
UNITED STATES DEPARTMENT OF LABOR

Frances Perkins, *Secretary*

BUREAU OF LABOR STATISTICS

Isador Lubin, *Commissioner*

in cooperation with
WORK PROJECTS ADMINISTRATION

+

Salaries and Hours of Labor in Municipal Fire Departments

VOLUME I

New England Cities

+

Prepared by

DIVISION OF CONSTRUCTION AND
PUBLIC EMPLOYMENT

HERMAN B. BYER, *Chief*



Bulletin No. 684

UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON : 1940

For sale by the Superintendent of Documents, Washington, D. C. - - - - Price 10 cents

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Letter of Transmittal

UNITED STATES DEPARTMENT OF LABOR,
BUREAU OF LABOR STATISTICS,
Washington, D. C., September 7, 1940.

The SECRETARY OF LABOR:

I have the honor to transmit herewith a study of employment and salaries in fire departments of 54 New England cities, as of July 1, 1938, prepared by the Bureau of Labor Statistics, in cooperation with the Work Projects Administration.

ISADOR LUBIN, *Commissioner.*

Hon. FRANCES PERKINS,
Secretary of Labor.

v

PREFACE

The emergency character of fire fighting, as well as the hazards involved, make the working conditions of firemen unique. Despite this fact, there has been comparatively little information available of a comprehensive nature on the conditions under which this large group of municipal employees work, although the Bureau of Labor Statistics did publish a brief report on Salaries and Working Conditions of Fire Department Employees in 1934. To present a more complete and up-to-date picture of the working conditions and earnings of firemen, the Bureau, with the cooperation of the Work Projects Administration, has conducted a survey of fire departments in cities with a population of 25,000 or more.

The present study of the New England States is the first in a series of nine. It includes detailed information on salaries and perquisites and the hours of work in effect on July 1, 1938, as well as descriptions of the systems used to stagger hours in order to provide continuous fire protection. There is also a discussion of vacation and promotion policies. Similar reports will be issued for each of the other geographic divisions of the United States.

This survey was under the general direction of Herman B. Byer, Chief of the Division of Construction and Public Employment, and under the more immediate supervision of Jesse M. Hadley, Director of the State, County, and Municipal Survey. Arthur Dadian prepared the analysis and arranged the presentation of the data, which were edited and tabulated by Mahlon B. Buckman. Carol P. Brainard was technical adviser.

ISADOR LUBIN,
Commissioner of Labor Statistics.

SEPTEMBER 1940.

VII

Salaries and Hours of Labor in Municipal Fire Departments, New England Cities

Summary

The fire departments in 54 of the 55 New England cities with a population of 25,000 or more¹ employed 7,940 people with annual salaries approximating \$16,996,000 on July 1, 1938. Ninety-three of every 100 employees were in the fire-fighting division.² The remaining personnel was engaged in such activities as fire-prevention, fire-alarm, maintenance, and clerical work. Of every 93 in the fire-fighting divisions, 74 were privates, 8 captains, and 8 lieutenants; the rest were drivers, engineers, battalion chiefs, and chiefs and their assistants. Only 1 small city had volunteers in place of paid privates and 1 medium-sized and 4 small cities³ had small staffs of privates supplemented by call men who received a slight remuneration. In most cities, the advancement of privates from the lower grades to the first grade was automatic. Practically all of the employees received approximately 2 weeks' vacation with pay.

Ninety percent of all employees earned between \$1,650 and \$2,550 a year. The annual salaries showed considerable uniformity. The salary differences among the various occupations within the same department and among the various grades within the same occupation were not great. For the same occupation the large cities, as a rule, paid somewhat higher salaries than the small cities. These differences, however, were small in the nonsupervisory occupations, which included four-fifths of all employees.

Eighty-seven percent of all employees worked under some variation of a two-platoon system of assignment which averaged 84 hours on duty per week. Within each fire department almost all the employees, 93 percent, had the same average working hours per week. In the large cities the average hours on duty per week were somewhat shorter.

¹ The U. S. Census of Population for 1930 was used to determine the size of the cities. In 1930, New England had 55 cities with a population of 25,000 or more. Five of these were towns classed by the Bureau of the Census as urban units. The town of West Haven, Conn., is not included in this bulletin because no information was furnished. See appendix for list of the cities included in this study.

² The fire-fighting division includes the chief, the assistant chiefs and other administrative assistants, the battalion chiefs, captains, lieutenants, engineers, drivers, and privates.

³ The medium-sized city had 32 call men at \$219 a year each and the small cities had a total of 122 call men drawing from \$100 to \$350 a year, or a total of \$25,000. These employees and their salaries are not included in the text tables.

Annual Salaries

General Level of Salaries

Annual salaries in the fire departments of the 54 New England cities were concentrated within a relatively narrow range. Ninety percent of all employees received between \$1,650 and \$2,550, and 51 percent received between \$2,050 and \$2,250. The annual salaries were somewhat higher in the large than in the small cities. In cities having a population of 100,000 or more, 19 out of every 100 employees received less than \$2,050 a year as compared with 40 in cities having a population of 50,000 and under 100,000, and 51 in cities having a population of 25,000 and under 50,000.

For the sake of brevity, hereafter, the group of largest cities mentioned above will be designated as group I,⁴ the medium sized cities, group II, and the smaller cities, group III.

TABLE 1.—*Distribution of employees in fire departments of 54 New England cities, by salary group and size of city, July 1, 1938*

[For a more detailed analysis of data, see appendix tables B, C, and D]

Salary group	Number				Percent			
	All cities	City group ¹			All cities	City group ¹		
		I	II	III		I	II	III
All groups.....	7,944	4,769	1,470	1,705	100.0	100.0	100.0	100.0
Under \$1,250.....	14	6	2	6	0.2	0.1	0.2	0.4
\$1,250 and under \$1,350.....	5	2		3	.1	(3)		.2
\$1,350 and under \$1,450.....	14	12	2		.2	.3	.2	
\$1,450 and under \$1,550.....	82	14	15	53	1.0	.3	1.0	3.1
\$1,550 and under \$1,650.....	136	66	13	57	1.7	1.4	.8	3.3
\$1,650 and under \$1,750.....	477	351	68	58	6.0	7.4	4.6	3.4
\$1,750 and under \$1,850.....	442	90	147	205	5.6	1.9	10.0	12.0
\$1,850 and under \$1,950.....	590	217	189	184	7.4	4.6	12.8	10.8
\$1,950 and under \$2,050.....	577	121	145	311	7.3	2.5	9.9	18.2
\$2,050 and under \$2,150.....	2,132	1,683	251	198	26.8	35.3	17.1	11.6
\$2,150 and under \$2,250.....	1,941	1,162	354	425	24.4	24.4	24.1	24.9
\$2,250 and under \$2,350.....	420	247	112	61	5.3	5.2	7.6	3.6
\$2,350 and under \$2,450.....	133	59	45	29	1.7	1.2	3.1	1.7
\$2,450 and under \$2,550.....	410	332	58	20	5.1	7.0	3.9	1.2
\$2,550 and under \$2,650.....	101	38	20	43	1.3	.8	1.3	2.5
\$2,650 and under \$2,750.....	140	120	10	10	1.8	2.5	.7	.6
\$2,750 and under \$2,850.....	110	88	14	8	1.4	1.8	.9	.5
\$2,850 and under \$2,950.....	19	8	1	10	.2	.2	.1	.6
\$2,950 and under \$3,050.....	71	52	9	10	.9	1.1	.7	.6
\$3,050 and over.....	130	101	15	14	1.6	2.0	1.0	.8

¹ Group I includes cities having a population of 100,000 or more; group II, cities having a population of 50,000 and under 100,000; and group III, cities having a population of 25,000 and under 50,000, based on U. S. Census of Population for 1930.

² Includes only regular, full-time employees, with the exception of 1 commissioner in Boston.

³ Less than 1/10 of 1 percent.

⁴ Includes 1 at \$3,080, 1 at \$3,120, 6 at \$3,130, 7 at \$3,148, 1 at \$3,150, 6 at \$3,250, 1 at \$3,273, 3 at \$3,300, 7 at \$3,370, 1 at \$3,400, 2 at \$3,432, 9 at \$3,500, 3 at \$3,640, 1 at \$3,738, 2 at \$3,750, 31 at \$4,000, 1 at \$4,250, 11 at \$4,600, 1 at \$4,987, 1 at \$5,000, 1 at \$5,200, 2 at \$5,500, 1 at \$6,000, and 1 at \$6,500.

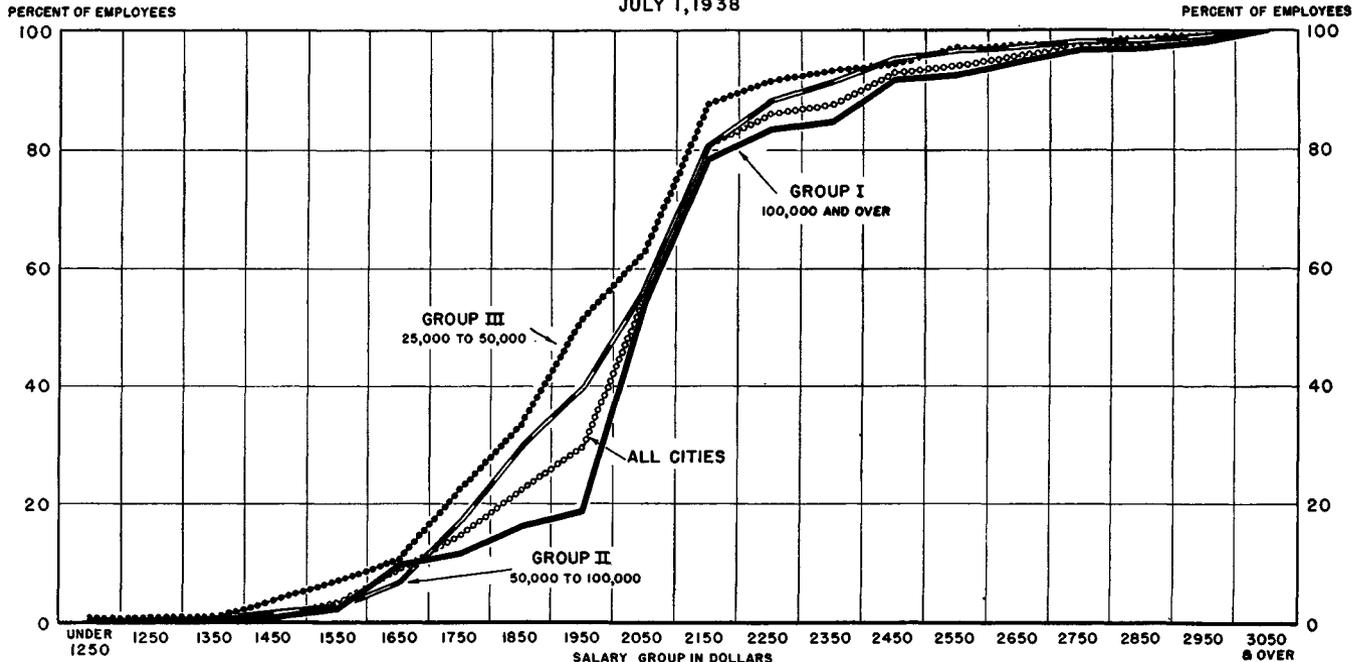
⁵ Includes 2 at \$3,100, 1 at \$3,238, 1 at \$3,300, 1 at \$3,340, 3 at \$3,500, 2 at \$3,600, 3 at \$4,000, 1 at \$4,500, and 1 at \$6,000.

⁶ Includes 2 at \$3,100, 2 at \$3,190, 2 at \$3,200, 1 at \$3,400, 1 at \$3,458, 1 at \$3,500, 1 at \$3,515, 1 at \$3,600, 1 at \$4,000, 1 at \$4,250, and 1 at \$4,275.

⁴ Except for Boston, the population of the cities in this group ranged between 100,234 and 252,981. Boston, with a population of 781,188, has been included in this group because the data for Boston did not vary sufficiently from the data for the other cities in the group to justify separate treatment.

EMPLOYEES IN FIRE DEPARTMENTS OF 54 NEW ENGLAND CITIES BY SALARY GROUP AND SIZE OF CITY

JULY 1, 1938



U. S. BUREAU OF LABOR STATISTICS

NEW ENGLAND CITIES

Salaries in Selected Occupations

The differences in annual salaries of the various occupations within a fire department were not great (table 2). Starting with the chief, the salary differences decreased sharply to a point where the occupations including a large majority of the employees (privates, engineers, drivers, auto mechanics, fire-alarm operators), received approximately the same average annual salaries. The salary differences between occupations tended to be greater in large than in the small cities because in the large cities the supervisory occupations entailed greater responsibilities and consequently received relatively larger salaries than the lower ranking occupations. Also, as a rule, the same occupation received a somewhat higher salary in the large cities than in the small cities. Here again the differences were most pronounced in the high-ranking or supervisory occupations. The differences in the annual salaries of chiefs in groups I, II, and III, for example, were far greater relatively than the differences in the annual salaries of privates among the same city groups.

TABLE 2.—Distribution of fire-department employees in 54 New England cities, by selected occupations and salary group, July 1, 1938

Salary group	All occupations				Chiefs			
	All cities	City group ^a			All cities	City group ^a		
		I	II	III		I	II	III
Number of cities reporting	54	13	12	29	54	13	12	29
Total number of employees.....	7,944	4,769	1,470	1,705	54	13	12	29
Under \$1,250.....	14	6	2	6				
\$1,250 and under \$1,350.....	5	2		3				
\$1,350 and under \$1,450.....	14	12	2					
\$1,450 and under \$1,550.....	82	14	15	53				
\$1,550 and under \$1,650.....	136	66	13	57				
\$1,650 and under \$1,750.....	477	351	68	58				
\$1,750 and under \$1,850.....	442	90	147	205				
\$1,850 and under \$1,950.....	590	217	189	184				
\$1,950 and under \$2,050.....	577	121	145	311				
\$2,050 and under \$2,150.....	2,132	1,683	251	198	1			1
\$2,150 and under \$2,250.....	1,941	1,162	354	425				
\$2,250 and under \$2,350.....	420	247	112	61	1			1
\$2,350 and under \$2,450.....	133	59	45	29				
\$2,450 and under \$2,550.....	410	332	58	20	3			3
\$2,550 and under \$2,650.....	101	38	20	43	2	1		1
\$2,650 and under \$2,750.....	140	120	10	10	4			4
\$2,750 and under \$2,850.....	110	88	14	8	1			1
\$2,850 and under \$2,950.....	19	8	1	10	1			1
\$2,950 and under \$3,050.....	71	52	9	10	7			6
\$3,050 and over.....	130	101	15	14	34	⁸ 13	⁹ 10	¹⁰ 11
Average annual salary.....	\$2,139	\$2,183	\$2,101	\$2,050	\$3,582	\$4,611	\$3,782	\$3,038

See footnotes at end of table.

TABLE 2.—Distribution of fire-department employees in 54 New England cities, by selected occupations and salary group, July 1, 1938—Continued

Salary group	Assistant or deputy chiefs			Assistant deputy chiefs				
	All cities	City group ^a			All cities	City group ^a		
		I	II	III		I	II	III
Number of cities reporting	50	13	12	25	8	4	4	
Total number of employees	86	30	18	38	8	4	4	
Under \$1,250								
\$1,250 and under \$1,350								
\$1,350 and under \$1,450								
\$1,450 and under \$1,550								
\$1,550 and under \$1,650								
\$1,650 and under \$1,750	2			2				
\$1,750 and under \$1,850	1			1				
\$1,850 and under \$1,950								
\$1,950 and under \$2,050	1			1				
\$2,050 and under \$2,150	2			2	2		2	
\$2,150 and under \$2,250	4			4	1		1	
\$2,250 and under \$2,350	4		2	2				
\$2,350 and under \$2,450	7		1	6	1	1		
\$2,450 and under \$2,550	7	1	1	5	1		1	
\$2,550 and under \$2,650	4	1		3				
\$2,650 and under \$2,750	2		2					
\$2,750 and under \$2,850	13	1	5	7	1	1		
\$2,850 and under \$2,950	1	1			1	1		
\$2,950 and under \$3,050	7		5	2				
\$3,050 and over	31	11 26	12 2	13 3	1	14 1		
Average annual salary	\$2, 953	\$3, 608	\$2, 822	\$2, 497	\$2, 497	\$2, 789	\$2, 205	

Salary group	Battalion chiefs			Captains				
	All cities	City group ^a			All cities	City group ^a		
		I	II	III		I	II	III
Number of cities reporting	14	11	3	52	13	12	27	
Total number of employees	78	75	3	639	367	124	148	
Under \$1,250								
\$1,250 and under \$1,350								
\$1,350 and under \$1,450								
\$1,450 and under \$1,550								
\$1,550 and under \$1,650				5			5	
\$1,650 and under \$1,750				6			6	
\$1,750 and under \$1,850				4			4	
\$1,850 and under \$1,950				17		8	9	
\$1,950 and under \$2,050				71	32	32	7	
\$2,050 and under \$2,150				62	16	8	38	
\$2,150 and under \$2,250				6			6	
\$2,250 and under \$2,350	7	6	1	33			33	
\$2,350 and under \$2,450	1		1	20		19	10	
\$2,450 and under \$2,550				155	118	32	5	
\$2,550 and under \$2,650	3	3		29		18	11	
\$2,650 and under \$2,750	6	5	1	115	103	6	6	
\$2,750 and under \$2,850				65	64	1		
\$2,850 and under \$2,950	7	7		8			8	
\$2,950 and under \$3,050	7	7		34	34			
\$3,050 and over	47	14 47						
Average annual salary	\$3, 295	\$3, 329	\$2, 444	\$2, 447	\$2, 586	\$2, 310	\$2, 217	

See footnotes at end of table.

TABLE 2.—Distribution of fire-department employees in 54 New England cities, by selected occupations and salary group, July 1, 1938—Continued

Salary group	Lieutenants			Engineers, fire engine, ¹ All grades				
	All cities	City group ⁶			All cities	City group ⁶		
		I	II	III		I	II	III
Number of cities reporting.....	50	13	12	25	10	7	1	2
Total number of employees.....	632	351	135	146	116	111	2	3
Under \$1,250.....								
\$1,250 and under \$1,350.....								
\$1,350 and under \$1,450.....								
\$1,450 and under \$1,550.....	5			5				
\$1,550 and under \$1,650.....								
\$1,650 and under \$1,750.....	10			10				
\$1,750 and under \$1,850.....	31	16	9	6	1	1		
\$1,850 and under \$1,950.....	71	20	34	17	4		2	2
\$1,950 and under \$2,050.....	43	17	10	16				
\$2,050 and under \$2,150.....	16			16	6	6		
\$2,150 and under \$2,250.....	37	5	9	23	20	20		
\$2,250 and under \$2,350.....	121	66	38	17	21	20		1
\$2,350 and under \$2,450.....	45	18	19	8	32	32		
\$2,450 and under \$2,550.....	181	161	16	4	29	29		
\$2,550 and under \$2,650.....	54	30		24	2	2		
\$2,650 and under \$2,750.....								
\$2,750 and under \$2,850.....	18	18						
\$2,850 and under \$2,950.....								
\$2,950 and under \$3,050.....					1	1		
\$3,050 and over.....								
Average annual salary.....	\$2,279	\$2,381	\$2,168	\$2,138	\$2,335	\$2,351	\$1,915	\$2,048

Salary group	Drivers ²			Privates, all grades				
	All cities	City group ⁶			All cities	City group ⁶		
		I	II	III		I	II	III
Number of cities reporting.....	11	4	2	5	53	13	12	28
Total number of employees.....	191	144	4	43	5,551	3,313	1,052	1,186
Under \$1,250.....								
\$1,250 and under \$1,350.....								
\$1,350 and under \$1,450.....					7	7		
\$1,450 and under \$1,550.....					68	10	12	46
\$1,550 and under \$1,650.....					97	48	10	39
\$1,650 and under \$1,750.....					442	340	64	38
\$1,750 and under \$1,850.....	74	35		39	296	30	126	140
\$1,850 and under \$1,950.....	4	2	2		412	128	134	150
\$1,950 and under \$2,050.....	2		2		409	43	95	271
\$2,050 and under \$2,150.....					1,949	1,600	223	126
\$2,150 and under \$2,250.....	109	107		2	1,691	992	323	376
\$2,250 and under \$2,350.....					180	115	65	
\$2,350 and under \$2,450.....	2			2				
\$2,450 and under \$2,550.....								
\$2,550 and under \$2,650.....								
\$2,650 and under \$2,750.....								
\$2,750 and under \$2,850.....								
\$2,850 and under \$2,950.....								
\$2,950 and under \$3,050.....								
\$3,050 and over.....								
Average annual salary.....	\$2,034	\$2,091	\$1,939	\$1,850	\$2,047	\$2,070	\$2,031	\$1,996

See footnotes at end of table.

TABLE 2.—Distribution of fire-department employees in 54 New England cities, by selected occupations and salary group, July 1, 1938—Continued

Salary group	Auto mechanics ³				Fire alarm operators ⁴			
	All cities	City group ⁶			All cities	City group ⁶		
		I	II	III		I	II	III
Number of cities reporting.....	23	10	7	6	26	9	8	9
Total number of employees.....	63	47	9	7	139	71	34	34
Under \$1,250.....					4	1		3
\$1,250 and under \$1,350.....					4	1		3
\$1,350 and under \$1,450.....								
\$1,450 and under \$1,550.....					3		3	
\$1,550 and under \$1,650.....					16	5	3	8
\$1,650 and under \$1,750.....	7	7			5		4	1
\$1,750 and under \$1,850.....	2		1	1	12		3	9
\$1,850 and under \$1,950.....	19	17	2		7	3	4	
\$1,950 and under \$2,050.....	2		1	1	12	5		7
\$2,050 and under \$2,150.....	10	10			32	23	9	
\$2,150 and under \$2,250.....	5	3	1	1	24	14	7	3
\$2,250 and under \$2,350.....	6	4	1	1	10	9	1	
\$2,350 and under \$2,450.....	7	4	2	1	1	1		
\$2,450 and under \$2,550.....					6	6		
\$2,550 and under \$2,650.....	2			2				
\$2,650 and under \$2,750.....	1	1			3	3		
\$2,750 and under \$2,850.....	2	1	1					
\$2,850 and under \$2,950.....								
\$2,950 and under \$3,050.....								
\$3,050 and over.....								
Average annual salary.....	\$2,086	\$2,039	\$2,180	\$2,276	\$1,980	\$2,129	\$1,923	\$1,724

Salary group	Electricians				Linemen and groundmen ⁵			
	All cities	City group ⁶			All cities	City group ⁶		
		I	II	III		I	II	III
Number of cities reporting.....	11	4	3	4	25	11	6	8
Total number of employees.....	29	14	8	7	78	50	15	13
Under \$1,250.....								
\$1,250 and under \$1,350.....								
\$1,350 and under \$1,450.....								
\$1,450 and under \$1,550.....								2
\$1,550 and under \$1,650.....	2			2	2	1		1
\$1,650 and under \$1,750.....	1			1	4	4		
\$1,750 and under \$1,850.....					6		5	1
\$1,850 and under \$1,950.....	2	2			13	9	1	3
\$1,950 and under \$2,050.....	9	9			9	5	1	3
\$2,050 and under \$2,150.....	10	2	6	2	11	11		
\$2,150 and under \$2,250.....	1			1	19	8	8	3
\$2,250 and under \$2,350.....	2	1		1	7	7		
\$2,350 and under \$2,450.....	1		1		1	1		
\$2,450 and under \$2,550.....					3	3		
\$2,550 and under \$2,650.....								
\$2,650 and under \$2,750.....					1	1		
\$2,750 and under \$2,850.....	1		1					
\$2,850 and under \$2,950.....								
\$2,950 and under \$3,050.....								
\$3,050 and over.....								
Average annual salary.....	\$2,063	\$2,039	\$2,231	\$1,918	\$2,045	\$2,086	\$2,035	\$1,899

See footnotes at end of table.

TABLE 2.—*Distribution of fire-department employees in 54 New England cities, by selected occupations and salary group, July 1, 1933—Continued*

Salary group	Others			
	All cities	City group ⁶		
		I	II	III
Number of cities reporting.....	54	13	12	29
Total number of employees.....	279	182	50	47
Under \$1,250.....	10	5	2	3
\$1,250 and under \$1,350.....	1	1	.....	.....
\$1,350 and under \$1,450.....	7	5	2	.....
\$1,450 and under \$1,550.....	4	4	.....	.....
\$1,550 and under \$1,650.....	14	12	.....	2
\$1,650 and under \$1,750.....	.....	.....	.....	.....
\$1,750 and under \$1,850.....	15	8	3	4
\$1,850 and under \$1,950.....	41	36	2	3
\$1,950 and under \$2,050.....	19	10	4	5
\$2,050 and under \$2,150.....	31	15	5	11
\$2,150 and under \$2,250.....	24	13	6	5
\$2,250 and under \$2,350.....	27	18	4	5
\$2,350 and under \$2,450.....	6	3	1	2
\$2,450 and under \$2,550.....	25	14	9	2
\$2,550 and under \$2,650.....	5	2	1	2
\$2,650 and under \$2,750.....	8	7	1	.....
\$2,750 and under \$2,850.....	9	4	5	.....
\$2,850 and under \$2,950.....	1	.....	.....	1
\$2,950 and under \$3,050.....	15	10	3	2
\$3,050 and over.....	17	¹⁶ 15	¹⁷ 2	.....
Average annual salary.....	.....	.....	.....	.....

¹ Includes 18 marine engineers in Boston.

² Includes 6 pilots in Boston.

³ Does not include master and assistant master mechanics.

⁴ Does not include chief fire alarm operators and assistants to the chief operators.

⁵ Does not include helpers.

⁶ Group I includes cities having a population of 100,000 or more; group II, cities having a population of 50,000 and under 100,000; group III, cities having a population of 25,000 and under 50,000, all based on U. S. Census of Population for 1930.

⁷ Includes only regular, full-time employees, with the exception of 1 commissioner in Boston.

⁸ Includes 1 at \$3,080, 1 at \$3,150, 1 at \$3,250, 1 at \$3,280, 1 at \$4,000, 1 at \$4,500, 1 at \$4,987, 1 at \$5,000, 1 at \$5,200, 2 at \$5,500, 1 at \$6,000, and 1 at \$6,500.

⁹ Includes 1 at \$3,238, 1 at \$3,340, 1 at \$3,500, 2 at \$3,600, 3 at \$4,000, 1 at \$4,500, and 1 at \$6,000.

¹⁰ Includes 2 at \$3,100, 2 at \$3,200, 1 at \$3,400, 1 at \$3,458, 1 at \$3,500, 1 at \$3,600, 1 at \$4,000, 1 at \$4,250, and 1 at \$4,275.

¹¹ Includes 1 at \$3,300, 1 at \$3,400, 2 at \$3,432, 4 at \$3,500, 2 at \$3,640, 2 at \$3,750, 7 at \$4,500, and 7 in Bridgeport ranging from \$3,240 to \$3,500.

¹² Each receives \$3,500.

¹³ Includes 2 at \$3,190 and 1 at \$3,515.

¹⁴ Receives \$3,100.

¹⁵ Includes 6 at \$3,130, 7 at \$3,146, 4 at \$3,250, and 30 at \$4,000.

¹⁶ Includes 1 at \$3,120, 1 at \$3,250, 2 at \$3,300, 5 at \$3,500, 1 at \$3,640, 1 at \$3,738, 1 at \$4,250, and 3 at \$4,500.

¹⁷ Includes 1 at \$3,100 and 1 at \$3,300.

However, the salary ranges for the same occupations in the same city group show clearly the existence of many exceptions to the generalization that the annual salaries were higher in the larger cities. Even in the case of chiefs, whose annual salaries showed the greatest differences resulting from the size of the city, some chiefs in group III cities received more than some in group I cities. These exceptions indicate that factors other than size of the city have a direct bearing on the prevailing salaries in a given city. The proximity of the city to a large metropolitan center and the ability of the city to pay high salaries are very important factors. Fall River, though one of the largest cities in New England, paid salaries below the average group

III cities primarily because of financial difficulties arising from the collapse of its chief industry, textiles. On the other hand, Brookline, Mass., a group III city and one of the wealthiest communities in the country, paid above the average of group I cities. Again, two group II cities paid the second and third highest rates to first grade privates in all New England, while five group II and six group III cities paid their first-grade privates more than Boston, the largest city in New England.

Salaries of Privates

Privates constituted 70 percent of all employees and received 67 percent of the total salaries in the 54 New England fire departments. Approximately one-third of all privates received between \$1,350 and \$2,050 a year and two-thirds received between \$2,050 and \$2,350. In the large cities a greater proportion of the privates were in the upper salary brackets. Seventy-eight percent of the privates in group I cities, as against 52 percent in group II, and 42 percent in group III cities, received between \$2,050 and \$2,250 a year.

Ninety-two percent of all privates were first-grade privates and the rest, for the most part, were in the second and fifth grades. A somewhat greater proportion of the privates in the small cities were first-grade privates, with fully 96 percent in this group against 92 percent in group I and 90 percent in group II cities. Nevertheless, only 2 percent of all privates in group I and group II cities, compared with 7 percent in group III cities, received under \$1,650 a year.

TABLE 3.—*Distribution of privates in fire departments of 54 New England cities, by salary group and grade, July 1, 1938*

Salary group	All grades							
	Number				Percentage			
	All cities	City group ¹			All cities	City group ¹		
		I	II	III		I	II	III
All groups.....	5, 551	3, 313	1, 052	1, 186	100. 0	100. 0	100. 0	100. 0
\$1,350 and under \$1,450.....	7	7	—	—	. 1	. 2	—	—
\$1,450 and under \$1,550.....	68	10	12	46	1. 2	. 3	1. 1	3. 9
\$1,550 and under \$1,650.....	97	48	10	39	1. 8	1. 4	1. 0	3. 3
\$1,650 and under \$1,750.....	442	340	64	38	8. 0	10. 3	6. 1	3. 2
\$1,750 and under \$1,850.....	296	30	126	140	5. 3	. 9	12. 0	11. 8
\$1,850 and under \$1,950.....	412	128	134	150	7. 4	3. 9	12. 7	12. 7
\$1,950 and under \$2,050.....	409	43	95	271	7. 4	1. 3	9. 0	22. 8
\$2,050 and under \$2,150.....	1, 949	1, 600	223	126	35. 1	48. 3	21. 2	10. 6
\$2,150 and under \$2,250.....	1, 691	992	323	376	30. 5	29. 9	30. 7	31. 7
\$2,250 and under \$2,350.....	180	115	65	—	3. 2	3. 5	6. 2	—

See footnote at end of table.

TABLE 3.—*Distribution of privates in fire departments of 54 New England cities, by salary group and grade, July 1, 1933—Continued*

Salary group	Number receiving classified salary, in—											
	First grade				Second grade				Third grade			
	All cities	City group ¹			All cities	City group ¹			All cities	City group ¹		
		I	II	III		I	II	III		I	II	III
All groups.....	5,131	3,050	947	1,134	143	53	68	22	81	43	14	24
\$1,350 and under \$1,450.....									7	7		
\$1,450 and under \$1,550.....	44			44	10	10			9		7	2
\$1,550 and under \$1,650.....	28			28	11		10	1	5			5
\$1,650 and under \$1,750.....	305	221	58	26	5		3	2	13		3	10
\$1,750 and under \$1,850.....	257		125	132	7		2	7	31	30	1	
\$1,850 and under \$1,950.....	362	122	95	145	35		35		11	6		5
\$1,950 and under \$2,050.....	322		64	258	69	43	15	11	4		2	2
\$2,050 and under \$2,150.....	1,944	1,600	219	125	4		3	1	1			
\$2,150 and under \$2,250.....	1,689	992	321	376	2		2				1	
\$2,250 and under \$2,350.....	180	115	65									

Salary group	Number receiving classified salary, in—											
	Fourth grade				Fifth grade				Probationary			
	All cities	City group ¹			All cities	City group ¹			All cities	City group ¹		
		I	II	III		I	II	III		I	II	III
All groups.....	39	10	23	6	147	147			10	10		
\$1,350 and under \$1,450.....												
\$1,450 and under \$1,550.....	5		5									
\$1,550 and under \$1,650.....	5			5	38	38			10	10		
\$1,650 and under \$1,750.....	10	10			109	109						
\$1,750 and under \$1,850.....	1			1								
\$1,850 and under \$1,950.....	4		4									
\$1,950 and under \$2,050.....	14		14									
\$2,050 and under \$2,150.....												
\$2,150 and under \$2,250.....												
\$2,250 and under \$2,350.....												

¹ Group I includes cities having a population of 100,000 or more; group II, cities having a population of 50,000 and under 100,000; and group III, cities having a population of 25,000 and under \$50,000, based on U. S. Census of Population for 1930.

Hours and Working Conditions

Average Hours and Days on Duty per Week

The working hours in the fire departments of the 54 New England cities fell into 4 general systems of operation according to the type of work performed: (1) Single-platoon system, (2) double-platoon system, (3) continuous duty, and (4) other arrangements of hours, generally approximating those of private industry.

A "platoon" is a system of assignment of firemen to duty at stated hours so as to provide continuous protection for the city. It is analogous to the shift systems in industries that operate 24 hours a day.

The single-platoon system requires a 24-hour shift; each fireman stays on duty continuously for 2 or more days, depending upon

the variation of the system in use in the particular locality, and then has a day off. The off days are so arranged that the fire department is equally staffed at all hours.

Under the double-platoon system the firemen are divided into two groups which work day and night tours of duty. While one group is at work, the other is off duty. The firemen, however, do not work on the same tour constantly but are shifted at regular intervals from day duty to night duty. Usually before shifting from day to night duty, or vice versa, one platoon stays on duty for 24 hours to effect the change, and the other platoon is off for 24 hours. At the next period of shift from day to night duty, conditions are reversed; the first platoon is off and the second is on. Since each full day off is balanced by a full day on, both platoons average 12 hours a day for 7 days a week, or 84 hours a week. Under some variations of the double-platoon system the firemen are given extra days off which are not balanced or compensated for by time on duty. An extra day off of this type reduces the workweek from 84 hours to 72 hours. All variations of the double-platoon system used in the 54 New England cities covered in this report averaged 84 hours on duty per week. All the fire departments operating under the double-platoon system do not shift at same intervals but have different shift periods; some shift on the second day, some on the third day, etc. This results in a varying number of days on duty per week for the same average number of hours on duty per week.

Almost every fire department has a small number of employees not included under the platoon system. These employees fall into 2 groups, those on "continuous" duty and "other." In most of the fire departments the chief and a few of his immediate assistants are subject to call any moment and are therefore considered to be on duty continuously. The "other" group includes mostly nonuniformed employees such as clerks and maintenance men who are not required to fight fires.

In the fire departments of the 54 New England cities almost nine-tenths, 87 percent, of all the employees were under the double-platoon system which averaged 84 hours on duty per week. Six percent, 501, of the employees were under the single-platoon system with an average of 112 to 144 hours on duty per week. Of these 501 men under the single platoon, 61 percent were on duty an average of 112 hours a week, 24 percent 126 hours a week, 11 percent 134 hours a week, and 4 percent 144 hours a week. Those on continuous duty, mostly chiefs, represented a very small proportion, 0.6 percent, of the total number of employees. The hours of the remaining 6 percent of the employees were closely related to those prevailing in private industry or the rest of the city government departments. These employees

were mostly in the fire-prevention, apparatus, fire-alarm, and clerical divisions. The average working hours for this "other" group varied between 41 and 60 per week, with a general average of 47.⁵

TABLE 4.—Average hours and days on duty per week in fire departments of 54 New England cities, July 1, 1938

System of operation	Average hours on duty per week	Average days on duty per week	Number of cities reporting				Number of employees				Percentage of employees			
			All cities	City group ¹			All cities	City group 1			All cities	City group ¹		
				I	II	III		I	II	III		I	II	III
All systems.....						27,944	4,769	1,470	1,705	100.0	100.0	100.0	100.0	
Continuous duty.....	168	7.0	35	12	7	16	49	21	8	20	.6	.4	.5	1.2
Single platoon ³							501	322	179	6.3		21.9	10.4	
On 2 days, off 1 day.....	112	4.7	4		2	2	302	201	101	3.8		13.7	5.9	
On 3 days, off 1 day.....	126	5.3	1		1		121	121		1.5		8.2		
On 4 days, off 1 day.....	134	5.6	2		2		57		57	.7			3.3	
On 6 days, off 1 day.....	144	6.0	1		1		21		21	.3			1.2	
Two-platoon, regular ⁴							6,912	4,438	1,056	1,418	87.0	93.1	71.9	83.2
On 24 hours, off 24 hours.....	84	3.5	3			3	142		142	1.8				8.3
Shift 3d day.....	84	5.8	32	11	6	15	5,615	3,913	642	1,060	70.7	82.1	43.7	62.2
Shift 4th day.....	84	6.1	5		2	3	358		207	151	4.5		14.1	8.9
Shift 6th day.....	84	6.4	3	2		1	571	525		46	7.2	11.0		2.7
Shift 7th day.....	84	6.5	2		1	1	226		207	19	2.8		14.1	1.1
Other ⁵	47.3	5.8	43	12	10	21	482	310	84	88	6.1	6.5	5.7	5.2

¹ Group I includes cities having a population of 100,000 or more; group II, cities having a population of 50,000 and under 100,000; group III, cities having a population of 25,000 and under 50,000, based on U. S. Census of Population for 1930.

² Includes only regular, full-time employees, with the exception of 1 commissioner in Boston.

³ The average number of hours on duty per week for employees in each variation of the single-platoon system is arrived at by dividing the total number of hours on duty per year for each variation by 52.143. The average number of days on duty per week for each variation is arrived at by dividing the total number of days on duty per year by 52.143.

⁴ Under each variation of the regular 2-platoon system the employees work in 2 groups, 1 group is on duty while the other is off duty. Over a period of days, therefore, each group is on duty as many hours as the other, or 12 hours a day and 84 hours a week. Each variation of the 2-platoon system, however, spreads these 84 hours into different numbers of days on duty per week. The average number of days on duty per week for each variation is arrived at by dividing the number of days on duty per year by 52.143.

⁵ The average number of hours and days per week is arrived at by dividing the total weekly man-hours and man-days by the total number of employees under "other."

As shown in table 4 the working hours were shorter and more uniform in the large cities. A greater proportion of the employees in these cities were under the double-platoon system and in the "other" category. In group I cities, out of every 100 employees 93 were on duty an average of 84 hours a week under the double-platoon system, and approximately 7 had an average of 45.3 hours under "other" as compared with 72 and 6 out of every 100 employees having similar hours in group II cities, and 83 and 5 out of every 100 employees having similar hours in group III cities. Further, the group I cities had no employees under the single-platoon system and a very small percentage under "continuous" system.

The average days on duty per week varied with the platoon system under which the department operated. One or two variations, how-

⁵ See appendix table E for detailed analysis.

ever, prevailed under each platoon system. Of the 501 employees under the single-platoon system, 423, or 84 percent, were on duty an average of about 5 days per week. Of the 6,912 employees under the double-platoon system, 86 percent were on duty an average of about 6 days per week. The days on duty for most of the remaining employees working under a platoon system varied between an average of 5½ and 6½ days per week.

In the matter of days worked, the group I cities showed greatest uniformity and fewer days on duty per week. All of the group I cities operated under two variations of the double-platoon system. One of these variations averaged almost 6 days per week and included 82 percent of all employees. The group II cities operated under two variations of the single-platoon system and three variations of the double-platoon system. Forty-four percent of the employees in group II cities worked under a variation of the double-platoon system which averaged almost 6 days on duty per week. In group III cities there were a greater number of variations of the two systems. The single-platoon system had three variations and the double-platoon system had five. The average of almost 6 days per week, however, predominated and included nearly three-fourths of the employees under the double-platoon system, and three-fifths of all employees.

Perquisites Supplied to Firemen

Table 5 shows the items supplied to firemen. All of the 54 cities supplied sleeping quarters for men on night duty, and all but 1 supplied the necessary beds, bedding, linen, and laundry. A large majority of the cities supplied helmets and a smaller majority supplied rubber coats. Little less than one-half supplied rubber boots, and only 7 supplied the uniforms.

TABLE 5.—*Perquisites supplied to firemen in 54 New England cities, July 1, 1938*

City group ¹	Number of cities	Number of cities supplying—					
		Sleeping quarters for men on night duty	Beds, bedding, linen, laundry	Helmets	Rubber coats	Rubber boots	Uniforms
All cities.....	54	54	53	40	31	20	7
Group I.....	13	13	13	7	6	3	4
Group II.....	12	12	12	10	6	4	.....
Group III.....	29	29	28	23	19	13	3

¹ Group I includes cities having a population of 100,000 or more; group II, cities having a population of 50,000 and under 100,000; and group III, cities having a population of 25,000 and under 50,000, based on U. S. Census of Population for 1930.

Vacations With Pay

The fire departments of 53 cities employing 99.5 percent of the fire-department employees covered by the study gave vacations with pay. Only 1 small city failed to give any vacations with pay. The average vacation period with pay for the 53 cities was a little over 14 days a year, with more than four-fifths of all the employees receiving a vacation of exactly 14 days.

Each of the 3 city groups had almost the same average number of days of vacation: Group I cities had an average of 14.2 days; group II cities, an average of 14.4 days; and group III cities, an average of 14.2 days. In the large cities, however, the number of vacation days was more uniform and never less than 14. Group I cities had 3 vacation periods, 14, 15, and 16 days, with 86 percent of the employees receiving 14 days. In group II cities vacation periods ranged from 14 to 30 days; 82 percent of the employees received 14 days, and 15 percent received 16 days a year. Group III cities showed the greatest spread, from none to 21 days, with 72 percent of the employees receiving 14 days a year.

TABLE 6.—*Number of employees receiving specified vacations with pay in fire departments of 54 New England cities, July 1, 1938*

City group ¹	Number of cities	Total number of employees	Number of employees having—									
			No vacation	10 days	12 days	13 days	14 days	15 days	16 days	18 days	21 days	30 days
All cities.....	54	7,944	38	18	42	31	6,545	510	621	32	105	2
Group I.....	13	4,769	-----	-----	-----	-----	4,114	423	232	-----	-----	-----
Group II.....	12	1,470	-----	-----	-----	-----	1,211	-----	224	32	1	-----
Group III.....	29	1,705	38	18	42	31	1,220	87	165	-----	104	-----

¹ Group I includes cities having a population of 100,000 or more; group II, cities having a population of 50,000 and under 100,000; and group III, cities having a population of 25,000 and under 50,000, based on U. S. Census of Population for 1930.

² Includes only regular full-time employees, with the exception of 1 commissioner in Boston.

Promotions of Lower-Grade Privates

Some system of automatic promotion for lower-grade privates existed in 42 of the 54 cities. In 38 of these cities promotion was made after a period of 1 year of service. Six months of service was required in 1 city of each size group. In the group III city, this period applied to only the initial promotion—that from the third to the second grade. The advancement to the first grade required an additional year of service.

Four cities advanced their privates in accordance with civil service regulations, and four by appointment. Four cities had only one classification for their privates.

TABLE 7.—*Promotion of lower-grade privates in fire departments of 54 New England cities, July 1, 1938*

City group	Total number of privates	Number of cities	Number of cities with promotion—					All one grade
			After 6 months	After 1 year	After 2 years	By civil service	By appointment	
All cities.....	5,551	54	3	38	1	4	4	4
Group I.....	3,313	13	1	7	-----	3	2	-----
Group II.....	1,052	12	1	10	-----	-----	-----	1
Group III.....	1,186	29	1	21	1	1	2	3

¹ 6 months 3d to 2d grade. 1 year 2d to 1st grade.

Percentage Distribution of Employees and Salaries

All Employees

Of every 100 employees, 93 were in the fire-fighting division. Of these, 3 were chiefs, assistant chiefs, assistant deputy chiefs, and battalion chiefs; 8 were captains; 8 lieutenants; and 74 were privates, drivers, and engineers. In the larger cities the higher-ranking occupations constituted a smaller percentage of the total number of employees than they did in the smaller cities. Privates, drivers, and engineers, on the other hand, constituted a somewhat larger percentage of the employees in the large than in the small cities.

Comparison of the percentage distribution of the employees and salaries, by divisions, shows a close relationship. In the 54 cities the fire-fighting divisions constituted 93 percent of the employees and received 93 percent of the salaries; the apparatus divisions constituted 2 percent of the employees and received 2 percent of the salaries; the fire-alarm divisions had 4 percent of the employees and received 4 percent of the salaries; and the clerical divisions constituted 0.6 percent of the employees and received 0.4 percent of the salaries.

The similarity in the percentage distribution of the total salaries and number of employees of the fire-fighting divisions is the result of the counterbalancing of the data for the various occupations within these divisions. Privates, drivers, and engineers constituted 74 percent of all employees and received 71 percent of the salaries. This 3-percent difference was absorbed by the higher-ranking occupations. Chiefs constituted 0.7 percent of all employees but received 1 percent of the salaries. From this point onward the difference between the percentage of salaries and employees in a given occupation decreased gradually with the decrease in the rank of the occupation. Lieutenants, who constituted 8.0 percent of all employees, received 8.5 percent of the total salaries. The survey indicated also that the relative difference between the percentage of total salaries

received by a given occupation and the percentage of total number of employees in that occupation was somewhat greater in the large than in the small cities, particularly among the higher-ranking occupations.

TABLE 8.—Percentage distributions of employees and salaries in specified divisions in fire departments of 54 New England cities, July 1, 1938

Division ¹ and occupation	Percentage of employees			Percentage of salaries				
	All cities	City group ²			All cities	City group ²		
		I	II	III		I	II	III
All divisions.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Fire fighting.....	92.8	92.6	92.5	93.8	93.0	92.6	92.4	
Chiefs.....	.7	.3	.8	1.7	1.1	.6	1.5	
Assistant or deputy chiefs.....	1.1	.6	1.2	2.2	1.5	1.0	1.6	
Assistant deputy chiefs ³.....	.3	.2	.6	.4	.4	.2	.8
Battalion chiefs.....	1.0	1.6	.2	-----	1.5	2.4	.2	
Captains.....	8.0	7.7	8.5	8.7	9.2	9.1	9.3	
Lieutenants.....	8.0	7.4	9.2	8.6	8.5	8.0	9.5	
Privates, drivers, engineers ⁴	73.7	74.8	72.0	72.2	70.8	71.3	69.5	
Fire prevention.....	.5	.5	.8	.3	.5	.5	.9	
Apparatus.....	2.1	2.7	1.3	1.2	2.1	2.6	1.4	
Fire alarm.....	4.0	3.5	5.2	4.4	4.0	3.7	5.1	
Clerical.....	.6	.7	.2	.3	.4	.6	.2	

¹ In some cities the employees listed in the fire-fighting division are assigned to other divisions. In this release these men are included in the fire-fighting division and the divisions to which they are assigned are shown in the appendix tables. In some cities, repairs, inspection, and fire-alarm work is under separate city bureaus. The employees of these separate city bureaus are not included in this release. For these reasons the number of employees listed in the table under the fire prevention, apparatus, fire alarm, and clerical divisions vary widely among the various cities, especially among the smaller cities.

² Group I includes cities having a population of 100,000 or more; group II, cities having a population of 50,000 and under 100,000; and group III, cities having a population of 25,000 and under 50,000, based on U. S. Census of Population for 1930.

³ Includes 3 aides to the commissioner and 3 secretaries in city group I, 3 secretaries in group II, and 2 secretaries in city group III.

⁴ Privates, drivers, and engineers are combined because in many cities, especially the small ones, privates act as drivers and engineers. This group also includes 6 pilots and 18 marine engineers in Boston.

Supervisory Employees

An important fact revealed by the data on salaries is that 20 percent of all employees in the 54 fire departments held supervisory positions and received 24 percent of the total salaries. The difference was even less in group II and group III cities than in group I cities. In group I cities, the ratio of supervisory salaries to employees was 1.2 compared with the ratio of 1.1 in group II and group III cities.

TABLE 9.—*Number and salaries of supervisory employees¹ as percentage of total fire-department employees and total salaries, in 54 New England cities, July 1, 1938*

Item	All cities	City group ²		
		I	II	III
Supervisory employees as percentage of all employees	20.4	18.8	22.0	23.5
Supervisory salaries as percentage of total salaries	23.8	22.8	24.7	26.0
Ratio of salaries to employees	1.17	1.21	1.12	1.11

¹ Supervisory employees are those employees in all divisions who have others working under them. The group includes the chiefs, assistant chiefs, assistant deputy chiefs, battalion chiefs, captains, lieutenants, marshals or wardens, superintendents, chief engineers, chief fire alarm operators, assistants to these officers who also supervise the activities of others, master mechanics and chief clerks, if they have others working under their direction, and others who direct other employees.

² Group I includes cities having a population of 100,000 or more; group II, cities having a population of 50,000 and under 100,000; and group III, cities having a population of 25,000 and under 50,000, based on U. S. Census of Population for 1930.

Distribution of Employees and Per Capita Salary Cost of Fire Protection

When the total salaries were put on a per capita basis it was found that the cost per person was \$4.16⁶ for the population of group I cities, \$3.62 for group II cities, and \$3.24 for group III cities. This higher per capita cost in the larger cities is accounted for by two factors: (1) The somewhat higher salaries paid, and (2) the larger number of firemen per 10,000 inhabitants. For every 10,000 inhabitants, the fire departments in the group I cities had 19 employees; in the group II cities, 17 employees; and in the group III cities, 16 employees.⁶

⁶ These figures are based on the U. S. Census of Population for 1930 and are presented primarily to facilitate relative comparisons rather than to give actual figures. Therefore, the errors introduced into the per capita figures by the changes in population from 1930 to 1938 do not affect appreciably any of the above conclusions.

Appendix

The listing of cities of 25,000 or more in the New England Division with their populations, ratios of employees to population, and per capita salary costs is shown in table A. The New England Division includes the States of Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont.

TABLE A.—*Fire department employees and salary costs in relation to population in cities with a population of 25,000 or more¹ in New England States, July 1, 1938*

Group and city	Popula- tion ²	Employees per 10,000	Per capita salary cost
All cities.....	4, 431, 657	18	\$3. 83
Group I—cities of 100,000 or more.....	2, 500, 799	19	4. 16
Boston, Mass.....	781, 188	20	4. 33
Bridgeport, Conn.....	146, 716	16	3. 66
Cambridge, Mass.....	113, 643	22	5. 09
Fall River, Mass.....	115, 274	15	2. 71
Hartford, Conn.....	164, 072	19	4. 36
Lowell, Mass.....	100, 234	17	3. 36
Lynn, Mass.....	102, 320	22	4. 81
New Bedford, Mass.....	112, 597	17	2. 96
New Haven, Conn.....	162, 655	18	4. 05
Providence, R. I.....	252, 981	19	4. 09
Somerville, Mass.....	103, 908	17	3. 84
Springfield, Mass.....	149, 900	23	5. 29
Worcester, Mass.....	195, 311	19	4. 32
Group II—cities of 50,000 and under 100,000.....	853, 234	17	3. 62
Brockton, Mass.....	63, 797	21	4. 02
Holyoke, Mass.....	56, 537	22	4. 98
Lawrence, Mass.....	85, 068	16	3. 58
Malden, Mass.....	58, 036	18	4. 21
Manchester, N. H.....	76, 834	14	2. 68
Medford, Mass.....	59, 714	17	3. 93
New Britain, Conn.....	68, 128	15	3. 05
Newton, Mass.....	65, 276	17	3. 72
Pawtucket, R. I.....	77, 149	11	2. 02
Portland, Maine.....	70, 810	19	3. 40
Quincy, Mass.....	71, 983	17	3. 58
Waterbury, Conn.....	99, 902	21	4. 57
Group III—cities of 25,000 and under 50,000.....	1, 077, 624	16	3. 24
Arlington, Mass. ³	36, 094	14	3. 12
Bangor, Maine.....	28, 749	24	3. 69
Beverly, Mass.....	25, 086	24	4. 81
Bristol, Conn.....	28, 451	12	2. 44
Brookline, Mass. ³	47, 490	29	6. 74
Central Falls, R. I.....	25, 898	7	1. 19
Chelsea, Mass.....	45, 816	22	5. 06
Chicopee, Mass.....	43, 930	16	3. 58
Concord, N. H.....	25, 228	8	1. 64
Cranston, R. I.....	42, 911	10	1. 72
East Providence, R. I. ³	29, 995	10	1. 98
Everett, Mass.....	48, 424	21	4. 82
Fitchburg, Mass.....	40, 692	20	3. 85
Haverhill, Mass.....	48, 710	19	3. 90
Lewiston, Maine.....	34, 948	11	1. 81
Meriden, Conn.....	38, 481	12	2. 66
Nashua, N. H.....	31, 463	15	2. 74
New London, Conn.....	29, 640	8	1. 51
Newport, R. I.....	27, 612	17	3. 14
Norwalk, Conn.....	36, 019	11	2. 33
Pittsfield, Mass.....	49, 677	12	2. 53
Revere, Mass.....	35, 680	20	3. 84
Salem, Mass.....	43, 353	13	2. 78
Stamford, Conn.....	46, 346	15	3. 20
Taunton, Mass.....	37, 355	15	3. 08
Torrington, Conn.....	26, 040	8	1. 59
Waltham, Mass.....	39, 247	13	2. 79
Watertown, Mass. ³	34, 913	15	3. 36
Woonsocket, R. I.....	49, 376	23	4. 27

¹ Includes all New England cities and urban townships with a population of 25,000 or more except the town of West Haven, Conn.

² Based on U. S. Census of Population for 1930.

³ Town, classified as urban under special rule of the U. S. Bureau of the Census.

TABLE B.—Number of employees and annual salaries in fire departments of each July 1,

Division and occupation	Total employees	Connecticut						Massachusetts	
		Bridgeport		Hartford		New Haven		Boston	
		No.	Salary	No.	Salary	No.	Salary	No.	Salary
1 All occupations ²	4,769	233		310		300		1,543	
2 Commissioner.....								1	\$7,000
Fire fighting:									
3 Chiefs.....	13	1	\$5,500	1	\$5,500	1	\$6,000	1	6,500
4 Assistant or deputy chiefs.....	30	7	{ 3,240 to 3,500 }	1	4,500	1	3,400	6	4,500
Assistant deputy chiefs and other executive assistants:									
5 Aides to chiefs.....	3							2	2,300
6 Aides to commissioner.....	3							1	2,500
7 Executive secretaries.....	3			1	3,500			3	2,300
8 Battalion or district chiefs.....	75			5	3,000	7	2,855	1	3,000
9 Captains.....	367	18	{ 2,880 to 3,060 }	30	2,500	30	2,500	30	4,000
10 Lieutenants.....	351	19	{ 2,460 to 2,700 }	18	2,375	{ 5 6 }	{ 2,225 2,290 }	115	2,500
11 Pilots.....	6							6	2,200
Engineers, marine—									
12 1st grade.....	6							6	2,300
13 2d grade.....	6							6	2,200
14 3d grade.....	6							6	2,100
Engineers, fire engine:									
15 Motor apparatus engineers.....	1							1	3,000
16 Assistant motor apparatus engineers.....	2							2	2,600
17 Engineers in charge.....	3							3	2,500
18 Engineers, fire.....	62	23	{ 2,460 to 2,580 }	30	2,350			1	2,340
19 Assistant engineers, fire.....	2								
20 Engineers, high pressure.....	12							12	2,200
21 Engineers, motor squad.....	11							11	2,300
22 Drivers.....	138			6	2,200			95	2,200
Privates—									
23 1st grade.....	3,050	115	2,300	195	2,200	222	2,108	892	2,100
24 2d grade.....	53								
25 3d grade.....	43								
26 4th grade.....	10	10	1,740						
27 5th grade.....	147	38	1,560					109	1,700
28 Probationary.....	10							10	1,600
Fire prevention:									
29 Marshals or wardens.....	3			1	3,000	1	3,500	1	4,500
30 Chief inspectors.....	2								
31 Inspectors.....	15	1	2,700			5	2,108	(3)	
Miscellaneous:									
32 Chemists.....	1							1	2,700
33 Constables.....	1							1	1,600
Apparatus:									
34 Superintendents of machinery.....	4					1	2,500	1	4,500
35 Assistant superintendents of machinery.....	4							1	3,000
36 Master mechanics and assistant master mechanics.....	9			{ 1 3,000 1 3,500 }				{ 3 2,300 1 2,500 }	
37 Machinists.....	9							{ 5 1,872 2 2,184 }	
38 Auto mechanics.....	47			4	2,300	5	2,108	{ 7 1,716 15 1,872 }	
General mechanics:									
39 Mechanics.....	22	(3)						22	1,872
40 Battery men.....	6							{ 1 1,900 2 2,100 }	
41 Carpenters.....	2								
42 Laddermen.....	1								
43 Masons.....	2							{ 1 1,872 1 2,184 }	
44 Painters.....	5			1	2,350				
45 Repairers, leading.....	6							6	2,028
46 Wheelwrights.....	1							1	1,950

See footnotes at end of table.

of 13 New England cities having a population of 100,000 or more,¹ by occupations, 1938

Massachusetts—Continued																Rhode Island		
Cambridge		Fall River		Lowell		Lynn		New Bedford		Somerville		Springfield		Worcester		Providence		
No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	
253		176		170		228		191		179		349		363		474	1	
																	2	
1	\$4,500	1	\$3,273	1	\$3,080	1	\$3,250	1	\$3,150	1	\$4,000	1	\$4,987	1	\$5,000	1	\$5,200	3
4	3,500	1	2,618	1	2,794	1	2,850	1	2,538	1	3,300	2	3,640	2	3,750	2	3,432	4
																	5	
																	6	
		3	2,338	3	2,595	5	2,650	3	2,286	2	3,000	6	3,130	1	3,000	7	3,146	7
														4	3,250			8
16	3,000	16	2,000	16	2,129	18	2,500	16	2,024	6	2,750	23	2,694	58	2,750	40	2,503	9
18	2,750	16	1,829	17	2,031	18	2,250	20	1,900	23	2,500	23	2,494	11	2,550	42	2,303	10
																		11
																		12
																		13
																		14
																		15
																		16
																		17
3	2,483	1	1,829									2	2,257	2	2,239			18
2	2,433																	19
																		20
				2	1,922			35	1,769									21
																		22
147	2,190	128	1,702	122	1,922	160	2,100	93	1,671	120	2,184	260	2,184	261	2,184	326	2,102	23
10	1,983					2	2,000	10	1,540	9	1,966			3	2,002	19	2,002	24
27	1,783					6	1,900	6	1,427	3	1,765							25
																		26
																		27
																		28
																		29
		(*)										1	2,309	1	2,750			30
				1	2,129	(*)		(*)				4	1,872	1	2,184	{	1 2,102	31
															2	2,303	}	
																		32
																		33
		1	2,127									1	2,748			1	2,821	34
		1	1,829													1	2,339	35
1	2,483							1	2,162									36
1	3,000																	37
												1	2,184			1	2,703	38
2	2,190			2	1,922	1	2,650			1	2,750	1	2,184	4	2,421	5	2,102	39
																		40
1	1,560	1	1,547					1	1,769									41
																		42
		1	1,829															43
1	2,190											1	2,184			2	2,102	44
																		45
																		46

TABLE B.—Number of employees and annual salaries in fire departments of each of July 1, 1938

Division and occupation	Total employees	Connecticut						Massachusetts	
		Bridgeport		Hartford		New Haven		Boston	
		No.	Salary	No.	Salary	No.	Salary	No.	Salary
Apparatus—Continued.									
Miscellaneous:									
47 Superintendents of garage.....	1						1	2,700	
48 Superintendents of hose.....	1						1	2,500	
49 Supervisors of building repairs.....	1						1	3,000	
50 Supervisors of fire boats.....	1						1	2,500	
51 Storekeepers.....	1						1	2,500	
52 Supplymen.....	1						2	2,512	
53 Firemen, stationary.....	2						3	1,560	
54 Laborers.....	4		1	2,200					
Fire alarm:									
55 Superintendents.....	11		1	3,500	1	2,800	1	4,500	
56 Assistant superintendents.....	10		1	3,000	1	2,655	1	2,300	
57 Chief fire-alarm operators.....	3						1	3,300	
Fire-alarm operators:							1	3,000	
58 Operators, fire alarm.....	37				7	2,108	3	2,700	
59 Assistant operators, fire alarm.....	18						6	2,100	
60 Operators, telephone.....	15		6	2,250			6	2,500	
61 Operators, radio.....	1						1	2,400	
Inspectors:									
62 Chief inspectors.....	1								
63 Inspectors.....	4		1	2,300					
64 Electricians (including inside wiremen and cable splicers).....	14						9	2,028	
65 Linemen (including groundmen).....	50		3	2,200	4	2,290	8	1,872	
							4	1,950	
Miscellaneous:									
66 Custodians.....	1						1	2,000	
67 Foremen of construction.....	1						1	2,500	
68 Janitors.....	1				1	2,108			
69 Laborers.....	1						1	1,820	
70 Storekeepers.....	1						1	2,200	
Clerical:									
71 Secretaries.....	2				1	1,900			
72 Chief clerks.....	5	(*)	1	2,200			2	2,500	
Clerks and bookkeepers:									
73 Bookkeepers.....	2						1	2,400	
74 Clerks.....	23		1	1,565			7	1,100	
							14	to 2,100	
75 Stenographers and typists.....	3	1	1,560		1	1,000	1	1,600	

¹ Based on U. S. Census of Population for 1930.

² Totals include regular, full-time employees, but do not include part-time employees, call men, or volunteers. Neither do totals include the commissioner for Boston.

³ Men from uniformed force are assigned to this work.

⁴ Part-time employee.

TABLE C.—Number of employees and annual salaries in fire departments of each by occupations,

	Division and occupation	Total employees	Connecticut				Maine		Massachusetts	
			New Britain		Waterbury		Portland		Brockton	
			No.	Salary	No.	Salary	No.	Salary	No.	Salary
1	All occupations.....	1,470	99	.....	212	.....	131	.....	135	.....
	Fire fighting:									
2	Chiefs.....	12	1	\$4,000	1	\$6,000	1	\$3,500	1	\$3,238
3	Assistant deputy chiefs.....	18	1	3,000	1	3,500	1	2,380	1	2,544
	Assistant deputy chiefs and other executive assistants:									
4	Assistant deputy chiefs.....	4	1	2,750	.....	.....	.....	.....	1	2,405
5	2d assistant deputy chiefs.....	1	.....	.....	.....	.....	.....	.....	.....	.....
6	3d assistant deputy chiefs.....	1	.....	.....	.....	.....	.....	.....	.....	.....
7	Executive secretaries.....	3	.....	.....	1	2,800	.....	.....	.....	.....
8	Battalion or district chiefs.....	3	.....	.....	.....	.....	1	2,380	.....	.....
9	Captains.....	124	9	2,366	{12 1	{2,500 2,800	19	2,015	8	2,128
10	Lieutenants.....	135	9	2,184	16	2,300	17	1,915	10	2,035
11	Engineers, fire engine.....	2	.....	.....	.....	.....	2	1,915	.....	.....
12	Drivers.....	4	2	2,002	.....	.....	.....	.....	.....	.....
	Privates:									
13	1st grade.....	947	64	2,002	135	2,093	59	1,825	95	1,850
14	2d grade.....	68	6	1,911	27	1,911	10	1,638	3	1,665
15	3d grade.....	14	3	1,729	.....	.....	5	1,547	2	1,480
16	4th grade.....	23	.....	.....	.....	.....	5	1,511	.....	.....
	Fire prevention:									
17	Marshals or wardens.....	2	.....	.....	1	3,000	.....	.....	.....	.....
18	Assistant marshals or wardens.....	2	.....	.....	1	2,300	.....	.....	.....	.....
19	Inspectors.....	8	.....	.....	2	2,093	.....	.....	{ 1 1	{ 1,850 2,128
	Apparatus:									
20	Superintendents of machinery.....	3	.....	.....	.....	.....	.....	.....	.....	.....
21	Master mechanics.....	3	1	2,458	1	2,800	.....	.....	.....	.....
22	Machinists.....	2	.....	.....	2	2,093	.....	.....	.....	.....
23	Auto mechanics.....	9	.....	.....	.....	.....	1	2,002	{ 1 1	{ 2,220 2,313
24	General mechanics—painters.....	1	.....	.....	.....	.....	.....	.....	.....	.....
25	Miscellaneous—laborers.....	1	.....	.....	.....	.....	.....	.....	.....	.....
	Fire alarm:									
26	Superintendents.....	8	1	2,600	1	3,100	1	2,180	.....	.....
27	Assistant superintendents.....	4	1	2,008	.....	.....	.....	.....	1	2,313
	Fire-alarm operators—									
28	Operators, fire-alarm.....	32	.....	.....	6	2,093	{ 3 1	{ 1,482 1,560	4	1,850
29	Operators, telephone.....	2	.....	.....	.....	.....	.....	.....	2	1,580
30	Inspectors.....	3	.....	.....	.....	.....	1	1,820	.....	.....
31	Electricians.....	8	.....	.....	.....	.....	.....	.....	.....	.....
32	Linemen.....	15	.....	.....	4	2,184	3	1,820	{ 1 1	{ 1,916 1,976
	Helpers and probationers:									
33	Linemen's helpers.....	1	.....	.....	.....	.....	1	1,183	.....	.....
34	Fire-alarm operators, probationary.....	2	.....	.....	.....	.....	.....	.....	.....	.....
35	Miscellaneous—helpers.....	1	.....	.....	.....	.....	.....	.....	.....	.....
	Clerical:									
36	Secretaries.....	3	.....	.....	.....	.....	.....	.....	1	1,850
37	Clerks.....	1	.....	.....	.....	.....	.....	.....	.....	.....

¹ Based on United States Census of Population for 1930.

² Totals include regular, full-time employees, but do not include part-time employees, call men, or volunteers.

of 12 New England cities having a population of 50,000 and under 100,000,¹
July 1, 1938

Massachusetts—Continued												New Hampshire		Rhode Island	
Holyoke		Lawrence		Malden		Medford		Newton		Quincy		Manchester		Paw-tucket	
No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary
123		136		106		103		109		119		109		88	
1	\$4,000	1	\$3,000	1	\$3,340	1	\$3,600	1	\$4,000	1	\$3,600	1	\$4,500	1	\$2,600
1	3,500	2	2,800	2	3,011	3	2,750	1	3,000	2	2,700	1	3,000	2	2,300
1	3,100											1	2,900		
1	2,825														
1	2,800														
1	2,450														
		1	2,652									1	1,950		
												1	2,300		
11	2,450	9	2,503	10	2,595	8	2,600	6	2,700	10	2,400	13	1,950	8	1,900
11	2,350	12	2,321	8	2,398	8	2,475	8	2,450	10	2,300	{ 4 13	1,850 1,875	9	1,800
												2	1,875		
84	2,190	100	2,184	68	2,227	65	2,252	69	2,190	84	2,100	66	1,800	58	1,734
									1,790						
1	2,090			2	2,128	2	2,152	15	{ 2,190 to 2,190	2	1,870				
				2	2,026	1	2,052			1	1,760				
				4	1,927	14	1,952								
				1	3,011										
										1	2,400				
				2	2,227			2	2,190						
1	2,800	1	2,503					1	2,450						
				1	2,993										
				1	2,398	1	2,750	1	1,890			(²)		{ 1 1	{ 1,800 1,900
1	2,350														
1	2,190														
		1	2,002												
1	3,300	1	2,685							1	2,500	1	2,500	1	1,800
1	2,500							1	2,450						
4	2,190	{ 3 1	{ 2,184 2,321					(³)		3	2,100	3	1,800	4	1,734
		1	2,496					1	2,290						
		2	2,145	{ 1 1	{ 2,398 2,759					4	2,100				
				2	2,227			2	2,190			2	1,800		
														2	1,380
1	2,290														
		1	1,950					1	1,092						
														1	1,800

² Men from uniformed force assigned to this work.

TABLE D.—Numbers of employees and annual salaries in fire departments of each occupation,

Division and occupation	Total employees	Connecticut									
		Bristol		Meriden		New London		Norwalk		Stamford	
		No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary
1 All occupations	1,705	35		46		24		41		68	
2 Commissioner											
3 Fire fighting:											
4 Chiefs	29	1 \$3,000	1 \$3,458	1 \$2,700	1 \$3,014	1 \$4,275					
5 Assistant or deputy chiefs	38	1 2,500	2 2,564	1 2,400	2 2,612	1 3,515					
6 Assistant deputy chiefs and other executive assistants:											
7 Assistant deputy chiefs	4										
8 Executive secretaries	2										
9 Captains	148	5 2,080	4 2,414							7 2,280	
10 Lieutenants	146	5 2,002	5 2,317				4 2,177				
11 Engineers, fire	3										
12 Drivers	43			19 1,800							
13 Privates—											
14 1st grade	1,134	17 1,924	31 2,102								
15 2d grade	22	2 1,742		(¹)				23 2,009		55 2,090	
16 3d grade	24	2 1,560						5 1,674			
17 4th grade	6										
18 Fire prevention:											
19 Marshals or wardens	1										
20 Assistant marshals or wardens	1										
21 Inspectors	4		(¹)		(¹)			1 2,009		(¹)	
22 Apparatus:											
23 Superintendents of machinery	5	1 2,080									1 2,375
24 Assistant superintendents of machinery	1										1 2,233
25 Master mechanics	5		1 2,418								
26 Machinists	1							1 2,345			
27 Auto mechanics	7										
28 General mechanics—blacksmiths	1										
29 Fire alarm:											
30 Superintendents	13	1 2,080	1 2,564								1 2,613
31 Assistant superintendents	7		1 2,317	1 1,900							1 2,233
32 Fire-alarm operators:											
33 Operators, fire alarm	29							3 2,009			
34 Operators, telephone	5			2 1,800							
35 Inspectors	1										
36 Electricians	7							1 2,177			
37 Linemen	13										
38 Clerical:											
39 Secretaries	2	(¹)									
40 Clerks	1		(¹)		(¹)						(¹)
41 Stenographers	2										

of 29 New England cities having a population of 25,000 and under 50,000¹ by July 1, 1938

Conn.— Con.		Maine				Massachusetts								No.					
Torrington		Bangor		Lewiston		Arlington		Beverly		Brookline		Chelsea			Chicopee		Everett		
No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary		No.	Salary	No.	Salary	
21		68		35		50		59		139		102		72		103		1	
										(³)								2	
1	\$3,100	1	\$3,000	1	\$2,523	1	\$3,400	1	\$2,300	1	\$4,250	1	\$3,600	1	\$3,000	1	\$3,200	3	
		2	1,729	1	2,011	2	2,800	1	2,250	2	3,190	2	3,011	2	2,460	2	2,800	4	
																		5	
1	2,288	5	1,638	6	1,700	5	2,500	9	2,100	8	2,891	6	2,738	8	2,313	8	2,600	7	
1	2,158	5	1,547	6	1,650	6	2,300			14	2,591	10	2,555			8	2,400	8	
2	1,924										2,391	1	2,296					9	
										2	2,391							10	
13	1,872	44	1,547	20	1,600	35	2,184	44	2,002	99	2,190	75	2,196	56	2,156	74	2,200	11	
1	1,794			1	1,550					6	1,991	2	2,000	1	2,028	1	2,100	12	
1	1,716			2	1,500									3	1,883	2	2,000	13	
																		14	
										1	2,891	(⁵)				(⁵)		15	
										1	2,190							16	
1	2,080																	17	
																		18	
		1	1,638									(⁵)						19	
										1	2,591							20	
														1	2,313	1	2,200	21	
														1	2,600			22	
																		23	
(⁴)		1	2,500	1	2,000			1	3,000			1	3,000	(³)				24	
		3	1,287															25	
		1	1,584			(⁵)				3	2,190	4	1,560			(⁵)		26	
		2	1,584					2	2,080								1	2,250	27
		1	1,668					1	1,946								3	2,200	28
																		29	
		(⁵)		(⁵)		1	994			1	2,091	(⁵)		(³)			1	2,200	30
		1	572															31	
		1	583															32	
																		33	

TABLE D.—Number of employees and annual salaries in fire departments of each occupation,

Division and occupation		Massachusetts—Continued											
		Fitchburg		Haverhill		Pittsfield		Revere		Salem		Taunton	
		No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary
1	All occupations ²	80		92		62		70		58		57	
2	Commissioner.....												
	Fire fighting:												
3	Chiefs.....	1	\$3,000	1	\$2,800	1	\$2,883	1	\$2,520	1	\$2,700	1	\$2,683
4	Assistant or deputy chiefs and other executive assistants:	2	2,129	2	2,391	1	2,583	1	2,340			2	2,383
5	Assistant deputy chiefs.....												
6	Executive secretaries.....												
7	Captains.....	10	2,057	9	2,275	4	2,383	6	2,160	8	2,300	3	2,133
8	Lieutenants.....	9	1,984	10	2,184	4	2,283	9	2,070	8	2,150	7	2,058
9	Engineers, fire.....												
10	Drivers.....												
	Privates:												
11	1st grade.....	54	1,911	65	2,002	49	2,002	49	1,890	39	2,002	38	2,002
12	2d grade.....	1	1,820							1	2,002	1	1,820
13	3d grade.....											3	1,638
14	4th grade.....												
	Fire prevention:												
15	Marshals or wardens.....	1	2,129										
16	Assistant marshals or wardens.....												
17	Inspectors.....			(³)				1	2,070	(³)			
	Apparatus:												
18	Superintendents of machinery.....									1	2,250		
19	Assistant superintendents of machinery.....												
20	Master mechanics.....	1	2,129										
21	Machinists.....			(³)		(³)		(³)					
22	Auto mechanics.....												
23	General mechanics—blacksmiths.....												
	Fire alarm:												
24	Superintendents.....					(³)		1	2,300			(³)	
25	Assistant superintendents.....			1	2,002								
	Fire-alarm operators:												
26	Operators, fire alarm.....			4	2,002								
27	Operators, telephone.....					3	1,200						
28	Inspectors.....												
29	Electricians.....												
30	Linemen.....	1	1,911			(³)		{	1 1,560			2	1,997
	Clerical:							{	1 2,000				
31	Secretaries.....												
32	Clerks.....			(³)						(³)			
33	Stenographers.....												

¹ Based on U. S. Census of Population for 1930.

² Totals include regular, full-time employees, but do not include part-time employees, call men, or volunteers.

³ Part-time employee.

TABLE E.—Average hours and days on duty per week in fire departments of 54 New England cities by functional divisions, July 1, 1938

System of operation	Average hours on duty per week	Average days on duty per week	All divisions			Division				
			All cities	City group ¹			Fire fighting			
				I	II	III	All cities	City group ¹		
								I	II	III
Total number of employees.....			7,944	4,769	1,470	1,705	7,371	4,413	1,359	1,599
Continuous duty.....	168	7.0	49	21	8	20	43	15	8	20
Single platoon ²			501		322	179	496		321	175
On 2 days, off 1 day.....	112	4.7	302		201	101	298		201	97
On 3 days, off 1 day.....	126	5.3	121		121		120		120	
On 4 days, off 1 day.....	134	5.6	57			57	57			57
On 6 days, off 1 day.....	144	6.0	21			21	21			21
Double platoon—regular ⁴			6,912	4,438	1,056	1,418	6,818	4,394	1,025	1,399
On 24 hours, off 24 hrs.....	84	3.5	142			142	139			139
Shift 3d day.....	84	5.8	5,615	3,913	642	1,060	5,573	3,894	630	1,049
Shift 4th day.....	84	6.1	358		207	151	353		204	149
Shift 6th day.....	84	6.4	571	525		46	543	500		43
Shift 7th day.....	84	6.5	226		207	19	210		191	19
Other ⁵	47.3	5.8	482	310	84	88	14	4	5	5

System of operation	Division															
	Fire prevention				Apparatus				Alarm			Clerical				
	All cities	City group ¹			All cities	City group ¹			All cities	City group ¹			All cities	City group ¹		
		I	II	III		I	II	III		I	II	III		I	II	III
Total number of employees.....	40	22	12	6	169	130	19	20	320	169	76	75	44	35	4	5
Continuous duty.....	1	1			1	1			3	3			1	1		
Single platoon ³					2				3		1	2				
On 2 days, off 1 day.....					2				2			2				
On 3 days, off 1 day.....									1		1					
On 4 days, off 1 day.....																
On 6 days, off 1 day.....																
Double platoon—regular ⁴	15	9	4	2	25	14	7	4	54	21	20	13				
On 24 hrs., off 24 hrs.....	1			1	1			1	1			1				
Shift 3d day.....	5	4		1	13	8	4	1	24	7	8	9				
Shift 4th day.....					2			1	3		2	1				
Shift 6th day.....	5	5			7	6		1	16	14		2				
Shift 7th day.....	4		4		2		2		10		10					
Other ⁵	24	12	8	4	141	115	12	14	260	145	55	60	43	34	4	5

¹ Group I includes cities having a population of 100,000 or more; group II, cities having a population of 50,000 and under 100,000; and group III, cities having a population of 25,000 and under 50,000, based on U. S. Census of Population for 1930.

² Includes only regular, full-time employees, with the exception of 1 commissioner in Boston.

³ The average number of hours on duty per week for employees in each variation of the single-platoon system is arrived at by dividing the total number of hours on duty per year for each variation by 52.143. The average number of days on duty per week for each variation is arrived at by dividing the total number of days on duty per year by 52.143.

⁴ Under each variation of the regular double platoon system the employees work in 2 groups; 1 group is on duty while the other is off duty. Over a period of days, therefore, each group is on duty as many hours as the other, or 12 hours a day and 84 hours a week. Each variation of the double platoon, however, spreads these 84 hours into different numbers of days on duty per week. The average number of days on duty per week for each variation is arrived at by dividing the number of days on duty per year by 52.143.

⁵ The average number of hours per week is arrived at by dividing the total weekly hours by the total number of employees under "other".

TABLE F.—Total salaries and total number of employees of fire departments in 54 New England cities, July 1, 1938

Division ¹ and occupation	Number of employees				Total salaries			
	All cities	City group ²			All cities	City group ²		
		I	II	III		I	II	III
All occupations.....	37,944	4,769	1,470	1,705	\$16,995,713	\$10,410,767	\$3,089,196	\$3,495,750
Fire fighting.....	7,371	4,413	1,359	1,599	15,790,580	9,646,991	2,854,253	3,289,336
Chiefs.....	54	13	12	29	193,406	59,940	45,378	88,088
Assistant or deputy chiefs.....	86	30	18	38	253,924	108,234	50,796	94,894
Assistant deputy chiefs ⁴	24	9	9	6	60,251	23,500	23,990	12,771
Battalion chiefs.....	78	75	3	3	257,026	249,694	7,332	.....
Captains.....	639	367	124	148	1,563,439	948,990	286,380	328,069
Lieutenants.....	632	351	135	146	1,440,346	835,564	292,622	312,160
Engineers, fire engine ⁵	116	111	2	3	270,910	260,936	3,830	6,144
Drivers ⁶	191	144	4	43	388,445	301,159	7,754	79,532
Privates, all grades.....	5,551	3,313	1,052	1,186	11,362,833	6,858,974	2,136,181	2,367,678
First grade.....	5,131	3,050	947	1,134	10,621,676	6,405,201	1,941,166	2,275,309
Others.....	420	263	105	52	741,157	453,773	195,015	92,369
Fire prevention.....	40	22	12	6	93,206	52,108	27,709	13,389
Marshals or wardens.....	6	3	2	1	19,140	11,000	6,011	2,129
Assistant marshals ⁷	5	2	2	1	12,650	5,059	4,700	2,891
Inspectors.....	27	15	8	4	57,116	31,749	16,998	8,369
Miscellaneous ⁸	2	2	.....	.....	4,300	4,300	.....	.....
Apparatus.....	169	130	19	20	360,979	273,817	44,005	43,157
Superintendents of machinery.....	12	4	3	5	30,819	12,196	7,753	10,870
Assistant superintendents of machinery.....	5	4	.....	1	11,901	9,668	.....	2,233
Master and assistant master mechanics.....	17	9	3	5	41,748	23,545	8,251	9,952
Machinists.....	12	9	2	1	25,146	18,615	4,186	2,345
Auto mechanics.....	63	47	9	7	131,389	95,834	19,623	15,932
General mechanics ⁹	47	45	1	1	91,712	87,697	2,190	1,825
Miscellaneous.....	13	12	1	.....	28,264	26,262	2,002	.....
Fire alarm.....	320	169	76	75	679,165	379,200	156,537	143,428
Superintendents.....	32	11	8	13	89,020	37,361	20,665	30,994
Assistant superintendents.....	21	10	4	7	50,592	27,199	9,271	14,122
Chief fire alarm operators.....	3	3	.....	.....	8,240	8,240	.....	.....
Fire alarm operators.....	139	71	34	34	275,177	151,163	65,393	58,621
Inspectors.....	9	5	3	1	19,936	11,746	6,606	1,584
Electricians.....	29	14	8	7	59,820	28,550	17,847	13,423
Linemen and groundmen.....	78	50	15	13	159,519	104,313	30,522	24,684
Miscellaneous.....	9	5	4	.....	16,861	10,628	6,233	.....
Clerical: Clerks, secretaries,¹⁰ typists, etc.....	44	35	4	5	71,783	58,651	6,692	6,440

¹ In some cities the employees listed in the fire-fighting division are assigned to other divisions. In this release these men are included in the fire-fighting division and the divisions to which they are assigned are shown in the appendix tables. In some cities repairs, inspection, and fire-alarm work is under separate city bureaus. Except in 2 cities, the employees of these separate city bureaus are not included in this release. For these reasons the number of employees listed in the table under the fire prevention, apparatus, fire alarm, and clerical divisions vary widely among the cities, especially among the smaller cities.

² Group I includes cities having a population of 100,000 or more; group II, cities having a population of 50,000 and under 100,000; and group III, cities having a population of 25,000 and under 50,000. Based on U. S. Census of Population for 1930.

³ Includes only regular full-time employees, with the exception of 1 commissioner in Boston.

⁴ Includes 3 aides to the commissioner and 3 secretaries in city group I, 3 secretaries in city group II, and 2 secretaries in city group III.

⁵ Includes 18 marine engineers in Boston.

⁶ Includes 6 pilots in Boston.

⁷ Includes 2 chief inspectors in city group I.

⁸ Includes 1 chemist and 1 constable in city group I.

⁹ Includes painters, carpenters, bricklayers, and so forth.

¹⁰ Does not include secretaries holding administrative positions.