

COMMUNICATIONS, ENERGY, AND SCIENCE

This section presents statistics relating to postal services, telephones, telegraphs, radio, television, and newspapers; electrical, gas and petroleum power and energy; and scientific resources.

Hawaii is served by all communications media. The most recent statistics indicate 76 post offices, 545,000 telephones, 32 radio stations, 12 television stations, and seven daily newspapers.

Electricity sales exceeded 4.8 billion kilowatt-hours in 1973, or 7,500 per residential customer. Manufactured gas sales totaled 34.5 million therms.

The liquid fuel tax base for 1974 was approximately 825 million gallons, compared with 883 million in 1973 and 250 million in 1960. The 1974 total included 270 million gallons of gasoline, 464 million of aviation fuel, and 87 million of diesel oil.

The State is well served with scientific resources. A 1974 inventory reported 367 companies and agencies with research or scientific capabilities. Employment in these organizations was more than 31,600. Forty-eight Hawaii residents were granted patents in 1973, the largest number on record.

Information on communications, energy and science can be obtained from reports and records of the U.S. Postal Service, U.S. Bureau of Mines, Federal Communications Commission, Federal Power Commission, Hawaii State Department of Taxation, Hawaii State Public Utilities Commission, individual utility companies, and Audit Bureau of Circulations. Detailed statistics on energy consumption, with special emphasis on petroleum products, appear in *Energy Use in Hawaii*, published by the Department of Planning and Economic Development in 1974. *Hawaii's Scientific Resources, 1974-1975*, also issued by DPED in 1974, contains information on scientific organizations and facilities in the Islands. Data for the nation as a whole can be found in the *Statistical Abstract of the United States: 1974*, Section 18, 19, and 20.

Table 202.—POSTAL SERVICE: 1958 TO 1974

Year	Number of post offices ¹	Gross postal receipts (\$1,000) ²	Pieces of mail handled (millions) ²
1958 ³	88	(NA)	(NA)
1959	85	(NA)	(NA)
1960	83	7,732	127
1961	82	8,434	(NA)
1962	82	11,041	(NA)
1963	80	13,037	(NA)
1964	80	(NA)	(NA)
1965	80	13,692	144
1966	80	14,984	147
1967	80	15,881	149
1968	80	17,617	159
1969	80	20,178	172
1970	80	20,840	187
1971	80	21,976	201
1972 ⁴	78	23,434	215
1973	77	27,100	226
1974	76	29,663	233

NA Not available.

¹As of June 30. Includes all 1st-, 2nd-, 3rd-, and 4th-class post offices; excludes branches and stations.

²Years ended June 30.

³For earlier years, see *The State of Hawaii Data Book 1974*, p. 193.

⁴Revised.

Source: *Annual Report of the Postmaster General* for 1958-1970; *Statistical Abstract of the United States* for 1960-1971; U.S. Post Office, San Francisco, records (for 1962-1963); U.S. Postal Service, Honolulu, records (for 1971 and later years).

Table 203.—TELEPHONE SERVICE: 1958 TO 1974

Year	Telephones in service, Dec. 31			Local calls completed (1,000)	Interisland calls		Transpacific calls	
	State total	Oahu	Other islands		Paid ¹	Completed	Paid, in and out ²	Hawaii originated
1958	176,750	143,189	33,561	353,990	352,181	375,032	326,669	197,089
1959	191,373	156,291	35,082	383,017	441,676	467,216	433,793	253,690
1960	208,411	171,793	36,618	413,908	512,404	538,317	516,527	303,334
1961	221,599	183,401	38,198	422,729	519,789	545,777	569,122	335,104
1962	233,680	193,570	40,110	434,132	573,789	605,138	702,428	403,051
1963	247,629	205,342	42,287	449,933	651,787	669,781	750,161	421,900
1964	265,793	220,939	44,854	470,097	794,060	808,729	926,424	523,803
1965	283,689	236,006	47,683	506,198	948,585	969,531	1,336,557	757,352
1966	302,506	251,505	51,001	539,632	1,129,492	1,153,375	1,687,105	957,163
1967	323,849	268,190	55,659	562,522	1,332,551	1,354,805	2,144,049	1,271,406
1968	352,196	291,317	60,879	585,071	1,624,206	1,649,734	2,594,151	1,558,008
1969	381,982	314,915	67,067	611,919	1,963,219	1,994,026	3,267,601	1,948,391
1970	414,165	339,952	74,213	631,543	2,288,320	2,317,727	3,753,449	2,257,208
1971 ³	445,995	365,733	80,262	667,542	2,569,758	2,607,521	4,476,130	2,517,860
1972	498,593	412,443	86,150	702,346	3,072,319	3,131,881	5,427,667	3,055,018
1973 ⁴	523,699	430,612	93,087	1,016,950	3,754,413	3,804,616	6,813,550	3,794,848
1974	544,718	444,359	100,359	1,078,658	4,494,314	4,564,049	8,619,719	4,775,288

¹Excludes uncollectables.

²Includes calls paid in Hawaii and elsewhere.

³Defense Administrative Telephone System (DATS) taken over by Hawaiian Telephone Company in 1971. DATS telephones in service numbered 4,423 (all on Oahu) as of December 31, 1971.

⁴The sharp increase in completed local calls is attributable in part to a change in the method of estimation.

Source: Hawaiian Telephone Co., records.

Table 204.—TELEPHONE SERVICE, BY ISLAND: 1974

Subject	State total	Hawaii	Maui	Lanai	Molokai	Oahu, except DATS ¹	DATS ¹	Kauai
Telephones in service ²	544,718	47,681	30,297	781	2,102	413,712	30,647	19,498
Residence main stations ²	239,923	21,297	14,121	557	1,320	193,596	...	9,032
Business main stations ²	64,408	5,192	3,553	103	290	37,096	15,861	2,313
Local calls:								
Originating ³	1,438,211,295	...	...	...	...	...	...	...
Completed ³	1,078,658,471	...	...	...	...	...	...	...
Interisland calls:								
Completed ⁴	4,564,049	1,054,319	821,752	...	...	2,239,536	...	448,442
Paid ³	4,494,314	...	...	...	...	...	...	...
Transpacific paid calls:								
Hawaii originating ⁴	4,775,288	261,557	283,269	...	...	4,112,160	...	118,302
Incoming and outgoing ³	8,619,719	...	...	...	...	...	...	...

¹Defense Agency Telephone Service, all on Oahu.

²As of December 31.

³Not available by island.

⁴Molokai and Lanai combined with Oahu.

Source: Hawaiian Telephone Company, records.

Table 205.—TELEGRAPH MESSAGES: 1970 TO 1974

Year	Total messages	From Hawaii to Mainland			From Mainland to Hawaii		
		Total from Hawaii	Originated in Hawaii	Originated elsewhere	Total to Hawaii	Originated on Mainland	Originated elsewhere
1970	567,550	266,811	198,830	67,981	300,739	236,106	64,633
1971	419,188	201,600	135,581	66,019	217,588	154,506	63,082
1972	392,596	189,214	122,792	66,422	203,382	141,682	61,700
1973	385,823	198,693	136,747	61,946	187,130	116,850	70,280
1974	382,281	185,204	100,321	84,883	197,077	125,319	71,758

Source: Federal Communications Commission, Common Carrier Bureau, records.

Table 206.—PAID CIRCULATION OF DAILY AND SUNDAY ENGLISH-LANGUAGE NEWSPAPERS: 1958 TO 1974

Year	Honolulu Advertiser ¹	Honolulu Star-Bulletin ¹	Sunday Star-Bulletin and Advertiser ²	Hawaii Tribune-Herald ³	
				Daily	Sunday
1958	46,347	97,680	...	9,755	9,765
1959	51,424	102,929	...	9,895	10,021
1960	64,287	104,901	...	9,884	9,898
1961	70,097	104,212	...	10,421	10,433
1962	62,239	100,858	146,540	10,679	10,824
1963	59,391	102,195	141,202	10,826	10,910
1964	62,337	105,099	145,934	11,006	11,060
1965	64,435	107,976	152,156	11,136	11,265
1966	66,499	109,865	156,123	11,447	11,600
1967	67,550	112,182	160,147	10,944	11,124
1968	70,135	115,688	166,171	11,645	11,813
1969	71,835	119,148	168,034	12,473	12,706
1970	74,318	123,765	174,069	13,125	13,469
1971	74,441	124,601	177,929	13,851	14,167
1972	72,723	126,341	181,452	14,250	14,683
1973	74,799	129,561	187,648	15,669	16,045
1974	76,196	121,163	184,528	15,724	16,253

¹Published daily, Monday through Saturday. Data are five-day averages through 1961 and six-day averages thereafter, for six-month periods ended September 30.

²First published in 1962, replacing the separate Sunday editions of the Advertiser and Star-Bulletin. The Sunday Advertiser reported average circulations of 77,279 in 1958, 86,289 in 1959, 81,400 in 1960, and 84,653 in 1961. The Sunday Star-Bulletin, first issued November 1, 1959, reported average circulations of 111,450 in 1960 and 113,498 in 1961. All data are averages for six-month periods ended September 30.

³Published daily. Data are averages for the fourth quarter (October through December) through 1972 and for six-month periods ended September 30 beginning in 1973.

Source: Audit Bureau of Circulations data supplied by the Hawaii Newspaper Agency, Inc., and the Hawaii Tribune-Herald.

Table 207.—COMMERCIAL AND EDUCATIONAL RADIO AND TELEVISION BROADCAST STATIONS ON THE AIR: 1958 TO 1975

Year (as of January 1)	Commercial			Educational	
	AM	FM	TV	FM	TV
1958	15	1	7	2	—
1959	15	1	7	2	—
1960	17	1	7	2	—
1961	18	1	8	1	—
1962	20	1	9	1	—
1963	20	1	10	1	—
1964	23	2	10	1	—
1965	23	2	10	—	—
1966	24	2	10	—	—
1967	25	2	10	—	2
1968	25	3	10	—	2
1969	25	4	10	—	2
1970	25	4	10	1	2
1971	25	4	10	1	2
1972	25	5	10	1	2
1973	24	5	10	1	2
1974	25	7	10	1	2
1975	26	5	10	1	2

Source: Federal Communications Commission, records; FCC data cited in *Statistical Abstract of the United States, 1959-1970*.

Table 208.—TELEPHONE AVAILABILITY AND TELEVISION SETS IN OCCUPIED HOUSING UNITS, BY COUNTY: 1970

Subject	State total	City and County of Honolulu	Hawaii County	Kauai County	Maui County
All occupied units	203,088	164,763	17,260	8,282	12,783
Telephone:					
Available	185,265	152,198	14,907	7,064	11,096
None	17,823	12,565	2,353	1,218	1,687
Number of television sets:					
One	143,288	114,351	13,101	6,376	9,460
Two or more	46,373	41,254	2,286	864	1,969
None	13,427	9,158	1,873	1,042	1,354

Source: U.S. Bureau of the Census, *U.S. Census of Housing: 1970*, Final Report HC(1)-B13, tables 32, 37, 62, and 63.

Table 209.—CABLE TELEVISION SUBSCRIBERS: DECEMBER 31, 1970 TO 1974

Year (Dec. 31)	State total	City and County of Honolulu	County of Hawaii	County of Kauai	County of Maui
1970 ¹	12,091	11,066	—	—	1,025
1971	13,718	12,581	—	37	1,100
1972	16,887	14,732	—	478	1,677
1973	21,826	18,315	501	950	2,060
1974	34,041	25,979	4,420	1,300	2,342

¹Earliest year available. The first CATV company in Hawaii began operation on Oahu in April 1961. State regulation of CATV was provided for by Act 112, S.L.H. 1970, effective June 19, 1970.

Source: Hawaii State Department of Regulatory Agencies, CATV Division, records.

Table 210.—POSTAGE, TELEPHONE, AND TELEGRAPH RATES, AND NEWSPAPER PRICES: 1955 TO 1975
(In dollars)

Year (as of July 1)	Postage rates (letters, < 1 oz.)		Telephone rates (including tax) for Honolulu					Telegraph rate per full-rate word (non-coded)	Newspaper price ¹	
	Surface	Air	Local call, pay phone	To Hilo ²	To San Francisco		Monthly charge ³		Daily	Sunday
					Direct dialing ⁴	Operator handled ²				
1955	0.03	0.06	0.10	2.19	...	9.38	7.15	0.19	0.05	0.15
1960	0.04	0.07	0.10	1.93	...	6.60	8.42	0.21	0.10	0.15
1965	0.05	0.08	0.10	1.65	...	6.05	8.42	0.21	0.10	0.20
1970	0.06	0.10	0.10	0.99	...	4.29	9.90	0.21	0.10	0.25
1971	0.08	0.11	0.10	0.99	...	4.29	9.90	0.21	0.15	0.35
1972	0.08	0.11	0.10	0.99	4.29	4.29	10.12	0.21	0.15	0.35
1973	0.08	0.11	0.10	0.97	3.27	4.25	10.63	0.21	0.15	0.35
1974	0.10	0.13	0.10	0.97	2.59	3.40	10.53	0.21	0.20	0.45
1975	0.10	0.13	0.10	0.96	2.57	3.37	10.17	0.21	0.20	0.50

¹Street sales, *Honolulu Advertiser* and *Honolulu Star-Bulletin*.

²Station-to-station operator-handled daytime calls, first three minutes.

³For an individual residential line.

⁴Daytime calls, first three minutes. Direct dialing was introduced January 16, 1972.

Source: Office of the Postmaster General, records; Hawaiian Telephone Co., records; Federal Communications Commission, records; newspaper mastheads.

Table 211.—ELECTRIC UTILITIES: 1959 TO 1974

Year	Customers, Dec. 31		1,000 KWH sold			Average annual use (KWH)		Average rate (\$/KWH)		Installed capacity (KW)
	Residential	Other	Total	Residential	Other	Residential	Other	Residential	Other	
1959	127,336	24,602	1,422,145	519,222	902,923	4,078	36,701	.030240	.021664	469,343
1960	132,440	25,138	1,602,197	580,849	1,021,348	4,386	40,630	.029723	.021559	469,343
1961	136,788	25,664	1,766,031	624,730	1,141,301	4,567	44,471	.029057	.021015	527,708
1962	140,661	26,440	1,966,105	678,628	1,287,477	4,825	48,694	.028886	.020722	543,737
1963	144,638	27,194	2,077,570	730,317	1,347,254	5,049	49,542	.028389	.020609	628,312
1964	149,547	28,137	2,284,275	786,118	1,498,157	5,257	53,245	.027949	.020133	716,312
1965	154,822	28,901	2,445,024	853,086	1,591,939	5,510	55,082	.027569	.020072	731,395
1966	160,784	29,492	2,639,866	912,616	1,727,250	5,676	58,567	.027290	.019949	830,644
1967	166,256	30,161	2,832,468	989,785	1,842,684	5,953	61,109	.027039	.020037	829,157
1968	171,346	30,821	3,109,256	1,083,233	2,026,023	6,322	65,735	.026803	.020022	894,532
1969	178,569	31,761	3,426,052	1,174,502	2,251,550	6,577	70,890	.026548	.019647	896,271
1970	186,282	32,721	3,758,094	1,270,732	2,487,362	6,822	76,017	.026810	.020113	1,007,021
1971	193,043	33,471	4,167,127	1,375,308	2,791,819	7,124	83,410	.028229	.021493	1,016,350
1972	201,903	34,406	4,562,568	1,493,840	3,068,728	7,399	89,192	.02849	.02172	1,135,055
1973	210,740	35,515	4,867,850	1,581,855	3,285,995	7,506	92,524	.03077	.02367	1,266,600
1974	219,633	36,268	5,113,906	1,635,978	3,477,928	7,449	95,895	.03493	.02704	1,419,892

Source: Hawaii State Public Utilities Division, *Historical Data, Gas and Electric Utilities, State of Hawaii, 1959 to 1968* (unpaged), and records.

Table 212.—ELECTRIC UTILITIES, BY ISLAND: 1973 AND 1974

Island	Customers, Dec. 31		1,000 KWH sold			Ave. ann. use (KWH)		Ave. rate (dollars/KWH)		Installed capacity (KW)
	Residential	Other	Total	Residential	Other	Residential	Other	Residential	Other	
State total, 1973	210,740	35,515	4,867,850	1,581,855	3,285,995	7,506	92,524	.03077	.02367	1,266,600
Oahu	162,180	25,141	4,189,397	1,305,505	2,883,892	8,050	114,709	.02812	.02094	1,068,400
Hawaii	21,660	4,887	302,472	122,930	179,542	5,675	36,739	.04290	.04003	96,429
Maui and Lanai	15,782	3,243	227,064	95,766	131,298	6,068	40,487	.04181	.04558	46,149
Kauai	9,720	1,817	131,566	48,272	83,294	4,966	45,841	.04805	.04449	47,900
Molokai	1,398	427	17,351	9,382	7,969	6,711	18,662	.04006	.06430	7,722
State total, 1974	219,633	36,268	5,113,906	1,635,978	3,477,928	7,449	95,895	0.03493	0.02704	1,419,892
Oahu	168,525	25,518	4,393,616	1,348,168	3,045,448	8,000	119,345	0.03063	0.02309	1,209,400
Hawaii	22,612	4,958	319,618	129,913	189,705	5,745	38,262	0.05424	0.05106	102,300
Kauai	10,275	1,949	135,590	49,686	85,904	4,836	44,076	0.06048	0.05780	39,900
Molokai	1,411	435	16,830	9,139	7,691	6,477	17,681	0.05866	0.08424	7,722
Maui	16,145	3,236	242,916	95,581	147,335	5,920	45,530	0.05315	0.05630	46,149
Lanai	665	172	5,336	3,491	1,845	5,249	10,727	0.05452	0.06942	—

Source: Hawaii State Department of Regulatory Agencies, Public Utilities Division, records.

Table 213.—GAS UTILITIES: 1959 TO 1974

(Data limited to Honolulu Gas Co., Ltd., and its successor organization, Gasco Inc. Excludes bottled gas)

Year	Customers		Gas sold (1,000 therms)			Ave. ann. use (therms)		Average rate (dollars per therm)	
	Residential	Other	Total	Residential	Other	Residential	Other	Residential	Other
1959	35,826	2,657	14,869	10,018	4,851	280	1,826	0.3538	0.2246
1960	35,536	2,555	15,881	10,299	5,582	290	2,185	0.3619	0.2280
1961	35,857	2,227	16,790	10,502	6,289	293	2,824	0.3685	0.2263
1962	35,463	2,050	18,197	10,839	7,358	306	3,589	0.3679	0.2262
1963	35,034	1,874	18,914	10,775	8,139	308	4,343	0.3666	0.2238
1964	34,994	1,515	19,697	10,919	8,778	312	5,794	0.3639	0.2202
1965	34,775	1,428	20,397	11,016	9,381	317	6,570	0.3634	0.2186
1966	34,956	1,355	21,019	11,171	9,848	320	7,268	0.3626	0.2185
1967	35,000	1,382	22,547	11,348	11,198	324	8,103	0.3618	0.2179
1968	34,955	1,300	23,570	11,331	12,240	324	9,415	0.3618	0.2169
1969	34,829	1,305	25,649	11,848	13,801	340	10,576	0.3588	0.2156
1970	32,163	3,979	27,831	10,891	16,940	339	4,257	0.3619	0.2227
1971	32,072	4,081	30,445	9,279	21,167	289	5,187	0.3699	0.2308
1972	31,806	4,277	33,322	9,321	24,000	293	5,612	0.36843	0.22681
1973	31,142	4,639	34,540	8,931	25,609	287	5,520	0.37518	0.23121
1974	30,620	4,608	34,363	8,096	26,267	264	5,700	0.68361	0.52267

Source: Hawaii State Public Utilities Division, *Historical Data, Gas and Electric Utilities, State of Hawaii, 1959 to 1968* (unpaged), and records.**Table 214.—GAS UTILITIES, BY ISLAND: 1973 AND 1974**

(Excludes bottled gas)

Island	Customers		Gas sold (1,000 therms)			Ave. ann. use (therms)		Average rate (dollars per therm)	
	Residential	Other	Total	Residential	Other	Residential	Other	Residential	Other
State total, 1973	31,142	4,639	34,540	8,931	25,609	287	5,520	0.37518	0.23121
Oahu	28,813	4,329	32,610	8,041	24,569	279	5,675	0.36957	0.22818
Hawaii	1,889	272	1,646	787	859	417	3,157	0.42026	0.28056
Maui	342	38	263	82	181	239	4,773	0.45772	0.40777
Kauai	98	—	21	21	—	216	—	0.51149	—
State total, 1974	30,620	4,608	34,363	8,096	26,267	264	5,700	0.68361	0.52267
Oahu	28,206	4,249	32,166	7,522	24,644	267	5,800	0.69045	0.52766
Hawaii	1,896	315	1,857	458	1,399	242	4,442	0.60258	0.44249
Maui	353	44	302	78	224	222	5,087	0.53817	0.47526
Kauai	165	—	38	38	—	231	—	0.60748	—

Source: Hawaii State Department of Regulatory Agencies, Public Utilities Division, records.

Table 215.—TYPICAL RESIDENTIAL UTILITY MONTHLY RATES, BY ISLAND: JANUARY 1975

Utility and usage	Oahu	Hawaii ¹	Kauai	Maui	Molokai	Lanai
Water:						
¼ inch meter, 5,000 gal. . . .	4.25	3.75	5.50	4.05	4.05	3.55
¼ inch meter, 10,000 gal. . .	6.10	5.75	8.00	6.10	6.10	5.25
¼ inch meter, 20,000 gal. . .	9.80	9.75	13.00	10.20	10.20	8.65
1½ inch meter, 50,000 gal. . .	26.00	24.00	35.00	25.25	25.25	22.00
Electricity:						
100 kilowatt-hours	7.51	10.30	8.60	8.78	11.76	9.31
250 kilowatt-hours	14.09	18.26	17.15	16.90	20.64	17.57
500 kilowatt-hours	22.64	28.52	29.60	28.23	33.42	29.13
Gas:						
10 therms	9.62	6.46	6.35	5.44	...	...
25 therms	19.88	12.51	13.06	11.25	...	...
50 therms	36.92	21.86	23.99	20.68	...	...
100 therms	71.37	40.86	46.03	39.72	...	...
Telephone:²						
Individual line	9.50	8.50	8.10	8.10	6.95	6.25
Two-party line	7.80	7.15	6.85	6.85	5.90	5.35

¹Water rates are those for North and South Hilo, North and South Kohala, and Ka'u.

²Plus 7 percent Federal excise tax.

Source: Hawaii State Public Utilities Commission; Honolulu Board of Water Supply; Hawaii County Department of Water Supply; Kauai County Department of Water, Maui County Department of Water Supply; Lanai Company, Inc.

Table 216.—LIQUID FUEL TAX BASE: 1958 TO 1974
(In thousands of gallons)

Year reported ¹	All types	Gasoline	Diesel oil ²		Liq. pet. gas ²		Aviation fuel	Small boats	
			Non-hwy.	Hwy. use	Off-hwy.	Hwy. use		Gasoline	Diesel oil
1958 ³	186,508	118,939	19,758	3,002	...	...	41,031	3,778	
1959	208,925	127,845	26,228	3,683	...	...	49,454	1,715	
1960	250,499	138,219	28,134	3,898	...	...	78,890	1,358	
1961	278,428	143,621	31,894	3,783	...	...	97,500	1,629	
1962	299,317	148,934	31,681	4,020	328	108	112,752	233	1,261
1963	317,948	152,347	34,527	4,141	361	101	124,880	248	1,344
1964	357,859	160,786	38,562	4,578	383	115	151,911	278	1,247
1965	395,525	169,670	38,587	5,193	367	119	180,052	251	1,356
1966	481,361	177,627	40,039	5,506	414	122	256,175	238	1,241
1967	572,354	188,717	39,569	5,511	457	139	336,359	250	1,351
1968	619,803	197,663	41,213	6,566	781	253	371,686	227	1,415
1969	743,255	223,088	49,147	7,703	674	242	460,753	226	1,424
1970	754,632	235,178	58,129	8,029	814	274	450,474	214	1,519
1971	809,628	250,191	57,405	8,852	1,044	579	489,767	231	1,559
1972	827,825	261,452	65,163	9,523	1,231	702	487,743	264	1,747
1973	882,932	281,122	74,608	11,159	1,909	453	511,502	280	1,899
1974	824,653	270,267	75,124	11,539	2,093	789	463,728	312	801

¹Liquid fuel sold in a given month is usually reported the following month. Annual totals accordingly refer to fuel sold in a 12-month period ended November 30.

²Liquefied petroleum gas was reported with diesel oil before 1962.

³Because of an accounting error, one large supplier misreported large quantities of non-highway diesel oil as fuel for small boats in 1958.

Source: Hawaii State Department of Taxation, "Tax Base for Certain Taxes" and "Comparison of Liquid Fuel Tax Collections & Distribution for Two Years" (annual reports).

Table 217.—DOMESTIC DEMAND FOR PETROLEUM PRODUCTS: 1972 AND 1973
(Barrels daily)

Item	Total		Military ¹		All other	
	1972	1973	1972	1973	1972	1973
Total petroleum	90,480	93,025	2,671	3,460	87,809	89,565
Liquefied gases	1,249	1,334	—	—	1,249	1,334
Fuel uses	1,249	1,334	—	—	1,249	1,334
Other	—	—	—	—	—	—
Gasoline	17,333	18,058	707	726	16,626	17,332
Motor	17,161	17,874	699	718	16,462	17,156
Aviation	172	184	8	8	164	176
Spec. naphthas, solvents	107	101	—	—	107	101
Jet fuel	32,688	33,778	1,612	2,471	31,076	31,307
Naphtha-type	1,825	2,507	1,601	2,466	224	41
Kerosene-type	30,863	31,271	11	5	30,852	31,266
Kerosene	82	85	5	8	77	77
Distillate fuel oil	5,415	5,742	347	255	5,068	5,487
Lubricating oils, greases	284	263	—	—	284	263
Residual fuel oil	31,735	31,907	—	—	31,735	31,907
Asphalt and road oil	940	1,044	—	—	940	1,044
All other finished and unfinished oils	16	58	—	—	16	58
Still gas	631	655	—	—	631	655

¹Excludes imports and direct shipments.

Source: U.S. Bureau of Mines, "Crude Petroleum, Petroleum Products, and Natural Gas Liquids in P.A.D. District V, Year 1973," *Mineral Industry Surveys*, February 19, 1975, pp. 3-4.

Table 218.—SCIENTIFIC RESOURCES: 1972 AND 1974

Type of organization	Number of companies or agencies		Total employment		Professional employment		Technical employment	
	1974	1972	1974	1972	1974	1972	1974	1972
Total employing organizations . . .	367	346	31,624	25,268	7,181	7,206	9,966	5,216
Organizations with scientific capabilities	91	75	16,878	8,842	2,703	2,043	6,076	1,017
Computer sciences	57	46	2,969	2,022	888	765	1,212	697
R & D and allied companies	43	41	1,712	4,992	527	1,215	394	1,335
Testing laboratories	26	26	972	911	272	483	243	208
Private research agencies	35	40	775	738	299	331	114	129
Government agencies	115	118	8,318	7,763	2,492	2,369	1,927	1,830
Federal	23	23	1,432	1,518	282	413	697	775
Military	10	10	668	642	178	167	188	184
State, except U.H.	34	37	2,588	2,539	919	820	500	352
University of Hawaii	32	34	1,374	1,322	690	646	250	286
County	16	14	2,256	1,742	423	323	292	233
Subject	1974	1972	Subject		1974	1972		
Professional associations:			Colleges and universities:					
Number of associations	49	43	Number of units		32	32		
Regular membership	11,901	11,182	Full-time enrollment ¹		37,687	34,276		
Associate membership	620	555	Part-time enrollment ¹		49,619	46,215		
Scientific libraries:			Business and technical schools:					
Number of libraries	21	22	Number of units		4	5		
Scientific books	680,769	682,042	Full-time enrollment		1,225	1,550		
			Part-time enrollment		50	305		

¹Because of different enrollment definitions, these data are not comparable to those in Section 3.

Source: Hawaii State Department of Planning and Economic Development, *Hawaii's Scientific Resources, 1974-1975 Directory*, 7th edition (1974), p. 5.

Table 219.—PATENTS GRANTED TO HAWAII RESIDENTS: 1959 TO 1973

Year	Patents	Year	Patents	Year	Patents
1959	20	1965	13	1971	36
1960	13	1966	25	1972	25
1961	26	1967	19	1973	48
1962	28	1968	22		
1963	20	1969	40		
1964	20	1970	46		

Source: *Annual Report of the Commissioner of Patents* (annual).