

Table 3.7. Summary of FBSS Buildings and Floorspace in Federal Regions 3, 6, and 9, 1993

Building Characteristics	Total Number of Buildings	Total Floorspace (thousand square feet)	Total Workers (thousand)	Floorspace per Building (thousand square feet)	Number of Buildings per Federal Region			Floorspace per Federal Region (thousand square feet)		
					3	6	9	3	6	9
All Buildings	881	175,012	492	198.7	312	243	326	94,880	35,816	44,316
Building Floorspace (square feet)										
10,000 to 50,000	349	9,013	21	25.8	94	107	148	2,564	2,591	3,858
50,001 to 200,000	326	35,395	74	108.6	117	86	123	13,166	9,548	12,680
Over 200,000	206	130,604	397	634.0	101	50	55	79,149	23,677	27,778
Principal Building Activity										
Education	26	1,394	2	53.6	8	6	12	598	168	628
Health Care	124	36,555	66	294.8	41	35	48	14,559	12,094	9,903
Laboratory	97	11,097	18	114.4	37	29	31	5,165	3,331	2,601
Lodging	51	4,720	2	92.6	13	16	22	2,558	942	1,220
Mercantile and Service	158	22,397	99	141.8	46	49	63	7,966	6,236	8,194
Office	292	84,060	277	287.9	124	76	92	56,881	10,799	16,380
All Others	133	14,789	28	111.2	43	32	58	7,152	2,247	5,390
Year Constructed										
1959 or Before	375	70,640	240	188.4	142	103	130	43,829	13,258	13,553
1960 to 1969	163	35,033	89	214.9	70	38	55	19,564	6,386	9,082
1970 to 1979	143	35,953	90	251.4	47	34	62	17,737	6,175	12,041
1980 to 1989	160	23,833	59	149.0	38	57	65	8,975	6,903	7,955
1990 to 1993	40	9,553	14	238.8	15	11	14	4,774	3,095	1,684
Federal Agency										
Department of Defense	122	24,145	61	197.9	22	22	78	13,988	1,668	8,489
General Services Administration	157	66,598	220	424.2	83	35	39	46,205	7,888	12,505
United States Postal Service	181	24,806	103	137.0	57	61	63	9,392	7,027	8,387
Veterans Administration	148	33,504	58	226.4	56	36	56	13,306	11,375	8,824
All Others	273	25,958	50	95.1	94	89	90	11,989	7,858	6,111
Energy Sources (more than one may apply)										
Electricity	879	174,273	490	198.3	311	243	325	94,161	35,816	44,296
Natural Gas	532	118,204	363	222.2	139	168	225	58,674	24,827	34,703
Fuel Oil	161	55,167	135	342.7	89	18	54	39,300	4,740	11,127
District Heat	296	89,185	289	301.3	154	68	74	63,991	13,437	11,757
District Chilled Water	114	37,263	95	326.9	57	30	27	22,922	7,980	6,362
Propane	20	2,259	4	113.0	5	5	10	941	200	1,117
Any Other	21	9,927	23	472.7	8	8	5	4,470	2,850	2,606
Energy End Uses (more than one may apply)										
Heating	853	171,718	483	201.3	307	242	304	94,063	35,734	41,921
Air Conditioning	838	170,634	485	203.6	305	241	292	93,454	35,273	41,907
Water Heating	856	171,343	485	200.2	303	238	315	93,138	35,221	42,984
Cooking	241	109,205	347	453.1	108	63	70	69,947	19,213	20,045
Manufacturing	108	40,070	134	371.0	50	28	30	27,041	5,335	7,693
Workers (main shift)										
Less than 50	234	10,335	5	44.2	71	70	93	4,102	2,548	3,684
50 to 99	132	6,090	10	46.1	39	44	49	1,903	2,026	2,161
100 to 499	321	36,678	69	114.3	107	80	134	13,632	9,029	14,017
500 or More	194	121,910	409	628.4	95	49	50	75,243	22,213	24,454
Weekly Operating Hours										
48 or Fewer	170	17,257	33	101.5	51	39	80	9,694	2,740	4,822
49 to 60	187	45,424	114	242.9	76	46	65	25,540	6,460	13,424
61 to 167	206	25,749	58	125.0	60	78	68	11,993	8,051	5,706
Open Continuously	318	86,582	288	272.3	125	80	113	47,653	18,565	20,364
Predominant Exterior Wall Material										
Masonry	658	117,869	343	179.1	236	203	219	65,621	26,577	25,671
Other	220	57,039	149	259.3	76	39	105	29,259	9,219	18,562
Don't Know	3	104	(*)	34.6	NC	1	2	NC	20	84

See footnotes at end of table.

Table 3.7. Summary of FBSS Buildings and Floorspace in Federal Regions 3, 6, and 9, 1993 (Continued)

Building Characteristics	Total Number of Buildings	Total Floorspace (thousand square feet)	Total Workers (thousand)	Floorspace per Building (thousand square feet)	Number of Buildings per Federal Region			Floorspace per Federal Region (thousand square feet)		
					3	6	9	3	6	9
Predominant Roof Material										
Built-Up	499	102,996	249	206.4	156	143	200	47,882	24,341	30,773
Synthetic or Rubber	121	32,530	101	268.8	58	33	30	23,371	4,377	4,782
Other	251	38,450	139	153.2	96	64	91	23,532	7,029	7,888
Don't Know	10	1,036	3	103.6	2	3	5	95	69	872
Floors										
One	233	14,045	32	60.3	56	74	103	4,414	4,504	5,127
Two	159	17,213	44	108.3	51	30	78	6,307	2,622	8,284
Three	162	18,239	45	112.6	60	40	62	7,440	3,598	7,201
Four to Nine	236	80,032	239	339.1	108	60	68	48,067	15,186	16,779
Ten to Twenty-five	59	40,731	124	690.4	34	15	10	27,430	6,722	6,579
Don't Know	32	4,751	9	148.5	3	24	5	1,222	3,184	345
Percent Window Glass										
50 or Less	771	146,270	428	189.7	269	204	298	79,002	29,836	37,432
51 to 100	84	25,107	59	298.9	42	16	26	14,878	3,429	6,800
Don't Know	26	3,635	6	139.8	1	23	2	1,000	2,552	84
Multibuilding Facility										
Yes	524	95,123	233	181.5	176	148	200	43,861	24,441	26,821
No	357	79,889	259	223.8	136	95	126	51,018	11,375	17,495
Space-Heating Energy Sources (more than one may apply)										
Electricity	211	37,748	100	178.9	70	66	75	18,459	9,859	9,430
Natural Gas	445	70,763	161	159.0	96	153	196	22,134	19,800	28,829
Fuel Oil	80	13,832	35	172.9	53	6	21	9,156	1,288	3,387
District Heat	284	86,885	282	305.9	151	65	68	62,321	13,244	11,319
Propane	11	322	1	29.3	NC	4	7	NC	65	257
Wood	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Any Other	6	926	2	154.4	3	2	1	289	234	403
Main Space-Heating Energy Source										
Electricity	111	15,763	46	142.0	36	31	44	6,798	4,639	4,326
Natural Gas	419	65,303	147	155.9	90	144	185	20,113	18,021	27,169
Fuel Oil	44	5,885	13	133.7	34	1	9	5,083	11	790
District Heat	270	84,544	277	313.1	147	63	60	62,068	13,008	9,467
Propane	9	223	(*)	24.8	NC	3	6	NC	54	169
Wood	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Any Other	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Replacement Energy Source for Main Heating										
Electricity Only	15	1,862	3	124.1	4	7	4	1,284	145	433
Natural Gas Only	21	2,768	5	131.8	12	3	6	2,253	356	159
Fuel Oil Only	170	38,875	88	228.7	66	37	67	14,166	8,544	16,165
Propane Only	25	2,354	4	94.2	NC	3	22	NC	184	2,170
Any Other Single Energy Source	9	2,028	5	225.4	2	1	6	1,016	11	1,001
More than One Energy Source	9	540	1	60.0	7	1	1	479	28	32
No Replacement Energy Source	541	114,410	359	211.5	206	158	177	70,765	23,310	20,335
Building Not Heated	28	3,294	9	117.6	5	1	22	817	82	2,394
Don't Know/Not Ascertained	63	8,881	19	141.0	10	32	21	4,100	3,157	1,625
Cooling Energy Sources (more than one may apply)										
Electricity	740	145,491	431	196.6	256	219	265	80,870	28,061	36,560
Natural Gas	8	263	1	32.8	1	1	6	22	47	193
District Chilled Water	109	29,667	67	272.2	55	29	25	15,695	7,742	6,230
Water-Heating Energy Sources (more than one may apply)										
Electricity	221	38,467	94	174.1	94	62	65	18,972	12,268	7,227
Natural Gas	381	60,841	147	159.7	78	125	178	18,101	15,655	27,085
Fuel Oil	30	6,364	18	212.1	19	1	10	4,679	760	925
District Heat	239	74,265	255	310.7	122	52	65	57,122	8,576	8,566
Propane	9	224	(*)	24.8	NC	4	5	NC	65	158

See footnotes at end of table.

Table 3.7. Summary of FBSS Buildings and Floorspace in Federal Regions 3, 6, and 9, 1993 (Continued)

Building Characteristics	Total Number of Buildings	Total Floorspace (thousand square feet)	Total Workers (thousand)	Floorspace per Building (thousand square feet)	Number of Buildings per Federal Region			Floorspace per Federal Region (thousand square feet)		
					3	6	9	3	6	9
Cooking Energy Sources (more than one may apply)										
Electricity	148	65,202	235	440.6	68	37	43	41,432	10,177	13,594
Natural Gas	111	59,944	229	540.0	46	31	34	39,084	11,004	9,857
Propane	7	332	(*)	47.4	2	NC	5	53	NC	279
Manufacturing Energy Sources (more than one may apply)										
Electricity	94	31,563	118	335.8	43	26	25	20,521	4,838	6,205
Natural Gas	14	7,192	17	513.7	5	1	8	5,319	37	1,836
Other	9	5,984	9	664.8	5	1	3	4,140	461	1,383
Percent of Floorspace Heated										
Not Heated	28	3,294	9	117.6	5	1	22	817	82	2,394
1 to 50	51	10,826	15	212.3	12	11	28	5,787	1,288	3,751
51 to 100	802	160,892	468	200.6	295	231	276	88,275	34,446	38,170
Percent of Floorspace Cooled										
Not Cooled	56	7,091	9	126.6	13	3	40	3,582	554	2,956
1 to 50	111	19,129	34	172.3	30	26	55	9,874	1,951	7,304
51 to 100	714	148,792	449	208.4	269	214	231	81,424	33,312	34,056
Percent Lit When Open										
1 to 50	46	3,572	4	77.6	11	15	20	663	1,062	1,847
51 to 100	831	171,118	488	205.9	300	227	304	94,070	34,672	42,375
No Operating Hours	3	258	(*)	86.0	1	1	1	147	82	29
Don't Know	1	64	(*)	64.4	NC	NC	1	NC	NC	64
Percent Lit When Closed										
Not Lit	107	9,504	50	88.8	39	33	35	5,149	2,691	1,664
1 to 50	564	103,736	289	183.9	194	165	205	57,953	20,495	25,288
51 to 100	111	33,550	88	302.3	42	25	44	17,412	8,029	8,109
No Off Hours	98	28,157	65	287.3	37	20	41	14,366	4,601	9,190
Don't Know	1	64	(*)	64.4	NC	NC	1	NC	NC	64
Heating Equipment (more than one may apply)										
Heat Pumps	84	14,968	39	178.2	34	10	40	10,922	964	3,081
Furnaces	59	3,689	6	62.5	16	18	25	1,694	791	1,204
Individual Space Heaters	138	45,264	128	328.0	75	30	33	34,923	5,408	4,933
District Heat	320	95,621	299	298.8	167	82	71	67,704	15,205	12,712
Boilers	341	60,810	148	178.3	93	102	146	20,082	16,718	24,010
Packaged-Heating Units	151	19,576	50	129.6	25	59	67	6,006	7,574	5,997
Cooling Equipment (more than one may apply)										
Residential-Type Central A/C	83	25,679	149	309.4	30	29	24	19,073	4,706	1,900
Heat Pumps	80	15,662	39	195.8	37	11	32	11,388	1,549	2,724
Individual A/C	182	40,755	170	223.9	80	50	52	28,082	6,950	5,723
District Chilled Water	147	46,698	116	317.7	72	44	31	28,194	10,856	7,647
Central Chillers	419	113,233	361	270.2	158	122	139	63,914	21,596	27,723
Packaged-A/C Units	375	94,757	322	252.7	127	97	151	56,664	14,104	23,989
Swamp Coolers	45	5,558	13	123.5	3	12	30	378	2,015	3,165
Lighting Equipment (more than one may apply)										
Incandescent	480	105,704	303	220.2	184	135	161	64,981	20,248	20,475
Standard Fluorescent	844	169,893	457	201.3	300	235	309	91,986	35,057	42,850
Compact Fluorescent	182	74,735	237	410.6	80	29	73	49,455	7,942	17,339
High-Intensity Discharge	250	87,517	303	350.1	111	64	75	52,593	16,188	18,736
Electronic Ballast	299	104,727	315	350.3	135	59	105	65,560	15,861	23,307
Water-Heating Equipment (more than one may apply)										
Centralized System	611	117,752	347	192.7	223	163	225	63,477	23,206	31,069
Distributed System	222	47,272	124	212.9	71	71	80	24,696	11,827	10,750
Don't Know/Not Ascertained	23	6,319	14	274.7	9	4	10	4,965	188	1,165

See footnotes at end of table.

Table 3.7. Summary of FBSS Buildings and Floorspace in Federal Regions 3, 6, and 9, 1993 (Continued)

Building Characteristics	Total Number of Buildings	Total Floorspace (thousand square feet)	Total Workers (thousand)	Floorspace per Building (thousand square feet)	Number of Buildings per Federal Region			Floorspace per Federal Region (thousand square feet)		
					3	6	9	3	6	9
Commercial Refrigeration Equipment (more than one may apply)										
Any Equipment	242	98,429	322	406.7	109	70	63	61,731	17,917	18,781
Walk-in Units	162	79,141	269	488.5	78	40	44	54,223	12,381	12,536
Cases and Cabinets	181	82,507	204	455.8	87	44	50	53,454	14,125	14,928
None	639	76,583	170	119.8	203	173	263	33,149	17,899	25,535
Retrofit or Purchase of any Equipment Within Last Ten Years (more than one may apply)										
Retrofit and/or Purchase	604	144,849	437	239.8	229	162	213	81,286	29,015	34,547
Retrofit	245	80,767	214	329.7	79	63	103	43,128	15,029	22,610
Purchase	462	104,046	332	225.2	188	126	148	62,995	21,409	19,642
No Retrofit or Purchase	277	30,163	55	108.9	83	81	113	13,594	6,801	9,769
Energy Conservation Features (more than one may apply)										
Any Conservation Feature	870	174,119	492	200.1	309	242	319	94,361	35,734	44,023
Building Shell	766	152,607	446	199.2	290	228	248	84,557	33,946	34,105
HVAC	846	172,084	489	203.4	303	236	307	93,543	35,425	43,116
Lighting	563	141,432	401	251.2	210	136	217	80,953	25,654	34,825
Building Shell Conservation Features (more than one may apply)										
Roof or Ceiling	621	125,137	354	201.5	240	196	185	69,654	28,249	27,234
Insulation	352	69,887	154	198.5	117	122	113	31,876	20,550	17,462
Wall Insulation	326	74,340	227	228.0	173	96	57	46,141	17,939	10,260
Storm or Multiple Glazing	418	93,977	292	224.8	158	127	133	46,829	24,768	22,381
Tinted or Reflective Glass or Shading Film	503	107,620	301	214.0	197	142	164	57,183	26,067	24,370
Exterior or Interior Shading or Awnings										
HVAC Conservation Features (more than one may apply)										
VAV System	224	71,706	211	320.1	84	65	75	37,611	18,518	15,577
Economizer Cycle	419	110,998	353	264.9	156	123	140	61,089	23,542	26,367
HVAC Maintenance	841	171,841	489	204.3	301	234	306	93,402	35,341	43,098
Lighting Conservation Features (more than one may apply)										
Specular Reflectors	340	84,607	261	248.8	124	92	124	44,741	18,017	21,850
Natural Lighting Control Sensors	114	38,243	95	335.5	29	27	58	17,743	6,740	13,760
Occupancy Sensors	262	103,941	314	396.7	95	58	109	62,261	16,435	25,245
Time Clock	151	66,131	210	438.0	74	36	41	46,555	9,037	10,539
Manual Dimmer Switches	215	77,732	239	361.5	93	44	78	49,824	13,454	14,455
Energy Management Practices (more than one may apply)										
Energy Management and Control System	299	103,220	328	345.2	132	96	71	61,891	23,099	18,231
Energy Conservation Programs ¹	271	97,497	304	359.8	99	48	124	59,284	13,513	24,699
Energy Audit	262	66,755	165	254.8	99	64	99	37,621	11,690	17,444
HVAC Maintenance Staff ²	206	83,032	287	403.1	97	57	52	52,924	15,538	14,570
Off-Hours Reduction in Equipment (more than one may apply)										
Heating	418	76,622	182	183.3	144	123	151	43,828	13,162	19,631
Cooling	426	76,840	184	180.4	145	124	157	43,757	13,864	19,219
Hot Water	178	44,187	105	248.2	77	33	68	26,018	4,554	13,614
Lighting	454	78,719	185	173.4	162	120	172	44,717	12,847	21,155

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					3	6	9	3	6	9
Building Generates Electricity										
Yes	139	56,563	175	406.9	55	32	52	31,984	10,295	14,283
No	742	118,449	318	159.6	257	211	274	62,896	25,521	30,032
Natural Gas Transported for the Account of Others										
Used in Building	40	10,103	22	252.6	11	5	24	4,270	631	5,201
Not Used in Building	438	101,624	326	232.0	124	140	174	52,636	22,202	26,787
Don't Know/Not Ascertained	52	6,393	15	122.9	4	23	25	1,768	1,994	2,631

¹ Building participates in any programs sponsored by the Federal Energy Management Program, in-house, utility, or third party.

² HVAC maintenance staff means at least one person spends at least half their working hours maintaining the heating/cooling equipment.

(*) = Value rounds to zero in the units displayed.

NC = No cases in responding sample.

Notes: • Total workers are the number of workers during the main shift. • See Glossary for explanation of abbreviations and definitions of terms used in this report. • These data are from 881 federally owned buildings having the following criteria: (1) located in Federal Regions 3, 6, or 9; (2) larger than 10,000 square feet; and (3) used for a commercial purpose, other than warehouse and storage. In addition, 9 out of 10 selected buildings were from agencies other than the Department of Defense. • Statistics for the "energy end uses" represent consumption in buildings that have end use, not consumption for a particular fuel for a particular end use. • A/C = Air Conditioning. • FBSS = Federal Buildings Supplemental Survey. • HVAC = Heating, Ventilation, and Air Conditioning. • VAV = Variable-Air Volume. • Data are for Fiscal Year 1993 (October 1, 1992 through September 30, 1993). • Because of rounding, data may not sum to totals.

Source: Energy Information Administration, Office of Energy Markets and End Use, 1993 Federal Buildings Supplemental Survey.