriers were those with \$100,000 or more of gross annual operating revenue. Beginning with 1950, the class I minimum became \$200,000. Beginning with 1957, the class I minimum for motor carriers of property was increased to \$1,000,000; however, the minimum for class I motor carriers of passengers remained at \$200,000.

**Civil aeronautics.**—Federal promotion and regulation of civil aviation are carried out by two bodies—the Federal Aviation Agency and the Civil Aeronautics Board. The Board issues certificates permitting persons to engage in air transportation as a

business, fixes air mail rates which they may charge, and may establish maximum and minimum rates for transportation of passengers and goods. It also has the duty of investigating accidents in air transportation.

The principal activities of the Federal Aviation Agency are: Controlling the use of navigable airspace; prescribing regulations dealing with the competency of airmen, airworthiness of aircraft, and air traffic control; operation of air route traffic control centers, airport traffic control towers, and flight service stations; the design, construction, maintenance, and inspection of navigation, traffic control, and communications equipment for the airways; and promotion of air safety.

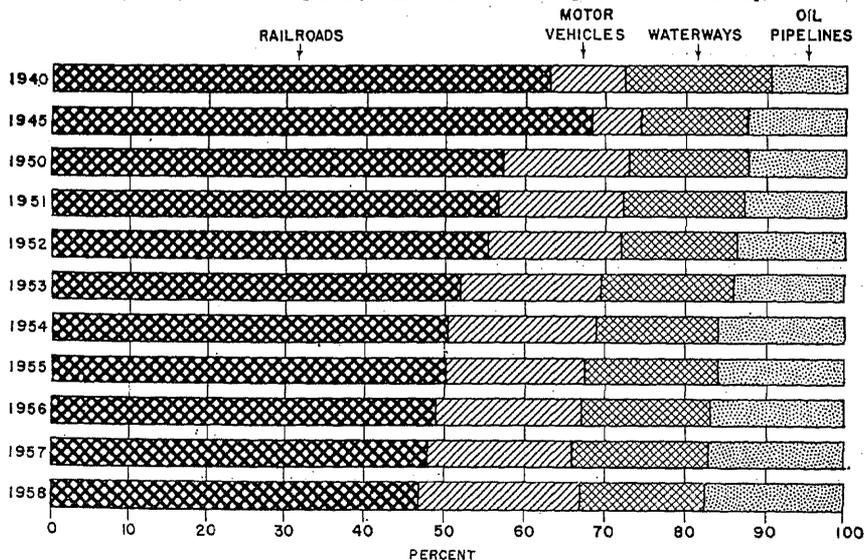
These agencies publish annual operational data on the use of airway facilities; data related to the location of airmen, aircraft, and airports; the activity volume in the field of non-aircarrier (general aviation) flying; and aircraft production and registration data by type of equipment.

**Alaska and Hawaii.**—For a general statement concerning the treatment of data for Alaska and Hawaii, see preface.

**Historical statistics.**—Tabular headnotes (as "See also *Historical Statistics, Colonial Times to 1957*, series Q 1-11") provide cross-references, where applicable, to *Historical Statistics of the United States, Colonial Times to 1957*. See preface.

FIG. XXXIV. PERCENT DISTRIBUTION OF DOMESTIC INTERCITY FREIGHT TRAFFIC, BY TYPE OF TRANSPORTATION: 1940 TO 1958

[Airways not shown separately—less than one-tenth of 1 percent. See table 746.]



Source: Chart prepared by Department of Commerce, Bureau of the Census. Data are from Interstate Commerce Commission.

No. 746. VOLUME OF DOMESTIC INTERCITY FREIGHT TRAFFIC, BY TYPE OF TRANSPORTATION: 1940 TO 1958

In millions of ton-miles. Excludes Alaska and Hawaii. A ton-mile is the movement of a ton (2,000 lbs.) of freight for the distance of one mile. Comprises public and private traffic and revenue and nonrevenue traffic. See also *Historical Statistics, Colonial Times to 1957*, series Q 1-11]

YEAR	Total traffic, volume	RAILROADS <sup>1</sup>		MOTOR VEHICLES		INLAND WATERWAYS <sup>2</sup>		OIL PIPELINES		AIRWAYS <sup>3</sup>	
		Volume	Per cent of total	Volume	Per cent of total	Volume	Per cent of total	Volume	Per cent of total	Volume	Per cent of total
1940.....	651,204	411,813	63.24	62,043	9.53	118,057	18.13	59,277	9.10	14	0.002
1945.....	1,072,490	736,184	68.64	66,948	6.24	142,737	13.31	126,530	11.80	91	0.008
1950.....	1,094,160	628,463	57.44	172,800	15.80	163,344	14.93	129,175	11.81	318	0.029
1951.....	1,209,099	686,377	56.77	188,012	15.55	182,216	15.07	152,115	12.58	379	0.031
1952.....	1,172,167	651,276	55.56	194,607	16.60	168,367	14.36	157,502	13.44	415	0.035
1953.....	1,232,477	642,578	52.14	217,163	17.62	202,439	16.43	169,884	13.78	413	0.034
1954.....	1,145,434	677,529	50.42	214,626	18.74	173,679	15.16	170,203	15.64	397	0.035
1955.....	1,300,994	654,573	50.31	226,188	17.39	216,508	16.64	203,244	15.62	481	0.037
1956.....	1,381,225	676,974	49.01	253,751	18.37	219,978	15.93	229,959	16.65	563	0.041
1957.....	1,344,733	644,746	47.95	244,895	18.21	231,792	17.24	222,728	16.56	572	0.043
1958.....	1,222,624	574,756	47.01	246,984	20.20	189,016	15.46	211,289	17.28	579	0.047

<sup>1</sup> Includes electric railways, express, and mail.

<sup>2</sup> Includes Great Lakes.

<sup>3</sup> Domestic revenue service only. Includes express, mail, and excess baggage.

<sup>4</sup> Part of this increase resulted from coverage of waterways previously existing but not covered.

<sup>5</sup> Motor-vehicle ton-miles revised upward on basis of new data; not applied to previous years.

Source: Interstate Commerce Commission; *Annual Report*, and Statement No. 568, *Intercity Ton-Miles, 1939-1954*, February 1956.

No. 747. VOLUME OF DOMESTIC INTERCITY PASSENGER TRAFFIC, BY TYPE OF TRANSPORTATION: 1950 TO 1958

In millions of passenger-miles. Excludes Alaska and Hawaii. A passenger-mile is the movement of one passenger for the distance of one mile. Comprises public and private traffic and revenue and nonrevenue traffic]

YEAR	Total traffic, volume	RAILROADS <sup>1</sup>		COMMERCIAL MOTOR CARRIERS		PRIVATE AUTOMOBILES		INLAND WATERWAYS <sup>2</sup>		AIRWAYS <sup>3</sup>	
		Volume	Per cent of total	Volume	Per cent of total	Volume	Per cent of total	Volume	Per cent of total	Volume	Per cent of total
1950.....	473,022	32,481	6.87	20,436	5.59	402,843	85.16	1,190	0.25	10,072	2.13
1951.....	534,782	35,306	6.60	27,418	5.13	457,787	85.60	1,333	0.25	12,938	2.42
1952.....	575,345	34,710	6.03	28,704	4.99	496,547	86.13	1,396	0.24	14,988	2.61
1953.....	608,769	32,261	5.30	28,397	4.66	529,194	86.93	1,487	0.24	17,430	2.86
1954.....	625,113	29,407	4.71	25,014	4.10	548,763	87.79	1,701	0.27	19,568	3.13
1955.....	664,510	28,095	4.32	25,510	3.84	585,817	88.16	1,738	0.26	22,741	3.42
1956.....	698,895	28,610	4.09	25,189	3.60	617,713	88.38	1,860	0.27	25,523	3.65
1957.....	722,601	26,251	3.63	21,455	2.97	644,837	89.24	1,930	0.27	28,128	3.89
1958.....	738,635	23,605	3.20	20,766	2.81	663,679	89.85	2,073	0.28	28,522	3.86

<sup>1</sup> Includes electric railways.

<sup>2</sup> Includes Great Lakes.

<sup>3</sup> Includes domestic commercial revenue service and private pleasure and business flying.

Source: Interstate Commerce Commission; *Annual Report*.

## No. 748. OPERATING REVENUES, BY TRANSPORT AGENCY: 1940 TO 1959

[Excludes Alaska and Hawaii, except as noted]

TRANSPORT AGENCY	1940	1945	1950	1955	1957	1958	1959 <sup>1</sup> (prel.)
REVENUES (\$1,000,000)							
Pullman Company.....	60	148	104	95	85	69	62
Electric railways <sup>2</sup> .....	53	87	79	60	45	30	30
Railway Express <sup>3</sup> .....	120	284	223	241	248	258	256
Railroads <sup>4</sup> .....	4,469	9,136	9,820	10,495	10,920	9,924	10,434
Water lines <sup>5</sup> .....	113	173	350	453	450	409	465
Pipelines (oil).....	226	304	442	678	730	721	700
Domestic scheduled air carriers <sup>6</sup> .....	77	215	558	1,201	1,515	1,624	1,941
Motor carriers of property.....	898	1,840	3,737	5,535	6,166	6,131	6,811
Motor carriers of passengers <sup>7</sup> .....	176	652	539	552	599	599	604
INDEX (1939=100)							
Railroads <sup>4</sup> .....	107.7	220.6	237.2	253.5	263.7	(8)	(8)
Pipelines (oil).....	106.3	143.2	207.8	318.9	343.5	(8)	(8)
Domestic scheduled air carriers <sup>6</sup> .....	137.6	384.1	997.9	2,149.0	2,708.1	2,902.5	3,144.0
Motor carriers of property.....	109.4	177.5	471.7	698.7	777.6	(8)	(8)
Motor carriers of passengers.....	103.6	327.3	318.6	331.2	354.0	(8)	(8)

<sup>1</sup> 12 months ending June 30.<sup>2</sup> 2 carriers in 1957 and 1 in 1958 were reclassified as railroads, and between January 1958 and June 1959, 2 carriers were abandoned or absorbed in part in the railroad group; hence, the apparent decline is somewhat overstated.<sup>3</sup> After deducting payments to others for express privileges.<sup>4</sup> Includes line-haul and switching and terminal companies.<sup>5</sup> Includes only revenues from domestic traffic of carriers subject to the jurisdiction of the Interstate Commerce Commission.<sup>6</sup> Source: Federal Aviation Agency; *FAA Statistical Handbook of Aviation*. Includes Hawaii.<sup>7</sup> Excludes motor-carrier revenues of electric railways, included under electric railways.<sup>8</sup> Not available.Source: Interstate Commerce Commission; *Annual Report and Statistics of Class I, II, and III Motor Carriers, 1939-1959* (Statement No. 589), except as noted.

## No. 749. INDEXES OF INTERCITY FREIGHT TRAFFIC, 1940 TO 1956, AND OF AVERAGE FREIGHT RATES ON RAILROAD CARLOAD TRAFFIC, 1948 TO 1956

[Excludes Alaska and Hawaii]

YEAR	INDEXES OF INTERCITY TON-MILES (1939=100)			Index of average freight rates <sup>3</sup> (1950=100)
	Total, all carriers	All motor carriers <sup>1</sup>	Class I, II, and III motor carriers <sup>2</sup>	
1940.....	113.8	117.5	105.3	
1945.....	189.0	126.7	138.9	
1946.....	166.3	155.2	155.0	
1947.....	205.8	193.3	191.9	
1948.....	192.3	219.7	237.7	93
1949.....	168.5	239.7	243.8	99
1950.....	195.5	327.3	334.2	100
1951.....	216.7	356.0	368.0	102
1952.....	210.5	363.4	360.6	109
1953.....	221.5	411.1	389.4	111
1954.....	206.9	406.3	368.0	109
1955.....	235.1	428.2	422.0	108
1956.....	280.2	480.4	422.6	112

<sup>1</sup> Private and for hire.<sup>2</sup> Excludes local carriers, which probably account for less than 3 percent of total intercity ton-miles of Class I, II, and III motor carriers.<sup>3</sup> On railroad carload traffic.Source: Interstate Commerce Commission; *Statistics of Class I, II, and III Motor Carriers, 1939-1956* (Statement No. 589) and *Indexes of Average Freight Rates on Railroad Carload Traffic, 1948-1956* (Statement R I-1).

## No. 750. RAILROADS—SUMMARY STATISTICS: 1920 TO 1958

[As of December 31. Excludes Alaska and Hawaii. Includes intercorporate duplications. See also *Historical Statistics, Colonial Times to 1957, series Q 44-124*]

ITEM	1920	1930	1940	1950	1955	1957	1958
Operating companies <sup>1</sup> .....number.....	1,085	775	574	471	441	415	412
Road owned, first track <sup>2</sup> .....miles.....	252,845	249,052	233,670	223,779	220,670	219,067	218,399
Miles operated: <sup>3</sup>							
Total, reporting railroads <sup>4</sup> .....miles.....	406,579	429,833	405,975	396,380	390,965	386,978	385,264
Road, first track <sup>4</sup> .....do.....	259,941	260,440	245,740	236,857	233,955	232,177	231,494
Other main tracks.....do.....	36,894	42,742	41,373	40,456	38,825	37,123	36,448
Yardtrack and sidings.....do.....	109,744	126,701	118,862	119,067	118,185	117,678	117,322
Miles of road operated by receivers or trustees.....do.....	16,290	9,486	75,270	12,223	11,685	1,022	1,040
Equipment:							
Locomotives in service.....number.....	68,942	60,189	44,333	42,951	33,533	32,301	31,616
Average tractive effort <sup>5</sup> .....pounds.....	36,365	45,225	50,905	57,075	65,005	61,615	61,312
Cars in service:							
Passenger-train.....number.....	56,102	53,584	38,308	37,359	32,118	29,564	28,999
Freight-train <sup>7</sup> .....thousands.....	2,388	2,322	1,684	1,746	1,724	1,778	1,756
Average capacity <sup>8</sup> .....tons.....	42.4	46.9	50.0	52.6	53.7	54.5	54.8
Capital and property investment: <sup>9</sup>							
Road and equipment, book value <sup>9</sup>							
mil. dol.....	19,849	26,051	25,646	30,174	33,035	34,615	34,934
Depreciation reserve <sup>10</sup> .....do.....	1,081	2,361	3,095	6,629	7,314	7,801	8,043
Capital outstanding <sup>11</sup> .....do.....	21,891	24,331	23,371	20,339	19,309	18,695	18,241
Net capitalization.....do.....	16,994	19,066	17,630	15,618	15,171	14,682	14,529
Stock paying dividends.....do.....	5,075	7,702	3,741	6,769	7,300	6,465	5,290
Dividends declared.....do.....	331	603	217	349	476	466	445
Interest accrued on funded debt							
mil. dol.....	500	589	547	367	374	382	393
Income and expenses:							
Operating revenues.....do.....	6,310	5,356	4,355	9,587	10,230	10,625	9,686
Operating expenses.....do.....	5,954	3,994	3,132	7,135	7,724	8,322	7,631
Tax accruals.....do.....	289	354	403	1,212	1,101	1,091	977
Operating income.....do.....	75	1,008	820	1,240	1,404	1,213	1,078
Net income <sup>8</sup> .....do.....	482	578	243	855	959	765	630
Passenger service:							
Passenger revenue.....do.....	1,305	731	418	815	744	736	676
Passengers carried.....millions.....	1,270	708	456	488	453	413	382
Passenger-miles.....do.....	47,370	26,876	23,816	31,790	28,548	25,914	23,295
Commutation <sup>12</sup> .....do.....		6,669	3,997	4,990	4,776	4,901	4,776
Coach <sup>12</sup> .....do.....			12,485	17,443	17,314	15,803	14,225
Parlor and sleeping car <sup>12</sup> .....do.....			7,288	9,338	6,441	5,185	4,249
Revenue per passenger-mile.....cents.....	2.76	2.72	1.76	2.56	2.61	2.84	2.90
Average journey per passenger							
miles.....	37.30	37.96	52.22	65.14	65.88	62.80	61.04
Freight service:							
Freight revenue.....mil. dol.....	4,421	4,145	3,584	7,934	8,665	9,064	8,193
Revenue tons originated							
millions.....	1,363	1,220	1,069	1,421	1,459	1,449	1,247
Tons carried one mile.....do.....	413,699	385,815	375,369	591,550	626,893	621,907	554,534
Revenue ton-miles per mile of road							
thousands.....	1,597	1,481	1,526	2,497	2,679	2,677	2,394
Revenue per ton-mile.....cents.....	1.069	1.074	0.955	1.341	1.382	1.457	1.477
Haul per ton.....miles.....	303.52	316.21	351.13	416.32	429.75	429.20	444.55
Number of employees, average							
thousands.....	2,076	1,517	1,046	1,237	1,071	999	853
Compensation of employees							
mil. dol.....	3,754	2,589	1,991	4,645	5,045	5,422	4,991
Accidents:							
Persons killed.....number.....	6,958	5,665	4,740	3,486	2,849	2,393	2,311
Persons injured.....do.....	168,309	49,443	29,606	33,267	27,846	18,688	19,343

<sup>1</sup> Line-haul operating.<sup>2</sup> Excludes all duplications; also excludes some mileage in Canada.<sup>3</sup> Includes some duplication under trackage rights and some mileage in Canada.<sup>4</sup> Excludes circular and unofficial.<sup>5</sup> Average for steam locomotives only, 1920-1955; beginning 1957, covers all locomotives.<sup>6</sup> Covers class I railroads, excluding switch and terminal companies. <sup>7</sup> Excludes caboose cars. <sup>8</sup> Includes lessors.<sup>9</sup> Increase in investment over a period of years cannot be obtained accurately by subtraction of 1 year's investment from that of another owing to reorganization, sale or abandonment, reclassification, etc. Includes lessor companies since 1930; for later years, includes proprietary companies except those which are part of systems filing consolidated annual reports.<sup>10</sup> For 1950 and later years, includes amortization of defense projects and proprietary companies.<sup>11</sup> Comprises actually outstanding, nominally issued, and nominally outstanding securities, and equipment obligations. <sup>12</sup> Class I railroads.Source: Interstate Commerce Commission; annual report, *Transport Statistics in the United States*, Part 1, and *Accident Bulletin*.

## No. 751. RAILROAD COMPANIES, BY CLASS: 1958

[Excludes Alaska and Hawaii. See text, p. 565, for explanation of class limits]

CLASS OF COMPANY	Com- panies	MILES OF ROAD <sup>1</sup>		EQUIPMENT IN SERVICE			Revenue freight origin- ated <sup>5</sup> (mil. tons)	Net rail- way op- erating income (\$1,000)
		Owned <sup>2</sup>	Oper- ated <sup>3</sup>	Loco- tives	Freight- train cars <sup>4</sup>	Passen- ger- train cars		
<b>Total</b> .....	855	218,399	231,588	31,616	1,776,174	28,999	1,247	807,112
Class I line-haul operating.....	110	189,066	221,391	29,513	1,743,784	28,915	1,100	762,296
Lessors to Class I.....	132	16,882						
Class II line-haul operating.....	303	8,990	10,103	609	17,240	77	57	10,602
Lessors to Class II.....	12	328						
Switching and terminal.....	6,226	( <sup>7</sup> )	( <sup>7</sup> )	1,404	15,150	7		34,214
Proprietary <sup>8</sup> .....	52	2,830						
Circular.....	19	287	94					
Unofficial.....	1	16						

<sup>1</sup> Single or first main track.<sup>2</sup> Excludes 162 miles in Canada.<sup>3</sup> Includes 1,299 miles in Canada.<sup>4</sup> Includes caboose cars.<sup>5</sup> Excludes switching and terminal companies.<sup>6</sup> Includes operating, lessor, proprietary, circular, and unofficial companies.<sup>7</sup> Not comparable.<sup>8</sup> Excludes those in systems which file consolidated reports combining mileage, investment, and other items on a net system basis.Source: Interstate Commerce Commission; annual report, *Transport Statistics in the United States*, Part 1.

## No. 752. RAILROADS—MILES OF ROAD OWNED, BY STATES: 1940, 1950, AND 1958

[Data are for actual length of line of each State without duplication. As of December 31]

STATE	1940	1950	1958	STATE	1940	1950	1958
<b>United States</b> .....	234,398	224,371	218,997	<b>W. N. Central—Con.</b>			
<b>New England</b> .....	6,677	6,393	6,148	Missouri.....	7,042	6,735	6,607
Maine.....	1,882	1,830	1,794	North Dakota.....	5,266	5,256	5,256
New Hampshire.....	1,002	936	870	South Dakota.....	4,006	3,958	3,916
Vermont.....	919	889	811	Nebraska.....	6,044	5,800	5,722
Massachusetts.....	1,793	1,726	1,667	Kansas.....	8,564	8,441	8,283
Rhode Island.....	194	185	181	<b>East South Central</b> .....	16,179	15,574	15,332
Connecticut.....	887	830	825	Kentucky.....	3,691	3,641	3,544
<b>Middle Atlantic</b> .....	20,175	19,180	17,787	Tennessee.....	3,573	3,471	3,398
New York.....	7,739	7,493	6,695	Alabama.....	4,996	4,723	4,649
New Jersey.....	2,108	1,992	1,938	Mississippi.....	3,919	3,739	3,741
Pennsylvania.....	10,328	9,695	9,154	<b>West South Central</b> .....	31,497	29,771	28,795
<b>South Atlantic</b> .....	29,475	27,924	27,490	Louisiana.....	4,357	4,079	3,961
Delaware.....	295	295	293	Texas.....	16,356	15,611	15,095
Dist. of Columbia.....	35	34	31	Oklahoma.....	6,802	5,977	5,760
Maryland.....	1,367	1,309	1,157	Arkansas.....	4,482	4,104	3,979
Virginia.....	4,261	4,073	4,138	<b>Mountain</b> .....	23,518	22,101	21,362
West Virginia.....	3,831	3,719	3,675	Montana.....	5,149	5,059	4,968
North Carolina.....	4,668	4,435	4,310	Wyoming.....	2,008	1,925	1,883
South Carolina.....	3,466	3,223	3,268	Colorado.....	4,552	4,273	3,514
Georgia.....	6,394	6,043	5,922	New Mexico.....	2,812	2,496	2,473
Florida.....	5,218	4,793	4,676	Arizona.....	2,228	2,197	2,160
<b>East North Central</b> .....	41,281	39,851	39,094	Utah.....	2,082	1,788	1,727
Ohio.....	8,501	8,418	8,350	Nevada.....	1,941	1,650	1,647
Indiana.....	6,889	6,652	6,601	Idaho.....	2,746	2,713	2,684
Illinois.....	11,949	11,643	11,273	<b>Pacific</b> .....	17,303	16,466	16,521
Michigan.....	7,303	6,803	6,675	Washington.....	5,243	5,124	4,981
Wisconsin.....	6,639	6,335	6,195	Oregon.....	3,385	3,217	3,161
<b>West North Central</b> .....	48,293	47,108	46,468	California.....	7,947	7,533	7,781
Minnesota.....	8,421	8,333	8,221	Alaska.....	536	567	573
Iowa.....	8,950	8,585	8,463	Hawaii.....	192	25	25

Source: Interstate Commerce Commission; annual reports, *Statistics of Railways in the United States*, and for 1958, *Transport Statistics in the United States*, Part 1.

## No. 753. RAILROADS—EQUIPMENT IN SERVICE: 1950 TO 1958

[Excludes Alaska and Hawaii. See also *Historical Statistics, Colonial Times to 1957*, series Q 53-65]

ITEM	1950	1955	1956	1957	1958
Locomotives.....	42,951	33,538	32,593	32,391	31,616
Steam.....	26,680	6,266	3,918	2,608	1,488
Electric.....	827	639	616	597	562
Diesel.....	15,396	26,563	28,001	29,137	29,515
Other.....	48	65	58	49	51
New units installed <sup>1</sup> .....	3,215	1,097	1,210	1,015	346
Freight cars <sup>2</sup> .....	1,745,778	1,723,747	1,738,631	1,777,557	1,785,775
Box.....	718,150	723,962	733,630	745,269	731,437
Gondola and hopper.....	874,801	845,809	850,579	875,519	871,081
Other.....	152,827	153,976	154,422	156,769	153,257
Aggregate capacity <sup>1</sup> .....1,000 tons.....	90,465	91,229	92,161	95,084	94,486
Average capacity <sup>1</sup> ..... tons.....	52.6	53.7	54.0	54.5	54.8
New units installed <sup>1</sup> .....	40,032	29,070	55,882	82,427	34,120
Passenger-train cars.....	37,359	32,118	30,817	29,564	28,999
Coaches.....	16,488	13,543	12,867	12,323	11,934
Average seating capacity <sup>1</sup> .....	75	75	75	75	76
Baggage, express, and other nonpassenger.....	13,817	13,388	11,146	10,873	10,672
Other.....	7,054	5,187	6,804	6,363	6,393
New units installed <sup>1</sup> .....	1,078	412	391	232	143
Air-conditioned cars <sup>3</sup> .....	16,747	14,784	14,561	14,323	13,675

<sup>1</sup> Class I railroads. <sup>2</sup> Excludes caboose cars. <sup>3</sup> Class I railroads and Pullman Company.Source: Interstate Commerce Commission; annual report, *Transport Statistics in the United States*, Part 1.

## No. 754. RAILROADS (CLASS I)—FUEL AND POWER CONSUMED AND RAILS AND TIES LAID: 1950 TO 1958

[Excludes Alaska and Hawaii. Line-haul railroads only. See text, p. 565, for explanation of change in class limit beginning 1956. See also *Historical Statistics, Colonial Times to 1957*, series Q 128-137, for related data]

ITEM	1950	1955	1957	1958
FUEL CONSUMED				
Coal.....1,000 short tons.....	55,452	11,427	4,866	1,150
Fuel oil.....1,000,000 gal.....	2,284	376	89	67
Diesel oil..... do.....	1,827	3,393	3,536	3,382
Electricity.....1,000,000 kwh.....	2,260	2,082	2,025	1,806
RAILS AND TIES LAID				
Rails (replacement and betterment).....1,000 short tons.....	2,454	1,890	1,592	921
Ties (in previously constructed tracks):				
Cross-ties.....1,000.....	30,494	24,149	22,082	16,030
Switch and bridge ties.....1,000 ft. b. m.....	98,400	79,093	71,582	54,985

## No. 755. RAILROADS (CLASS I)—OPERATING REVENUES, EXPENSES, INCOME, AND CAPITAL EXPENDITURES: 1950 TO 1959

[In millions of dollars. Excludes Alaska and Hawaii. See text, p. 565, for explanation of change in class limits beginning 1956. See also *Historical Statistics, Colonial Times to 1957*, series Q 103-117]

ITEM	1950	1955	1956	1957	1958	1959 (prel.)
Operating revenues.....	9,473	10,107	10,545	10,506	9,555	9,826
Freight.....	7,817	8,539	8,946	8,942	8,071	8,313
Passenger.....	813	743	757	735	675	651
Mail.....	374	287	287	292	325	330
Express.....	51	118	119	98	91	116
Other.....	387	420	437	440	399	416
Operating expenses.....	7,059	7,641	8,102	8,238	7,544	7,705
Maintenance, total.....	2,995	3,172	3,295	3,346	2,944	3,034
Way and structures.....	1,287	1,387	1,404	1,433	1,223	1,236
Equipment.....	1,708	1,785	1,892	1,913	1,720	1,798
Traffic.....	192	236	254	259	252	259
Transportation, rail line.....	3,491	3,768	4,040	4,102	3,834	3,888
Miscellaneous operations.....	110	108	111	104	92	86
General.....	271	357	401	427	422	438
Net revenue from railway operations.....	2,414	2,466	2,443	2,269	2,021	2,122
Tax accruals.....	1,195	1,081	1,121	1,190	957	1,047
Operating income.....	1,219	1,385	1,322	1,199	1,064	1,074
Net railway operating income.....	1,040	1,129	1,070	923	762	749
Ratio of expenses to revenues (percent).....	74.5	75.6	76.8	78.4	78.9	78.4
Expenditures for capital improvements, total.....	1,065	908	1,227	1,395	738	818
Equipment.....	779	568	821	1,008	480	568
Roadway and structures.....	286	340	406	387	258	250

Source of tables 754 and 755: Interstate Commerce Commission; *Annual Report*.

**No. 756. RAILROADS (CLASS I)—SELECTED FREIGHT STATISTICS: 1950 TO 1959**  
 [Excludes Alaska and Hawaii. Excludes switching and terminal roads. Tons of 2,000 pounds. See text, p. 565, for explanation of change in class limits beginning 1956]

ITEM	1950	1955	1957	1958	1959 (prel.)
Average miles of road operated.....	225,339	222,295	221,639	220,837	220,029
Operating revenue.....mil. dol.	7,817	8,538	8,940	8,071	8,513
Per ton-mile.....cents.	1.33	1.37	1.45	1.46	1.45
Per ton per road.....dollars.	3.04	3.25	3.48	3.56	3.32
Revenue tons:					
Originated.....millions..	1,354	1,393	1,380	1,190	1,232
Carried.....do.	2,570	2,625	2,566	2,204	2,294
Carried 1 mile.....do.	588,578	623,615	618,495	551,539	575,439
Miles per revenue ton per road (average haul)...	229.0	237.6	241.0	250.2	250.8
Freight train miles.....millions..	515	476	447	400	414
Freight train car-miles:					
Loaded, revenue and nonrevenue.....do.	19,644	20,099	19,076	17,176	17,833
Empty.....do.	10,140	11,054	11,604	10,883	10,736
Net ton-miles per train-mile <sup>1</sup> .....	1,224	1,374	1,439	1,430	1,443
Net ton-miles per loaded car-mile <sup>1</sup> .....	31.7	32.1	33.4	33.0	33.3
Train-miles per train-hour.....	16.8	18.6	18.8	19.2	19.5

<sup>1</sup> Revenue and nonrevenue freight.

**No. 757. RAILROADS (CLASS I)—REVENUE FREIGHT ORIGINATED AND GROSS FREIGHT REVENUE, BY COMMODITY GROUPS: 1940 TO 1959**

[Excludes Alaska and Hawaii. Carload freight only, except as specified. See text, p. 565, for explanation of change in class limits beginning 1956. See also *Historical Statistics, Colonial Times to 1967*, series Q 73-80]

ITEM	1940	1945	1950	1955	1958	1959 (prel.)
<b>REVENUE FREIGHT ORIGINATED (1,000 short tons)</b>						
<b>Total</b> .....	<b>1,009,421</b>	<b>1,424,913</b>	<b>1,354,196</b>	<b>1,396,339</b>	<b>1,190,353</b>	<b>1,232,201</b>
Products of agriculture.....	88,821	159,571	129,175	133,790	146,746	145,631
Animals and their products.....	15,458	23,748	14,321	13,161	9,595	9,594
Products of mines.....	570,218	732,942	746,808	761,993	628,911	632,870
Coal and coke.....	372,663	485,109	420,296	394,394	343,897	345,740
Other.....	197,557	247,833	326,512	387,599	285,013	280,130
Products of forests.....	58,221	75,604	78,860	82,585	73,287	80,597
Manufactures and miscellaneous <sup>1</sup> .....	262,010	412,216	374,145	397,819	327,112	359,485
All less than carload.....	14,602	20,833	10,887	6,993	4,402	3,923
<b>GROSS FREIGHT REVENUE (\$1,000)</b>						
<b>Total</b> .....	<b>3,678,097</b>	<b>6,949,258</b>	<b>8,145,630</b>	<b>8,938,388</b>	<b>8,469,586</b>	<b>8,703,988</b>
Products of agriculture.....	510,083	985,114	1,054,574	1,133,492	1,286,329	1,226,417
Animals and their products.....	172,599	279,443	275,858	294,402	246,555	243,211
Products of mines.....	1,076,419	1,486,683	1,093,687	2,121,426	1,985,404	1,977,773
Coal and coke.....	(2)	1,024,471	1,301,101	1,280,761	1,201,645	1,171,570
Other.....	(2)	462,212	692,586	840,665	783,750	800,203
Products of forests.....	235,865	316,154	580,836	686,821	646,069	707,058
Manufactures and miscellaneous <sup>1</sup> .....	1,435,520	3,495,907	3,887,762	4,421,336	4,092,838	4,594,702
All less than carload.....	247,611	385,958	352,913	280,912	212,391	183,927

<sup>1</sup> Includes forward traffic. <sup>2</sup> Not available.

Source of tables 756 and 757: Interstate Commerce Commission; annual report, *Transport Statistics in the United States*, Part 1.

**No. 758. RAILROADS (CLASS I)—NUMBER OF CARS OF REVENUE FREIGHT LOADED, BY PRINCIPAL COMMODITIES: 1940 TO 1959**

[In thousands. Figures are 52-week totals. Excludes Alaska and Hawaii. See text, p. 565, for explanation of change in class limits beginning 1956]

YEAR	Total	Grain and grain products	Live-stock	Coal	Coke	Forest products	Ore	Miscellaneous	Miscellaneous less than carload
1940.....	36,358	1,835	685	6,820	549	1,800	2,148	14,842	7,679
1945.....	41,918	2,734	894	8,296	695	2,039	2,474	19,258	5,529
1950.....	38,903	2,466	491	7,240	727	2,226	2,529	18,955	4,269
1953.....	38,216	2,453	451	6,371	688	2,254	3,143	19,360	3,496
1954.....	33,915	2,555	447	5,670	422	2,085	2,115	17,436	3,185
1955.....	37,636	2,633	441	6,508	616	2,275	2,846	19,087	3,230
1956.....	37,845	2,705	442	7,007	616	2,317	2,749	18,953	3,056
1957.....	35,500	2,674	343	6,749	575	1,995	2,863	17,551	2,750
1958.....	30,226	2,873	308	5,522	342	1,856	1,754	15,239	2,832
1959.....	30,991	2,751	300	5,432	410	2,049	1,955	16,279	2,115

Source: Association of American Railroads, Car Service Division, Washington, D.C.; annual report, *Cars of Revenue Freight Loaded*. Weekly reports are published currently.

## No. 759. RAILROADS (CLASS I)—SELECTED PASSENGER STATISTICS: 1950 TO 1959

[Excludes Alaska and Hawaii. See text, p. 565, for explanation of change in class limits beginning 1956]

ITEM	1950	1955	1957	1958	1959 (prel.)
Average miles of road operated.....	150,349	119,545	112,724	107,131	100,252
Passenger revenue.....\$1,000.....	813,417	742,945	735,127	675,096	650,944
Revenue per passenger-mile:					
Including commutation passengers.....cents.....	2.56	2.60	2.84	2.90	2.95
Excluding commutation passengers.....do.....	2.46	2.70	2.95	2.99	3.00
Revenue passengers carried.....1,000.....	486,194	431,999	411,179	378,905	352,312
Revenue passenger-miles.....millions.....	31,760	28,523	25,889	23,250	22,051
Revenue passenger-miles per train-mile.....	88.5	95.2	93.9	94.0	97.6
Revenue passenger-miles per car-mile.....	17.0	17.8	18.0	18.6	18.9
Average journey per passenger per road.....miles.....	65.3	66.1	63.0	61.4	62.6
Passenger-train miles.....1,000.....	357,618	293,602	275,766	247,331	225,866
Passenger-carrying car-miles.....do.....	1,854,737	1,570,916	1,435,776	1,251,591	1,166,916
Train-miles per train-hour.....	37.4	39.8	40.2	40.2	40.3

Source: Interstate Commerce Commission; *Annual Report*, and *Transport Statistics in the United States*, Part 1.

## No. 760. RAILROADS—NUMBER AND COMPENSATION OF EMPLOYEES: 1930 TO 1959

[Excludes Alaska and Hawaii. Excludes switching and terminal roads. See also *Historical Statistics, Colonial Times to 1967*, series Q 141-142]

YEAR	ALL OPERATING CARRIERS		CLASS I CARRIERS <sup>1</sup>					
	Average number of employees	Total yearly compensation (\$1,000)	Average number of employees	Total hours (1,000)	Total yearly compensation (\$1,000)	Average hours per employee	Average compensation	
							Per hour <sup>2</sup>	Per year
1930.....	1,517,043	2,558,598	1,487,839	3,759,772	2,550,789	2,527	\$0.678	\$1,714
1935.....	1,013,654	1,666,229	994,371	2,397,353	1,643,879	2,411	.686	1,653
1940.....	1,045,738	1,990,631	1,026,848	2,615,905	1,964,125	2,548	.751	1,913
1945.....	1,438,545	3,900,928	1,419,505	3,979,637	3,862,001	2,804	.970	2,721
1950.....	1,236,879	4,644,890	1,220,401	2,876,591	4,594,423	2,857	1.597	3,765
1952.....	1,241,963	5,382,489	1,226,421	2,845,217	5,326,804	2,320	1.872	4,343
1953.....	1,221,300	5,380,828	1,205,966	2,777,235	5,324,951	2,303	1.917	4,416
1954.....	1,078,403	4,906,584	1,064,337	2,467,515	4,853,660	2,318	1.967	4,560
1955.....	1,071,387	5,045,278	1,057,866	2,502,608	4,992,235	2,366	1.995	4,719
1956.....	1,058,053	5,387,631	1,042,664	2,466,745	5,324,672	2,366	2.159	5,107
1957.....	998,880	5,422,080	986,001	2,314,976	5,358,044	2,348	2.315	5,434
1958.....	853,196	4,990,638	840,575	1,980,583	4,929,906	2,356	2.489	5,865
1959 (prel.).....	( <sup>3</sup> )	( <sup>3</sup> )	815,474	1,924,500	4,986,253	2,360	2.591	6,115

<sup>1</sup> See text, p. 565, for explanation of change in class limits beginning 1956.<sup>2</sup> Calculated for all classes of employees, including those not paid on an hourly basis.<sup>3</sup> Not available.Source: Interstate Commerce Commission; annual reports, *Statistics of Railways in the United States*, and beginning 1954, *Transport Statistics in the United States*, Part 1.

## No. 761. PULLMAN COMPANY OPERATIONS: 1930 TO 1959

[Excludes Alaska and Hawaii. See also *Historical Statistics, Colonial Times to 1967*, series Q 138-140]

YEAR	Average miles of road over which operations conducted	Revenue-passenger miles <sup>1</sup> (millions)	Employees, end of year	YEAR	Average miles of road over which operations conducted	Revenue-passenger miles <sup>1</sup> (millions)	Employees, end of year
1930.....	129,578	12,516	26,165	1953.....	94,518	8,200	21,529
1935.....	112,117	7,146	20,436	1954.....	91,920	7,271	19,866
1940.....	109,595	8,214	20,877	1955.....	89,124	6,882	18,061
1945.....	95,765	27,276	41,601	1956.....	87,472	6,630	16,793
1950.....	102,722	10,558	22,820	1957.....	85,068	5,388	14,890
1951.....	99,592	9,893	23,862	1958.....	79,555	4,300	10,234
1952.....	96,390	9,396	22,588	1959.....	71,448	3,462	8,020

<sup>1</sup> Beginning 1940, includes operations on Canadian and Mexican railroads; excludes chartered car operations.Source: Interstate Commerce Commission; annual reports, *Statistics of Railways in the United States*, and beginning 1954, *Transport Statistics in the United States*, Part 2.

### No. 762. RAILROAD ACCIDENTS—NUMBER OF PERSONS KILLED AND INJURED, BY STATUS: 1921 TO 1959

[As of December 31. Excludes Alaska and Hawaii. For various reasons, including fact that returns were required under different acts, statistics are not strictly comparable. From 1921-47 train accidents were those causing damage to railroad property in excess of \$150 with or without a casualty; for 1948, accidents causing damages in excess of \$250, with or without a casualty, were classified as train accidents; for 1949-50, train accidents were those causing damage of \$275 or more; in 1951, \$300 or more; in 1952, \$325 or more; and beginning 1953, \$350 or more. Where damage was less than the amounts specified and there was a reportable casualty, it was classified as a train-service accident. Covers all reportable accidents, including those due to suicide, mental derangement, and attempting to escape custody. See also *Historical Statistics, Colonial Times to 1957*, series Q 143-152]

YEARLY AVERAGE OR YEAR	TOTAL		PASSENGERS <sup>1</sup>		EMPLOYEES		OTHER PERSONS		TRESPASSERS	
	Killed	Injured	Killed	Injured	Killed	Injured	Killed	Injured	Killed	Injured
1921-1925	6,618	141,688	173	5,878	1,654	123,790	2,225	9,420	2,566	2,901
1926-1930	6,623	89,543	101	3,667	1,395	73,622	2,606	9,822	2,521	2,532
1931-1935	5,127	29,334	38	1,995	589	18,222	1,811	6,529	2,688	3,087
1936-1940	4,987	31,292	56	2,533	613	19,765	1,866	6,883	2,452	2,111
1941-1945	5,060	53,813	174	4,274	989	41,223	2,059	7,038	1,838	1,278
1946-1950	3,918	41,868	97	3,706	598	30,778	1,777	6,243	1,446	1,141
1951-1955	2,909	29,411	55	2,447	336	20,401	1,566	5,637	1,012	926
1950	3,486	33,267	180	3,419	392	22,856	1,669	6,129	1,245	1,133
1951	3,459	34,454	150	3,184	432	24,286	1,693	5,993	1,184	1,011
1952	3,011	30,001	24	2,049	386	21,339	1,522	5,669	1,079	944
1953	3,039	29,214	49	2,503	343	20,170	1,571	5,577	1,076	964
1954	2,575	25,547	30	2,247	235	17,219	1,399	5,181	911	900
1955	2,849	27,846	24	2,253	282	19,011	1,646	5,765	897	817
1956	2,578	25,676	57	2,756	288	19,608	1,394	5,435	839	877
1957	2,398	18,658	15	1,666	195	12,246	1,441	4,259	742	617
1958	2,311	19,343	61	1,628	187	13,305	1,352	3,750	711	660
1959 (prel.)	2,094	19,909	10	1,352	173	14,203	1,265	3,735	641	619

<sup>1</sup> Data cover passengers on trains and travelers not on trains. Casualties sustained in nontrain accidents included with "Other persons."

Source: Interstate Commerce Commission; annual report, *Accident Bulletin*.

### No. 763. HIGHWAY GRADE CROSSINGS AND ACCIDENTS AT HIGHWAY GRADE CROSSINGS—AUTOMOBILE AND TOTAL CASUALTIES: 1935 TO 1959

[Excludes Alaska and Hawaii. Covers all railroads, except as noted. Excludes casualties due to suicide, mental derangement, and attempting to escape custody. See also headnote, table 762. See also *Historical Statistics, Colonial Times to 1957*, series Q 125-127]

YEAR	HIGHWAY GRADE CROSSINGS <sup>1</sup>				ACCIDENTS				
	Total	Specially protected <sup>2</sup>	Eliminated during year by separation of grades	Number	All persons		Involving automobiles <sup>3</sup>		Total casualties per 10,000 automobiles registered
					Number killed	Number injured	Persons killed	Persons injured	
1935	234,231	30,200	164	3,933	1,680	4,658	1,442	4,434	2.24
1940	230,285	32,421	209	4,104	1,808	4,632	1,576	4,430	1.88
1945	226,153	33,321	7	4,100	1,903	4,446	1,577	4,126	1.86
1950	227,364	35,968	61	4,000	1,576	4,368	1,393	4,206	1.15
1951	227,415	36,682	50	3,995	1,578	4,335	1,396	4,161	1.08
1952	227,291	37,242	95	3,592	1,407	3,904	1,249	3,752	0.95
1953	227,110	37,990	53	3,675	1,494	3,815	1,319	3,688	0.90
1954	226,522	38,528	80	3,336	1,303	3,426	1,151	3,314	0.76
1955	226,318	39,060	34	3,846	1,446	4,014	1,313	3,886	0.83
1956	224,519	39,324	72	3,639	1,338	3,755	1,202	3,629	0.74
1957	223,381	39,884	113	3,559	1,371	3,767	1,217	3,613	0.72
1958	225,938	41,165	78	3,099	1,271	3,161	1,129	3,026	0.61
1959 (prel.)	(4)	(4)	(4)	3,075	1,203	3,247	1,055	3,123	0.59

<sup>1</sup> Class I railroads only.

<sup>2</sup> Includes crossings with operated gates or watchmen, or both, during at least part of day, and those with audible or visible signals, or both. Excludes those with fixed signs only.

<sup>3</sup> Includes passenger automobiles, motortrucks, and motor buses. <sup>4</sup> Not available.

Source: Interstate Commerce Commission; annual reports, *Accident Bulletin*, *Statistics of Railways in the United States*, and, beginning 1954, *Transport Statistics in the United States*, Part 1.

No. 764. TRANSIT INDUSTRY—SUMMARY: 1935 TO 1958

[Calendar years except as noted. Excludes Alaska and Hawaii. Comprises all organized local passenger transportation agencies except taxicabs, suburban railroads, and sightseeing and school buses. Covers (a) local motorbus lines, (b) electric street railways, (c) elevated and subway lines, (d) interurban electric railroads and (e) trolley coach lines. Based on financial and statistical reports received by American Transit Association from transit companies representing more than 85 percent of the industry. See also *Historical Statistics, Colonial Times to 1897*, series Q 330-340]

ITEM	1935	1940	1945	1950	1954	1955	1956	1957	1958
Operating companies.....	(1)	(1)	1,253	1,406	1,587	1,483	1,326	1,324	1,300
Motorbus companies <sup>2</sup> .....	(1)	(1)	1,164	1,354	1,550	1,450	1,305	1,304	1,282
Miles of route operated (Dec. 31):									
Electric railway—miles of single track.....	26,700	19,602	17,702	10,813	6,765	6,197	5,746	5,019	4,145
Surface.....	25,470	18,360	16,480	9,590	5,547	4,976	4,495	3,774	2,901
Subway and elevated.....	1,230	1,242	1,222	1,223	1,218	1,221	1,251	1,245	1,244
Trolley coach—miles of negative overhead wire.....	548	1,925	2,313	3,513	3,630	3,428	3,293	3,007	2,723
Motorbus—miles of route round trip.....	58,100	78,000	90,400	98,000	99,000	99,800	100,700	102,400	104,500
Passenger vehicles owned (Dec. 31):									
Electric railway cars.....	74,844	75,464	89,758	86,810	76,198	73,089	70,873	68,971	67,147
Surface.....	50,466	37,662	36,377	22,986	15,600	14,532	13,225	12,759	12,199
Subway and elevated.....	40,050	26,630	26,160	13,228	6,400	5,800	3,970	3,601	3,108
Trolley coaches.....	10,416	11,032	10,217	9,753	9,200	9,232	9,255	9,153	9,091
Motorbuses.....	578	2,802	3,711	6,504	6,598	6,157	5,748	5,412	4,848
Total.....	23,800	35,000	49,670	56,520	54,000	52,400	51,400	50,800	50,100
Investment (Dec. 31).....mil. dol.	(1)	4,096	4,262	3,918	3,863	3,821	3,797	3,793	3,781
Electric railway.....do.....	(1)	3,588	3,620	3,060	2,942	2,902	2,880	2,870	2,870
Surface.....do.....	(1)	1,574	1,570	913	692	616	577	485	373
Subway and elevated.....do.....	(1)	2,014	2,050	2,147	2,260	2,286	2,303	2,385	2,497
Trolley coach.....do.....	(1)	68	76	144	165	190	148	143	139
Motorbus.....do.....	(1)	450	566	714	766	759	769	780	772
Operating finances:									
Operating revenue.....do.....	681	737	1,380	1,452	1,472	1,426	1,416	1,386	1,350
Electric railway.....do.....	520	456	710	578	473	440	411	383	366
Surface.....do.....	388	328	560	362	204	176	139	115	99
Subway and elevated.....do.....	132	128	149	216	269	264	271	268	267
Trolley coach.....do.....	6	25	68	122	142	131	128	117	103
Motorbus.....do.....	156	256	603	752	857	856	878	886	881
Operating expenses.....do.....	535	598	1,067	1,297	1,337	1,277	1,271	1,262	1,267
Percent of revenue.....do.....	78.50	81.14	77.31	89.30	90.86	89.55	89.79	91.09	93.85
Net revenue.....mil. dol.	146	139	313	155	135	149	145	123	83
Taxes (all).....do.....	50	63	135	89	90	93	89	87	76
Operating income.....do.....	96	76	149	66	45	56	56	37	7
Percent of revenue.....do.....	14.09	10.35	10.77	4.57	3.05	3.91	3.93	2.64	0.49
Revenue vehicle miles operated									
millions.....	2,312	2,596	3,254	3,008	2,549	2,448	2,367	2,290	2,201
Electric railway.....do.....	1,586	1,316	1,398	907	591	561	520	495	476
Surface.....do.....	1,148	845	940	463	215	178	133	107	90
Subway and elevated.....do.....	439	471	458	443	376	383	387	388	386
Trolley coach.....do.....	15	86	133	206	197	177	166	147	131
Motorbus.....do.....	711	1,195	1,722	1,895	1,761	1,710	1,681	1,648	1,594
Passengers carried.....do.....	12,226	13,098	23,254	17,246	12,392	11,529	10,941	10,389	9,782
Electric railway.....do.....	9,512	8,325	12,194	6,168	3,401	3,077	2,756	2,522	2,387
Surface.....do.....	7,276	5,943	9,426	3,904	1,489	1,207	876	679	572
Subway and elevated.....do.....	2,236	2,382	2,698	2,264	1,912	1,870	1,880	1,843	1,815
Trolley coach.....do.....	96	534	1,244	1,658	1,367	1,202	1,142	993	843
Motorbus.....do.....	2,618	4,230	9,896	9,420	7,624	7,250	7,043	6,874	6,502
Revenue passengers carried.....do.....	9,782	10,504	18,982	13,845	9,858	9,189	8,756	8,338	7,778
Electric railway.....do.....	7,408	6,465	9,636	4,903	2,820	2,586	2,374	2,197	2,050
Surface.....do.....	5,156	4,183	7,081	2,790	1,039	845	625	491	415
Subway and elevated.....do.....	2,252	2,282	2,555	2,113	1,781	1,741	1,749	1,706	1,635
Trolley coach.....do.....	77	419	1,001	1,261	993	869	814	703	693
Motorbus.....do.....	2,297	3,620	8,345	7,681	6,045	5,734	5,568	5,438	5,135
Number of employees (average).....	209,200	202,400	242,000	240,000	211,000	198,000	188,000	177,000	165,000
Electric railway.....do.....	164,400	122,500	129,200	90,900	71,000	66,000	58,000	54,500	49,000
Trolley coach.....do.....	1,800	6,400	8,500	15,400	18,000	16,000	15,000	13,500	12,000
Motorbus.....do.....	43,500	73,500	104,300	133,700	122,000	116,000	113,000	109,000	104,000
Payroll, total.....mil. dol.	321	360	632	835	895	864	852	840	831
Average annual earnings per employee.....dollars.....	1,536	1,773	2,612	3,479	4,242	4,364	4,581	4,746	5,036

<sup>1</sup> Not available.

<sup>2</sup> Includes companies which do not operate motor buses exclusively; that is, those which have combined services such as trolley coach and motorbus, etc.

No. 765. MOTORBUS LINES—SUMMARY OF OPERATIONS OF COMMON CARRIERS AND SCHOOL BUSES: 1945 TO 1959

[Beginning 1959, includes Alaska and Hawaii. Beginning 1956, not exactly comparable with earlier years as a number of short-haul intercity companies were reclassified as city-suburban]

ITEM	1945	1950	1955	1956	1957	1958	1959
<b>COMMON CARRIER BUS OPERATIONS</b>							
Number of operating companies (Dec. 31):							
City and city suburban.....	1,311	1,638	1,575	1,580	1,540	1,515	1,500
Intercity.....	2,645	2,858	2,800	1,912	1,700	1,670	1,620
Number of buses (Dec. 31):							
City and city suburban.....	50,625	57,570	55,200	52,400	51,500	52,500	52,500
Intercity.....	31,250	28,711	27,200	24,980	23,450	23,500	23,500
Miles of highway covered (Dec. 31): <sup>1</sup>							
City and city suburban.....	39,300	53,810	60,600	75,950	80,260	84,500	85,000
Intercity.....	363,000	400,284	410,000	297,960	250,000	264,000	240,000
Total bus miles (millions):							
City and city suburban.....	1,605	1,882	1,711	1,727	1,650	1,610	1,602
Intercity.....	1,569	1,500	1,375	1,225	1,222	1,170	1,146
Revenue passengers, line service (millions):							
City and city suburban <sup>2</sup> .....	8,650	7,750	5,758	5,594	5,400	5,175	5,097
Intercity.....	1,092	815	612	535	516	465	452.7
Operating revenue (\$1,000):							
City and city suburban.....	644,500	798,933	880,987	915,257	898,300	894,635	895,575
Intercity.....	576,000	510,815	527,660	514,500	540,200	541,250	571,100
Taxes assignable to operations (\$1,000): <sup>3</sup>							
City and city suburban.....	63,400	62,025	76,259	78,143	75,800	71,625	73,665
Intercity.....	41,350	42,508	43,678	41,650	44,150	46,050	47,900
Net operating revenue (\$1,000):							
City and city suburban.....		8,540	21,597	20,400	30,800	68,000	80,530
Intercity.....		37,962	36,182	36,825	36,350	35,800	50,125
Number of employees (Dec. 31): <sup>4</sup>							
City and city suburban.....		129,043	115,600	117,000	116,750	114,650	117,790
Intercity.....		66,570	58,417	53,300	52,900	51,850	51,850
<b>SCHOOL BUS OPERATIONS</b>							
Number of schools and school districts using buses.....	40,000	43,813	44,233	42,364	47,157	47,367	45,697
Number of buses.....	80,000	104,179	137,552	142,977	150,150	156,096	162,958
Total bus-miles..... millions.....	1,725		1,148	1,200	1,239	1,315	1,362
Children carried daily.....1,000.....	4,700	6,264	9,053	9,682	10,080	10,636	11,360
Cost of service annually.....\$1,000.....	93,500	180,183	312,730	329,078	346,000	384,000	423,292

<sup>1</sup> Includes duplication between carriers.

<sup>2</sup> Includes revenue transfer passengers.

<sup>3</sup> Excludes income taxes.

<sup>4</sup> Operating companies only.

Source: McGraw-Hill Publishing Co., Inc., New York, N. Y.; after 1956, published in *Fleet Owner*. (Earlier years published in predecessor magazine, *Bus Transportation*.)

**No. 766. CLASS I INTERCITY MOTOR CARRIERS OF PROPERTY—SUMMARY OF FINANCIAL AND OPERATING STATISTICS: 1950 TO 1958**

[All money figures in thousands of dollars, except revenue and expense per vehicle-mile. Excludes Alaska and Hawaii. See text, p. 565, for explanation of change in class limits beginning 1957]

ITEM	1950	1955	1956	1957	1958
Number of carriers reporting	1, 621	2, 244	2, 298	837	866
Investment in carrier operating property	747, 756	1, 514, 971	1, 706, 171	1, 488, 599	1, 595, 711
Reserve for depreciation and amortization	309, 430	735, 704	816, 444	705, 632	801, 231
<b>Income statement:</b>					
Operating revenue, total	2, 379, 713	4, 030, 291	4, 290, 170	3, 835, 624	3, 851, 305
Common carrier	2, 180, 779	3, 621, 933	3, 877, 748	3, 564, 136	3, 581, 070
Contract carrier	143, 771	264, 444	292, 435	176, 464	167, 611
Other operating revenue	56, 164	113, 914	119, 987	95, 025	102, 624
Expenses, total	2, 215, 006	3, 869, 852	4, 140, 765	3, 702, 312	3, 723, 222
Operation and maintenance expenses	1, 968, 089	3, 496, 521	3, 717, 807	3, 324, 374	3, 337, 157
Depreciation and amortization <sup>1</sup>	84, 497	157, 197	181, 004	169, 572	171, 224
Operating taxes and licenses <sup>2</sup>	103, 408	216, 134	241, 954	218, 366	214, 841
Operating rents, net	59, 012	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )
Operating ratio (percent expenses of operating revenue)	93. 1	96. 0	96. 5	96. 5	96. 7
Net operating revenue	164, 707	160, 439	149, 405	133, 312	128, 083
Lease of distinct operating unit—Net	540	879	563	723	730
Other income, less income deductions	6, 603	13, 763	19, 353	21, 829	24, 549
Net income before income taxes	158, 565	145, 697	129, 434	111, 295	103, 004
Net income after income taxes	92, 682	82, 213	76, 727	62, 418	54, 343
Dividend appropriations and withdrawals <sup>4</sup>	23, 482	28, 547	25, 116	17, 679	17, 051
<b>Operating statistics and averages:</b>					
Owned revenue vehicles, total <sup>5</sup>	191, 243	288, 068	304, 322	237, 910	243, 080
Intercity vehicle-miles	5, 352	7, 559	7, 629	6, 399	6, 101
Tons of intercity revenue freight carried <sup>6</sup>	212, 997	313, 583	330, 394	235, 755	232, 192
Miles per owned vehicle	53, 833	53, 008	51, 409	59, 338	56, 786
Revenue per vehicle-mile (intercity)	\$0. 434	\$0. 518	\$0. 554	\$0. 585	\$0. 614
Expense per vehicle-mile (intercity) <sup>7</sup>	\$0. 414	\$0. 512	\$0. 550	\$0. 579	\$0. 610

<sup>1</sup> Amortization represents a very small part of this total. <sup>2</sup> Excludes Federal and State income taxes.  
<sup>3</sup> Not available. <sup>4</sup> Withdrawals of sole proprietors and partners.  
<sup>5</sup> Excludes equipment used under lease, including operations conducted under "purchased transportation" arrangements.  
<sup>6</sup> Includes duplications on account of tonnage received from connecting motor carriers.  
<sup>7</sup> Basic figures include expenses of operating vehicles in local services not available separately.

**No. 767. CLASS I INTERCITY MOTOR CARRIERS OF PROPERTY—SELECTED OPERATING STATISTICS, BY REGIONS: 1957 AND 1958**

[Excludes Alaska and Hawaii. See text, p. 565, for explanation of change in class limits, beginning 1957. Regions: 1, Conn., Maine, Mass., N.H., R.I., Vt.; 2, Del., D.C., Md., N.J., N.Y., Pa., W. Va.; 3, Ill., Ind., Mich. (Lower Pen.), Ohio; 4, Ala., Fla., Ga., Ky., Miss., N.C., S.C., Tenn., Va.; 5, Mich. (Upper Pen.), Minn., N. Dak., S. Dak., Wis.; 6, Iowa, Kans., Mo., Nebr.; 7, Ark., La., Okla., Tex.; 8, Colo., Idaho, Mont., N. Mex., Utah, Wyo.; 9, Ariz., Calif., Nev., Oreg., Wash.]

REGION AND YEAR	Number of carriers reporting	Operating revenue (\$1,000)	Total expenses (\$1,000)	OWNED REVENUE VEHICLES <sup>1</sup>				Inter-city vehicle miles (millions)	EMPLOYEES <sup>2</sup>	
				Trucks	Truck-tractors	Semi-trailers	Full trailers		Average number	Compensation (\$1,000)
<b>1957</b>	837	3, 835, 624	3, 702, 312	28, 564	76, 529	130, 036	2, 781	6, 399	296, 032	1, 665, 588
1. New England	49	139, 092	135, 030	1, 530	3, 185	5, 050	-----	155	13, 012	70, 962
2. Middle Atlantic	154	612, 945	595, 470	4, 401	12, 910	23, 393	43	870	50, 096	276, 429
3. Central	249	1, 311, 147	1, 265, 520	4, 670	23, 014	40, 347	611	2, 244	89, 757	526, 727
4. Southern	119	512, 279	493, 749	4, 589	11, 818	18, 093	19	955	43, 450	225, 307
5. Northwestern	39	145, 345	140, 879	1, 238	3, 580	5, 357	-----	220	12, 562	71, 649
6. Midwestern	59	257, 846	254, 183	1, 816	5, 367	9, 337	8	462	18, 662	107, 494
7. Southwestern	68	321, 111	305, 982	3, 597	7, 123	9, 889	72	636	26, 451	142, 850
8. Rocky Mountain	29	184, 694	171, 317	1, 410	2, 709	4, 872	220	343	13, 104	77, 007
9. Pacific	71	351, 161	339, 581	5, 313	6, 323	13, 158	1, 808	514	25, 914	167, 163
<b>1958</b>	866	3, 851, 305	3, 723, 222	28, 387	77, 893	133, 946	2, 854	6, 101	286, 175	1, 687, 844
1. New England	49	139, 411	135, 433	1, 779	3, 290	4, 807	-----	153	12, 761	71, 685
2. Middle Atlantic	164	622, 231	606, 929	4, 682	13, 103	24, 750	41	841	60, 710	286, 774
3. Central	267	1, 235, 503	1, 247, 080	4, 511	23, 036	42, 144	657	2, 100	83, 151	518, 480
4. Southern	122	546, 983	526, 565	4, 902	12, 842	20, 102	-----	973	44, 995	247, 760
5. Northwestern	43	151, 069	150, 391	1, 253	3, 993	6, 130	-----	229	13, 336	80, 591
6. Midwestern	59	295, 265	257, 510	1, 790	5, 354	9, 788	8	439	18, 253	111, 717
7. Southwestern	68	331, 919	312, 446	3, 375	6, 912	9, 305	256	604	25, 349	146, 530
8. Rocky Mountain	29	178, 025	167, 327	1, 512	2, 955	5, 097	233	311	12, 595	75, 135
9. Pacific	75	322, 848	311, 642	4, 583	6, 408	11, 823	1, 659	451	25, 025	149, 172

<sup>1</sup> See footnote 5, table 766.  
<sup>2</sup> Excludes drivers of equipment engaged by these carriers to perform "purchased transportation" service.  
 Source of tables 766 and 767: Interstate Commerce Commission; annual reports, *Statistics of Class I Motor Carriers*, and, beginning 1955, *Transport Statistics in the United States*, Part 7.

**No. 768. CLASS I INTERCITY MOTOR CARRIERS OF PASSENGERS—SUMMARY OF FINANCIAL AND OPERATING STATISTICS: 1950 TO 1958**

[All money figures in thousands of dollars, except average fare and revenue and expense per vehicle-mile. Excludes Alaska and Hawaii. See headnote, table 766. Excludes carriers subject to ICC jurisdiction engaged preponderantly in local or suburban service and carriers engaged in transportation of both property and passengers]

ITEM	1950	1955	1956	1957	1958
Number of carriers reporting.....	172	146	145	144	136
Investment in carrier operating property.....	286,000	372,801	379,476	411,865	432,326
Reserve for depreciation and amortization.....	144,489	197,076	207,508	217,071	225,050
<b>Income statement:</b>					
Operating revenue, total.....	350,751	361,644	377,175	406,629	409,733
Passenger revenue <sup>1</sup> .....	324,523	314,759	324,293	345,251	345,060
Special bus revenue.....	11,694	22,346	25,259	29,551	30,088
Other operating revenue.....	14,528	24,539	27,624	31,826	34,585
Expenses, total.....	314,773	330,598	342,778	370,509	366,087
Operation and maintenance expenses.....	254,905	269,660	279,221	305,167	301,093
Depreciation and amortization <sup>2</sup> .....	27,188	37,117	28,621	28,195	29,418
Operating taxes and licenses <sup>3</sup> .....	28,649	30,347	31,117	33,065	31,553
Operating rents, net.....	4,300	3,474	3,820	4,082	4,023
Operating ratio (percent expenses of operating revenue).....	89.7	91.4	90.9	91.1	89.4
Net operating revenue.....	35,978	31,046	34,397	36,120	43,646
Lease of carrier property, net.....	100	35	55	21	33
Other income, less income deductions.....	766	1,695	1,555	153	2,355
Net income before income taxes.....	35,121	29,319	33,927	35,946	40,708
Net income after income taxes.....	18,908	15,570	17,273	19,598	19,834
Dividend appropriations and withdrawals <sup>4</sup> .....	16,088	28,345	19,184	8,930	4,620
<b>Operating statistics and averages:</b>					
Passenger vehicles owned <sup>5</sup> .....	13,200	11,547	11,062	11,301	10,791
Vehicle-miles of owned and leased passenger vehicles, total <sup>6</sup> .....	958,530	859,207	858,503	867,190	815,927
Number of revenue passengers carried, total.....	389,898	293,244	277,813	266,122	225,529
Miles per vehicle <sup>7</sup> .....	65,411	64,128	65,857	65,140	63,574
Average fare per passenger, per carrier, intercity service.....	\$1.010	\$1.370	\$1.513	\$1.695	\$1.913
Passenger revenue per vehicle-mile, regular route intercity.....	\$0.346	\$0.281	\$0.390	\$0.425	\$0.454
Expense per vehicle-mile <sup>8</sup> .....	\$0.328	\$0.384	\$0.399	\$0.427	\$0.449

<sup>1</sup> Regular route intercity and local revenue.  
<sup>2</sup> Amortization represents a very small part of this total.  
<sup>3</sup> Excludes Federal and State income taxes.  
<sup>4</sup> Withdrawals of sole proprietors and partners.  
<sup>5</sup> Total vehicles owned at close of year.  
<sup>6</sup> Includes bus-miles of vehicles operated under "purchased transportation" arrangements.  
<sup>7</sup> Averages for owned and leased vehicles.  
<sup>8</sup> See footnote 7, table 766.

**No. 769. CLASS I INTERCITY MOTOR CARRIERS OF PASSENGERS—SELECTED OPERATING STATISTICS, BY REGIONS: 1957 AND 1958**

[Excludes Alaska and Hawaii. See headnote, table 763; for description of regions, see headnote, table 767]

REGION AND YEAR	Number of carriers reporting	Operating revenue (\$1,000)	Total expenses (\$1,000)	PASSENGER VEHICLES		REGULAR-ROUTE INTERCITY			EMPLOYEES	
				Total <sup>1</sup>	Intercity <sup>2</sup>	Vehicle-miles (1,000)	Revenue passengers carried (1,000)	Average fare per passenger, per carrier	Average number	Compensation (\$1,000)
1957.....	144	406,629	370,509	12,789	11,741	764,128	191,628	\$1.695	36,163	177,923
1. New England.....	12	5,622	5,620	282	244	11,265	4,474	.990	542	2,163
2. Middle Atlantic.....	34	39,486	38,125	1,543	1,107	52,115	29,490	.854	3,584	17,247
3. Central.....	27	107,954	103,321	3,038	2,777	193,089	53,516	1.659	10,187	52,140
4. Southern.....	23	96,400	85,411	2,862	2,847	192,266	50,500	1.601	8,356	38,921
5. Northwestern.....	3	1,386	1,188	72	72	3,332	443	2.138	111	143
6. Midwestern.....	6	14,340	13,245	525	515	35,549	3,931	2.743	1,150	5,484
7. Southwestern.....	24	64,140	57,736	2,488	2,460	145,273	25,175	2.106	5,840	27,036
8. Rocky Mountain.....	7	4,652	3,941	283	283	9,546	1,928	1.919	903	1,918
9. Pacific.....	8	72,660	61,422	1,696	1,436	123,694	22,171	2.578	5,990	32,852
1958.....	136	409,733	366,087	12,148	11,351	722,234	171,437	1.913	33,965	175,973
1. New England.....	9	6,177	6,280	245	11,872	5,058	.854	3,584	17,247	2,163
2. Middle Atlantic.....	31	39,387	37,325	1,377	990	50,315	24,460	1.058	3,362	16,922
3. Central.....	25	106,727	98,144	2,759	2,670	180,762	47,713	1.876	9,207	49,762
4. Southern.....	22	98,535	85,696	2,766	2,742	184,655	46,379	1.764	7,931	38,992
5. Northwestern.....	3	1,447	1,210	75	75	3,203	427	2.286	98	486
6. Midwestern.....	6	10,174	10,370	494	494	21,907	2,730	2.643	813	3,733
7. Southwestern.....	23	64,115	56,895	2,309	2,281	133,843	21,561	2.435	5,467	26,334
8. Rocky Mountain.....	9	4,469	4,231	337	334	8,872	1,727	1.853	450	2,018
9. Pacific.....	8	78,712	65,935	1,786	1,520	126,805	21,383	2.899	6,034	34,907

<sup>1</sup> Comprises average number operated in intercity service during year and number owned in local operations at close of year.

<sup>2</sup> Comprises vehicles owned, leased, and operated under "purchased transportation" arrangements; operated in intercity revenue service.

Source of tables 768 and 769: Interstate Commerce Commission; annual reports, *Statistics of Class I Motor Carriers*, and, beginning 1955, *Transport Statistics in the United States*, Part 7.

## No. 770. SUMMARY OF CIVIL FLYING: 1934 TO 1959

[As of Dec. 31 or for year ending Dec. 31. Includes Alaska and Hawaii, except as noted. See also *Historical Statistics, Colonial Times to 1937*, series Q 378-383 and Q 394-397]

ITEM	1934	1940	1945	1950	1955	1958	1959
Miles of Federal airways: <sup>1</sup>							
Equipped with low/medium frequency radio aids	19,081	32,100	43,285	70,253	67,770	57,705	47,302
Equipped with very high frequency radio aids					81,209	124,870	129,632
Total civil aircraft <sup>1 2</sup>	8,322	17,928	37,789	92,809	85,320	98,893	105,309
Active aircraft	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	60,921	60,432	69,718	70,747
Hours flown <sup>4</sup>	1,000	846	3,200	( <sup>3</sup> )	9,650	9,500	11,700
Business <sup>5</sup>	do	121	314	( <sup>3</sup> )	2,750	4,300	5,300
Commercial <sup>7</sup>	do	207	387	( <sup>3</sup> )	1,500	1,950	2,200
Instructional	do	217	1,529	( <sup>3</sup> )	3,000	1,275	2,000
Pleasure	do	301	970	( <sup>3</sup> )	2,300	1,975	2,200
Other	do			( <sup>3</sup> )	100		2,400
Miles flown <sup>4</sup>	1,000	75,602	264,000	( <sup>3</sup> )	1,061,500	1,216,000	1,544,000
Business <sup>5</sup>	do	11,697	25,910	( <sup>3</sup> )	339,700	627,800	787,000
Commercial <sup>7</sup>	do	20,980	31,961	( <sup>3</sup> )	180,500	245,700	278,000
Instructional	do	17,360	126,264	( <sup>3</sup> )	286,600	120,650	216,000
Pleasure	do	25,565	79,865	( <sup>3</sup> )	244,100	221,850	263,000
Other	do			( <sup>3</sup> )	10,600		287,000
Fuel consumed: <sup>4</sup>							
Gasoline	1,000 gal.	9,631	22,400	( <sup>3</sup> )	131,200	190,000	227,000
Oil	do	349	660	( <sup>3</sup> )	2,916	3,450	3,700
Certificated airplane pilots	13,949	69,829	296,895	( <sup>3</sup> )	643,201	731,078	758,368
Airline transport	676	1,431	5,815	( <sup>3</sup> )	13,700	18,303	19,364
Commercial	7,484	18,791	162,873	( <sup>3</sup> )	211,142	246,541	255,377
Private	5,789	49,607	128,207	( <sup>3</sup> )	418,359	467,234	483,627
Other certificated airman:							
Glider pilots	109	138	2,438	( <sup>3</sup> )	3,659	4,271	4,592
Mechanics	8,156	11,177	27,272	( <sup>3</sup> )	91,001	107,072	113,520
Parachute riggers	358	444	1,029	( <sup>3</sup> )	2,859	2,543	2,835
Ground instructors	59	1,948	15,195	( <sup>3</sup> )	27,080	28,306	30,179
Aids to air navigation (Federal airways): <sup>1</sup>							
Radio range stations	112	292	360	749	768	885	983
Low/medium frequency	112	290	344	378	344	329	322
Very high frequency		2	16	371	424	556	661
Nondirectional radio beacons	73	48	88	141	175	191	191
Airport towers			107	172	100	128	139
Airways centers		11	29	31	31	32	33
Combined station/towers					75	84	83
Flight service stations	205	365	438	451	364	345	332
Instrument landing systems		1	9	96	157	171	174
Airports in operation <sup>8</sup>	2,297	2,331	4,026	6,408	6,839	16,018	6,426
General <sup>9</sup>					2,713	12,932	2,949
Limited and restricted <sup>9</sup>					4,126	13,086	3,477
Lighted airports	664	776	1,007	1,670	1,247	11,809	1,943
Aircraft accidents (general aviation) <sup>10</sup>	1,491	3,471	4,652	4,505	3,343	4,264	4,725
Aircraft destroyed	387	433	792	1,527	798	780	(3)
Substantial damage	1,113	2,605	3,818	2,947	2,509	3,462	(3)
Minor and no damage	19	833	42	31	36	22	(3)
Degree of injury to persons in aircraft accidents (general aviation):							
Fatal	323	359	508	871	619	688	769
Severe	139	327	446	546	347	305	(3)
Minor and no injury	2,226	4,744	6,296	6,263	4,974	6,661	(3)

<sup>1</sup> United States (including Alaska and Hawaii) and outlying areas.

<sup>2</sup> Includes gliders.

<sup>3</sup> Not available. <sup>4</sup> Excludes all aircraft operated by scheduled airlines and by FAA. Excludes Alaska and Hawaii.

<sup>5</sup> Data statistically computed from trend, since no formal survey was conducted.

<sup>6</sup> Includes flying for corporate or executive purposes as well as flying by individuals, including farmers and ranchers, on personal business.

<sup>7</sup> Includes contract, charter, industrial, and commercial agricultural flying.

<sup>8</sup> Existing airports and airfields recorded with FAA. "Limited" includes seaplane bases and heliports.

<sup>9</sup> See footnote 4, table 780, for current definitions.

<sup>10</sup> For 1934, detail shown is number of planes involved in accidents; for other years, number of accidents. 1958 and 1959 figures are preliminary.

Source: Federal Aviation Agency and Civil Aeronautics Board. Published in *FAA Statistical Handbook of Aviation*.

## No. 771. SCHEDULED AIR CARRIERS—SUMMARY OF OPERATIONS: 1934 TO 1959

[As of Dec. 31 or for year ending Dec. 31, except as noted. Excludes Alaska. Data for domestic air carriers include Hawaii. See also *Historical Statistics, Colonial Times to 1967*, series Q 352-362 and Q 384-393]

ITEM	1934	1940	1945	1950	1955	1958	1959
<b>Number of operators:</b>							
Domestic.....	24	19	20	38	31	30	30
International.....	2	3	4	12	15	15	15
<b>Route miles in operation</b>							
Domestic <sup>1</sup> .....	50,801	95,079	87,401	183,841	192,097	228,123	229,150
International <sup>2</sup> .....	28,609	42,757	48,516	77,440	78,992	90,506	96,655
International <sup>2</sup> .....	22,192	52,322	38,885	106,401	114,005	137,617	132,495
<b>Aircraft in service</b>							
Domestic.....	522	437	518	1,120	1,359	1,731	1,752
Single-engine.....	423	369	421	960	1,212	1,546	1,595
Twain-engine.....			11	29	19	22	23
Four-engine.....			405	571	645	692	627
International.....	99	68	97	160	147	185	156
Twain-engine.....			71	35	23	8	14
Four-engine.....			26	125	124	177	142
<b>Average available seats:<sup>3</sup></b>							
Domestic.....	8.86	16.54	19.68	37.47	51.60	55.83	59.04
International.....	( <sup>4</sup> )	18.28	18.91	40.96	56.33	64.35	68.41
<b>Average speed (miles per hour):</b>							
Domestic.....	( <sup>4</sup> )	( <sup>4</sup> )	155.4	181.2	209.0	219.6	224.0
International.....	( <sup>4</sup> )	( <sup>4</sup> )	150.7	218.4	245.4	257.8	265.4
<b>Fuel consumed:</b>							
Gasoline.....1,000 gal.....	25,136	74,535	159,911	572,246	1,140,447	1,517,747	1,477,895
Domestic.....	18,925	65,675	134,824	418,442	902,936	1,187,639	1,150,311
International.....	6,211	8,860	25,087	163,804	237,511	330,108	321,584
Jet fuel, domestic.....					1,827	89,581	412,494
International.....						4,884	63,417
Oil.....	839	1,288	2,025	6,675	13,832	20,745	21,240
Domestic.....	669	1,104	1,710	5,007	11,311	16,279	18,747
International.....	170	184	316	1,668	2,521	4,466	4,493
<b>Total personnel employed</b>							
Domestic.....	6,477	22,051	68,281	82,786	122,203	147,150	160,890
International.....	4,201	15,984	50,313	61,903	95,548	119,746	132,042
International.....	2,276	6,067	17,968	20,883	26,655	27,404	28,648
<b>Revenue miles flown (all scheduled services)</b>							
Domestic.....1,000.....	49,065	119,753	241,578	458,087	752,255	945,430	1,001,633
Domestic.....	41,526	110,101	208,969	364,256	620,720	778,925	836,071
International.....	7,539	9,652	32,609	93,831	131,535	166,505	165,567
Revenue passengers carried.....	6,572	6,965	7,052	19,019	41,441	52,723	59,919
Domestic.....	6,475	6,523	6,576	17,345	38,025	48,128	54,768
International.....	97	163	476	1,674	3,416	4,595	5,151
<b>Revenue passenger-miles flown:</b>							
Domestic.....1,000,000.....	7,197	1,052	3,362	8,003	19,819	25,343	29,269
International.....	737	100	448	2,206	4,420	5,992	6,919
<b>Average passenger-mile rate:</b>							
Domestic.....	\$0.059	\$0.0507	\$0.0495	\$0.0555	\$0.0535	\$0.0563	( <sup>4</sup> )
International.....	( <sup>4</sup> )	\$0.0883	\$0.0867	\$0.0728	\$0.0668	\$0.0646	( <sup>4</sup> )
<b>Express and freight, ton-miles flown</b>							
Domestic.....1,000.....	( <sup>4</sup> )	( <sup>4</sup> )	30,914	211,914	319,040	421,036	498,588
Domestic.....	597	3,476	22,197	151,351	228,072	292,069	342,584
International.....	( <sup>4</sup> )	( <sup>4</sup> )	8,718	60,563	90,969	128,969	154,004
<b>Mail, ton-miles flown:</b>							
Domestic.....	10 2,237	10,118	11 65,093	47,009	87,445	105,832	118,775
International.....			3,399	21,188	52,410	65,827	71,598
<b>Accidents, domestic:<sup>12</sup></b>							
Number of accidents.....	71	30	40	39	45	50	65
Revenue miles flown per accident.....1,000.....	585	3,684	5,234	9,859	14,230	16,347	13,466
Total fatalities.....	29	45	88	109	179	139	241
Passenger-fatalities per 100 million passenger-miles flown.....	9.0	3.0	2.2	1.1	0.8	0.4	0.7
<b>Accidents, international:<sup>12</sup></b>							
Number of accidents.....	2	6	5	6	5	13	12
Revenue miles flown per accident.....1,000.....	3,770	1,609	6,522	15,986	28,984	14,644	99,140
Total fatalities.....	9		27	56	4	10	71
Passenger-fatalities per 100 million passenger-miles flown.....	10.9		3.7	2.1	0.04	0.2	0.8

<sup>1</sup> 1934 as of Dec. 31; 1940 and 1945, averages for December; and 1950-59, based on fourth quarter.

<sup>2</sup> 1934 and 1940, as of Dec. 31; 1945, average for December; and 1950-59, based on fourth quarter.

<sup>3</sup> Obtained by dividing passenger seat miles by revenue miles flown in passenger service.

<sup>4</sup> Not available.

<sup>5</sup> Data for domestic passengers include duplication.

<sup>6</sup> Includes nonrevenue passengers.

<sup>7</sup> Includes nonrevenue miles.

<sup>8</sup> Excludes freight flown by certificated all-cargo operators and irregular carriers.

<sup>9</sup> Excludes Colonial Airlines, Inc., and Hawaiian Airlines, Ltd.

<sup>10</sup> Excludes 224,236 ton-miles flown by U. S. Army.

<sup>11</sup> Excludes regular mail carried under special contract.

<sup>12</sup> Revenue operations accidents. Beginning 1950, includes scheduled cargo carriers.

Source: Federal Aviation Agency and Civil Aeronautics Board. Published in *FAA Statistical Handbook of Aviation*.

**No. 772. SCHEDULED AIR CARRIERS—AVAILABLE SERVICE AND UTILIZATION, AND TRAFFIC CARRIED: 1946 TO 1959**

[In millions. Includes Alaska and Hawaii, except as noted]

ITEM	1946 <sup>1</sup>	1950	1952	1953	1954	1955	1956	1957	1958	1959
<b>SERVICE AND UTILIZATION</b>										
Available ton miles.....	1,202	2,412	3,349	3,935	4,443	5,236	6,087	7,122	7,266	8,227
Revenue ton miles.....	787	1,384	1,986	2,267	2,530	3,022	3,527	4,004	4,075	4,691
Ton mile load factor..... percent.....	65.53	57.39	59.31	57.60	56.96	57.72	57.95	56.23	56.08	57.01
Available seat miles.....	9,110	16,834	24,115	28,935	33,343	38,545	43,646	51,023	53,070	59,192
Revenue passenger miles.....	7,049	10,241	15,619	18,234	20,599	24,340	27,612	31,243	31,482	36,346
Passenger load factor..... percent.....	77.37	60.84	64.77	63.02	61.78	63.15	63.26	61.23	60.32	62.85
Revenue plane miles.....	369	477	589	656	689	779	868	975	972	1,029
<b>TRAFFIC CARRIED (revenue ton-miles)</b>										
<b>Total</b> .....	<b>787</b>	<b>1,384</b>	<b>1,986</b>	<b>2,267</b>	<b>2,530</b>	<b>3,022</b>	<b>3,527</b>	<b>4,004</b>	<b>4,075</b>	<b>4,691</b>
Passenger <sup>2</sup> .....	683	1,000	1,515	1,764	1,988	2,347	2,662	3,011	3,021	3,487
U. S. mail:										
Priority.....	39	69	93	98	108	123	137	144	160	182
Nonpriority.....				2	11	15	15	17	17	19
Express.....	39	82	42	44	41	51	53	46	49	57
Freight.....	15	189	288	304	312	383	451	508	502	589
Charter flights.....		22	23	27	37	62	165	229	277	305
Excess baggage.....	12	22	25	29	33	37	43	50	48	52

<sup>1</sup> Excludes Alaskan and all cargo airlines.

<sup>2</sup> Passenger miles converted to ton-miles on basis of about 10 to 1; that is, 10 passengers with allowable free baggage are accepted as equalling 1 ton.

Source: Air Transport Association of America, Washington, D. C.; *Air Transport Facts and Figures*, and records.

**No. 773. SCHEDULED AIR CARRIERS—OPERATING REVENUES AND EXPENSES: 1945 TO 1959**

[In millions of dollars. Excludes Alaska and includes Hawaii. See also *Historical Statistics, Colonial Times to 1957*, series Q 363-375]

ITEM	DOMESTIC AIR CARRIERS					INTERNATIONAL AIR CARRIERS				
	1945	1950	1955	1958	1959	1945	1950	1955	1958	1959
Net operating income.....	34.1	63.2	124.1	97.2	107.0	7.3	11.8	18.6	10.6	18.6
<b>Operating revenues</b> .....	<b>214.7</b>	<b>557.8</b>	<b>1,201.3</b>	<b>1,623.9</b>	<b>1,940.8</b>	<b>69.1</b>	<b>260.1</b>	<b>385.2</b>	<b>514.3</b>	<b>573.0</b>
Passenger.....	166.5	444.5	1,060.6	1,428.0	1,717.5	38.9	160.7	295.4	387.3	434.9
Mail (incl. subsidy).....	33.7	63.8	55.5	77.4	89.7	12.2	55.7	27.2	32.7	35.1
Express and freight.....	10.8	35.1	61.1	73.4	89.9	7.3	21.7	32.0	44.0	50.4
Excess baggage.....	2.3	5.1	12.2	13.3	21.2	1.6	3.2	7.4	8.8	8.7
Other.....	1.4	9.3	11.9	22.8	22.4	9.1	18.9	23.1	41.6	43.9
<b>Operating expenses</b> .....	<b>180.6</b>	<b>494.6</b>	<b>1,077.1</b>	<b>1,526.7</b>	<b>1,833.8</b>	<b>61.8</b>	<b>248.3</b>	<b>366.6</b>	<b>503.7</b>	<b>554.5</b>
Aircraft.....	69.2	241.1	551.7	923.9	1,102.7	22.9	122.8	171.4	291.9	315.1
Flying operations.....	43.4	141.8	323.2	470.7	546.8	15.3	71.0	109.0	168.5	164.5
Direct maintenance flight equipment <sup>1</sup> .....	16.4	57.8	135.5	308.0	375.3	5.2	26.2	34.9	82.0	91.8
Depreciation flight equipment.....	9.4	41.4	92.9	145.2	180.6	2.4	25.6	27.6	51.4	58.8
Ground and indirect expense.....	111.4	253.6	525.5	602.7	731.1	38.8	125.5	195.1	211.8	239.4

<sup>1</sup> Beginning 1956, includes maintenance formerly reported as ground and indirect expense.

**No. 774. PERSONNEL OF DOMESTIC SCHEDULED AIR CARRIERS: 1934 TO 1959**

[Includes Hawaii; excludes Alaska. Beginning 1957, groups not strictly comparable with prior years because of change in reporting procedures]

TYPE OF PERSONNEL	1934	1940	1945	1950	1955	1957	1958	1959
<b>Total</b> .....	<b>4,201</b>	<b>15,984</b>	<b>50,313</b>	<b>61,903</b>	<b>95,548</b>	<b>119,333</b>	<b>119,746</b>	<b>132,042</b>
Pilots and copilots.....	667	1,939	4,967	5,785	8,721	11,430	11,287	12,175
Other flight personnel.....		18	108	776	1,721	3,135	3,092	3,370
Purser, stewards, stewardesses.....		914	2,075	3,372	5,919	7,939	8,262	9,089
Meteorologists and dispatchers.....		193	2,613	2,450	2,548	3,037	2,970	3,240
Mechanics.....	1,650	4,054	10,844	15,788	23,776	26,153	24,996	26,884
Other hangar and field personnel.....	923	1,880	7,012	9,822	16,872	29,406	30,454	35,643
Office employees.....	961	5,855	19,241	21,894	34,148	25,425	25,368	26,949
All others.....		1,131	3,453	2,016	2,843	12,808	13,317	14,692

Source of tables 773 and 774: Federal Aviation Agency and Civil Aeronautics Board. Published in *FAA Statistical Handbook of Aviation*.

## No. 775. NONCERTIFICATED AIR CARRIERS—SUMMARY OF OPERATIONS: 1953 TO 1958

[In thousands, except number of operators. Noncertificated air carriers are those carriers operating by authority of letters of registration granted by the Civil Aeronautics Board. Includes domestic and international, supplemental and large irregular passenger air carriers, and irregular transport air carriers. Figures shown for military cover activities performed under charter or other contract with the Department of Defense]

ITEM	1953	1954	1955	1956	1957	1958
Number of operators.....	(1)	(1)	50	48	37	35
Revenue miles.....	45,672	35,769	40,330	42,381	32,942	37,189
Commercial.....	17,246	15,153	17,376	15,860	11,177	13,187
Military.....	28,426	20,616	22,954	26,521	21,765	24,002
Revenue passengers.....	724	695	789	663	535	690
Revenue passenger-miles.....	1,256,911	1,243,030	1,395,682	1,004,052	767,287	1,169,236
Commercial.....	650,286	585,410	716,096	628,876	429,807	609,495
Military.....	606,625	657,620	679,586	375,176	337,480	559,741
Available seat-miles.....	1,690,433	1,613,213	1,767,162	1,382,573	1,120,373	1,726,938
Revenue cargo ton-miles.....	75,279	52,087	74,601	110,377	86,707	86,195
Commercial.....	11,036	18,355	21,191	19,262	8,697	10,417
Military.....	64,243	33,732	53,410	91,115	78,010	75,778
Available ton-miles.....	239,674	230,865	307,932	268,712	216,267	266,338
Operating revenue.....	\$70,028	\$54,661	\$76,824	\$67,609	\$50,456	\$65,202
Transport.....	65,694	51,798	66,923	60,974	44,051	59,240
Passenger.....	21,025	18,325	20,494	17,984	10,701	15,955
Freight.....	2,651	4,274	3,743	3,134	874	1,650
Contract and charter:						
Commercial.....	6,556	3,250	6,993	6,507	7,585	10,992
Military.....	35,139	25,673	35,133	33,109	24,656	30,487
Other.....	323	276	560	240	235	145
Other than transport.....	4,334	2,863	9,901	6,635	6,405	5,002
Operating expenses.....	69,671	58,482	73,067	68,058	55,290	60,462
Direct flight.....	46,357	39,512	49,149	46,110	37,755	46,062
Other.....	23,314	18,970	23,918	21,948	17,535	22,500
Operating profit or loss.....	357	-3,821	3,757	-449	-4,834	-4,260

<sup>1</sup> Not available.

Source: Civil Aeronautics Board; records.

## No. 776. EMPLOYMENT, HOURS, AND EARNINGS IN AIRCRAFT INDUSTRIES (ANNUAL AVERAGES): 1948 TO 1959

ITEM	1948	1950	1954	1955	1956	1957	1958	1959
<b>EMPLOYMENT<sup>1</sup> (1,000)</b>								
Total.....	237.7	281.8	764.1	740.5	809.3	861.7	767.6	734.9
Aircraft.....	158.0	188.4	470.0	471.2	494.4	522.3	457.2	435.0
Aircraft engines and parts.....	48.6	55.8	159.4	147.1	167.1	179.1	162.6	146.3
Aircraft propellers and parts.....	7.7	8.3	15.8	13.8	16.9	20.5	18.3	14.4
Other aircraft parts and equipment.....	23.3	29.3	118.9	113.0	130.9	139.8	129.5	139.2
<b>HOURS AND EARNINGS</b>								
Average weekly hours:								
Aircraft industries.....	41.1	41.4	40.9	41.2	41.8	40.7	40.4	40.2
Aircraft engines and parts industries.....	40.9	42.1	40.7	41.0	42.5	41.2	40.4	41.3
Average weekly earnings:								
Aircraft industries.....	\$60.21	\$67.15	\$85.07	\$89.40	\$94.89	\$95.65	\$101.40	\$106.13
Aircraft engines and parts industries.....	\$63.40	\$71.40	\$85.06	\$85.97	\$96.90	\$98.23	\$102.62	\$109.03
Average hourly earnings:								
Aircraft industries.....	\$1.47	\$1.62	\$2.08	\$2.17	\$2.27	\$2.35	\$2.51	\$2.54
Aircraft engines and parts industries.....	\$1.55	\$1.70	\$2.09	\$2.17	\$2.28	\$2.39	\$2.54	\$2.64

<sup>1</sup> Data for week ending nearest middle of month.

Source: Department of Labor, Bureau of Labor Statistics. Published in *FAA Statistical Handbook of Aviation*.

**No. 777. DOMESTIC AIR CARGO—TON-MILES FLOWN, BY TYPE OF CARRIER: 1950 TO 1959**

[In thousands of ton-miles. Excludes Alaska and Hawaii. For scheduled combination and all-cargo carriers, comprises express and freight ton-miles; for noncertificated carriers, freight only]

YEAR	Total, all carriers	SCHEDULED COMBINATION CARRIERS <sup>1</sup>			SCHEDULED ALL-CARGO CARRIERS			Non-certificated carriers <sup>3</sup>
		Total	Sched-uled	Non-sched-uled <sup>2</sup>	Total	Sched-uled	Non-sched-uled <sup>2</sup>	
1950	229,039	152,327	150,718	1,609	63,599	58,420	5,179	13,113
1951	239,547	142,805	142,669	136	79,056	74,610	4,446	17,686
1952	256,375	159,673	159,614	159	86,447	81,829	4,618	10,255
1953	275,916	176,497	176,428	69	81,330	74,579	6,751	13,089
1954	272,725	186,721	186,615	106	62,295	58,089	4,206	28,709
1955	379,414	226,689	226,425	264	112,669	88,802	23,867	40,056
1956	444,899	243,971	243,653	318	142,123	103,522	38,601	58,805
1957	515,272	265,107	264,947	160	202,990	127,282	75,708	47,175
1958	523,206	291,008	290,483	525	170,979	92,717	78,262	61,309
1959	577,309	341,088	340,959	129	172,894	105,486	67,408	63,327

<sup>1</sup> Domestic trunk, local service, and helicopter carriers.

<sup>2</sup> Includes some military ton-miles and may include a small amount of international traffic.

<sup>3</sup> Civil and military.

Source: Federal Aviation Agency and Civil Aeronautics Board.

**No. 778. CIVIL AIRCRAFT SHIPMENTS: 1948 TO 1959**

ITEM	1948	1950	1954	1955	1956	1957	1958	1959
Aircraft shipments	7,802	3,520	3,389	4,820	7,205	6,805	6,882	8,242
Under 3,000 lbs. airframe weight	7,039	3,391	3,098	4,575	6,778	6,208	6,522	7,796
3,000 lbs. airframe weight and over	263	129	291	245	427	597	360	446
Airframe weight, total, 1,000 lbs.	10,083	5,961	10,494	10,231	16,202	21,810	16,658	23,132
Value of complete units, total, \$1,000	114,207	100,097	295,738	271,250	454,156	700,831	500,540	899,637
Aircraft shipments, by size:								
1- and 2-place	3,302	1,029	2,982	786	948	1,178	1,012	7,588
3- to 5-place	3,737	2,362		3,586	5,557	4,783	5,355	
Over 5-place	263	129	407	448	700	844	515	654
Aircraft shipments, by horsepower: <sup>1</sup>								
1 to 99	2,990	597	2,968	4,144	225	445	324	7,348
100 to 399	4,026	2,789			6,057	5,366	5,867	
400 and over	286	134	421	676	923	994	691	894

<sup>1</sup> Total rated horsepower of all engines.

**No. 779. CIVIL AIRCRAFT EXPORTS: 1948 TO 1959**

[See also *Historical Statistics, Colonial Times to 1957*, series Q 349-350, for total number and value]

ITEM	1948	1950	1954	1955	1956	1957	1958	1959
NUMBER								
New fixed-wing aircraft	1,026	456	639	848	1,118	1,294	1,027	1,104
Transports	91	48	110	95	151	204	127	65
Utility aircraft	935	408	529	749	966	1,086	896	1,033
Commercial and civilian, n. e. c. <sup>1</sup>				4	1	4	4	6
Used and surplus utility planes <sup>2</sup>	202	262	340	800	536	627	595	461
Rebuilt, including converted					66	57	104	67
Rotary-wing aircraft	47	38	74	897	1,371	1,516	1,552	948
New air-cooled reciprocating engines <sup>3</sup>	460	205	728					
VALUE (\$1,000)								
New fixed-wing aircraft	41,536	42,697	97,514	88,574	143,940	193,797	158,669	124,971
Transports	37,395	40,444	93,010	81,144	132,929	180,651	146,436	107,618
Utility aircraft	4,141	2,253	4,504	7,422	11,009	13,141	12,108	14,478
Commercial and civilian, n. e. c. <sup>1</sup>				8	2	5	125	2,875
Used and surplus utility planes <sup>2</sup>	652	606	1,178	37,185	22,932	43,239	35,818	19,807
Rebuilt including converted				4,165	4,225	11,907	9,564	8,184
Rotary-wing aircraft	1,933	984	4,044	2,016	3,529	3,860	4,312	2,448
New air-cooled reciprocating engines <sup>3</sup>	326	201	1,516					

<sup>1</sup> "N. e. c." means not elsewhere classified.

<sup>2</sup> Through 1954, excludes those of 3,000 pounds and over, empty airframe weight.

<sup>3</sup> Excludes those of 400 horsepower and over.

Source of tables 778 and 779: Department of Commerce, Bureau of the Census, and Federal Aviation Agency. Published in *P.A.A. Statistical Handbook of Aviation*.

No. 780. CIVIL AIRWAYS MILEAGE, CIVIL AIRCRAFT, AIRPORTS, AND FEDERAL-AID AIRPORT PROGRAM, BY STATES AND OTHER AREAS: 1959

[As of December 31, except as noted]

STATE OR OTHER AREA	CIVIL AIRWAYS MILEAGE			CIVIL AIRCRAFT <sup>3</sup>		AIRPORTS AND AIRFIELDS <sup>4</sup>			FEDERAL-AID AIRPORT PROGRAM <sup>5</sup> (\$1,000)		
	Total	L/MF <sup>1</sup>	VHF <sup>2</sup>	Total	Active	Total	General	Limited <sup>6</sup>	Total	Federal funds	Sponsor funds
<b>Total</b> .....	176,934	47,302	129,632	105,809	70,747	6,426	2,949	3,477	1,047,123	509,106	538,017
Ala.....	3,085	576	2,509	989	679	77	34	43	14,614	7,297	7,317
Alaska.....	8,809	6,809		2,010	1,208	344	131	213	14,446	10,410	4,036
Ariz.....	5,012	1,218	3,794	1,026	1,065	111	48	63	16,307	8,463	7,844
Ark.....	1,983	211	1,772	1,832	859	86	48	38	8,246	4,074	4,172
Calif.....	9,741	2,536	7,205	13,030	8,761	394	108	196	96,397	44,504	51,893
Colo.....	4,582	678	3,906	1,516	1,033	83	39	44	14,222	7,082	7,140
Conn.....	1,260	378	882	513	536	30	20	10	7,692	3,851	3,841
Del.....	324	121	203	316	228	18	11	7	8,883	444	439
D. C.....	16	13	3	677	374	1	1				
Fla.....	6,750	1,968	4,782	4,058	2,352	151	97	54	37,906	18,129	19,777
Ga.....	2,916	195	2,721	1,446	965	107	48	59	23,377	11,744	11,633
Hawaii.....	2,472	1,204	1,268	197	109	35	10	25	15,027	6,096	8,931
Idaho.....	2,649	775	1,874	962	689	152	28	124	5,032	2,776	2,256
Ill.....	5,701	466	5,235	5,489	3,791	270	104	166	68,884	32,091	36,793
Ind.....	3,689	411	3,278	2,821	1,889	133	97	36	16,813	8,056	8,757
Iowa.....	2,835	260	2,575	2,115	1,626	169	72	97	14,587	7,198	7,389
Kans.....	4,154	547	3,607	2,577	1,790	185	81	104	7,673	3,764	3,909
Ky.....	2,497	360	2,137	757	529	32	22	10	18,449	8,944	9,505
La.....	2,463	966	1,497	1,760	1,160	105	35	47	30,826	14,127	16,699
Maine.....	1,617	981	636	525	371	83	35	48	4,657	2,325	2,332
Md.....	1,664	719	945	959	624	44	20	15	10,613	5,222	5,391
Mass.....	1,866	512	854	1,405	912	80	53	27	21,512	10,373	11,139
Mich.....	4,489	1,929	2,560	3,982	2,728	197	124	73	41,759	19,133	22,626
Minn.....	2,643	835	1,758	2,785	2,036	210	89	121	27,922	13,801	14,121
Miss.....	1,878	605	1,273	1,128	718	76	38	38	8,307	4,111	4,196
Mo.....	4,662	756	3,906	2,435	1,663	128	63	65	32,384	15,892	16,492
Mont.....	3,698	1,428	2,270	1,336	985	142	44	98	5,078	2,735	2,343
Nebr.....	3,076	684	2,392	1,692	1,174	168	56	112	11,372	5,657	5,715
NeV.....	2,667	679	1,988	549	356	50	19	31	8,901	5,647	3,254
N. H.....	634	342	292	284	176	24	16	8	1,769	883	886
N. J.....	1,732	591	1,141	2,101	1,274	88	55	33	21,261	9,091	12,170
N. Mex.....	5,738	1,496	4,242	1,097	720	83	31	52	6,953	3,871	3,082
N. Y.....	5,262	584	4,678	5,040	3,334	225	112	113	75,019	34,112	40,907
N. C.....	3,286	574	2,712	1,763	1,171	105	59	46	14,117	7,052	7,061
N. Dak.....	1,940	838	1,102	942	676	155	33	122	3,635	1,820	1,815
Ohio.....	6,816	1,424	5,392	4,641	3,109	263	138	125	44,112	21,385	22,727
Okl.....	3,275	493	2,782	2,141	1,511	125	61	64	21,189	10,030	10,559
Oreg.....	3,358	899	2,459	1,948	1,393	135	40	95	15,111	7,672	7,439
Pa.....	7,978	1,623	6,355	3,684	2,495	261	136	126	64,052	30,613	33,639
R. I.....	351	115	236	194	132	10	6	4	5,764	2,801	2,963
S. C.....	2,359	354	2,005	581	408	69	30	39	8,941	1,982	1,959
S. Dak.....	1,886	348	1,538	1,072	779	69	36	33	3,790	2,014	1,776
Tenn.....	2,380	575	1,805	1,203	816	54	30	15	24,261	12,157	12,104
Tex.....	13,000	2,570	10,430	8,858	6,187	605	209	296	60,181	29,395	30,789
Utah.....	4,106	1,052	3,054	642	442	57	25	32	12,566	6,893	5,673
Vt.....	317	265	52	151	97	24	8	16	1,732	861	871
Va.....	4,713	1,281	3,432	1,305	863	87	45	42	12,071	5,964	6,107
Wash.....	2,364	1,087	1,277	2,640	1,787	172	57	115	19,090	9,379	9,711
W. Va.....	2,790	252	2,538	530	368	44	20	24	11,199	5,561	5,638
Wis.....	1,670	335	1,335	2,021	1,823	161	83	78	23,638	11,560	12,073
Wyo.....	4,281	1,330	2,951	564	401	55	23	32	4,308	2,450	1,858
Other areas.....				219	120	17	14	3	13,420	7,214	6,215

<sup>1</sup> L/MF—Low/Medium Frequency; radio navigational aids operating between 200 and 400 kilocycles.

<sup>2</sup> VHF—Very High Frequency; radio navigational aids operating on 108 through 118 megacycles.

<sup>3</sup> Includes gliders.

<sup>4</sup> As of April 1, 1960; includes military. Airport type definitions: Effective Apr. 15, 1958, type definitions of airports were revised as follows: General use—airports serving as regular, alternate, or provisional stops for scheduled and large irregular air carriers; non-air-carrier airports offering a minimum of services such as fuel and regular attendant during normal working hours; and airports operating seasonally which qualify under above definition. Limited use—airports available to public but not equipped to offer minimum services. Restricted use—use by general public prohibited except in case of forced landing or by previous arrangement.

<sup>5</sup> Includes restricted use airports, seaplane bases, and heliports.

<sup>6</sup> Cumulative since enactment of Federal Airport Act, May 16, 1946, through Dec. 31, 1959.

Source: Federal Aviation Agency; FAA Statistical Handbook of Aviation.

No. 781. PETROLEUM PIPELINE COMPANIES—SUMMARY OF SELECTED FINANCIAL DATA: 1930 TO 1958

[In thousands of dollars, except miles of line operated. Excludes Alaska and Hawaii. See also *Historical Statistics, Colonial Times to 1967*, series Q 342, for miles of line operated]

YEAR	Miles of line operated	Investment in carrier property	Other investments	Total current assets	Pipeline operating revenues	Pipeline operating expenses	Pipeline operating income	Net income
1930	88,727	772,711	96,184	133,428	237,910	99,363	121,816	123,741
1935	92,037	763,009	119,071	46,949	197,368	89,364	79,586	78,249
1940	100,156	841,977	64,095	47,163	225,760	101,919	82,568	79,867
1941	105,435	885,317	45,687	56,287	251,685	110,448	81,604	79,468
1942	106,485	918,848	44,525	81,259	245,061	123,507	58,332	56,845
1943	108,783	965,464	39,891	107,501	276,652	148,448	62,620	61,302
1944	111,615	1,000,741	62,767	104,150	310,194	172,368	67,840	65,715
1945	113,351	1,042,523	86,713	115,370	304,268	191,668	67,127	65,941
1946	116,544	1,106,454	69,991	103,819	293,723	183,869	56,485	56,094
1947	119,298	1,225,168	56,455	126,621	325,224	214,682	54,415	53,145
1948	124,092	1,381,402	52,168	168,020	377,034	252,971	58,806	56,679
1949	124,984	1,497,679	78,285	175,458	376,452	249,368	63,282	57,743
1950	128,589	1,655,573	100,798	192,291	441,627	254,701	89,047	81,303
1951	131,457	1,821,880	70,011	232,851	523,973	290,144	91,265	82,006
1952	132,715	2,064,405	107,412	322,677	662,268	310,311	111,053	96,650
1953	133,900	2,311,885	95,970	301,185	691,186	324,935	128,943	109,046
1954	138,962	2,501,330	67,451	315,731	617,463	331,834	149,845	124,409
1955	140,374	2,585,555	80,679	352,762	677,605	346,985	176,257	150,334
1956	142,686	2,716,234	82,453	367,633	737,386	370,787	188,272	178,457
1957	145,236	2,843,034	75,912	364,258	729,952	386,661	182,392	159,197
1958	144,354	2,948,598	194,855	347,369	720,670	389,678	190,748	161,838

Source: Interstate Commerce Commission; annual reports, *Statistics of Oil Pipe-Line Companies*, and, beginning 1954, *Transport Statistics in the United States*, Part 6.

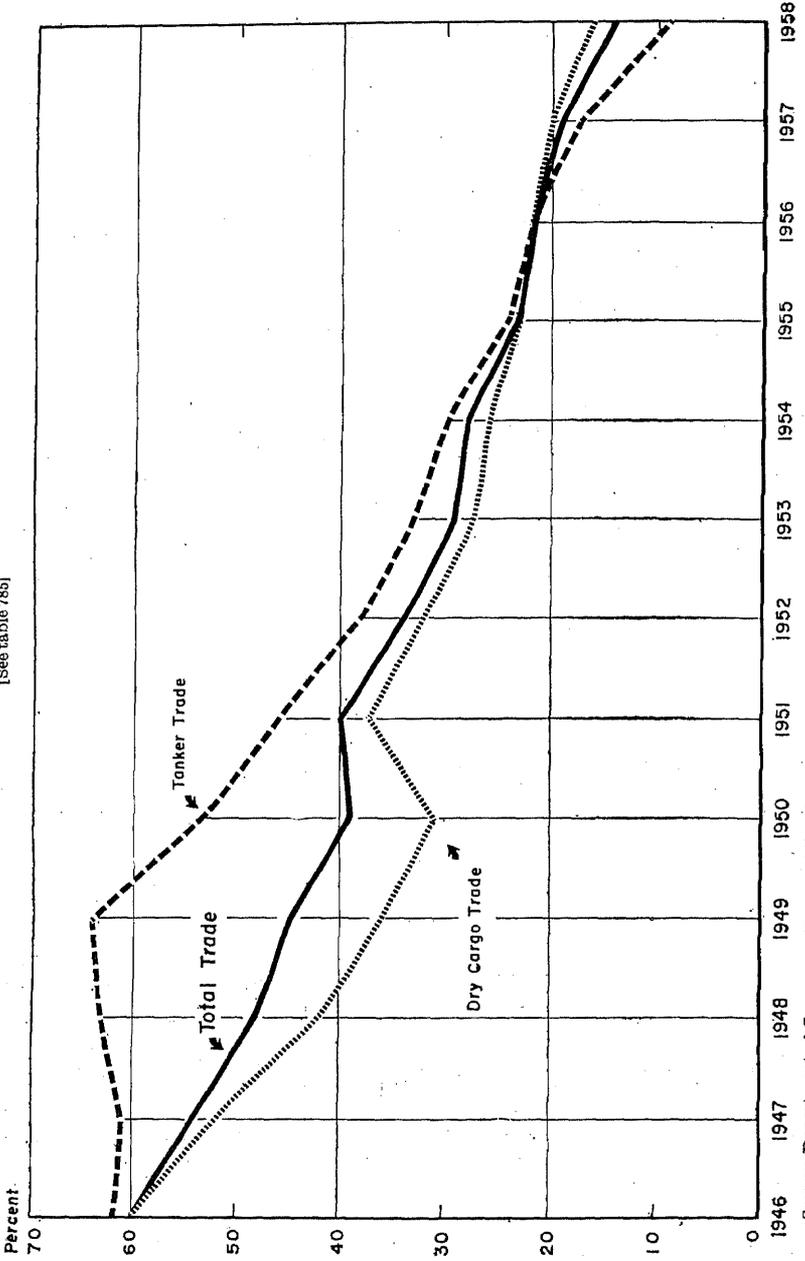
No. 782. PETROLEUM PIPELINES—OIL TRANSPORTED: 1945 TO 1958

[Excludes Alaska and Hawaii. See also *Historical Statistics, Colonial Times to 1967*, series Q 343-344, for oil originated]

ITEM	1945	1950	1954	1955	1956	1957	1958
Number of companies	74	76	81	84	83	82	82
Mileage operated	113,351	128,589	138,962	140,374	142,686	145,236	144,354
Gathering lines	43,994	47,593	50,689	50,645	51,336	52,077	49,787
Trunk lines	69,357	80,996	88,273	89,729	91,350	93,159	94,567
Oil transported (million bbls.):							
Total received into system	2,379	2,766	3,703	4,058	4,459	4,485	4,318
From connecting carriers, total	937	944	1,372	1,434	1,601	1,635	1,543
Crude oil	859	879	1,265	1,299	1,443	1,470	1,361
Refined oils	78	65	106	134	168	165	182
Originated, total	1,442	1,822	2,331	2,624	2,858	2,850	2,775
Crude oil	1,292	1,625	1,829	2,038	2,195	2,183	2,018
Refined oils	150	297	502	586	663	668	757
Total delivered out of system	2,365	2,740	3,705	4,039	4,458	4,472	4,317
To connecting carriers, total	964	937	1,355	1,444	1,613	1,590	1,509
Crude oil	894	874	1,260	1,329	1,489	1,447	1,345
Refined oils	70	63	95	115	125	143	165
Terminated, total	1,401	1,803	2,349	2,595	2,845	2,833	2,807
Crude oil	1,244	1,610	1,838	1,992	2,154	2,195	2,034
Refined oils	157	293	511	603	691	688	773
Trunk-line movement (million bbls.):							
Crude oil	1,721	1,977	2,574	2,781	3,062	3,056	2,947
Refined oils	228	360	607	717	817	876	935
Trunk-line barrel-miles (billions):							
Crude oil	430	577	782	839	936	931	905
Refined oils	65	107	183	205	233	248	260

Source: Interstate Commerce Commission; annual reports, *Statistics of Oil Pipe-Line Companies*, and, beginning 1954, *Transport Statistics in the United States*, Part 6.

FIG. XXXV. PERCENT OF CARGO TONNAGE CARRIED ON AMERICAN FLAG VESSELS IN THE UNITED STATES  
EXPORT AND IMPORT TRADE: 1946 TO 1958  
[See table 785]



Source: Department of Commerce, Bureau of the Census.

## Section 22

### Waterways, Water Traffic, and Shipping

This section presents statistics concerning water transportation, including inland waterways and ocean-borne commerce, the merchant marine, cargo and vessel tonnages, and shipbuilding. The principal sources of these data are two annual reports issued by the Corps of Engineers of the Department of the Army titled *Waterborne Commerce of the United States* and the *Annual Report of the Chief of Engineers, Part 2*; the Bureau of the Census monthly and annual *U. S. Waterborne Foreign Trade*; and the Bureau of Customs annual *Merchant Marine Statistics*. Data in this field are also presented in a *Statistical Analysis of the World's Merchant Fleets*, issued periodically by the Maritime Administration of the Department of Commerce; *The Bulletin* issued annually by the American Bureau of Shipping; and the *Annual Summary of Merchant Ships Launched in the World* and the *Register Book* published by Lloyd's Register of Shipping of London, England. A basic source for historical data is the Bureau of the Census, *Foreign Commerce and Navigation of the United States*, which was issued annually through 1946.

Data relating to merchandise exports and imports, their classification, dollar values, and countries of origin and destination may be found in section 32, Foreign Commerce.

**Units of measurement.**—Cargo tonnage and shipping weight both represent the gross weight of the cargo including the weight of containers, wrappings, crates, etc. Other tonnage figures generally refer to stowing capacity of vessels, 100 cubic feet being called 1 ton. Gross tonnage comprises the space within the frames and the ceiling of the hull, together with those closed-in spaces above deck available for cargo, stores, passengers, or crew, with certain minor exceptions. Net or registered tonnage is the gross tonnage less the spaces occupied by the propelling machinery, fuel, crew quarters, master's cabin, and navigation spaces. It represents substantially space available for cargo and passengers. The net tonnage capacity of a ship may bear little relation to weight of cargo. Dead-weight tonnage is the weight in long tons required to depress a vessel from light water line (that is, with only the machinery and equipment on board) to load line. It is therefore the weight of the cargo, fuel, etc., which a vessel is designed to carry with safety.

**Vessel shipments, entrances, and clearances.**—Shipments by dry cargo vessels comprise shipments on all types of watercraft except tanker vessels, and shipments by tanker vessels comprise all types of cargo both liquid and dry carried by tanker vessels.

A vessel is reported as entered at the first port in the United States at which entry is made, regardless of whether any cargo is unladen at that port. A vessel is reported as cleared from the last port where outward cargo is completed or where the vessel cleared in ballast. Army and Navy vessels entering or clearing without commercial cargo and vessels touching at a United States port in distress, or for other temporary causes without discharging cargo, are not included in the figures.

**Alaska and Hawaii.**—For a general statement concerning the treatment of data for Alaska and Hawaii, see preface.

**Historical statistics.**—Tabular headnotes (as "See also *Historical Statistics, Colonial Times to 1957*, series Q 216-229") provide cross-references, where applicable, to *Historical Statistics of the United States, Colonial Times to 1957*. See preface.

**No. 783. WATERBORNE COMMERCE OF THE UNITED STATES—CARGO TONNAGE,  
FOREIGN AND DOMESTIC: 1940 TO 1958**

[In thousands of short tons. Includes Alaska, Hawaii, and outlying areas. Import and export figures differ slightly from those shown in tables 785 and 786, due to minor differences in basic concepts which are explained in the source. See also *Historical Statistics, Colonial Times to 1957*, series Q 216-229]

CLASS	1940	1945	1950	1955	1956	1957	1958
<b>Net total, foreign and domestic.....</b>	<b>607,900</b>	<b>618,906</b>	<b>820,584</b>	<b>1,016,136</b>	<b>1,092,913</b>	<b>1,131,401</b>	<b>1,004,516</b>
<b>Foreign commerce, total.....</b>	<b>111,255</b>	<b>172,094</b>	<b>169,225</b>	<b>271,103</b>	<b>326,690</b>	<b>358,539</b>	<b>308,851</b>
Imports, through seaports.....	40,740	44,526	96,299	144,276	163,349	176,236	181,490
Exports, through seaports.....	49,568	100,533	45,640	95,404	126,448	146,890	101,555
Imports, Great Lakes ports.....	4,113	6,511	5,683	8,681	10,865	10,116	8,004
Exports, Great Lakes ports.....	16,829	20,724	23,603	22,742	26,027	25,298	17,811
<b>Domestic commerce, net total<sup>1</sup>.....</b>	<b>496,645</b>	<b>446,812</b>	<b>651,359</b>	<b>745,033</b>	<b>766,223</b>	<b>772,862</b>	<b>695,665</b>
Coastwise, between ports.....	157,027	90,705	182,544	195,713	205,910	196,419	194,060
Great Lakes, between ports.....	141,103	157,900	169,881	184,809	173,991	182,150	132,289
Local traffic of seaports, Great Lakes ports, and communities on inland waterways.....	97,632	97,822	106,906	112,863	114,364	110,824	105,425
Traffic between ports and river ports <sup>2</sup> .....	70,217	87,073	190,789	190,789	249,693	269,734	261,069
Traffic between ports of outlying areas of the United States <sup>3</sup> .....			1,239	1,951	2,225	2,403	2,832

<sup>1</sup> For 1940 and 1945, approximate net total, excluding duplications in domestic traffic.

<sup>2</sup> Represents traffic among ports and communities utilizing inland waterways exclusively.

<sup>3</sup> Included in other types of domestic traffic prior to 1950.

Source: Department of the Army, Corps of Engineers; figures through 1950, *Annual Report of Chief of Engineers*, Part 2; thereafter, *Waterborne Commerce of the United States*.

**No. 784. UNITED STATES RECEIPTS AND PAYMENTS FOR INTERNATIONAL TRANSPORTATION: 1947 TO 1959**

[In millions of dollars. Includes Alaska and Hawaii. Data are international transportation transactions recorded for balance of payments purposes (see table 1167). Receipts include freight on exports carried by U.S. operated carriers and foreign carrier expenditures in U.S. ports. Payments include freight on imports carried by foreign carriers and U.S. carrier port expenditures abroad. Freight on exports carried by foreign carriers is excluded since such payments are directly or indirectly for foreign account. Similarly, freight on U.S. imports carried by U.S. carriers is a domestic rather than an international transaction. See also *Historical Statistics, Colonial Times to 1957*, series U 170 and U 177, for totals]

ITEM	1947	1950	1953	1954	1955	1956	1957	1958	1959 (prel.)
<b>Total receipts.....</b>	<b>1,738</b>	<b>1,033</b>	<b>1,198</b>	<b>1,171</b>	<b>1,420</b>	<b>1,642</b>	<b>1,999</b>	<b>1,672</b>	<b>1,649</b>
Ocean transportation.....	1,593	859	971	943	1,151	1,337	1,660	1,317	1,248
Export freight earnings.....	1,154	380	367	347	448	536	639	429	335
Privately controlled shipments:									
Coal.....	257	1	9	6	26	22	32	8	5
Grain.....	67	23	21	21	44	81	70	52	31
Other dry cargo.....	608	311	302	304	365	414	504	361	294
Tanker.....	29	12	18	12	12	10	33	8	5
Military-controlled shipments <sup>1</sup> .....	193	33	17	4	1				
Freight earnings on shipments between foreign countries.....	100	110	103	98	106	140	179	130	126
Passenger fares.....	39	20	21	24	23	25	24	24	20
Port expenditures.....	281	313	465	469	562	619	798	726	761
Charter hire.....	19	36	15	5	12	17	20	8	6
Other transportation.....	145	174	227	228	269	305	339	355	401
<b>Total payments.....</b>	<b>583</b>	<b>818</b>	<b>1,081</b>	<b>1,026</b>	<b>1,204</b>	<b>1,407</b>	<b>1,564</b>	<b>1,636</b>	<b>1,784</b>
Ocean transportation.....	456	643	864	805	946	1,116	1,217	1,247	1,323
Import freight payments.....	141	295	423	369	480	597	717	743	840
Dry cargo.....	133	255	311	288	358	423	517	545	658
Tanker.....	8	40	112	81	122	174	200	198	182
Passenger fares.....	47	121	134	130	138	154	133	166	183
Port expenditures.....	231	138	142	141	153	168	203	170	157
Charter hire.....	37	89	165	165	175	197	164	198	148
Other transportation.....	127	175	217	221	258	291	347	359	456
<b>Receipts balance.....</b>	<b>1,155</b>	<b>215</b>	<b>117</b>	<b>145</b>	<b>216</b>	<b>235</b>	<b>435</b>	<b>36</b>	<b>-185</b>

<sup>1</sup> Represents freight on economic aid only. Freight on military end items not included.

Source: Department of Commerce, Office of Business Economics; *Balance of Payments Statistical Supplement*, 1958 edition, a supplement to the *Survey of Current Business*; *Survey of Current Business*, June 1960, and records.

No. 785. WATERBORNE IMPORTS AND EXPORTS—CARGO TONNAGE, BY FLAG OF CARRIER VESSEL: 1935 TO 1959

[In thousands of short tons. Excludes cargoes (small in aggregate) carried by ships of less than 100 tons gross capacity prior to 1946. Beginning 1946, excludes U. S. Army and Navy cargo, and includes Alaska, Hawaii, and Puerto Rico. Beginning July 1950, excludes commodities classified for security reasons as "special category." From July 1953 through December 1955 and beginning July 1956, exports exclude shipments under \$500 in value regardless of shipping weight; for January through June 1956, exclude those under \$1,000 regardless of shipping weight. From January 1954 through December 1957, imports exclude shipments under 2,000 pounds shipping weight regardless of value, as well as shipments valued at less than \$100 regardless of shipping weight. Beginning January 1968, imports exclude only those shipments valued at less than \$100 regardless of shipping weight. See also *Historical Statistics, Colonial Times to 1967*, series Q 210-215]

YEAR	Total trade	Percent by U. S. flag	IMPORTS BY FLAG OF CARRIER VESSELS				EXPORTS BY FLAG OF CARRIER VESSELS			
			Total	U. S.	Foreign	Percent U. S.	Total	U. S.	Foreign	Percent U. S.
<b>TOTAL</b>										
1935	80,765	31.7	38,042	15,820	22,221	41.6	42,723	9,789	32,935	22.9
1940	105,596	28.7	44,667	17,322	27,345	38.8	60,929	12,939	47,990	21.2
1945 <sup>1</sup>	101,030	68.4	39,426	31,415	8,011	79.7	61,603	37,729	23,874	61.2
1950	159,389	39.3	96,703	42,268	54,435	43.7	62,685	20,379	42,306	32.5
1952	210,469	34.3	107,421	41,683	65,738	38.8	103,048	30,417	72,630	29.5
1953	199,552	29.0	119,003	38,468	80,535	32.3	80,549	19,448	61,101	24.1
1954	198,863	27.5	120,685	36,291	84,395	30.1	78,178	18,378	59,800	23.5
1955	253,919	23.5	141,123	37,409	103,715	26.5	112,796	22,144	90,652	19.6
1956	305,764	21.9	160,382	39,762	120,620	24.8	145,372	27,424	117,948	18.9
1957	337,826	18.8	172,030	34,558	137,472	20.1	165,796	20,092	136,704	17.5
1958	290,353	13.5	175,605	20,628	154,977	11.7	114,748	18,686	96,062	16.3
1959	308,372	12.0	200,207	19,216	180,991	9.6	108,165	17,741	90,424	16.4
<b>DRY CARGO</b>										
1945 <sup>1</sup>	63,083	70.9	21,716	17,053	4,663	78.5	41,367	27,672	13,695	66.9
1950	100,189	31.2	46,611	14,823	31,788	31.8	53,578	16,429	37,149	30.7
1952	139,101	32.2	50,368	18,517	31,851	36.8	88,733	26,275	62,458	29.6
1953	124,445	26.7	57,302	17,201	40,101	30.0	67,143	16,008	51,135	23.8
1954	124,742	25.9	57,888	16,507	40,881	28.8	67,354	15,796	51,558	23.5
1955	169,231	23.2	68,437	19,855	48,582	29.0	100,794	19,782	81,032	19.6
1956	208,708	21.7	79,787	21,125	58,662	26.4	128,921	24,197	104,723	18.8
1957	229,544	19.6	86,868	19,607	67,261	22.6	142,676	25,396	117,280	17.8
1958	184,594	16.2	79,942	13,602	66,340	17.0	104,652	16,341	88,311	15.6
1959	195,161	15.7	98,755	14,678	84,077	14.9	96,406	15,897	80,509	16.5
<b>TANKER CARGO</b>										
1945 <sup>1</sup>	37,947	64.4	17,711	14,362	3,349	81.1	20,236	10,068	10,179	49.7
1950	59,199	53.0	50,092	27,445	22,647	54.8	9,107	3,950	5,157	43.4
1952	71,368	38.3	57,053	23,166	33,887	40.6	14,315	4,143	10,172	28.9
1953	75,107	32.9	61,701	21,267	40,434	34.5	13,406	3,441	9,965	25.7
1954	74,121	30.2	63,297	19,733	43,514	31.3	10,824	2,582	8,242	23.9
1955	84,688	23.5	72,686	17,554	55,133	24.2	12,002	2,382	9,620	19.8
1956	97,046	22.4	80,595	18,637	61,958	23.1	16,451	3,227	13,224	19.6
1957	108,282	17.2	85,162	14,951	70,211	17.6	23,120	3,697	19,423	16.0
1958	105,760	8.9	95,664	7,026	88,638	7.3	10,096	2,345	7,751	23.2
1959	113,211	5.6	101,452	4,537	96,915	4.5	11,759	1,845	9,914	15.7

<sup>1</sup> Excludes U. S. Army and Navy cargo, and Great Lakes.

No. 786. WATERBORNE IMPORTS AND EXPORTS—CARGO TONNAGE, BY COASTAL DISTRICT: 1945 TO 1959

[In thousands of short tons. See headnote, table 785]

DISTRICT	1945	1950	1954	1955	1956	1957	1958	1959
<b>IMPORTS</b>								
Atlantic ports	30,748	76,062	90,642	105,990	116,509	123,151	125,366	137,549
Gulf ports	5,675	10,930	16,386	17,345	19,923	21,920	26,283	28,190
Pacific ports	3,003	4,095	7,739	9,038	13,150	16,840	18,071	19,759
Great Lakes ports		5,616	5,918	8,751	10,796	10,119	7,880	14,709
<b>EXPORTS</b>								
Atlantic ports	39,609	15,223	30,380	54,906	73,026	83,947	55,648	41,459
Gulf ports	14,737	16,818	18,589	22,500	31,634	39,057	27,674	31,381
Pacific ports	7,298	7,270	10,617	13,394	15,985	18,579	14,089	14,927
Great Lakes ports		23,370	18,591	21,996	24,727	24,213	17,336	20,398

Source of tables 785 and 786: Department of Commerce, Bureau of the Census; *Foreign Commerce and Navigation of the United States*, releases, and records.

No. 787. WATERBORNE IMPORTS—SHIPPING WEIGHT ON DRY-CARGO AND TANKER  
VESSELS, BY TRADE AREA: 1957 TO 1959

[In thousands of short tons. Represents general imports. See headnote, table 785]

TRADE AREA	1957			1958			1959		
	Total	On U. S. vessels	Percent U. S.	Total	On U. S. vessels	Percent U. S.	Total	On U. S. vessels	Percent U. S.
<b>DRY CARGO</b>									
Trade area, total.....	86,867.7	19,606.9	22.6	79,941.6	13,602.2	17.0	98,755.1	14,678.2	14.9
Foreign except Canadian.....	61,712.8	14,607.9	23.7	60,787.8	11,188.6	18.4	70,628.1	10,365.9	14.8
Caribbean.....	28,428.4	5,523.1	19.4	30,252.2	4,192.3	13.9	31,669.9	2,407.3	7.6
East Coast South America.....	3,761.0	819.2	21.8	2,736.6	467.6	17.1	3,731.6	849.4	22.8
West Coast South America.....	8,337.0	2,661.6	31.9	7,832.8	1,880.2	24.0	9,052.5	1,961.6	21.7
West Coast Central America and Mexico.....	1,255.7	481.5	38.3	1,351.8	435.7	32.2	1,530.3	320.5	20.9
Gulf Coast Mexico.....	917.1	177.7	19.4	1,044.1	113.1	10.8	1,124.9	45.7	4.1
United Kingdom and Eire.....	909.1	297.5	32.7	1,055.8	323.1	31.1	1,473.6	421.3	28.6
Baltic, Scandinavia, Iceland and Greenland.....	1,818.5	68.0	3.7	1,298.8	66.2	5.1	1,800.5	101.6	5.6
Bayonne-Hamburg Range.....	3,486.6	539.6	15.5	3,722.7	433.8	11.7	6,242.5	575.5	9.2
Portugal and Spanish Atlantic.....	188.3	47.1	25.0	200.7	37.5	18.7	352.9	37.3	10.6
Azores, Mediterranean, and Black Sea.....	1,802.5	528.1	29.3	1,617.7	514.6	31.8	2,040.5	535.2	26.2
West Coast Africa.....	2,409.6	277.7	11.5	1,939.1	207.6	10.7	2,279.9	205.9	9.0
South and East Africa.....	1,933.5	1,056.3	54.6	1,492.8	751.3	50.3	1,726.2	748.3	43.3
Australasia.....	595.7	252.6	42.4	561.2	202.6	36.1	827.3	241.6	29.2
India, Persian Gulf, and Red Sea.....	1,790.5	468.5	26.2	1,514.1	327.7	21.6	1,355.6	477.0	35.2
Malaya and Indonesia.....	585.6	267.4	45.7	486.4	232.6	47.8	584.5	237.9	40.7
South China, Formosa, and Philippines.....	2,620.3	827.1	31.6	2,380.1	569.1	23.8	2,660.2	577.4	21.6
North China, including Shanghai and Japan.....	873.3	315.0	36.1	1,301.4	432.1	33.2	2,166.1	622.4	28.7
Canadian.....	25,154.8	4,999.0	19.9	19,153.8	2,413.5	12.6	28,127.0	4,312.3	15.3
Pacific Canada.....	2,604.6	616.9	23.7	2,714.0	419.6	15.5	3,220.2	634.4	19.7
Great Lakes Canada.....	7,234.8	2,003.6	27.7	5,721.8	1,386.8	24.2	7,968.7	2,572.8	32.3
Atlantic Canada and Newfoundland.....	15,315.5	2,378.4	15.5	10,718.0	607.2	5.7	16,938.0	1,105.0	6.5
<b>TANKER CARGO</b>									
Trade area, total.....	85,162.2	14,951.0	17.6	95,663.5	7,026.1	7.3	101,451.9	4,537.4	4.5
Foreign except Canadian.....	83,702.6	13,677.7	16.3	95,544.0	6,976.0	7.3	101,262.8	4,478.5	4.4
Caribbean.....	63,653.1	11,946.8	18.8	68,521.6	6,123.9	8.9	74,103.2	4,157.6	5.6
East Coast South America.....	128.9	19.4	15.1	318.3	.....	.....	170.5	.....	.....
West Coast South America.....	83.9	17.6	21.0	55.4	.....	.....	15.6	.....	.....
West Coast Central America and Mexico.....	87.6	20.8	23.7	104.8	49.3	47.0	73.4	31.2	42.5
Gulf Coast Mexico.....	2,657.8	422.3	15.9	2,124.5	75.5	3.6	2,427.5	77.0	3.2
United Kingdom and Eire.....	41.9	(1)	.....	74.0	.....	.....	211.1	.....	.....
Baltic, Scandinavia, Iceland, and Greenland.....	37.3	.....	.....	54.6	.....	.....	23.5	.....	.....
Bayonne-Hamburg Range.....	275.5	34.5	12.5	241.5	32.3	13.4	238.5	28.4	11.9
Portugal and Spanish Atlantic.....	.....	.....	.....	9.7	.....	.....	29.9	.....	.....
Azores, Mediterranean, and Black Sea.....	1,627.3	237.7	14.6	4,891.0	134.4	2.7	3,582.8	.....	.....
West Coast Africa.....	.....	.....	.....	.....	.....	.....	27.0	.....	.....
South and East Africa.....	.....	.....	.....	13.2	.....	.....	.....	.....	.....
Australasia.....	.....	.....	.....	.....	.....	.....	6.0	6.0	100.0
India, Persian Gulf, and Red Sea.....	11,518.9	957.8	8.3	15,214.4	.....	.....	16,484.5	144.4	0.9
Malaya and Indonesia.....	3,568.1	20.8	0.6	3,678.2	549.5	14.9	3,612.8	17.1	0.5
South China, Formosa, and Philippines.....	2.2	.....	.....	13.3	11.2	84.2	58.8	16.8	28.6
North China, including Shanghai and Japan.....	(1)	.....	.....	229.5	.....	.....	107.8	.....	.....
Canadian.....	1,459.6	1,273.3	87.2	119.5	50.2	42.0	189.2	58.9	31.1
Pacific Canada.....	1,279.7	1,252.4	97.9	51.4	41.4	80.5	82.6	47.5	57.5
Great Lakes Canada.....	179.5	20.9	11.6	68.2	8.8	12.9	72.3	11.4	15.8
Atlantic Canada and Newfoundland.....	0.4	.....	.....	.....	.....	.....	34.3	.....	.....

<sup>1</sup> Less than 50 short tons.

Source: Department of Commerce, Bureau of the Census; current summary reports, FT 985, *Waterborne Foreign Trade Statistics*.

**No. 788. WATERBORNE EXPORTS—SHIPPING WEIGHT ON DRY-CARGO AND TANKER VESSELS, BY TRADE AREA: 1957 TO 1959**

[In thousands of short tons. Covers domestic and foreign merchandise. See headnote, table 785]

TRADE AREA	1957			1958			1959		
	Total	On U. S. vessels	Per cent U. S.	Total	On U. S. vessels	Per cent U. S.	Total	On U. S. vessels	Per cent U. S.
<b>DRY CARGO</b>									
Trade area, total.....	142,676.0	25,395.5	17.8	104,651.6	16,340.8	15.6	96,406.0	15,897.2	16.5
Foreign except Canadian.....	118,534.3	19,573.1	16.5	87,456.4	12,833.5	14.7	78,077.4	11,558.1	14.8
Caribbean.....	5,628.5	1,515.7	26.9	4,600.4	978.0	21.3	4,390.6	944.5	21.5
East Coast South America.....	4,401.4	901.7	20.5	3,090.6	580.3	18.8	3,184.9	591.8	18.6
West Coast South America.....	1,669.9	688.1	41.2	1,346.6	519.4	38.6	1,267.0	402.9	31.8
West Coast Central America and Mexico.....	364.4	112.1	30.8	303.3	89.5	29.5	236.9	84.4	35.6
Gulf Coast Mexico.....	536.9	12.8	2.4	643.3	193.0	30.0	291.0	12.1	4.2
United Kingdom and Eire.....	6,701.3	1,147.4	17.1	5,505.5	939.7	17.1	5,979.5	729.6	12.2
Baltic, Scandinavia, Iceland, and Greenland.....	4,708.6	603.5	12.8	4,727.2	625.5	13.2	4,017.5	449.4	11.2
Bayonne-Hamburg Range.....	45,775.0	3,599.8	7.9	30,875.5	988.5	3.2	21,083.6	1,024.3	4.9
Portugal and Spanish Atlantic.....	1,443.9	327.4	22.7	1,063.7	253.3	23.8	1,110.6	338.4	30.5
Azores, Mediterranean, and Black Sea.....	20,175.4	3,037.5	15.1	15,277.7	2,211.2	14.5	13,322.6	2,340.5	17.6
West Coast Africa.....	628.4	217.2	34.7	462.8	159.0	34.4	565.1	218.0	38.6
South and East Africa.....	808.4	531.4	65.7	649.2	311.0	47.9	640.4	296.2	46.3
Australasia.....	754.1	169.5	22.5	680.0	156.5	23.0	774.9	146.1	18.9
India, Persian Gulf, and Red Sea.....	4,663.1	1,713.4	36.7	4,045.8	1,698.2	42.0	4,215.9	1,828.5	43.4
Malaya and Indonesia.....	431.2	151.8	35.2	267.4	103.8	38.8	356.9	117.7	33.0
South China, Formosa, and Philippines.....	2,073.5	1,055.0	50.9	1,965.3	987.5	50.2	1,879.4	888.5	46.2
North China, including Shanghai and Japan.....	17,773.2	3,789.1	21.3	11,952.3	2,039.6	17.1	14,760.6	1,189.4	7.9
Canadian.....	24,141.7	5,822.3	24.1	17,195.2	3,507.3	20.4	18,328.7	4,339.1	23.7
Pacific Canada.....	306.1	125.4	41.1	217.4	87.3	31.0	202.7	52.3	25.8
Great Lakes Canada.....	22,607.3	5,668.9	25.1	16,000.5	3,432.1	21.4	16,991.5	4,275.8	25.2
Atlantic Canada and Newfoundland.....	1,229.3	28.1	2.3	977.4	7.9	0.8	1,134.5	11.1	1.0
<b>TANKER CARGO</b>									
Trade area, total.....	23,120.4	3,696.8	16.0	10,096.3	2,345.0	23.2	11,758.9	1,844.3	15.7
Foreign except Canadian.....	20,829.5	2,276.1	10.9	8,486.1	1,334.5	16.3	10,220.5	1,104.1	10.8
Caribbean.....	1,901.6	500.8	26.3	1,077.0	137.2	12.7	472.7	55.9	11.8
East Coast South America.....	672.9	83.7	12.4	297.6	100.9	33.9	381.3	140.9	37.0
West Coast South America.....	157.0	34.0	21.7	168.3	17.6	10.5	207.3	-----	-----
West Coast Central America and Mexico.....	586.5	49.9	8.5	627.3	70.4	11.2	225.9	-----	-----
Gulf Coast Mexico.....	316.0	10.7	3.4	14.3	8.9	62.2	18.2	3.7	75.3
United Kingdom and Eire.....	5,170.5	229.1	4.4	1,090.0	( <sup>1</sup> )	-----	1,125.3	9.6	0.9
Baltic, Scandinavia, Iceland, and Greenland.....	9,977.6	30.5	3.1	274.7	-----	-----	267.9	2.0	0.7
Bayonne-Hamburg Range.....	5,800.3	505.7	8.7	1,244.8	26.8	2.2	2,751.1	33.3	1.2
Portugal and Spanish Atlantic.....	168.0	2.5	1.5	44.2	13.5	30.5	102.1	27.6	27.0
Azores, Mediterranean, and Black Sea.....	2,027.3	321.6	15.9	516.7	232.4	45.0	497.3	236.5	47.6
West Coast Africa.....	313.0	58.4	18.7	119.8	22.2	18.5	69.5	-----	-----
South and East Africa.....	11.5	-----	-----	39.4	-----	-----	41.5	-----	-----
Australasia.....	37.7	-----	-----	77.4	13.9	18.0	123.8	16.4	13.2
India, Persian Gulf, and Red Sea.....	524.9	449.2	85.6	687.7	605.6	88.1	1,232.4	578.3	46.9
Malaya and Indonesia.....	-----	-----	-----	( <sup>1</sup> )	-----	-----	-----	-----	-----
South China, Formosa, and Philippines.....	42.9	-----	-----	25.4	-----	-----	41.8	-----	-----
North China, including Shanghai and Japan.....	2,122.0	-----	-----	2,181.9	135.0	6.2	2,662.8	-----	-----
Canadian.....	2,290.9	1,420.7	62.0	1,610.2	960.5	59.7	1,538.4	740.2	48.1
Pacific Canada.....	779.4	560.4	72.4	533.8	408.4	76.5	602.2	392.9	65.3
Great Lakes Canada.....	1,198.1	746.2	62.3	966.6	551.7	57.1	746.2	375.3	50.6
Atlantic Canada and Newfoundland.....	313.3	114.1	36.4	109.7	0.4	0.4	190.1	2.0	1.1

<sup>1</sup> Less than 50 short tons.

 Source: Department of Commerce, Bureau of the Census; current summary reports, FT 985, *Waterborne Foreign Trade Statistics*.

No. 789. WATERBORNE EXPORTS AND IMPORTS—VALUE OF TRADE, BY COASTAL DISTRICT: 1956 TO 1958

[In millions of dollars. Includes trade of Alaska, Hawaii, and Puerto Rico with foreign countries]

TYPE OF VESSEL AND DISTRICT	TOTAL TRADE			EXPORTS			IMPORTS		
	1956	1957	1958	1956	1957	1958	1956	1957	1958
<b>Total</b> .....	<b>20,774</b>	<b>22,934</b>	<b>20,576</b>	<b>11,485</b>	<b>13,267</b>	<b>10,948</b>	<b>9,289</b>	<b>9,667</b>	<b>9,628</b>
Atlantic.....	13,585	14,604	13,376	6,838	7,622	6,506	6,747	6,982	6,870
Dry cargo.....	12,479	13,349	12,055	6,757	7,538	6,435	5,722	5,811	5,620
Tanker.....	1,108	1,254	1,321	82	84	71	1,026	1,170	1,250
Gulf.....	4,026	4,714	4,026	2,843	3,549	2,829	1,183	1,165	1,197
Dry cargo.....	3,561	4,107	3,709	2,441	3,007	2,623	1,120	1,100	1,086
Tanker.....	465	607	317	402	542	206	63	65	111
Pacific.....	2,492	2,874	2,498	1,431	1,675	1,260	1,061	1,199	1,239
Dry cargo.....	2,281	2,576	2,223	1,349	1,568	1,165	932	1,008	1,058
Tanker.....	211	298	275	82	107	94	129	191	181
Great Lakes.....	672	742	674	373	421	353	299	321	321
Dry cargo.....	648	719	653	352	402	334	296	317	319
Tanker.....	24	24	22	21	20	19	3	4	3

Source: Department of Commerce, Bureau of the Census; *United States Foreign Waterborne Commerce*, annual review.

No. 790. WATERBORNE EXPORTS AND IMPORTS—SHIPPING WEIGHT OF PRINCIPAL COMMODITIES IN OCEANBORNE TRADE: 1957 AND 1958

[In thousands of short tons. Includes trade of Alaska, Hawaii, and Puerto Rico with foreign countries. Export data exclude shipments of under \$500 in value. Import data exclude shipments of under 2,000 pounds shipping weight for the period January–December 1957. For the period January–December 1958 import data exclude shipments of under \$100 in value. "N.e.c." means not elsewhere classified]

COMMODITY	1957	1958	COMMODITY	1957	1958
<b>EXPORTS</b>			<b>IMPORTS</b>		
Bituminous coal.....	57,568	38,139	Crude petroleum.....	53,069	54,757
Wheat.....	12,448	9,921	Residual fuel oil.....	27,626	30,234
Corn.....	4,150	4,039	Iron ore and concentrates.....	31,279	26,212
Residual fuel oil.....	5,033	3,358	Aluminum ores and concentrates.....	8,839	9,836
Phosphate fertilizer material.....	3,488	3,116	Sugar.....	4,185	4,796
Barley and rye.....	1,487	3,049	Gypsum or plaster rock.....	4,216	4,084
Iron and steel scrap.....	5,909	2,352	Petroleum products, n.e.c.....	267	3,652
Soybeans, inedible.....	2,271	2,132	Manganese.....	3,259	2,612
Iron and steel mill products.....	4,151	2,084	Molasses, inedible.....	1,365	2,079
Grain sorghums.....	572	2,068	Gas oil and distillate fuel oil.....	1,261	2,009
Gas oil and distillate fuel oil.....	5,972	1,996	Gasoline and other motor fuels.....	534	1,958
Lubricating oils and greases.....	1,396	1,854	Iron and steel mill products.....	1,420	1,897
Sulphur.....	1,607	1,648	Bananas.....	1,669	1,690
Wheat flour and semolina.....	1,238	1,275	Chrome.....	2,311	1,518
Cotton, unmanufactured.....	1,807	1,191	Coffee, raw or green.....	1,398	1,344
Industrial chemicals, n.e.c.....	1,099	1,004	Petroleum asphalt.....	1,127	1,278
Anthracite coal.....	2,566	809	Standard newsprint paper.....	1,257	1,189
Chemical specialties, n.e.c.....	650	654	Lumber and shingles.....	640	1,168
Coke, including petroleum coke.....	788	628	Pulpwood.....	1,145	991
Rice.....	803	624	Nitrogenous fertilizer.....	935	810
Inedible animal products, n.e.c.....	906	606	Woodpulp.....	597	650
Lumber and shingles.....	740	589	Sulphur.....	553	598
Iron ore and concentrates.....	1,127	554	Crude rubber and allied gums.....	675	580
Paper and manufactures, n.e.c.....	519	543	Nonmetallic minerals and manufactures, n.e.c.....	617	575
Woodpulp.....	582	479	Copper ore and concentrates.....	668	529

Source: Department of Commerce, Bureau of the Census; *United States Foreign Waterborne Commerce*, annual review.

No. 791. COMMERCE OF SELECTED UNITED STATES PORTS: 1958

[In thousands of short tons (cargo). Excludes Great Lakes. In addition to commerce here shown, many ports have (a) commerce with ports on internal rivers and canals; (b) purely local port traffic]

PORT	Im-ports	Ex-ports	COASTWISE		PORT	Im-ports	Ex-ports	COASTWISE	
			Re-ceipts	Ship-ments				Re-ceipts	Ship-ments
<b>Total</b> .....	181,480	101,555	193,939	194,023	<b>GULF COAST PORTS</b>				
<b>ATLANTIC COAST PORTS</b>					Charlotte Harbor, Fla.....				
Portland Harbor, Maine	12,150	96	2,884	423	Tampa Harbor, Fla.....				
Portsmouth Harbor, N. H.	508	(2)	710	1	Port St. Joe Harbor, Fla.....				
Salem Harbor, Mass.	142		1,194	41	Panama City Harbor, Fla.....				
Boston, Mass.	4,969	649	11,831	1,019	Pensacola Harbor, Fla.....				
New Bedford and Fairhaven Harbor, Mass.	33	3	121	6	Mobile Harbor, Ala.....				
Fall River Harbor, Mass.	497	(2)	1,521	31	New Orleans, La.....				
Providence River and Harbor, R. I.	1,426	62	5,695	518	Baton Rouge, La.....				
New London Harbor, Conn.	396		428	149	Lake Charles, La. 1.....				
New Haven Harbor, Conn.	1,050	1	4,953	911	Galveston, Tex.....				
Bridgeport Harbor, Conn.	337	58	1,516	385	Texas City, Tex.....				
Norwalk Harbor, Conn.			312		Houston, Tex.....				
Stamford Harbor, Conn.			700	10	Corpus Christi, Tex.....				
Port of New York, N.Y., and N.J.	34,437	7,038	40,764	12,045	Harbor Island, Tex.....				
Hempstead Harbor, N. Y.			2,114	3,282	Freeport Harbor, Tex.....				
Huntington Harbor, N. Y.			400	2	Brazos Island Harbor, Tex.....				
Port Jefferson Harbor, N. Y.	11		1,069	75	Beaumont, Tex.....				
Port of Albany, N.Y.	457	648	3,762	12	Port Arthur, Tex.....				
Delaware River and tributaries	42,318	3,254	25,885	8,866	<b>PACIFIC COAST PORTS</b>				
Baltimore Harbor and Channels, Md.	18,677	6,391	5,772	1,202	San Diego Harbor, Calif.....				
Norfolk Harbor, Va.	2,496	20,641	5,574	3,979	Long Beach Harbor, Calif.....				
Port of Newport News, Va.	2,081	15,571	24	2,611	Los Angeles Harbor, Calif.....				
Morehead City Harbor, N. C.	156	50	144	9	San Francisco Bay Area, Calif.....				
Port of Wilmington, N. C.	490	179	2,831	21	Crescent City Harbor, Calif.....				
Charleston Harbor, S. C.	1,337	258	2,060	179	Humboldt Harbor and Bay, Calif.....				
Savannah Harbor, Ga.	1,934	368	1,322	180	Stockton, Calif.....				
Jacksonville Harbor, Fla.	1,625	251	3,694	65	Coos Bay, Oreg.....				
Palm Beach Harbor, Fla.	541	236			Portland, Oreg.....				
Port Everglades Harbor, Fla.	1,577	45	3,292	157	Astoria, Oreg.....				
Miami Harbor, Fla.	355	153	349	46	Vancouver, Wash.....				
San Juan Harbor, P. R.	1,422	31	1,151	825	Longview, Wash.....				
Mayaguez Harbor, P. R.	32	10	156	74	Tacoma Harbor, Wash.....				
Ponce Harbor, P. R.	46	20	209	459	Seattle Harbor, Wash.....				
					Bellingham Bay and Harbor, Wash.....				
					Port Angeles Harbor, Wash.....				
					Seward Harbor, Alaska.....				
					Honolulu Harbor, Hawaii.....				
					Kahului Harbor, Maui, Hawaii.....				
					Hilo Harbor, Hawaii.....				
					Nawiliwili Harbor, Hawaii.....				

<sup>1</sup> Includes data for ports not shown separately.

<sup>2</sup> Less than 500 tons.

<sup>3</sup> Includes Calcasieu River and Pass.

Source: Department of the Army, Corps of Engineers; *Waterborne Commerce of the United States*.

## No. 792. COMMERCE OF SELECTED GREAT LAKES PORTS: 1950 TO 1958

[In thousands of short tons (cargo). Comprises foreign, lakewise, and coastwise shipping]

PORT	RECEIPTS				SHIPMENTS			
	1950	1955	1957	1958	1950	1955	1957	1958
<b>Total</b> .....	175,637	193,591	192,378	140,404	193,511	207,588	207,496	150,127
Ashland Harbor, Wis.....	685	451	428	401	5,422	4,527	3,859	2,462
Ashtabula, Ohio.....	10,447	9,455	9,071	6,250	3,302	3,586	3,388	2,098
Buffalo, N. Y., Port of.....	16,458	19,318	20,336	13,237	2,417	2,436	1,920	1,225
Chicago, Ill., Port of.....	15,813	16,872	41,014	10,419	4,093	6,349	15,016	8,245
Cleveland, Ohio.....	17,375	19,744	18,149	11,060	382	358	935	480
Conneaut Harbor, Ohio.....	9,562	14,139	14,740	5,794	2,522	994	1,050	826
Detroit, Mich., Port of.....	21,090	24,295	24,992	19,757	1,298	1,626	2,146	1,779
Duluth-Superior, Minn. and Wis.....	10,117	7,142	6,678	5,036	53,009	61,156	54,015	29,437
Indiana Harbor, Ind.....	10,355	13,695	( <sup>1</sup> )	( <sup>1</sup> )	5,182	6,886	( <sup>1</sup> )	( <sup>1</sup> )
Lorain Harbor, Ohio.....	8,153	5,563	5,661	2,791	3,264	2,258	2,519	1,634
Milwaukee Harbor, Wis.....	7,357	7,157	6,947	6,275	1,421	1,532	1,448	1,380
Sandusky Harbor, Ohio.....	1	1	13	51	9,822	7,961	8,376	6,180
Toledo Harbor, Ohio.....	4,040	6,504	6,475	4,828	29,307	28,710	27,574	23,471
Two Harbors (Agate Bay), Minn.....	216	99	157	-----	18,948	19,004	19,017	11,661
All other.....	43,368	49,156	37,717	54,505	53,122	60,705	66,283	59,189

<sup>1</sup> Included in Port of Chicago, Ill.Source: Department of the Army, Corps of Engineers; 1950, *Annual Report of the Chief of Engineers, Part 2*; thereafter, *Waterborne Commerce of the United States*.

## No. 793. FREIGHT CARRIED ON INLAND WATERWAYS, BY SYSTEM: 1940 TO 1958

[In millions of ton-miles. Excludes Alaska and Hawaii]

SYSTEM	1940	1945	1950	1955	1957	1958
<b>Total</b> .....	118,057	142,737	163,344	216,508	231,792	189,016
Atlantic coast rivers.....	1,859	1,036	6,497	27,042	32,600	20,188
Gulf coast rivers.....	593	345	1,229	13,890	15,920	15,782
Pacific coast rivers.....	1,229	1,555	1,686	4,736	5,329	4,952
Mississippi River System <sup>1</sup> .....	13,934	19,595	33,598	52,019	60,710	59,208
Other waterways.....	10	9	8	5	3	2
Canals and connecting channels <sup>2</sup> .....	4,787	7,168	8,639	-----	-----	-----
Great Lakes system.....	95,645	113,028	111,687	118,845	117,231	79,885

<sup>1</sup> Comprises main channels and all tributaries of the Mississippi, Illinois, Missouri, and Ohio Rivers.<sup>2</sup> Except Great Lakes. Beginning 1955, distributed by inland waterway system.Source: Department of the Army, Corps of Engineers; figures through 1950, *Annual Report of the Chief of Engineers, Part 2*; thereafter, *Waterborne Commerce of the United States*.

## No. 794. FREIGHT CARRIED ON GREAT LAKES SYSTEM: 1958

[In thousands of ton-miles]

AREA	Total	DOMESTIC				FOREIGN	
		Lakewise	Coastwise	Internal	Local and intraport	Canadian	Overseas
<b>Total</b> .....	79,885,238	67,619,456	76,900	732,959	119,605	10,643,164	693,154
Lake Superior.....	22,593,949	20,461,444	68	3,506	130	2,120,598	8,203
St. Marys River.....	4,236,622	3,693,266	11	577	2	536,419	1,347
Lake Michigan, including Port of Chicago <sup>1</sup> .....	16,155,426	14,566,730	12,232	484,463	98,476	850,514	143,011
Lake Huron.....	18,124,245	15,764,951	9,056	16,813	1,434	2,209,669	122,322
St. Clair River, including channels in Lake St. Clair.....	4,349,133	3,764,337	2,099	4,044	722	549,102	28,829
Detroit River.....	2,421,813	2,080,920	2,102	4,489	1,253	315,224	17,825
Lake Erie, including upper Niagara River.....	10,031,952	7,150,659	28,635	98,371	17,587	2,582,245	154,455
Welland Canal.....	360,096	16,967	3,648	16,364	-----	303,506	19,611
Lake Ontario, including lower Niagara River.....	1,150,774	106,888	19,049	94,308	1	814,729	115,799
St. Lawrence River, between St. Regis, Quebec, and Lake Ontario.....	461,228	8,294	-----	10,024	-----	361,158	81,752

<sup>1</sup> Comprises Chicago Harbor, North Branch, South Branch, Sanitary Ship Canal, Calumet-Sag Channel, Lake Calumet, Calumet Harbor and River.Source: Department of the Army, Corps of Engineers; *Waterborne Commerce of the United States*.

No. 795. FREIGHT CARRIED ON MISSISSIPPI RIVER SYSTEM: 1940 TO 1958

In thousands. Net traffic. Comprises main channels and all tributaries of the Mississippi, Illinois, Missouri, and Ohio Rivers]

YEAR	TRAFFIC IN SHORT TONS					TRAFFIC IN TON-MILES				
	Total	Inland	Coast-wise	Foreign		Total	Inland	Coast-wise	Foreign	
				Imports	Exports				Imports	Exports
1940-----	88,980	73,174	9,001	3,157	3,649	13,934,427	11,578,418	1,523,144	385,444	447,421
1945-----	95,643	82,031	4,954	3,114	5,394	16,695,193	17,737,830	849,230	340,228	667,905
1950-----	138,145	114,697	13,877	4,395	5,176	33,697,816	30,281,638	2,074,088	599,288	642,802
1953-----	169,892	142,569	14,162	5,762	6,900	42,357,919	38,289,640	2,333,601	826,018	908,660
1954-----	162,833	136,392	13,830	5,252	7,359	42,609,492	38,703,034	2,118,425	812,446	975,587
1955-----	194,363	163,760	16,060	6,296	8,243	52,019,333	47,417,668	2,473,056	1,046,148	1,082,461
1956-----	212,818	179,257	16,567	7,303	9,691	56,785,567	51,733,286	2,508,900	1,232,001	1,312,210
1957-----	227,028	188,214	17,643	8,536	12,635	60,709,711	54,768,579	2,733,715	1,458,601	1,748,816
1958-----	209,881	172,582	16,996	10,475	9,828	59,207,559	53,442,610	2,507,298	1,811,271	1,446,380

No. 796. COMMERCE ON SELECTED RIVERS, CANALS, AND CONNECTING CHANNELS OF THE UNITED STATES: 1940 TO 1958

[In thousands of short tons (cargo). Excludes general ferry traffic and non-regulated car ferry traffic]

WATERWAY	1940	1945	1950	1955	1957	1958
<b>RIVERS</b>						
Hudson River, N. Y. (Mouth of Spuyten Duyvil Creek to Waterford, N. Y.)-----	11,516	5,747	14,574	20,203	20,650	19,147
Delaware River, Philadelphia, Pa., to Trenton, N. J.-----	4,410	4,261	7,086	11,010	13,691	12,808
Delaware River, Philadelphia, Pa., to the sea-----	27,658	29,553	69,283	86,764	106,247	98,274
Potomac River below Washington, D. C.-----	3,015	1,936	2,402	3,796	3,370	3,158
James River, Va.-----	2,649	1,469	3,663	5,197	5,477	5,080
Wilmington Harbor, N. C.-----	1,275	1,169	4,022	4,693	4,753	4,827
Black Warrior, Warrior, and Tombigbee Rivers, Ala.-----	1,890	1,492	2,603	4,221	4,874	5,686
San Joaquin River, Calif.-----	1,049	1,220	1,495	2,414	3,976	3,942
Columbia and Lower Willamette Rivers below Vancouver, Wash., and Portland, Oreg.-----	15,028	16,635	18,578	19,826	21,532	18,470
Columbia River from Vancouver, Wash., to The Dalles, Oreg.-----	1,884	1,417	2,845	3,216	3,194	3,163
Willamette River above Portland and Yamhill River, Oreg.-----	3,067	2,877	3,948	4,290	3,578	3,374
Illinois Waterway, Ill.-----	5,729	6,501	16,421	21,363	24,234	24,489
Mississippi River, Minneapolis, Minn., to the Passes-----	32,372	43,969	66,923	94,042	113,414	112,578
Allegheny River, Pa.-----	3,929	2,416	3,594	4,722	5,352	4,873
Monongahela River, Pa. and W. Va.-----	29,560	26,556	28,510	37,618	38,421	28,911
Kanawha River, W. Va.-----	4,499	4,499	6,388	7,644	8,883	8,213
Ohio River, Pittsburgh to mouth-----	29,549	33,868	48,598	71,461	81,567	73,477
Cumberland River, Tenn., and Ky.-----	852	814	1,647	2,878	2,667	2,859
Tennessee River, Tenn., Ala., and Ky.-----	2,207	2,163	3,051	9,975	12,742	12,041
<b>FEDERAL CANALS AND CONNECTING CHANNELS</b>						
Cape Cod Canal, Mass.-----	7,901	14,684	13,625	13,388	12,192	10,673
Inland Waterway from Delaware River to Chesapeake Bay, Del. and Md.-----	3,795	3,690	7,298	9,151	9,808	9,146
Lake Charles Deep Water Channel, La.-----	8,601	10,288	12,164	14,901	19,007	17,200
Gulf Intracoastal Waterway, Apalachee Bay, Fla., to the Mexican border-----	11,643	23,045	31,520	41,379	48,104	46,008
Sabine-Neches Waterway, Tex.-----	38,433	26,318	48,385	56,234	62,638	60,674
Port Aransas (Aransas Pass) Corpus Christi Waterway, Tex.-----	14,180	13,074	21,132	24,330	23,176	21,745
Detroit River, Mich.-----	18,294	127,045	127,292	132,507	130,560	87,879
St. Marys Falls Canal, Mich.-----	89,360	112,983	106,140	114,649	112,803	76,324
Grays Reef Passage, Mich.-----	5,962	4,905	6,045	5,399	5,937	4,595
<b>STATE CANALS</b>						
New York State Barge Canal-----	4,768	2,969	4,616	4,616	4,469	4,001
Innerharbor Navigation Canal, La.-----	2,687	1,430	2,338	3,834	5,883	6,049

<sup>1</sup> Reported as "Cape Fear River at and below Wilmington, N. C."

Source of tables 795 and 796: Department of the Army, Corps of Engineers; figures through 1953, *Annual Report of the Chief of Engineers*, Part 2; thereafter, *Waterborne Commerce of the United States*.

**No. 797. COMMERCIAL TRAFFIC THROUGH THE PANAMA CANAL, 1940 TO 1959,  
AND BY NATIONALITY OF VESSEL, 1959**

[For years ending June 30. Comprises oceangoing toll-paying vessels and foreign naval vessels of 300 net tons and over (Panama Canal measurement) for vessels rated on net tonnage, or 500 tons displacement and over for vessels rated on displacement tonnage. See also *Historical Statistics, Colonial Times to 1957*, series Q 235-237]

YEAR	Number of transits	Net tonnage <sup>1</sup> (1,000)	Tolls (\$1,000)	Tons of cargo (1,000 long tons)	NATIONALITY OF VESSEL, 1959	Number of transits	Net tonnage <sup>1</sup> (1,000)	Tolls (\$1,000)	Tons of cargo (1,000 long tons)
1940	5,370	24,144	21,145	27,299	Chile	90	516	461	466
1941	4,727	20,643	18,158	24,951	China	56	244	218	373
1942	2,688	11,010	9,752	13,607	Colombia	269	908	815	378
1943	1,822	8,294	7,357	10,600	Denmark	347	1,611	1,407	1,073
1944	1,502	6,073	5,466	7,003	France	153	887	794	609
1945	1,939	8,331	7,244	8,604	Germany	1,039	4,186	3,621	2,954
1946	3,747	17,517	14,774	14,978	Great Britain	1,234	7,697	6,795	6,917
1947	4,260	20,233	17,597	21,671	Greece	119	724	628	1,126
1948	4,678	22,902	19,957	24,118	Honduras	151	317	260	124
1949	4,793	23,473	20,541	25,305	Italy	188	1,160	1,026	934
1950	5,448	23,013	24,490	28,872	Japan	800	4,621	4,146	5,468
1951	5,593	27,130	23,906	30,073	Liberia	966	6,025	5,094	8,394
1952	6,524	30,674	26,923	33,611	Netherlands	389	1,572	1,345	1,642
1953	7,410	36,679	31,918	36,095	Nicaragua	71	176	156	157
1954	7,784	38,028	33,248	39,095	Norway	979	5,406	4,667	4,840
1955	7,997	38,568	33,849	40,646	Panama	367	1,460	1,214	1,438
1956	8,209	41,203	36,154	45,119	Peru	72	224	201	302
1957	8,579	43,628	38,444	49,702	Spain	44	196	159	187
1958	9,187	47,924	41,796	48,125	Sweden	233	1,261	1,109	851
1959	9,718	52,154	45,529	51,153	United States	1,955	12,277	10,806	12,188
					All other	186	686	607	605

<sup>1</sup> Panama Canal net.

Source: Panama Canal Company; *Annual Report*.

**No. 798. VESSELS ENTERED AND CLEARED IN FOREIGN TRADE—NET REGISTERED TONNAGE, BY REGIONS: 1936 TO 1959**

[In thousands of net tons. Includes Alaska, Hawaii, and Puerto Rico. Excludes domestic trade]

YEARLY AVERAGE OR YEAR	ATLANTIC COAST		GULF COAST		PACIFIC COAST		Mexican border, total	NORTHERN BORDER	
	Total	With cargo	Total	With cargo	Total	With cargo		Total	With cargo
Entered:									
1936-1940	30,634	26,925	10,115	5,593	14,108	9,368	663	11,595	5,187
1941-1945	34,914	18,397	6,454	4,463	11,211	6,153	40	15,374	5,060
1946-1950	48,414	35,490	15,396	7,954	10,928	6,546	353	12,369	2,756
1951-1955	64,957	54,693	18,092	11,738	17,263	11,716	345	14,333	3,898
1952	64,833	52,080	18,328	10,543	17,789	11,133	313	15,112	3,997
1953	60,271	54,855	17,660	11,039	19,079	13,243	335	15,215	3,923
1954	61,952	56,568	18,416	13,096	16,462	12,292	367	12,327	3,528
1955	75,762	61,965	20,323	14,283	17,441	13,063	281	14,597	4,631
1956	86,067	66,503	24,033	15,452	20,424	15,322	241	17,077	5,542
1957	93,420	69,987	27,917	17,057	24,554	18,261	254	16,781	5,460
1958	85,860	71,649	26,581	19,243	23,716	19,276	135	12,806	4,590
1959	83,641	75,672	27,523	20,261	26,444	22,237	237	16,369	8,133
Cleared:									
1936-1940	30,472	22,459	11,064	9,601	14,752	13,394	677	11,575	9,417
1941-1945	35,545	27,351	7,636	6,494	13,082	11,288	40	15,489	12,652
1946-1950	47,766	31,273	15,757	13,446	11,032	9,702	332	12,801	10,319
1951-1955	65,261	38,063	17,870	14,269	17,649	15,770	433	14,234	12,002
1952	63,781	40,013	18,001	15,176	17,531	15,688	391	15,095	12,578
1953	60,179	33,431	17,343	14,021	19,654	17,139	451	15,308	12,957
1954	62,393	32,768	17,681	13,348	17,134	15,097	466	12,225	10,261
1955	76,412	42,336	20,057	14,901	17,897	16,099	440	14,561	11,330
1956	85,930	48,754	24,075	18,687	21,005	17,517	383	16,378	13,558
1957	92,803	53,545	28,042	21,972	24,675	19,491	435	16,624	13,554
1958	86,952	44,392	25,628	18,149	23,216	18,192	306	12,714	10,366
1959	85,279	39,580	27,474	19,614	25,967	20,492	542	16,244	11,882

Source: Department of Commerce, Bureau of the Census; *Foreign Commerce and Navigation of the United States*, and current summary reports, FT 975, *Vessel Entrances and Clearances*.

No. 799. VESSELS ENTERED AND CLEARED IN FOREIGN TRADE—NET REGISTERED TONNAGE, BY CLASSES: 1936 TO 1959

[In thousands of net tons, except number of vessels and percentages. Includes Alaska, Hawaii, and Puerto Rico. Excludes domestic trade. See also *Historical Statistics, Colonial Times to 1967*, series Q 192-203]

YEARLY AVERAGE OR YEAR	ALL PORTS					SEAPORTS <sup>1</sup>					
	Number of vessels	All vessels			Percent U. S.	All vessels			With cargo		
		Total tonnage	U. S.	Foreign		Total tonnage	U. S.	Foreign	Total tonnage	U. S.	Foreign
<b>ENTERED</b>											
1936-1940-----	33,954	67,117	19,243	47,873	28.7	55,521	16,090	39,432	41,951	13,865	28,086
1941-1945-----	38,997	67,994	34,658	33,336	51.0	52,620	30,059	22,560	28,995	16,877	12,118
1946-1950-----	48,813	87,462	46,205	41,257	52.8	75,094	42,168	32,926	50,288	26,318	23,970
1951-1955-----	48,082	114,900	39,459	75,531	34.3	100,657	35,345	65,313	78,407	26,759	51,649
1951-----	48,466	108,086	44,571	63,515	41.2	93,674	40,482	53,192	66,868	28,005	38,863
1952-----	50,076	116,375	45,223	71,152	38.9	101,263	40,732	60,532	73,973	28,496	45,477
1953-----	47,802	112,559	39,319	73,240	34.9	97,344	34,969	62,375	79,410	26,794	52,616
1954-----	45,651	109,524	33,860	75,664	30.9	97,198	30,133	67,065	82,234	25,167	57,067
1955-----	48,415	128,405	34,321	94,084	26.7	113,807	30,407	83,400	89,552	25,331	64,220
1956-----	52,999	147,844	36,247	111,598	25.5	130,767	31,254	99,514	97,442	26,224	71,218
1957-----	55,308	162,925	35,898	127,027	22.0	146,144	31,191	114,954	105,487	24,928	80,559
1958-----	48,455	149,097	26,842	122,255	18.0	136,291	23,642	112,648	110,280	19,806	90,474
1959-----	51,237	154,213	26,417	127,796	17.1	137,845	21,897	115,947	118,370	18,510	99,860
<b>CLEARED</b>											
1936-1940-----	32,706	68,541	19,448	49,093	28.4	56,967	16,302	40,665	46,126	13,116	33,009
1941-1945-----	38,195	71,792	37,283	34,509	51.9	56,304	32,585	23,718	45,147	26,377	18,770
1946-1950-----	45,135	87,190	44,942	42,244	51.5	74,889	40,933	33,953	54,584	29,510	25,073
1951-1955-----	45,324	115,447	39,533	75,914	34.2	101,213	35,531	65,682	68,396	25,407	42,989
1951-----	45,753	110,236	46,763	63,472	42.4	96,257	43,024	53,233	70,756	32,356	38,400
1952-----	46,501	114,797	43,726	71,071	38.1	99,703	39,273	60,429	71,111	29,451	41,660
1953-----	44,757	112,935	39,188	73,747	34.7	97,627	34,775	62,852	64,889	24,786	40,103
1954-----	42,966	109,899	33,579	76,321	30.6	97,674	29,969	67,706	61,561	19,679	41,883
1955-----	46,642	129,368	34,407	94,961	26.6	114,806	30,615	84,192	73,663	20,763	52,900
1956-----	50,735	148,260	36,317	111,952	24.5	131,391	31,510	99,881	85,285	21,262	64,023
1957-----	52,687	162,578	35,118	127,460	21.6	145,954	30,569	115,385	96,379	22,067	73,312
1958-----	46,115	148,816	26,449	122,366	18.0	136,102	23,324	112,778	81,024	18,711	62,313
1959-----	49,608	155,505	26,623	128,883	17.1	139,262	22,042	117,221	80,208	18,260	61,939

<sup>1</sup> Comprises all ports except northern border ports.

Source: Department of Commerce, Bureau of the Census; *Foreign Commerce and Navigation of the United States*, and current summary reports, FT 975, *Vessel Entrances and Clearances*.

No. 800. FEDERAL EXPENDITURES (COSTS) FOR CIVIL FUNCTIONS OF THE CORPS OF ENGINEERS, U. S. ARMY: 1940 TO 1959

[In thousands of dollars. For years ending June 30. Includes Alaska, Hawaii, and outlying areas. Represents funds actually expended under the direction of the Chief of Engineers for maintenance and improvement of rivers and harbors, flood control, and other miscellaneous works]

YEAR	Amount	YEAR	Amount	YEAR	Amount
1940-----	213,889	1947-----	269,380	1954-----	539,687
1941-----	220,734	1948-----	380,615	1955-----	511,587
1942-----	198,041	1949-----	572,830	1956-----	556,724
1943-----	222,053	1950-----	634,534	1957-----	666,433
1944-----	175,589	1951-----	620,581	1958-----	718,532
1945-----	134,216	1952-----	597,102	1959-----	806,427
1946-----	168,957	1953-----	635,512		

Source: Department of the Army, Corps of Engineers; *Statement of Costs*, 1959.

### No. 801. EMPLOYEES IN GOVERNMENT AND PRIVATE SHipyARDS, 1935 TO 1959, AND BY REGION, 1958 AND 1959

[In thousands. Annual average employment in establishments primarily engaged in building and repairing all types of ships, barges, canal boats, and lighters of 5 gross tons and over, whether propelled by sail or motor power or towed by other craft]

YEAR	Total	Private yards <sup>1</sup>	Navy yards <sup>2</sup>	YEAR AND REGION	Total	Private yards <sup>1</sup>	Navy yards <sup>2</sup>
1935	68.5	48.7	19.8	1958:			
1940	180.3	102.7	77.5	North Atlantic <sup>3</sup>	98.3	55.8	42.5
1941	377.0	236.0	141.0	South Atlantic <sup>4</sup>	35.8	17.0	18.8
1942	1,004.0	761.7	242.3	Gulf <sup>5</sup>	27.6	27.6	
1943	1,655.5	1,336.9	318.6	Pacific <sup>6</sup>	49.5	15.9	33.6
1944	1,568.6	1,242.5	326.1	Great Lakes <sup>7</sup>	4.9	4.9	
1945	1,033.9	741.9	292.0	Inland <sup>8</sup>	4.1	4.1	
1950	145.7	72.0	73.6	1959:			
1951	223.3	102.2	121.2	North Atlantic <sup>3</sup>	99.6	58.6	41.0
1952	267.6	134.2	133.4	South Atlantic <sup>4</sup>	36.4	17.7	18.7
1953	255.0	131.2	123.8	Gulf <sup>5</sup>	22.0	22.0	
1954	218.3	108.5	109.8	Pacific <sup>6</sup>	47.5	14.0	33.5
1955	208.0	101.0	107.0	Great Lakes <sup>7</sup>	4.6	4.6	
1956	211.4	109.8	101.6	Inland <sup>8</sup>	4.0	4.0	
1957	224.6	126.9	97.7				
1958	220.2	125.3	94.9				
1959	214.1	120.9	93.2				

<sup>1</sup> Includes all full- and part-time employees who worked during or received pay for any part of the pay period ending nearest the 15th of the month. Data for latest years have been adjusted to 1st quarter 1957 benchmark levels indicated by data from Government social insurance programs.

<sup>2</sup> Beginning 1942, includes Curtis Bay Coast Guard yard (Md.).

<sup>3</sup> Comprises yards bordering on the Atlantic in Conn., Del., Maine, Md., Mass., N. H., N. J., N. Y., Pa., R. I., Va.

<sup>4</sup> Comprises yards bordering on the Atlantic in Ga., N. C., S. C., Va.

<sup>5</sup> Comprises all yards in Fla. and yards bordering on the Gulf of Mexico in Ala., La., Miss., Texas.

<sup>6</sup> Comprises yards in Calif., Oreg., Wash.

<sup>7</sup> Comprises yards bordering on Great Lakes in Ill., Mich., Minn., N. Y., Ohio, Pa., Wis.

<sup>8</sup> Comprises all other yards.

Source: Department of Labor, Bureau of Labor Statistics; current data published monthly in *Employment and Earnings*.

### No. 802. EMPLOYMENT ON AMERICAN FLAG MERCHANT VESSELS: 1935 TO 1959

[As of June 30, except as indicated. Estimates of personnel employed on U. S. merchant ships, 1,000 gross tons and over. Excludes vessels on inland waterways, Great Lakes, and those owned by, or operated for, the United States Army and Navy, and special types such as cable ships, tugs, etc.]

DATE	Employment	DATE	Employment	DATE	Employment
1935	56,150	1948	80,250	1958: Mar. 31	52,941
1940	49,810	1949	71,970	June 30	51,515
1941	51,280	1950	61,550	Sept. 30	51,224
1942	47,410	1951	84,300	Dec. 31	51,640
1943 (June 20)	75,000	1952	79,650	1959: Mar. 31	50,390
1944 (June 20)	125,290	1953 (June 20)	72,750	June 30	50,223
1945 (June 20)	158,860	1954	63,850	Sept. 30	49,156
1946 (June 20)	120,050	1955	57,507	Dec. 31	47,019
1947 (Dec. 20)	110,820	1956	57,192		
		1957	61,059		

### No. 803. BASIC WAGE SCALE FOR ABLE-BODIED SEAMEN: 1935 TO 1960

[Represents basic wage, over and above subsistence (board and room), paid to seamen having qualifying experience and employed on American flag merchant vessels. Excludes overtime and fringe benefits]

MONTH ESTABLISHED	Monthly wage rate	MONTH ESTABLISHED AND AREA	Monthly wage rate	MONTH ESTABLISHED AND AREA	Monthly wage rate
In effect, Jan. 1, 1935	\$55.00	EAST COAST <sup>1</sup>		WEST COAST <sup>2</sup>	
1940—January	72.50			1953—June	\$314.41
1941—February	90.00			1954—October	302.00
1942—January	100.00			1955—November	423.00
1945—October	145.00	1956—October	453.00		
1946—April	162.50	1957—October	478.00		
June	172.50	In effect, Jan. 1, 1960	478.00		
1947—February	182.85				
October	197.50				
1948—March	210.00				
December	226.00				
1950—September	248.50				
1951—October	288.00				
1952—April	302.40				

<sup>1</sup> Excludes any overtime payments.

<sup>2</sup> Effective November 1955, based on 56 hours at sea and 40 hours in port for watchstanders. Includes penalty overtime.

Source of tables 802 and 803: Department of Commerce, Maritime Administration; records.

No. 804. UNITED STATES FLAG STEAM AND MOTOR MERCHANT VESSELS: 1940 TO 1959

[Dead-weight tonnage in thousands. As of June 30, except as indicated. Covers seagoing vessels of 1,000 gross tons and over engaged in foreign and domestic trade, and inactive vessels. Excludes special types and vessels employed on Great Lakes]

YEAR AND TYPE OF VESSEL	ALL VESSELS										ACTIVE VESSELS										TEMPORARILY INACTIVE		RESERVE FLEET		SPECIAL SERVICE	
	Total		Foreign trade		Domestic trade						Total		Coastwise		Intercoastal		Noncontiguous		Num-ber	Tons	Num-ber	Tons	Num-ber	Tons	Num-ber	Tons
	Num-ber	Tons	Num-ber	Tons	Num-ber	Tons	Num-ber	Tons	Num-ber	Tons	Num-ber	Tons	Num-ber	Tons	Num-ber	Tons	Num-ber	Tons	Num-ber	Tons	Num-ber	Tons	Num-ber	Tons		
1940	1,300	11,019	1,118	9,643	425	3,749	693	5,893	500	4,172	122	1,189	71	532	181	1,387										
Combination <sup>1</sup>	140	873	112	696	66	514	46	182	36	129	1	8	9	45	28	176										
Cargo	730	6,020	641	4,882	291	2,443	350	4,338	188	988	109	1,033	53	417	148	1,129										
Tankers	370	4,126	365	4,065	68	791	297	3,273	276	3,054	12	148	9	70	5	62										
1946 (Sept. 30)	4,852	50,263	2,332	25,399	1,890	20,592	442	4,807	297	3,460	54	563	91	787	533	4,998										
Combination <sup>1</sup>	117	500	25	155	15	127	10	38					10	38	28	175										
Cargo	3,850	36,675	1,855	18,110	1,807	16,200	226	1,910	101	728	53	501	72	617	450	4,198										
Tankers	906	12,758	474	7,122	268	4,264	200	2,858	196	2,751	1	2	9	101	55	624										
1950	3,408	36,526	1,145	13,928	711	8,853	434	5,474	279	3,716	87	1,181	68	626	86	845										
Combination <sup>1</sup>	83	630	61	45	45	589	6	28					6	23	4	27										
Cargo	2,846	28,997	682	7,075	505	5,367	177	1,708	66	559	88	649	53	500	42	384										
Tankers	479	6,959	412	6,355	161	2,997	251	3,757	213	3,157	29	452	9	98	40	484										
1955	3,235	35,017	1,026	12,872	601	6,992	425	5,880	271	3,989	75	996	79	885	89	1,099										
Combination <sup>2</sup>	239	2,567	40	371	39	361	1	10					1	10	14	68										
Cargo	2,500	26,559	652	7,033	492	5,383	160	1,650	43	385	52	591	65	674	28	288										
Tankers	426	6,790	334	5,468	70	1,248	264	4,220	228	3,614	23	405	13	201	47	742										
1958	3,047	33,316	907	11,577	551	6,208	356	5,369	229	3,811	57	803	70	755	106	1,415										
Combination <sup>2</sup>	238	1,098	37	374	36	344	3	30					3	30	3	24										
Cargo	2,425	28,123	620	6,714	487	5,348	133	1,366	37	345	39	443	57	578	43	423										
Tankers	384	6,555	285	4,489	20	516	220	3,973	192	3,466	18	360	10	147	60	969										
1959	3,047	33,565	908	11,847	533	5,935	375	5,912	229	4,054	69	995	77	863	120	1,579										
Combination <sup>2</sup>	288	1,960	38	337	36	323	2	14					2	14	4	31										
Cargo	2,847	24,333	615	6,701	473	5,189	142	1,512	35	336	45	517	62	659	55	554										
Tankers	412	7,288	255	4,808	24	422	231	4,386	194	3,718	24	478	13	190	61	995										

<sup>1</sup> All inactive vessels.

<sup>2</sup> Includes ships originally constructed as cargo ships but converted to transports, hospital ships, etc., previously included in cargo classification as follows: 1955, 181 ships of 1,124,000 tons; 1958, 182 ships of 1,119,500 tons; 1959, 220 ships of 1,387,300 tons.

Source: Department of Commerce, Maritime Administration, records.

## No. 805. MERCHANT VESSELS COMPLETED BY U.S. SHIPYARDS: 1930 TO 1959

[Represents self-propelled steel vessels of 2,000 gross tons and over. Excludes Alaska and Hawaii]

YEAR	ALL MERCHANT VESSELS		PASSENGER-CARGO/TRANSPORT			CARGO			TANKER		
	Number	Gross tons	Number	Gross tons	Dead-weight tons	Number	Gross tons	Dead-weight tons	Number	Gross tons	Dead-weight tons
1930.....	18	163,500	5	50,311	39,269	2	15,824	24,000	11	97,365	161,219
1935.....	2	19,022	6	68,943	61,222	31	227,275	334,660	16	148,509	238,352
1940.....	53	444,727	6	58,107	56,515	61	423,022	597,943	28	267,979	434,039
1941.....	95	749,108	11	101,847	81,290	652	4,678,880	6,842,689	61	612,121	982,381
1942.....	724	5,392,848	20	219,760	180,047	1,410	10,103,245	14,921,082	231	2,162,624	3,420,405
1943.....	1,661	12,485,629	48	461,291	330,311	1,175	8,455,475	11,857,797	240	2,486,397	3,954,957
1944.....	1,465	11,403,163	46	509,163	311,046	807	5,336,152	7,206,201	188	1,769,533	2,787,397
1945.....	1,041	7,614,898	3	26,854	43,500	23	26,854	43,500	23	377,763	608,593
1950.....	26	119,104	7	84,110	95,289	2	84,110	95,289	2	34,994	55,414
1955.....	8	113,298	2	6,844	15,032	6	6,844	15,032	6	106,454	169,377
1956.....	19	297,350	3	7,885	6,350	16	7,885	6,350	16	289,465	456,694
1957.....	30	571,886	4	60,700	34,707	5	48,211	66,681	21	462,975	759,496
1958.....	30	713,562	1	5,315	1,200	3	40,434	72,834	26	667,813	1,095,388

Source: American Bureau of Shipping, New York, N.Y.; published annually in *The Bulletin*.

## No. 806. U.S. MERCHANT MARINE—NUMBER AND GROSS TONNAGE OF VESSELS, BY TONNAGE GROUPING: 1959

[As of January 1. Includes Alaska, Hawaii, Guam, Puerto Rico, and Virgin Islands. Covers documented vessels of 5 net tons or more]

TONNAGE GROUPING	ALL VESSELS		STEAM		MOTOR		SAILING		UNRIGGED <sup>1</sup>	
	Number	Gross tons (1,000)	Number	Gross tons (1,000)	Number	Gross tons (1,000)	Number	Gross tons (1,000)	Number	Gross tons (1,000)
Total.....	42,409	28,895	3,266	22,306	30,240	2,027	180	23	8,723	4,539
5 to 49 tons.....	24,959	443	30	1	24,130	421	158	2	641	19
50 to 99 tons.....	3,716	257	58	5	3,259	223	5	(2)	394	29
100 to 499 tons.....	6,876	1,880	236	56	2,414	485	7	2	4,219	1,337
500 to 999 tons.....	2,974	2,091	70	49	190	126	5	4	2,709	1,912
1,000 to 2,499 tons.....	888	1,229	96	155	129	168	2	3	661	903
2,500 to 4,999 tons.....	291	1,070	111	438	81	299	3	11	96	323
5,000 to 9,999 tons.....	2,331	17,135	2,297	16,884	31	234	4	3	6	16
10,000 to 19,999 tons.....	349	4,213	343	4,143	6	70	-----	-----	-----	-----
20,000 tons and over.....	25	576	25	576	-----	-----	-----	-----	-----	-----

<sup>1</sup> Vessels having no propelling power of their own. <sup>2</sup> Less than 500 gross tons.

## No. 807. U.S. MERCHANT MARINE—NUMBER AND GROSS TONNAGE OF VESSELS BUILT, AND REMOVED: 1940 TO 1958

[Includes Alaska, Hawaii, Guam, Puerto Rico, and Virgin Islands. Covers documented vessels of 5 net tons or more. Vessels may be added to merchant marine by way of redocumentation. However, figures are available only for vessels documented. See also *Historical Statistics, Colonial Times to 1967*, series Q 178-182]

YEAR	VESSELS BUILT AND DOCUMENTED				GROSS TONNAGE OF VESSELS REMOVED (1,000)				
	Number	Gross tonnage (1,000)			Total	Lost and abandoned	Sold to aliens <sup>3</sup>	Sold to United States	All other
		Total <sup>1</sup>	Steam and motor	Un-rigged <sup>2</sup>					
1940.....	705	447	386	61	1,697	274	1,114	(4)	308
1945.....	1,744	6,314	6,259	55	901	138	75	198	490
1950.....	861	194	103	91	1,293	163	488	147	440
1955.....	1,116	400	117	283	866	63	418	(5)	384
1956.....	1,385	446	152	293	890	60	274	-----	557
1957.....	1,582	585	249	336	1,625	33	579	-----	1,013
1958.....	1,390	837	406	431	961	35	87	(5)	838

<sup>1</sup> Includes small amount of tonnage for sailing vessels for certain years.<sup>2</sup> Vessels having no propelling power of their own.<sup>3</sup> Beginning 1955, sold or transferred to aliens. <sup>4</sup> Included in All other. <sup>5</sup> Less than 500 gross tons.Source of tables 806 and 807: Treasury Department, Bureau of Customs; annual report, *Merchant Marine Statistics*.

No. 808. U.S. MERCHANT MARINE—SUMMARY: 1920 TO 1959

[As of June 30 for 1920 to 1940; January 1, thereafter. Includes Alaska, Hawaii, Guam, Puerto Rico, and Virgin Islands. Covers documented vessels of 5 net tons or more. See also *Historical Statistics, Colonial Times to 1987*, series Q 153-174]

YEAR	NUMBER OF VESSELS			GROSS TONNAGE OF VESSELS (1,000)							
	Total	Steam and motor	All other	Total	Major class			Material of which built		Type of trade in which engaged <sup>3</sup>	
					Steam and motor	Sailing	Un-rigged <sup>1</sup>	Metal <sup>2</sup>	Wood	Foreign trade	Coast-wise and internal
1920.....	28,183	18,814	9,369	16,324	13,823	1,272	1,228	12,448	3,876	9,925	6,358
1925.....	26,867	18,637	7,730	17,406	14,976	1,125	1,304	14,499	2,907	8,151	9,216
1930.....	25,214	18,211	7,003	16,068	13,757	757	1,554	13,514	2,554	6,296	9,723
1935.....	24,010	18,495	6,424	14,654	12,535	441	1,677	12,469	2,185	4,560	10,049
1940.....	27,212	19,504	7,708	14,018	11,353	200	2,466	(4)	(4)	3,638	10,352
1945.....	20,797	22,772	7,025	32,813	30,247	115	2,452	30,898	1,915	26,043	6,766
1950.....	36,083	28,793	7,290	31,215	28,327	82	2,806	29,263	1,952	19,154	12,048
1951.....	36,745	29,429	7,316	30,341	27,424	71	2,846	28,417	1,924	18,876	11,462
1952.....	37,389	30,189	7,200	30,416	27,459	66	2,891	28,559	1,857	19,279	11,134
1953.....	38,072	30,791	7,281	30,546	27,507	55	2,984	28,761	1,785	19,007	11,537
1954.....	39,008	31,665	7,443	30,764	27,631	46	3,087	28,982	1,782	18,974	11,787
1955.....	39,242	31,882	7,360	29,958	26,792	40	3,125	28,326	1,622	18,143	11,812
1956.....	39,499	32,030	7,469	29,610	26,251	34	3,326	28,073	1,537	17,765	11,843
1957.....	40,191	32,423	7,768	29,421	25,785	24	3,612	27,935	1,486	17,255	12,154
1958.....	41,276	32,988	8,288	28,586	24,599	23	3,965	27,118	1,469	16,206	12,376
1959.....	42,409	33,606	8,803	28,895	24,333	23	4,539	27,470	1,425	15,600	13,284

AREA OF LOCATION	NUMBER OF VESSELS					GROSS TONNAGE OF VESSELS (1,000)				
	1950	1955	1957	1958	1959	1950	1955	1957	1958	1959
<b>Total.....</b>	<b>36,083</b>	<b>39,242</b>	<b>40,191</b>	<b>41,276</b>	<b>42,409</b>	<b>31,215</b>	<b>29,958</b>	<b>29,421</b>	<b>28,586</b>	<b>28,895</b>
Atlantic and Gulf.....	21,623	23,355	23,737	24,371	24,958	20,420	20,402	19,642	18,858	19,206
Pacific.....	10,066	10,687	10,667	10,701	10,870	8,446	7,004	6,964	6,667	6,312
Northern lakes.....	2,026	2,005	1,962	1,981	1,970	1,628	1,590	1,569	1,638	1,627
Western rivers.....	2,368	3,195	3,825	4,223	4,611	721	962	1,247	1,429	1,691

- <sup>1</sup> Vessels having no propelling power of their own.
- <sup>2</sup> Comprises iron, steel, composite, concrete, and aluminum.
- <sup>3</sup> Excludes vessels engaged in whale, cod, and mackerel fisheries.
- <sup>4</sup> Not available.

No. 809. U.S. MERCHANT MARINE—NUMBER AND GROSS TONNAGE OF VESSELS, BY YEAR OF BUILD: 1959

[As of January 1. Includes Alaska, Hawaii, Guam, Puerto Rico, and Virgin Islands. Covers documented vessels of 5 net tons or more]

YEAR OF BUILD	Number	Gross tons	YEAR OF BUILD	Number	Gross tons	YEAR OF BUILD	Number	Gross tons
<b>Total...</b>	<b>42,409</b>	<b>28,895,263</b>	1931-1935.....	2,021	288,481	1949.....	1,139	214,414
Unknown.....	634	47,851	1936-1940.....	3,821	842,732	1950.....	1,045	229,600
1822-1900.....	702	230,464	1941.....	915	473,517	1951.....	1,109	347,301
1901-1905.....	581	377,605	1942.....	1,499	2,998,606	1952.....	1,142	469,508
1906-1910.....	873	884,079	1943.....	2,125	5,770,985	1953.....	1,351	667,913
1911-1915.....	1,261	299,950	1944.....	2,199	4,954,229	1954.....	1,301	606,889
1916-1920.....	1,614	402,259	1945.....	1,794	4,164,601	1955.....	1,253	429,015
1921-1925.....	1,824	445,193	1946.....	1,505	601,376	1956.....	1,557	490,969
1926-1930.....	3,318	658,867	1947.....	1,395	272,232	1957.....	1,791	661,153
			1948.....	1,250	218,670	1958.....	1,300	836,799

Source of tables 808 and 809: Treasury Department, Bureau of Customs; annual report, *Merchant Marine Statistics*.

**No. 810. MERCHANT VESSELS LAUNCHED AND OWNED, FOR THE WORLD AND THE UNITED STATES: 1935 TO 1959**

[Vessels of 100 gross tons and over. Beginning 1941, excludes sailing ships, nonpropelled craft, and all ships built of wood]

YEAR	WORLD				UNITED STATES			
	Launched		Owned		Launched		Owned	
	Number	Gross tons (1,000)	Number	Gross tons (1,000)	Number	Gross tons (1,000)	Number	Gross tons (1,000)
1935	11,040	12,595	30,979	64,886	1,117	1,244	3,585	12,773
1940	495	1,754	(2)	(2)	167	579	(2)	(2)
1945	1,311	7,189	(2)	(2)	880	5,968	(2)	(2)
1950	990	3,489	27,922	83,996	51	437	4,531	27,404
1951	1,002	3,639	28,374	86,678	58	164	4,484	27,226
1952	1,065	4,394	28,751	89,636	64	468	4,458	27,139
1953	1,134	5,095	29,174	92,826	68	523	4,431	27,144
1954	1,223	5,251	29,766	96,899	46	477	4,404	27,252
1955	1,437	5,315	29,967	100,069	26	73	4,225	26,343
1956	1,815	6,670	30,620	104,720	50	160	4,157	26,074
1957	1,950	8,501	31,421	109,778	54	359	4,116	25,843
1958	1,936	9,270	32,857	117,578	64	732	4,054	25,526
1959	1,808	8,746	33,924	124,494	47	597	3,964	25,227

<sup>1</sup> 1935-1939 average.

<sup>2</sup> Not recorded.

Source: Lloyd's Register of Shipping, London; records.

**No. 811. MERCHANT FLEETS OF THE WORLD—NUMBER AND AVERAGE AGE OF VESSELS, BY TYPE OF VESSEL AND COUNTRY OF REGISTRATION: 1958**

[Vessels of 1,000 gross tons and over. As of December 31. Specified countries have 100 or more ships]

COUNTRY OF REGISTRY	TOTAL		COMBINATION, PASSENGER AND CARGO		FREIGHTERS		BULK CARRIERS		TANKERS	
	Number	Average age (years)	Number	Average age (years)	Number	Average age (years)	Number	Average age (years)	Number	Average age (years)
<b>World total</b> .....	<b>16,966</b>	<b>14.5</b>	<b>1,275</b>	<b>18.8</b>	<b>11,594</b>	<b>15.2</b>	<b>868</b>	<b>14.2</b>	<b>3,229</b>	<b>10.3</b>
<b>United States</b> .....	<b>3,061</b>	<b>14.2</b>	<b>279</b>	<b>14.3</b>	<b>2,338</b>	<b>14.5</b>	<b>41</b>	<b>13.4</b>	<b>403</b>	<b>12.7</b>
Government owned.....	2,054	14.7	237	14.7	1,747	14.7	—	—	70	14.6
Privately owned.....	1,007	13.1	42	12.2	591	13.7	41	13.4	333	12.3
<b>Foreign</b> .....	<b>13,905</b>	<b>14.5</b>	<b>996</b>	<b>20.1</b>	<b>9,256</b>	<b>15.3</b>	<b>827</b>	<b>14.3</b>	<b>2,826</b>	<b>10.0</b>
Argentina.....	146	19.3	22	16.5	74	19.4	3	36.0	47	19.5
Australia.....	131	12.9	13	19.8	81	12.8	36	10.9	1	3.0
Brazil.....	201	24.6	27	42.3	137	25.2	8	19.5	29	6.7
China.....	174	27.0	20	36.4	124	27.6	5	26.2	25	16.6
Costa Rica.....	121	30.7	1	44.0	105	30.2	14	33.1	1	36.0
Denmark.....	357	10.8	27	21.2	265	10.5	6	6.7	59	5.9
Finland.....	224	24.6	7	34.6	185	24.8	16	30.3	16	12.0
France.....	624	9.6	62	11.9	383	9.4	38	11.6	141	8.6
Germany.....	866	9.9	24	11.5	746	9.5	46	12.8	50	11.4
Greece.....	289	18.2	22	25.8	230	16.4	12	30.4	25	21.9
India.....	123	11.4	10	15.9	111	11.1	—	—	2	9.0
Italy.....	718	19.8	79	18.7	454	21.8	37	20.6	148	14.3
Japan.....	870	9.6	21	17.1	727	9.6	21	10.0	101	7.6
Liberia.....	1,020	10.7	9	24.9	536	12.9	63	9.7	412	7.7
Netherlands.....	580	11.1	77	16.2	368	10.4	13	4.8	122	10.6
Norway.....	1,288	9.6	31	12.2	736	11.1	43	8.9	478	7.1
Panama.....	546	19.0	19	29.3	290	23.5	41	17.1	196	11.9
Spain.....	314	31.6	45	23.7	213	36.0	14	35.2	42	16.5
Sweden.....	584	13.8	27	21.0	400	15.3	51	13.6	106	6.6
Turkey.....	140	34.5	33	28.1	97	37.2	2	54.5	8	24.1
United Kingdom.....	2,522	10.9	195	15.2	1,482	11.0	264	9.4	581	10.0
U.S.S.R.....	774	25.0	72	31.7	575	26.5	35	19.0	92	12.5
All other <sup>1</sup> .....	1,293	16.5	153	18.6	937	15.9	59	22.4	144	15.4

<sup>1</sup> Includes the following countries with less than 100 merchant type ships (1,000 gross tons and over) under their registry: Albania, Belgium, Burma, Bulgaria, Canada, Ceylon, Chile, Colombia, Cuba, Czechoslovakia, Dominican Republic, Ecuador, Ethiopia, East Germany, Ghana, Guatemala, Honduras, Hungary, Iceland, Indonesia, Ireland, Israel, Korea, Lebanon, Mexico, Monaco, Morocco, New Zealand, Nicaragua, Other Colonies (British Commonwealth), Pakistan, Peru, Philippines, Poland, Portugal, Rumania, Saudi Arabia, Switzerland, Thailand, Tunisia, Union of S. Africa, United Arab, Uruguay, Venezuela, Viet-Nam, Yugoslavia, and unknown.

 Source: Department of Commerce, Maritime Administration; *A Statistical Analysis of the World's Merchant Fleets*, December 1958.

## Section 23

### Irrigation, Drainage, and Soil Conservation

This section presents statistics concerning agricultural land development, in particular, measures of the activities of irrigation and drainage enterprises, and reclamation and land conservation projects. The primary sources for these data are the Bureau of the Census which conducts decennially a Census of Drainage and a Census of Irrigation (as part of the Census of Agriculture), and a mid-decade Census of Agriculture which covers fewer items in these fields; the *Report of Administrator of Soil Conservation Service*, issued by the Soil Conservation Service of the Department of Agriculture; *Crop Report and Related Data, Federal Reclamation Projects*, issued annually by the Bureau of Reclamation, Department of the Interior; and the *Annual Report of the Commissioner of Reclamation* to the Secretary of the Interior.

**Irrigation.**—Irrigated land as defined by the Bureau of the Census is the net acreage of farm land to which irrigation water is applied. It does not include land that could be irrigated, or usually is irrigated, but was not irrigated during the census year. Excluded also is uncultivated land (roads, farmsteads) in irrigated farms and irrigated nonfarm land (cemeteries, parks, golf courses, etc.).

Most of the irrigated land is located in the 17 Western States (excluding Alaska and Hawaii) and Arkansas, Louisiana, and Florida. In these States the Bureau of the Census collects information on acres irrigated, irrigation works, capital investment, and a number of other items from irrigation companies, districts, and other organizations, and from farms that operate their own irrigation supply works. Information for the other States, excepting special surveys, is limited to that reported in the regular farm census.

The development of irrigation projects rests primarily on the Bureau of Reclamation. By Congressional directive its activities are confined to 18 Western States including Alaska. The operation of irrigation works, upon complete development, is transferred to capable private water user organizations.

**Drainage.**—Most farm land drainage works serve to reclaim and improve the land. Other purposes are to protect the land against overflow, and to rid the land of seepage from irrigation ditches or for control of alkali formation.

The farm lands of the Eastern States need drainage to remove surplus rainfall. Most of this is gravity drainage, although pumps are sometimes used. In the Western States drainage serves to remove seepage water from irrigated lands and to carry off alkali salts.

The Bureau of the Census in 1950 enumerated, in general, only those organized enterprises with 500 acres or more of drained farm land. A few irrigation enterprises of smaller size which had their own drainage works were also included. In previous Censuses (1910 to 1940) all organized enterprises draining farm lands were included in the enumeration regardless of size. Privately drained lands of less than 500 acres have not been enumerated in any of the four drainage censuses. The change in Census procedure for 1950 materially reduced the number of enterprises enumerated, but affected very little the amount of drained land enumerated. Drainage enterprises in Alaska and Hawaii are not included in the statistics presented here.

In taking the 1950 Census, differences in form of organization and management of drainage enterprises made it necessary to divide arbitrarily the 40 States with drain-

age enterprises into two groups: The 10 "county-drain" States and the 30 "drainage-district" States. The 8 States with no drainage enterprises in 1950 were the 6 New England States, Pennsylvania, and West Virginia. In the 10 "county-drain" States (Delaware, Indiana, Iowa, Kentucky, Michigan, Minnesota, North Dakota, Ohio, Oklahoma, South Dakota), statistics were gathered for the county as a unit, rather than for each separate enterprise as for the 30 "drainage-district" States. Generally, the maintenance work on existing ditches has been done by reorganizing the land of an earlier enterprise into a new project. Since the number of enterprises for "county-drain" States would be meaningless, the number was not obtained for these 10 States.

In the Western States most of the drained land is located in irrigation enterprises which were chartered to do both irrigation and drainage work under one organization. The cost of construction, operation, and maintenance of the irrigation works is usually far greater than that for drainage. Separate records are seldom kept of expenditures for drainage and irrigation. Data were not included in the 1950 Census for cost, collections, and indebtedness of irrigation enterprises having their own drainage. Therefore, the data for 1950 are not fully comparable with those for earlier years.

**Soil conservation.**—Basic soil conservation district legislation has now been enacted in all of the States (including Alaska and Hawaii), and in Puerto Rico and the Virgin Islands. Each of these laws contains an effective date after which soil conservation districts could be organized by local farmers and operators. A soil conservation district is a political subdivision of a State which is determined by petition and referendum of farmers residing in the area, and approved by the State Soil Conservation Committee. Districts, in most cases, have authority to solicit Federal, State, county, and private assistance in carrying on their soil and water conservation program within the area. On request of the local governing body of each soil conservation district, the Department of Agriculture provides technical and other assistance to districts, through its several agencies. "Memorandums of understanding" form the basis on which any departmental assistance is provided to a district for use on the farms and ranches within the district. After the basic memorandum with the Department has been signed, the Soil Conservation Service signs a supplemental memorandum with each district governing body requesting assistance, to cover activities which the Soil Conservation Service will help each district to carry out.

**Alaska and Hawaii.**—For a general statement concerning the treatment of data for Alaska and Hawaii, see preface.

**Historical statistics.**—Tabular headnotes (as "See also *Historical Statistics, Colonial Times to 1957*, series J 84-85") provide cross-references, where applicable, to *Historical Statistics of the United States, Colonial Times to 1957*. See preface.

No. 812. IRRIGATION ENTERPRISES—SUMMARY: 1910 TO 1950

[Data are for the 17 Western States (excluding Alaska and Hawaii), Arkansas, Louisiana, and, for 1940 and 1950, Florida. Tables 812 and 814 relate to irrigation enterprises of all types, including those operated by individual farmers. They are based on reports of management of enterprises. An enterprise is defined as an independent irrigation establishment owning or operating works for supplying water to agricultural land]

ITEM	1910	1920	1930	1940	1950
Approximate land area.....1,000 acres..	1, 224, 063	1, 223, 989	1, 223, 989	1, 259, 784	1, 258, 972
Farms (irrigated and nonirrigated) <sup>2</sup> ..... number..	1, 776, 046	1, 916, 391	2, 062, 813	1, 960, 093	1, 689, 447
Land in all farms <sup>2</sup> .....1,000 acres..	416, 463	505, 441	568, 694	637, 888	734, 577
Irrigation enterprises:					
Enterprises..... number.....	56, 858	63, 298	75, 517	95, 265	123, 926
Area irrigated.....1,000 acres..	14, 433	19, 192	19, 548	21, 136	26, 233
Investment in irrigation enterprises.....1,000 dollars..	321, 454	697, 657	892, 756	1, 050, 105	1, 887, 738
Increase over preceding census..... percent.....	359.2	117.0	28.0	18.6	78.2
Average per acre irrigated.....dollars.....	22.27	36.85	45.67	50.11	71.96
Increase over preceding census..... percent.....		63.2	25.6	9.7	43.6
Average annual cost per acre irrigated for maintenance and operation of irrigation works.....dollars..	<sup>3</sup> 1.07	2.43	.77	2.19	4.89

<sup>1</sup> Represents redeterminations and therefore differs from figures shown for earlier years.

<sup>2</sup> From Census of Agriculture.

<sup>3</sup> Excludes cost of operation and maintenance for rice-growing districts in Gulf States; consequently figure is not comparable with those for later years.

Source: Department of Commerce, Bureau of the Census; *U. S. Census of Agriculture: 1950*, Vol. III.

No. 813. FEDERAL BUREAU OF RECLAMATION IRRIGATION PROJECTS—ACREAGE AND CROP VALUE: 1948 TO 1958

[In thousands. Comprises projects constructed by United States and those for which supplemental water is furnished from storage works built by United States. Through 1955, data classified by legislative authorization or type of contract under which service was provided; beginning 1956, data classified by type of irrigation service provided. For States included, see table 814]

YEAR	ENTIRE AREA				REGULAR AND SUPPLEMENTAL WATER PROJECTS <sup>1</sup>				WARREN ACT, SPECIAL CONTRACTS, LEASED AND WATER RENTAL LANDS SERVED <sup>2</sup>			
	Irrigable acreage	Irrigated acreage	Net area in cultivation (acres)	Gross crop value	Irrigable acreage	Irrigated acreage	Net area in cultivation (acres)	Gross crop value	Irrigable acreage	Irrigated acreage	Net area in cultivation (acres)	Gross crop value
1948.....	5, 380	4, 559	4, 700	\$534, 624	3, 198	2, 619	2, 702	\$274, 225	2, 182	1, 940	1, 098	\$260, 399
1949.....	5, 679	4, 821	4, 916	516, 329	3, 275	2, 749	2, 798	274, 339	2, 404	2, 072	2, 118	241, 990
1950.....	6, 025	5, 077	5, 189	578, 238	3, 357	2, 817	2, 867	284, 869	2, 668	2, 260	2, 322	293, 369
1951.....	6, 713	5, 876	5, 942	821, 722	4, 049	3, 526	3, 554	437, 207	2, 664	2, 350	2, 388	384, 515
1952.....	6, 994	5, 956	6, 026	935, 680	4, 146	3, 570	3, 607	495, 122	2, 848	2, 386	2, 419	440, 558
1953.....	7, 148	6, 098	6, 192	785, 940	4, 245	3, 661	3, 717	411, 990	2, 903	2, 437	2, 475	373, 950
1954.....	7, 232	6, 126	6, 195	865, 026	4, 359	3, 658	3, 711	452, 199	2, 873	2, 468	2, 484	412, 827
1955.....	7, 308	6, 262	6, 364	827, 706	4, 485	3, 757	3, 825	424, 691	2, 883	2, 505	2, 539	403, 015
1956.....	7, 659	6, 400	6, 554	951, 624	4, 155	3, 323	3, 413	496, 815	3, 504	3, 077	3, 141	454, 809
1957.....	7, 828	6, 557	6, 760	928, 157	4, 162	3, 319	3, 446	475, 361	3, 666	3, 238	3, 314	452, 796
1958.....	8, 050	6, 757	6, 981	987, 442	4, 256	3, 407	3, 528	504, 741	3, 794	3, 350	3, 453	482, 701

<sup>1</sup> Beginning 1956, represents "full irrigation service lands."

<sup>2</sup> Warren Act, leased and water rental lands receive excess water over and above regular project requirements. Lands served are usually located outside project proper. Beginning 1956, represents "supplemental and temporary service lands," largely unclassified as to irrigability.

Source: Department of the Interior, Bureau of Reclamation; *Crop Report and Related Data, Federal Reclamation Projects*.

NO. 814. IRRIGATION ENTERPRISES—AREA IRRIGATED, 1939 AND 1949, CAPITAL INVESTED, 1940 AND 1950, AND DAMS, RESERVOIRS, CANALS, PIPELINES, AND WELLS, 1950, BY STATES

[See headnote, table 812. Minus sign (—) denotes decrease]

STATE	AREA IRRIGATED				CAPITAL INVESTED			
	1939	1949		In-crease, 1939 to 1949	1940	1950		In-crease, 1940 to 1950
		Total	Proportion of total			Total	Proportion of total	
	<i>Acres</i>	<i>Acres</i>	<i>Percent</i>	<i>Percent</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Percent</i>	<i>Percent</i>
<b>20 States, total.....</b>	<b>21,136,101</b>	<b>26,233,215</b>	<b>100.0</b>	<b>24.1</b>	<b>1,059,105,122</b>	<b>1,887,738,707</b>	<b>100.0</b>	<b>78.2</b>
Arkansas.....	161,601	419,101	1.6	159.3	5,766,895	14,171,467	0.8	145.7
Louisiana.....	447,095	597,966	2.3	33.7	11,565,513	21,503,040	1.1	85.9
Florida.....	132,362	362,938	1.4	174.2	7,053,921	19,549,139	1.0	177.1
<b>17 Western States, total.....</b>	<b>20,395,043</b>	<b>24,853,210</b>	<b>94.7</b>	<b>21.9</b>	<b>1,034,716,793</b>	<b>1,832,515,061</b>	<b>97.1</b>	<b>77.1</b>
Arizona.....	653,263	979,114	3.7	49.9	83,526,608	137,575,193	7.3	64.7
California.....	5,069,593	6,598,839	25.2	30.2	318,889,218	640,474,185	33.9	100.8
Colorado.....	3,220,685	2,943,895	11.2	-8.6	106,849,343	163,296,813	8.7	52.8
Idaho.....	2,277,857	2,167,879	8.3	-4.8	102,585,798	129,973,554	6.9	26.7
Kansas.....	99,987	140,992	0.5	41.0	2,153,886	5,882,265	0.3	173.1
Montana.....	1,711,409	1,808,576	6.9	5.7	67,352,505	81,256,990	4.3	20.6
Nebraska.....	610,379	887,239	3.4	45.4	39,056,207	56,463,881	3.0	44.6
Nevada.....	739,863	722,896	2.8	-2.3	16,906,790	20,181,476	1.1	19.4
New Mexico.....	554,039	691,476	2.6	24.8	32,735,907	61,137,909	3.2	86.8
North Dakota.....	21,615	35,759	0.1	65.4	1,755,489	2,957,763	0.2	68.5
Oklahoma.....	4,160	44,209	0.2	962.7	272,186	13,076,010	0.7	4,704.1
Oregon.....	1,049,176	1,337,517	5.1	27.5	50,961,251	74,300,981	3.9	45.9
South Dakota.....	60,198	84,356	0.3	40.1	5,395,610	6,617,914	0.4	22.7
Texas.....	1,045,224	3,150,527	12.0	201.4	66,441,376	144,445,313	7.7	117.4
Utah.....	1,176,116	1,166,972	4.4	-0.8	41,896,332	56,539,436	3.0	35.0
Washington.....	615,013	618,129	2.4	0.5	56,415,196	178,289,988	9.4	216.0
Wyoming.....	1,486,498	1,474,835	5.6	-0.8	41,522,801	59,986,390	3.2	44.5

STATE	1950							
	Diver-sion dams	Reser-voirs	RESERVOIRS WITH CAPACITY REPORTED		Canals and ditches	Pipe-lines and siphons	WELLS	
			Reser-voirs	Total capacity			Flow-ing	Pumped
	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Acre-feet</i>	<i>Miles</i>	<i>Miles</i>	<i>Number</i>	<i>Number</i>
<b>20 States, total.....</b>	<b>50,131</b>	<b>7,717</b>	<b>7,002</b>	<b>42,407,489</b>	<b>138,967</b>	<b>15,851</b>	<b>10,634</b>	<b>130,688</b>
Arkansas.....	108	86	74	40,431	683	19	18	3,662
Louisiana.....	319	58	57	31,249	3,477	62	849	3,365
Florida.....	355	180	168	3,343	695	482	4,181	7,598
<b>17 Western States, total.....</b>	<b>49,349</b>	<b>7,393</b>	<b>6,703</b>	<b>42,332,466</b>	<b>134,112</b>	<b>15,288</b>	<b>5,586</b>	<b>116,063</b>
Arizona.....	552	269	237	3,625,679	4,800	316	214	4,361
California.....	4,708	1,684	1,502	8,711,667	21,183	10,088	572	72,147
Colorado.....	7,709	1,182	1,106	2,028,550	18,729	251	1,371	4,988
Idaho.....	5,121	364	313	5,124,966	15,169	487	458	888
Kansas.....	127	48	42	25,505	542	13	11	1,343
Montana.....	8,139	629	577	1,598,898	15,499	110	79	142
Nebraska.....	488	114	96	133,934	4,613	88	89	7,157
Nevada.....	4,065	202	176	687,179	3,388	123	290	254
New Mexico.....	1,286	476	448	3,185,401	5,763	168	106	3,846
North Dakota.....	15	11	6	1,101	193	7	-----	4
Oklahoma.....	20	29	27	148,945	354	19	-----	160
Oregon.....	6,231	528	471	2,421,138	8,406	572	138	2,770
South Dakota.....	281	100	94	204,698	664	8	14	27
Texas.....	438	566	508	1,402,883	10,092	1,168	152	15,070
Utah.....	3,080	511	476	2,224,361	9,621	300	1,925	360
Washington.....	1,861	222	205	6,436,522	4,984	1,614	60	2,098
Wyoming.....	5,228	458	419	4,370,044	9,822	56	98	248

Source: Department of Commerce, Bureau of the Census; U. S. Census of Agriculture: 1950, Vol. III.

No. 815. IRRIGATED LAND IN FARMS, BY STATES: 1939 TO 1954

[In 1940, the questionnaire called for land from which irrigated crops were harvested in 1939, and for land irrigated in 1939 and used for grazing or pasture; in 1945 and 1950, for total land in farms irrigated in 1944 and 1949; in 1954, irrigated cropland harvested plus irrigated pasture. See also *Historical Statistics, Colonial Times to 1867*, series J 84-85, for U. S. totals]

STATE	FARMS REPORTING				ACRES IRRIGATED			
	1939	1944	1949	1954	1939	1944	1949	1954
<b>U. S. 1</b> .....	299,604	288,195	305,061	320,236	17,982,830	20,539,470	25,787,455	29,552,155
The North.....	13,656	12,448	18,348	27,648	667,820	861,979	1,258,321	1,925,423
The South.....	32,039	29,008	39,087	57,185	1,601,384	2,372,296	4,562,481	7,102,185
The West 1.....	253,909	246,739	247,626	235,403	15,713,626	17,305,195	19,976,653	20,524,547
<b>New England</b> .....	338	922	1,581	2,017	2,846	12,153	31,450	38,395
Maine.....	33	3	123	87	143	100	2,299	1,097
New Hampshire.....	7	10	51	61	25	63	622	942
Vermont.....		2	22	55		6	303	689
Massachusetts.....	231	874	1,053	1,366	2,049	11,355	18,507	22,683
Rhode Island.....	10	9	52	43		133	1,631	1,009
Connecticut.....	57	24	280	405		496	8,088	11,975
<b>Middle Atlantic</b> .....	1,446	1,415	2,208	4,333	17,260	30,792	54,616	135,886
New York.....	567	646	888	1,675	5,948	10,316	19,248	59,024
New Jersey.....	580	675	1,033	1,775	7,956	11,712	28,117	58,912
Pennsylvania.....	299	94	287	883	3,356	8,704	7,251	17,950
<b>East North Central</b> .....	1,491	1,206	2,110	3,509	10,833	12,795	36,237	75,578
Ohio.....	658	463	458	847	4,536	4,178	5,706	15,379
Indiana.....	136	123	164	443	6,855	830	5,339	11,738
Illinois.....	72	47	139	266		368	1,510	6,789
Michigan.....	462	347	995	1,408	2,960	2,850	13,901	23,473
Wisconsin.....	163	226	354	545	2,345	4,569	9,781	18,199
<b>West North Central</b> .....	10,381	8,905	12,449	17,789	636,881	806,239	1,136,018	1,675,564
Minnesota.....	216	27	274	347	2,968	210	4,235	9,207
Iowa.....	88	54	76	132	2,258	1,197	1,386	2,396
Missouri.....	140	118	142	752	960	1,113	2,089	32,998
North Dakota.....	8,479	206	304	399	19,975	22,814	35,204	37,672
South Dakota.....	967	708	807	923	54,073	52,895	78,069	90,371
Nebraska.....	6,913	7,156	9,680	12,500	473,775	631,762	876,259	1,171,360
Kansas.....	1,578	636	1,166	2,736	82,872	96,248	138,686	331,551
<b>South Atlantic</b> .....	4,119	4,199	6,516	11,660	128,037	224,446	381,044	536,195
Delaware.....	2	3	10	81	7		404	5,553
Maryland.....	17	8	30	235	67	287	697	8,344
District of Columbia.....		16	2	(2)		45	13	(9)
Virginia.....	53	31	71	763	687	1,419	2,817	21,805
West Virginia.....	23	11	9	62	270	42	40	1,381
North Carolina.....	37	19	96	2,704	246	229	2,083	25,423
South Carolina.....	14	5	84	748	411	62	6,408	22,009
Georgia.....	26	14	139	1,268	158	423	3,161	23,873
Florida.....	3,947	4,092	6,075	5,799	126,191	221,917	366,421	427,807
<b>East South Central</b> .....	111	211	180	4,475	891	1,113	6,950	185,130
Kentucky.....	46	34	67	1,226	205	230	1,415	13,434
Tennessee.....	21	21	35	1,094	311	393	1,012	22,548
Alabama.....	37	153	34	452	281	487	1,867	16,653
Mississippi.....	7	3	44	1,703	94	3	5,086	132,400
<b>West South Central</b> .....	28,409	24,598	32,391	41,050	1,472,456	2,146,737	4,164,487	6,380,860
Arkansas.....	1,529	2,229	3,060	6,218	169,412	288,665	422,107	857,863
Louisiana.....	7,037	7,185	7,438	6,897	413,969	535,619	573,775	707,813
Oklahoma.....	2,275	74	466	1,620	4,437	2,207	36,071	108,151
Texas.....	19,568	15,110	21,427	26,315	894,638	1,320,216	3,131,634	4,707,025
<b>Mountain</b> .....	135,414	127,963	122,280	112,231	9,912,862	10,708,164	11,642,484	11,207,997
Montana.....	15,087	12,997	15,457	13,114	1,587,602	1,555,480	1,716,792	1,890,671
Idaho.....	29,898	28,571	29,413	28,218	1,896,048	2,026,288	2,137,237	2,324,571
Wyoming.....	8,637	7,793	7,331	7,130	1,284,027	1,353,873	1,431,767	1,262,932
Colorado.....	29,766	28,054	27,121	23,355	2,467,548	2,698,579	2,872,948	2,262,921
New Mexico.....	15,811	14,299	12,601	11,690	436,402	534,640	655,287	649,415
Arizona.....	10,339	9,634	7,822	6,809	575,464	736,027	963,500	1,177,407
Utah.....	22,612	29,543	21,126	10,406	911,135	1,124,081	1,137,995	1,072,682
Nevada.....	3,264	3,072	2,819	2,509	755,636	674,204	727,498	567,498
<b>Pacific</b> .....	117,895	118,776	125,346	123,172	5,800,764	6,602,031	8,334,169	9,316,550
Washington.....	17,426	15,974	16,828	18,844	493,982	520,153	689,835	778,135
Oregon.....	10,159	15,597	17,668	10,826	1,030,228	1,129,059	1,306,810	1,490,366
California.....	84,310	87,205	90,755	84,502	4,276,554	4,952,819	6,458,324	7,045,049

1 Excludes Alaska and Hawaii. 2 Not available.

Source: Department of Commerce, Bureau of the Census; *U. S. Census of Agriculture: 1950*, Vols. II and III, and *U. S. Census of Agriculture: 1964*, Vol. II.

## No. 816. FEDERAL BUREAU OF RECLAMATION IRRIGATION PROJECTS—ACREAGE AND CROP VALUE, BY PROJECT: 1958

STATE AND PROJECT	FULL IRRIGATION SERVICE LANDS			SUPPLEMENTAL IRRIGATION SERVICE LANDS			TEMPORARY IRRIGATION SERVICE LANDS		
	Irrigable acreage	Irrigated acreage	Gross crop value (\$1,000)	Irrigable acreage	Irrigated acreage	Gross crop value (\$1,000)	Irrigable acreage	Irrigated acreage	Gross crop value (\$1,000)
<b>Total</b> .....	<b>4,256,301</b>	<b>3,407,057</b>	<b>504,741</b>	<b>3,693,896</b>	<b>3,254,388</b>	<b>463,999</b>	<b>99,445</b>	<b>95,292</b>	<b>18,702</b>
Arizona:									
Gila.....	103,487	87,722	10,982						
Salt River.....	239,299	163,259	52,145	95,738	66,563	18,270			
Yuma <sup>1</sup> .....	51,936	45,250	19,637						
Yuma Auxiliary.....	3,406	2,892	1,253						
California:									
Boulder Canyon.....	607,905	547,918	135,939						
Cachuma.....	500	61		26,544	12,519	8,576			
Central Valley.....	33,855	30,033	8,803	815,745	639,216	193,659	94,807	90,860	18,410
Klamath <sup>1</sup> .....	80,021	77,211	8,166						
Orland.....	19,811	17,376	1,173						
Yuma <sup>1</sup> .....	14,620	9,102	1,541						
Colorado:									
Colorado-Big Thompson.....				720,000	720,000	71,295			
Fruitgrowers Dam.....				2,662	2,042	181			
Grand Valley.....	34,686	28,161	2,734	7,730	7,353	1,976			
Mancos.....				8,631	7,057	312			
Missouri River Basin: Upper Republican Division: St. Francis Unit.....				750	384	11			
Paonia.....				13,070	9,002	866			
Pine River <sup>1</sup> .....				40,193	33,546	1,193			
Pine River Indian Irrig. Uncompahgre.....	76,295	63,070	4,683	9,703	9,613	348			
Idaho:									
Avondale.....	874	509	26						
Boise <sup>1</sup> .....	222,490	201,991	20,852	133,384	124,463	13,489			
Dalton Gardens.....	944	694	34						
Lewiston Orchards.....	3,590	2,022	383						
Michaud Flats.....	10,475	4,442	521						
Minidoka.....	209,908	184,620	17,899	938,326	873,024	72,409	505	423	9
Owyhee <sup>1</sup> .....	33,360	31,397	4,047						
Preston Bench.....				4,500	3,865	356			
Rathdrum Prairie.....	4,292	3,671	332						
Kansas:									
Missouri River Basin: Bostwick Division: Courtland Unit.....	20,427	3,707	685						
Solomon Division: Kirwin Unit.....	11,500	4,127	332						
Montana:									
Bitter Root.....	16,665	16,035	581						
Buffalo Rapids.....	22,938	20,916	1,301						
Frenchtown.....	4,810	3,573	215						
Huntley.....	32,487	23,207	1,450						
Intake.....	881	731	25						
Lower Yellowstone <sup>1</sup> .....	36,832	30,063	2,537						
Milk River.....	134,082	87,549	4,060						
Missoula Valley.....	977	468	31						
Missouri River Basin: Three Forks Div.: Crow Creek Pump Unit.....	4,545	3,206	142						
Yellowstone Division: Savage Unit.....	2,215	2,102	80						
Sun River.....	91,854	65,931	2,131						
Nebraska:									
Mirage Flats.....	11,657	11,298	1,077						
Missouri River Basin: Bostwick Division: Superior-Courtland Unit.....	22,849	15,147	1,373						
Frenchman-Cam- bridge Division.....	29,233	22,850	1,880						
Middle Loup Divi- sion: Sargent Unit.....	13,740	5,165	320						
Oregon Trail Divi- sion: Glendo Unit <sup>1</sup> .....				22,524	21,239	1,534			
North Platte <sup>1</sup> .....	171,571	158,242	11,620	92,393	89,569	7,143			

See footnotes at end of table.

No. 816. FEDERAL BUREAU OF RECLAMATION IRRIGATION PROJECTS—ACREAGE AND CROP VALUE, BY PROJECT: 1958—Continued

STATE AND PROJECT	FULL IRRIGATION SERVICE LANDS			SUPPLEMENTAL IRRIGATION SERVICE LANDS			TEMPORARY IRRIGATION SERVICE LANDS		
	Irrigable acreage	Irrigated acreage	Gross crop value (\$1,000)	Irrigable acreage	Irrigated acreage	Gross crop value (\$1,000)	Irrigable acreage	Irrigated acreage	Gross crop value (\$1,000)
Nevada: Humboldt.....				39,633	29,536	1,950			
Newlands.....	71,566	55,096	3,157						
Truckee Storage.....				28,978	21,512	1,698			
New Mexico: Carlsbad.....	25,055	19,050	4,397						
Fort Sumner.....	6,500	5,333	443						
Middle Rio Grande.....	121,680	54,356	3,871						
Pine River <sup>1</sup> .....							943	940	26
Rio Grande <sup>1</sup> .....	102,082	83,923	24,452						
Tucumcari.....	41,411	33,554	2,040						
Vermejo.....	7,379	4,602	134						
North Dakota:									
Buford-Trenton.....	7,655	6,464	539						
Lower Yellowstone <sup>1</sup> .....	19,388	16,153	1,284						
Missouri River Basin:									
Heart Division:									
Dickinson Unit.....	400	332	24						
Heart Butte Unit.....	2,533	524	24						
North Dakota Pumping Div.:									
Fort Clark Unit.....	2,039	1,038	63						
Oklahoma:									
W. C. Austin.....	47,809	41,249	6,580						
Oregon: Arnold.....	4,292	2,634	93						
Baker.....				7,281	7,266	301			
Boise <sup>1</sup> .....	1,724	1,455	97						
Burnt River.....				15,616	15,489	539			
Crescent Lake Dam.....	6,650	6,394	312						
Deschutes.....	50,000	46,597	4,956	40,140	43,983	2,599			
Grants Pass.....	10,300	7,455	846						
Klamath <sup>1</sup> .....	134,436	118,735	10,318						
Ochoco.....	8,500	8,137	737						
Owyhee <sup>1</sup> .....	71,656	67,218	9,346	13,800	12,860	2,967			
Rogue River Basin.....				23,801	20,841	5,452			
Umatilla.....	17,859	12,809	902	12,813	11,029	1,086	521	489	45
Vale.....	32,000	31,212	1,988						
South Dakota:									
Belle Fourche.....	57,183	54,413	1,966						
Missouri River Basin:									
Cheyenne Division:									
Angostura Unit.....	12,136	11,098	663						
Rapid Valley.....				8,900	6,644	117			
Texas: Balmorhea.....				10,608	5,426	950			
Rio Grande <sup>1</sup> .....	70,114	56,879	16,926	18,330	6,844	1,874			
Utah: Hyrum.....				6,800	5,380	295			
Moon Lake.....				75,256	58,117	1,293			
Newton.....				2,600	2,185	133			
Ogden River.....				22,867	15,737	2,118			
Provo River.....				46,609	37,674	3,475			
Sanpete.....				13,653	11,999	415			
Scotfield.....				15,609	14,673	802			
Strawberry Valley.....	17,635	15,636	797	22,529	21,464	1,682	2,499	2,447	137
Weber River.....				108,929	90,779	8,468			
Washington:									
Chief Joseph Dam.....	2,860	878	225						
Columbia Basin.....	386,359	238,312	27,302						
Okanogan.....	5,307	3,897	774						
Yakima.....	279,849	229,453	46,852	181,844	164,273	32,585	170	133	25
Wyoming: Eden.....	12,903	11,629	331						
Kendrick.....	23,957	18,168	514						
Missouri River Basin:									
Bighorn Basin Div.:									
Hanover-Bluff Unit.....	6,939	3,905	295	11,333	8,656	286			
Owl Creek Unit.....									
Oregon Trail Division:									
Glendo Unit <sup>1</sup> .....				8,732	7,556	412			
North Platte <sup>1</sup> .....	54,752	51,887	4,109	16,317	15,010	879			
Riverton.....	52,945	49,455	1,957						
Shoshone.....	93,431	76,039	4,407						

<sup>1</sup> Project serves areas shown separately in 2 States as follows: Yuma—Arizona and California; Klamath—California and Oregon; Pine River—Colorado and New Mexico; Boise and Owyhee—Idaho and Oregon; Lower Yellowstone—Montana and North Dakota; Glendo Unit and North Platte—Nebraska and Wyoming; Rio Grande—New Mexico and Texas.

<sup>2</sup> Area for which service is available under Warren Act contracts.

Source: Department of the Interior, Bureau of Reclamation; 1958 Crop Report and Related Data. Federal Reclamation Projects.

No. 817. NUMBER AND AREA OF DRAINAGE ENTERPRISES CLASSIFIED BY SIZE: 1920 TO 1950

[Excludes Alaska and Hawaii]

SIZE GROUP	Number of enterprises, 1950	AREA OF ENTERPRISES (acres) <sup>1</sup>							
		All drainage States			30 States <sup>2</sup>				
		1920	1930	1940	1920	1930	1940	1950	
<b>Total</b> .....	14,066	95,629,231	128,495,078	132,823,451	23,657,216	41,644,155	45,207,287	54,617,706	
Under 100 acres.....	8,273	1,152,025	324,157	525,455	12,305	2,727	4,383	603,554	
100 to 199 acres.....			1,040,664	1,446,870		12,057	19,496		
200 to 499 acres.....			5,222,615	5,984,023		7,093,485	147,705		220,974
500 to 999 acres.....			9,001,516	11,130,096		11,234,727	910,371		953,935
1,000 to 1,999 acres.....			1,398	34,074,009		14,558,019	3,183,867		4,998,968
2,000 to 4,999 acres.....	1,314	13,357,936	15,865,002	16,387,515	2,820,328	4,484,862	4,542,720	4,528,281	
5,000 to 9,999 acres.....	651								
10,000 to 19,999 acres.....	433	23,826,149	35,075,951	16,964,180	9,423,712	14,768,991	10,047,929	6,003,783	
20,000 to 49,999 acres.....	268								
50,000 to 99,999 acres.....	87	8,605,536	11,403,982	10,760,472	4,880,449	6,304,255	6,816,045	6,084,562	
100,000 to 199,999 acres.....	25	4,850,978	10,218,995	3,155,493	2,868,617	10,014,219	2,954,853	6,575,535	
200,000 to 499,999 acres.....	19								
500,000 acres and over.....	12								

<sup>1</sup> Sum of areas in individual enterprises without deduction for area in more than 1 enterprise (overlapped).  
<sup>2</sup> Largely States with organized drainage districts and other corporate and private enterprises. See text, p. 603.

Source: Department of Commerce, Bureau of the Census; U. S. Census of Agriculture: 1950, Vol. IV.

No. 818. FARM DRAINAGE—ANNUAL COST AND FUNDS COLLECTED, FOR ALL DRAINAGE STATES: 1940 TO 1949

[Excludes Alaska and Hawaii]

ITEM	All drainage States, amount	30 STATES <sup>1</sup>		10 States, amount <sup>2</sup>
		Number of enterprises reporting	Amount	
<b>Cost of construction and operation and maintenance, 1940 to 1949</b> .....	<b>\$179,033,770</b>	<b>3,426</b>	<b>\$110,231,690</b>	<b>\$68,802,080</b>
1940.....	11,118,467	1,513	6,196,439	4,922,028
1941.....	11,858,842	1,519	6,658,374	5,200,468
1942.....	11,622,551	1,518	6,723,109	4,899,442
1943.....	11,680,225	1,577	7,043,661	4,636,564
1944.....	13,754,850	1,582	8,135,637	5,619,213
1945.....	15,874,399	1,671	9,077,448	6,796,951
1946.....	18,868,027	1,853	11,645,339	7,222,688
1947.....	23,635,739	2,022	15,224,054	8,411,685
1948.....	29,103,462	2,133	19,222,181	9,881,281
1949.....	31,517,208	2,214	20,305,448	11,211,760
<b>Cost of new drainage works, 1940 to 1949</b> .....	<b>23,872,422</b>	<b>983</b>	<b>16,288,346</b>	<b>7,584,076</b>
1940.....	292,905	28	211,602	81,243
1941.....	595,553	36	450,885	138,668
1942.....	688,394	38	488,030	183,334
1943.....	761,825	55	552,887	208,938
1944.....	847,874	58	588,754	262,120
1945.....	1,841,350	106	1,209,478	631,882
1946.....	2,656,197	175	1,845,545	810,652
1947.....	3,982,765	285	2,675,951	1,306,814
1948.....	5,480,198	334	3,811,674	1,668,524
1949.....	6,745,381	399	4,453,480	2,291,901
<b>Funds collected for drainage, 1940 to 1949</b> .....	<b>209,919,061</b>	<b>3,471</b>	<b>144,415,544</b>	<b>65,503,517</b>
1940.....	14,826,778	1,544	9,876,982	4,849,796
1941.....	16,059,107	1,516	10,964,089	5,095,019
1942.....	16,434,645	1,534	11,257,936	5,176,708
1943.....	16,604,413	1,540	11,745,320	4,859,093
1944.....	17,857,447	1,574	12,359,386	5,505,061
1945.....	19,895,508	1,650	13,748,625	6,144,883
1946.....	24,077,324	1,792	16,740,225	7,337,099
1947.....	25,689,330	1,968	18,062,647	7,606,692
1948.....	28,090,532	2,072	19,551,283	8,539,249
1949.....	30,405,968	2,107	20,116,051	10,289,917

<sup>1</sup> Largely States with organized drainage districts and other corporate and private enterprises. See text, p. 603.  
<sup>2</sup> Largely county-drain States. See text, p. 603.

Source: Department of Commerce, Bureau of the Census; U. S. Census of Agriculture: 1950, Vol. IV.

No. 819. GROWTH OF CONSERVATION DISTRICTS: 1938 TO 1959

[For years ending June 30. Includes Alaska, Hawaii, Puerto Rico, and Virgin Islands. Beginning 1941, includes wind-erosion districts and grazing districts. Beginning 1946, includes Imperial Irrigation District, California. Beginning 1959, includes Elephant Butte Irrigation District, N. Mex. See text, p. 604]

YEAR	DISTRICTS ORGANIZED <sup>1</sup>		TOTAL AREA IN DISTRICTS		DISTRICTS WITH SUPPLEMENTAL MEMORANDUMS	
	Each year	Cumulative total	New districts and additions	Cumulative total	Each year	Cumulative total
	Number	Number	1,000 acres	1,000 acres	Number	Number
1938	69	69	36, 107	36, 107	34	34
1939	92	161	52, 339	88, 446	79	113
1940	153	314	101, 306	189, 752	120	233
1941	241	555	145, 091	334, 843	201	434
1942	230	785	122, 727	457, 570	219	653
1943	116	901	60, 102	517, 672	159	812
1944	213	1, 114	102, 819	620, 491	171	983
1945	232	1, 346	120, 368	740, 859	221	1, 204
1946	292	1, 638	143, 119	883, 977	223	1, 427
1947	251	1, 889	118, 991	1, 002, 969	315	1, 742
1948	144	2, 033	111, 035	1, 114, 003	174	1, 916
1949	131	2, 164	64, 760	1, 178, 763	168	2, 074
1950	121	2, 285	74, 721	1, 253, 484	133	2, 207
1951	88	2, 373	51, 626	1, 305, 110	122	2, 329
1952	94	2, 467	53, 803	1, 358, 913	89	2, 418
1953	82	2, 549	45, 075	1, 403, 989	59	2, 477
1954	69	2, 618	37, 507	1, 441, 496	104	2, 581
1955	56	2, 674	43, 478	1, 484, 974	63	2, 644
1956	47	2, 721	61, 482	1, 546, 456	44	2, 688
1957	49	2, 770	50, 535	1, 596, 991	46	2, 734
1958	36	2, 806	36, 327	1, 633, 318	33	2, 767
1959	55	2, 861	28, 650	1, 661, 968	47	2, 814

<sup>1</sup> Totals at end of each year are net, including corrections and adjustments made during year.

Source: Department of Agriculture, Soil Conservation Service; *Report of Administrator of Soil Conservation Service*, and records.

No. 820. CONSERVATION PRACTICES NEWLY APPLIED IN CONSERVATION DISTRICTS, WITH SOIL CONSERVATION SERVICE ASSISTANCE: 1950 TO 1959

[For years ending June 30. Includes Alaska, Hawaii, Puerto Rico, and Virgin Islands. See text, p. 604]

PRACTICE	Unit	1950	1955	1956	1957	1958	1959
Contour farming	Acres	3, 491, 511	3, 146, 889	2, 965, 786	2, 660, 044	2, 296, 854	2, 070, 458
Cover cropping	do	3, 111, 387	4, 506, 673	3, 832, 090	4, 110, 385	4, 144, 611	3, 116, 221
Strip cropping	do	829, 200	947, 611	971, 131	898, 016	768, 881	727, 663
Seeding range and pasture	do	1, 876, 832	3, 134, 634	3, 278, 121	3, 431, 427	4, 278, 998	4, 761, 346
Farm and ranch ponds	Number	37, 780	86, 574	78, 869	81, 178	63, 060	66, 809
Tree planting	Acres	126, 784	313, 209	351, 479	472, 435	752, 113	1, 046, 956
Terraces	Miles	100, 612	45, 806	52, 187	59, 937	40, 986	46, 011
Diversions	do	5, 892	6, 902	5, 890	6, 000	4, 878	4, 972
Farm drainage	Acres	1, 161, 402	1, 553, 562	1, 510, 196	1, 301, 445	1, 442, 564	1, 756, 801
Irrigation land leveling	do	315, 519	493, 907	575, 023	581, 245	460, 066	526, 528
Improved water application	do	617, 606	1, 713, 618	1, 719, 558	1, 410, 890	1, 290, 598	1, 165, 984

Source: Department of Agriculture, Soil Conservation Service; *Report of Administrator of Soil Conservation Service*, and records.

No. 821. SOIL CONSERVATION DISTRICTS—SUMMARY, BY STATES AND OTHER AREAS:  
CUMULATIVE TO JUNE 30, 1959

[See text, p. 604]

STATE OR OTHER AREA	Year district law be- came effective	Dis- tricts or- gan- ized <sup>1</sup>	APPROXIMATE AREA AND FARMS WITHIN ORGANIZED DISTRICTS			Districts having Memo. of under- standing with D. of A.	SOIL CONSERVATION DISTRICT COOPERATORS <sup>2</sup>		
			Total area	Farms and ranches	Land in farms		Cooper- ators	Total area	
			Number 1,000 acres	Number 4,590,451	1,000 acres		Number 1,859,439	1,000 acres 563,743	
<b>Total</b> .....			<b>2,861</b>	<b>1,661,968</b>	<b>4,590,451</b>	<b>1,053,653</b>	<b>2,824</b>	<b>1,859,439</b>	<b>563,743</b>
<b>United States</b> .....		<b>2,843</b>	<b>1,659,698</b>	<b>4,536,181</b>	<b>1,051,797</b>	<b>2,806</b>	<b>1,843,205</b>	<b>562,902</b>	
Alabama.....	1939	50	32,690	176,956	20,810	38	50,770	10,095	
Alaska.....	1947	9	4,391	924	104	8	559	91	
Arizona.....	1941	48	61,600	8,798	26,480	48	4,914	6,394	
Arkansas.....	1937	76	35,712	145,085	17,944	76	75,325	16,067	
California <sup>3</sup> .....	1938	160	64,924	94,458	29,763	154	31,801	10,243	
Colorado.....	1937	90	48,729	44,752	30,451	94	18,396	16,563	
Connecticut.....	1945	8	3,135	12,753	1,198	8	4,955	533	
Delaware.....	1943	3	1,266	6,297	814	3	2,581	385	
Florida.....	1937	59	29,377	54,607	16,818	59	21,740	10,387	
Georgia.....	1937	27	37,429	165,623	24,019	27	99,162	18,801	
Hawaii.....	1947	16	3,384	4,979	2,340	16	1,194	1,746	
Idaho.....	1939	51	40,366	35,300	12,258	51	16,633	6,884	
Illinois.....	1937	99	58,104	173,570	30,137	99	53,027	9,204	
Indiana.....	1937	80	19,379	126,334	19,004	78	32,190	4,876	
Iowa.....	1939	100	34,265	192,933	34,044	100	65,858	11,963	
Kansas.....	1937	105	52,549	121,053	50,038	105	75,249	24,943	
Kentucky.....	1940	121	25,033	193,487	18,034	121	61,989	11,927	
Louisiana.....	1938	26	27,989	110,430	11,442	26	39,967	9,275	
Maine.....	1941	15	16,485	22,086	3,449	15	8,259	1,731	
Maryland.....	1937	24	6,277	35,969	4,056	24	10,524	2,418	
Massachusetts.....	1945	15	4,998	17,326	1,439	15	8,483	915	
Michigan.....	1937	75	29,579	125,442	15,010	75	39,527	4,451	
Minnesota.....	1937	81	39,512	145,116	28,662	80	40,793	8,806	
Mississippi.....	1938	74	30,239	216,786	20,700	74	67,549	11,869	
Missouri.....	1943	36	12,207	60,840	9,969	36	17,121	3,517	
Montana <sup>4</sup> .....	1939	66	90,716	35,500	58,250	66	13,575	30,854	
Nebraska.....	1937	87	48,412	100,846	47,487	87	62,072	22,083	
Nevada.....	1937	34	61,705	2,844	7,327	33	2,999	2,823	
New Hampshire.....	1945	10	5,771	10,411	1,457	10	5,484	892	
New Jersey.....	1937	14	4,785	22,634	1,664	14	8,274	938	
New Mexico <sup>5</sup> .....	1937	60	64,045	24,259	44,200	60	13,640	32,862	
New York.....	1940	46	24,581	95,388	13,972	46	40,489	5,655	
North Carolina.....	1937	37	28,696	267,906	18,260	37	93,629	9,470	
North Dakota.....	1937	75	44,660	62,037	41,861	74	36,193	23,153	
Ohio.....	1941	87	24,764	174,861	19,835	87	45,315	6,327	
Oklahoma.....	1937	87	44,024	130,162	36,732	87	92,225	24,492	
Oregon.....	1939	57	40,477	57,977	18,316	57	13,281	7,700	
Pennsylvania.....	1937	51	23,056	107,766	11,320	44	25,042	3,245	
Rhode Island.....	1943	3	3,677	2,004	155	3	1,146	145	
South Carolina.....	1937	44	19,395	124,203	11,069	44	43,132	7,139	
South Dakota.....	1937	68	46,499	58,793	42,657	68	36,192	23,345	
Tennessee.....	1939	94	26,559	203,154	17,571	94	50,064	7,601	
Texas.....	1939	174	163,137	291,369	140,272	171	195,391	100,118	
Utah.....	1937	48	51,298	22,775	12,047	48	12,012	7,290	
Vermont.....	1939	13	5,931	15,981	3,313	13	11,236	2,239	
Virginia.....	1938	29	24,959	133,216	14,101	29	42,717	7,022	
Washington.....	1939	76	33,781	67,058	17,892	76	33,851	11,404	
West Virginia.....	1939	14	15,273	68,283	7,308	14	36,875	5,997	
Wisconsin.....	1937	71	35,011	153,558	22,507	71	39,252	6,514	
Wyoming.....	1941	44	43,965	12,683	22,306	44	5,342	10,378	
Puerto Rico.....	1946	17	2,185	53,515	1,792	17	15,727	793	
Virgin Islands.....	1946	1	85	755	64	1	507	48	

<sup>1</sup> For specific procedure on organization of soil conservation districts, see respective State soil conservation district law. By provision of most State district laws, State soil conservation committee has responsibility for organization of districts. Local district governing bodies administer affairs of each individual district.

<sup>2</sup> Comprises all farmer-district cooperative agreements including basic conservation plans.

<sup>3</sup> Includes Imperial Irrigation District.

<sup>4</sup> Includes 6 grass conservation districts.

<sup>5</sup> Includes Elephant Butte Irrigation District.

Source: Department of Agriculture, Soil Conservation Service; annual report, *Soil Conservation Districts*, and records.