
UNITED STATES DEPARTMENT OF LABOR

Frances Perkins, *Secretary*

BUREAU OF LABOR STATISTICS

Isador Lubin, *Commissioner (on leave)*

A. F. Hinrichs, *Acting Commissioner*

in cooperation with

WORK PROJECTS ADMINISTRATION

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Salaries and Hours of Labor
in Municipal Fire Departments

July 1, 1938

VOLUME II

Middle Atlantic Cities

Part I—New York City

Part II—Sixty-seven Cities With Populations Greater Than 25,000

Part III—Appendix

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Prepared by the

DIVISION OF CONSTRUCTION AND PUBLIC EMPLOYMENT

HERMAN B. BYER, *Chief*



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STATE, COUNTY, AND MUNICIPAL SURVEY

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Letter of Transmittal

UNITED STATES DEPARTMENT OF LABOR,
BUREAU OF LABOR STATISTICS,
Washington, D. C., April 10, 1941.

The SECRETARY OF LABOR:

I have the honor to transmit herewith the second of a series of nine reports on Salaries and Hours of Labor in Municipal Fire Departments. This report covers cities in the Middle Atlantic States. An explanation of the purposes of the survey was given in the preface to the first report, Volume I, New England Cities.

A. F. HINRICHS, *Acting Commissioner.*

Hon. FRANCES PERKINS,
Secretary of Labor.

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*Bulletin No. 684 (Vol. II) of the
United States Bureau of Labor Statistics*

Salaries and Hours of Labor in Municipal Fire Departments, Middle Atlantic Cities, July 1, 1938¹

Summary

This bulletin, which covers fire departments² in 68 cities in the Middle Atlantic States of New York, New Jersey, and Pennsylvania, is divided into three parts. Part I deals with New York City, which has been treated separately because it had almost as many fire-department employees as all the other 67 cities combined and paid much higher salaries. Part II, covering 67 cities, includes all other cities with a population of 25,000 or more in this region, except 4 cities for which information was not available and 4 cities which did not have any full-time fire-department employees but depended entirely on volunteers or call men. Part III contains detailed statistical tabulations for parts I and II. For the sake of brevity and comparability with other reports in this series the 67 cities in part II have been divided into 4 population groups on the basis of the United States Census of Population for 1930. Group I includes cities with a population of 500,000 or more; group II, cities of 100,000 and under 500,000; group III, cities of 50,000 and under 100,000; and group IV, cities of 25,000 and under 50,000. The cities range in size from Woodridge, N. J., with a population of 25,266 to Philadelphia, Pa., with 1,950,961 inhabitants in 1930. The population of each city in 1930 is shown in appendix table C.

The New York City fire department had 10,489 persons on its pay roll on July 1, 1938, and at the rates of pay in effect at that time the annual salaries for these workers totaled approximately \$29,592,000. Although the combined employment of 10,770 persons in fire departments in the remaining 67 Middle Atlantic cities was slightly higher

¹ Analysis and presentation by Arthur Dadian. Editing and tabulation of the data by Mahlon B. Buckman. Carol P. Brainerd, technical adviser.

² Relatively little general information is available on employment and salaries in city fire departments, in spite of the importance of their functions and the considerable number of their employees. A study of salaries and working conditions of fire department employees in 1934 was made by the Bureau of Labor Statistics and was published in the Monthly Labor Review for November 1935. In the present study the Bureau of Labor Statistics, in cooperation with the Work Projects Administration, undertook to compile this information, as of July 1, 1938, for cities in the United States having a population of 25,000 or more. This report for 68 Middle Atlantic Division cities is one of a series which is being issued by geographic divisions.

than that for New York City, total annual salary payments in these departments were lower—only \$24,148,000 as of July 1, 1938. In New York City there were 15 fire-department employees for every 10,000 inhabitants and the salary cost was \$4.27 per capita. The other 60 departments with complete full-time staffs (7 departments had small full-time staffs supplemented by call men or volunteers) had 14 employees per 10,000 inhabitants and the per capita cost was only \$3.13.³

The annual rates of pay in the New York City department ranged from \$840 for clerks to \$12,500 for the commissioner who headed the department, whereas in the other Middle Atlantic cities the extremes in salary rates were \$600 and \$7,500. The great majority of the salaries were concentrated within much narrower ranges than these extremes—82 percent of all employees in the New York City department received between \$2,000 and \$3,000 a year and 86 percent of those in the other 67 departments were in the \$1,000 interval beginning at \$1,550.

For almost all occupations the salaries were higher in New York City than in the other 67 cities in the Middle Atlantic area. The differences were most pronounced among the higher ranking occupations. For example, 55 of the 63 cities reporting chiefs or officers of equivalent rank paid their department heads between \$2,000 and \$5,000 a year and the remaining 8 cities between \$5,000 and \$7,500 a year. New York City paid the head of its department \$12,500. Captains in New York City received \$4,500 a year, whereas those in the other Middle Atlantic cities received between \$1,550 and \$4,050 a year and 98 percent of them were paid less than \$3,250 a year. Lieutenants in New York City received \$3,900, but those in the other Middle Atlantic cities received a maximum of \$3,400 and 89 percent were paid less than \$2,750 a year.

The annual salary of \$3,000 received by first-grade privates in New York City was higher than the annual salaries of captains in all except 9 of the 55 Middle Atlantic cities reporting captains, and was higher than those of lieutenants in all but 3 of the 35 cities reporting lieutenants.

Two cities near New York City—Mount Vernon and Yonkers, N. Y.—also paid their first-grade privates \$3,000. Moreover, these two cities had a larger proportion of all their privates in the first grade than New York City: 80 percent in Mount Vernon and 72 percent in Yonkers, as compared with 55 percent in New York City. They also paid higher salaries than New York City to the lower-grade privates. As a result, the average annual salaries for all privates in these two cities were higher than the average for New York City—\$2,820 for Mount Vernon, \$2,830 for Yonkers, and \$2,594 for New York City.

³ All population figures are based on the U. S. Census of Population for 1930.

A third city, New Rochelle, N. Y., which paid its first-grade privates \$100 a year less than New York City, had an average for all privates of \$2,784, because New Rochelle had 80 percent of its privates in the first grade and maintained higher salary rates than New York City for privates in the lower grades.

In comparing the annual salaries of firemen in New York City with those of firemen in other cities, it should be borne in mind that New York City did not supply its firemen with any items of equipment such as uniforms, rubber coats and boots, and helmets. On the other hand, 8 of the 67 other Middle Atlantic cities supplied uniforms and 10 supplied cloth and trimmings for uniforms. All of the Middle Atlantic cities provided sleeping quarters for firemen on night duty, but only 40 of them reported that they furnished the necessary bedding and laundry.

On July 1, 1938, the uniformed force of the New York City department was working under 3 different systems of rotating hours on duty: (1) The regular 2-platoon system with an average of 84 hours on duty per week; (2) the 2-platoon, 10-group system with an average of 67 hours on duty per week; and (3) the 3-platoon, 10-group system with an average of 50.4 hours on duty per week. The nonuniformed employees worked the same hours as other municipal employees.

In the other 67 cities 93.2 percent of all employees worked under some variation of the 2-platoon system with average hours ranging from 67 to 84 per week, 0.4 percent were under the single-platoon system with average hours of 108 to 144 per week, and 6.4 were outside the platoon system. Most of this last group were nonuniformed employees who had the same hours as other municipal workers, but a few were on continuous duty.

The policy of giving vacations with pay was well established in fire departments of Middle Atlantic cities. All employees in New York City received vacations which averaged 21.7 days per year. All but 10 of the 10,770 employees in the other 67 cities received paid vacations. The average vacation period in these cities was 15.6 days per year.

Privates in the New York City department were promoted automatically after their first year of service. Of the 60 other Middle Atlantic departments which had privates, 52 promoted them automatically after a specified period of service, 4 after a civil-service examination, 1 by appointment, and 3 started all their privates in the first grade.

Part I
New York City

Level of Salaries and Salaries in Various Occupations

The annual salaries in the New York City fire department ranged from \$840 received by 4 clerks to \$12,500 received by the commissioner who was the administrative head of the department. There was a pronounced concentration of salaries at 2 points: nearly 43 percent of the 10,489 employees of this department received \$3,000 a year and almost 28 percent received \$2,000. Practically all of those at the \$3,000 rate were first-grade privates and likewise nearly all of those receiving \$2,000 were privates of the third and lower grades. Privates in the second grade, who were paid \$2,500 a year, composed an additional 7 percent of all employees. In brief, nearly 5 out of every 6 employees in the New York City department were paid between \$2,000 and \$3,000 a year in 1938, and 94 percent of the employees in this salary range were privates. Not quite 2 percent of all employees received \$1,938 or less per year, and about 16 percent were paid more than \$3,000.

TABLE 1.—*Distribution of employees in the New York City fire department, by salary, July 1, 1938*

Salary class	Employees		Salary class	Employees	
	Num-ber	Percent-age		Num-ber	Percent-age
All salaries.....	10,489	100.0	\$3,450 and under \$3,550.....	38	0.4
Under \$1,650.....	93	.9	\$3,550 and under \$3,650.....	3	(²)
\$1,650 and under \$1,750.....	44	.4	\$3,650 and under \$3,750.....	2	(²)
\$1,750 and under \$1,850.....	17	.2	\$3,750 and under \$3,850.....	2	(²)
\$1,850 and under \$1,950.....	20	.2	\$3,850 and under \$3,950.....	931	8.9
\$1,950 and under \$2,050.....	2,950	28.1	\$3,950 and under \$4,050.....	1	(²)
\$2,050 and under \$2,150.....	19	.2	\$4,050 and under \$4,150.....	1	(²)
\$2,150 and under \$2,250.....	68	.6	\$4,150 and under \$4,250.....	1	(²)
\$2,250 and under \$2,350.....	75	.7	\$4,250 and under \$4,350.....	3	(²)
\$2,350 and under \$2,450.....	134	1.3	\$4,350 and under \$4,450.....	.....	.....
\$2,450 and under \$2,550.....	822	7.8	\$4,450 and under \$4,550.....	354	3.4
\$2,550 and under \$2,650.....	30	.3	\$4,550 and under \$4,650.....	.....	.....
\$2,650 and under \$2,750.....	5	.1	\$4,650 and under \$4,750.....	.....	.....
\$2,750 and under \$2,850.....	13	.1	\$4,750 and under \$4,850.....	.....	.....
\$2,850 and under \$2,950.....	29	.3	\$4,850 and under \$4,950.....	.....	.....
\$2,950 and under \$3,050.....	4,489	42.8	\$4,950 and under \$5,050.....	1	(²)
\$3,050 and under \$3,150.....	20	.2	\$5,050 and under \$5,150.....	.....	.....
\$3,150 and under \$3,250.....	10	.1	\$5,150 and under \$5,250.....	1	(²)
\$3,250 and under \$3,350.....	19	.2	\$5,250 and under \$5,350.....	136	1.3
\$3,350 and under \$3,450.....	107	1.0	\$5,350 and over.....	³ 52	.5

¹ Includes only full-time employees.

² Less than $\frac{1}{10}$ of 1 percent.

³ Includes 1 at \$5,460, 1 at \$6,000, 45 at \$6,300, 1 at \$7,300, 2 at \$7,500, 1 at \$8,000, and 1 at \$12,500.

Next to privates in numerical importance were 931 lieutenants whose annual rate of pay was \$3,900 on July 1, 1938. The New York City department also had 354 captains who received \$4,500. The

group receiving \$5,000 or more was composed in the main of higher ranking officers. Salary rates for each occupation in the New York City department are shown in appendix tables A and B.

The annual salary rates did not represent net salaries, because the firemen in New York City had to pay for their uniforms and other necessary items, such as rubber boots, rubber coats, and helmets.

Hours and Working Conditions

Average Hours on Duty Per Week ⁴

In 1937 New York City passed a law which made mandatory the installation of the 3-platoon system of hours on duty for firemen of all grades and to officers ranking as high as deputy chief. The primary purpose of the 3-platoon system is to give the firemen an 8-hour day, with a day off each week. At the time this law was passed the city was operating under a 2-platoon system with an average of 84 hours on duty per week. In a fire department as large as that of New York City, it is a difficult and time-consuming task to make such a drastic reduction in hours on duty per week and at the same time provide adequate fire protection. To facilitate this transition, a part of the force was placed under a variation of the 2-platoon system called the 10-group system which eliminated the continuous 24-hour tour of duty and averaged 67 hours on duty per week. At the time of this study, the New York City fire department was still in the transition stage and all 3 systems of hours were in operation. No data were available as to the number of firemen operating under each of these systems.

Two-Platoon System

Under the original 2-platoon system, every 6 days the firemen in the first platoon had two tours of night duty of 15 hours each, one continuous tour of 24 hours, two tours of day duty of 9 hours each, and one continuous period of 24 hours off duty. The 24-hour tour of continuous duty was a combination of the third night tour of 15 hours and the first day tour of 9 hours. This combination was necessary to effect the shift on the third day from a night to day tour of duty. Thus in 6 days the firemen were on duty a total of 72 hours. This averaged 12 hours a day and over a period of 2 weeks resulted in an average work-week of 84 hours. The firemen working in the second platoon supplemented the hours worked by those in the first, so that the same number of firemen were on duty at all times. This system of operation is illustrated in chart I.

⁴ For a discussion of hours of firemen throughout the United States, see "Hours of Work of Municipal Firemen in the United States," Monthly Labor Review, July 1940, pp. 13-26.

CHART I.—Two-platoon system, shift on third day, New York City, July 1, 1938

Day	p. m.					a. m.											p. m.								
	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	
	Platoon number																								
1.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2
2.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2
3.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4.....	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1
5.....	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1
6.....	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

Two-Platoon, Ten-Group System

Under the 2-platoon, 10-group system, instituted to facilitate the transition from the regular 2-platoon to the 3-platoon system, the

CHART II.—Two-platoon, 10-group system, New York City, July 1, 1938

Day	First platoon 15 hours on duty, 6 p. m. to 9 a. m.															Second platoon 9 hours on duty, 9 a. m. to 6 p. m.									
	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	
	Group number																								
1.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	4	4	4	4	4	4	4	4	4
2.....	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	5	5	5	5	5	5	5	5	5	5
3.....	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	6	6	6	6	6	6	6	6	6	6
4.....	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	7	7	7	7	7	7	7	7	7	7
5.....	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	8	8	8	8	8	8	8	8	8	8
6.....	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	9	9	9	9	9	9	9	9	9	9
7.....	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	10	10	10	10	10	10	10	10	10	10
8.....	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	1	1	1	1	1	1	1	1	1	1
9.....	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	2	2	2	2	2	2	2	2	2	2
10.....	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	3	3	3	3	3	3	3	3	3	3

firemen were first divided into 2 platoons: a night platoon with a 15-hour tour of duty starting at 6 p. m. and a day platoon with a 9-hour tour starting at 9 a. m. To eliminate the continuous 24-hour tour of duty that prevailed under the regular 2-platoon system, the firemen were divided into 10 groups of equal size. A fireman assigned to one of these groups did not stay on the same tour or platoon constantly, but worked on the night tour for 4 days and the day tour for 4 days with a total of 24 hours off duty between the shift from night to day tour, and a total of 48 hours off duty between the shift from the day to the night tour. Thus, it took a fireman 10 days to complete the cycle. Each group worked the same schedule of hours over a 10-day period, with an interval of a day between the starting of each group. Because of this rotation there was always the same number of firemen on duty, 4 groups being on night duty and 4 groups on day duty. Chart II shows the operation of this system over a 10-day cycle for both platoons and each of the 10 groups.

Three-Platoon System

Under the 3-platoon system the firemen were divided into 3 platoons and the day was divided into three 8-hour tours of duty, starting at midnight, 4 p. m., and 8 a. m. A platoon was assigned to each of the tours. So that the city might be equally protected at all times, the firemen were further divided into 10 groups. Over a period of 20 days each of the 10 groups had the same schedule of hours, but there was an interval of 2 days between the schedule of each group. By rotating the groups in this way, the fire department had 3 groups on duty constantly on each of the 3 tours, or a total of 9 groups on duty every 24 hours. Chart III shows in detail the operation of this system.

A fireman did not work on any one of the 3 tours constantly, but was shifted from one to the other once every 6 $\frac{2}{3}$ days. The 6 $\frac{2}{3}$ days on each tour was made up of 6 periods of 8 hours on and 16 hours off duty, followed by 16 additional hours off duty after the sixth working period. It was because of the continuous period of 32 hours off duty between the shifts that a fireman finishing with the tour which ended at 8 a. m., started his next tour at 4 p. m. rather than at 8 a. m.

To go through the three tours of 6 $\frac{2}{3}$ days each, took a fireman 20 days with eighteen 8-hour periods on duty. Thus, a fireman worked a total of 144 hours in 20 days, or an average of 7.2 hours a day and 50.4 hours a week.

CHART III.—Three-platoon, 10-group system, New York City, July 1, 1938

Day	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11
	First platoon, 8 hours on duty, midnight to 8 a. m.								Second platoon, 8 hours on duty, 8 a. m. to 4 p. m.					Third platoon, 8 hours on duty, 4 p. m. to 12 p. m.										
	Group number																							
1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	6	6	6	6	6	6	6	6
9	9	9	9	9	9	9	9	9	3	3	3	3	3	3	3	3	7	7	7	7	7	7	7	7
10	10	10	10	10	10	10	10	10	4	4	4	4	4	4	4	4	8	8	8	8	8	8	8	8
2	1	1	1	1	1	1	1	1	3	3	3	3	3	3	3	3	6	6	6	6	6	6	6	6
9	9	9	9	9	9	9	9	9	4	4	4	4	4	4	4	4	7	7	7	7	7	7	7	7
10	10	10	10	10	10	10	10	10	5	5	5	5	5	5	5	5	8	8	8	8	8	8	8	8
3	1	1	1	1	1	1	1	1	3	3	3	3	3	3	3	3	7	7	7	7	7	7	7	7
2	2	2	2	2	2	2	2	2	4	4	4	4	4	4	4	4	8	8	8	8	8	8	8	8
10	10	10	10	10	10	10	10	10	5	5	5	5	5	5	5	5	9	9	9	9	9	9	9	9
4	1	1	1	1	1	1	1	1	4	4	4	4	4	4	4	4	7	7	7	7	7	7	7	7
2	2	2	2	2	2	2	2	2	5	5	5	5	5	5	5	5	8	8	8	8	8	8	8	8
10	10	10	10	10	10	10	10	10	6	6	6	6	6	6	6	6	9	9	9	9	9	9	9	9
5	1	1	1	1	1	1	1	1	4	4	4	4	4	4	4	4	8	8	8	8	8	8	8	8
2	2	2	2	2	2	2	2	2	5	5	5	5	5	5	5	5	9	9	9	9	9	9	9	9
3	3	3	3	3	3	3	3	3	6	6	6	6	6	6	6	6	10	10	10	10	10	10	10	10
6	1	1	1	1	1	1	1	1	5	5	5	5	5	5	5	5	8	8	8	8	8	8	8	8
2	2	2	2	2	2	2	2	2	6	6	6	6	6	6	6	6	9	9	9	9	9	9	9	9
3	3	3	3	3	3	3	3	3	7	7	7	7	7	7	7	7	10	10	10	10	10	10	10	10
7	2	2	2	2	2	2	2	2	5	5	5	5	5	5	5	5	1	1	1	1	1	1	1	1
3	3	3	3	3	3	3	3	3	6	6	6	6	6	6	6	6	9	9	9	9	9	9	9	9
4	4	4	4	4	4	4	4	4	7	7	7	7	7	7	7	7	10	10	10	10	10	10	10	10
8	2	2	2	2	2	2	2	2	6	6	6	6	6	6	6	6	1	1	1	1	1	1	1	1
3	3	3	3	3	3	3	3	3	7	7	7	7	7	7	7	7	9	9	9	9	9	9	9	9
4	4	4	4	4	4	4	4	4	8	8	8	8	8	8	8	8	10	10	10	10	10	10	10	10
9	3	3	3	3	3	3	3	3	6	6	6	6	6	6	6	6	1	1	1	1	1	1	1	1
4	4	4	4	4	4	4	4	4	7	7	7	7	7	7	7	7	2	2	2	2	2	2	2	2
5	5	5	5	5	5	5	5	5	8	8	8	8	8	8	8	8	10	10	10	10	10	10	10	10
10	3	3	3	3	3	3	3	3	7	7	7	7	7	7	7	7	1	1	1	1	1	1	1	1
4	4	4	4	4	4	4	4	4	8	8	8	8	8	8	8	8	2	2	2	2	2	2	2	2
5	5	5	5	5	5	5	5	5	9	9	9	9	9	9	9	9	10	10	10	10	10	10	10	10
11	4	4	4	4	4	4	4	4	7	7	7	7	7	7	7	7	1	1	1	1	1	1	1	1
5	5	5	5	5	5	5	5	5	8	8	8	8	8	8	8	8	2	2	2	2	2	2	2	2
6	6	6	6	6	6	6	6	6	9	9	9	9	9	9	9	9	3	3	3	3	3	3	3	3
12	4	4	4	4	4	4	4	4	8	8	8	8	8	8	8	8	1	1	1	1	1	1	1	1
5	5	5	5	5	5	5	5	5	9	9	9	9	9	9	9	9	2	2	2	2	2	2	2	2
6	6	6	6	6	6	6	6	6	10	10	10	10	10	10	10	10	3	3	3	3	3	3	3	3
13	5	5	5	5	5	5	5	5	8	8	8	8	8	8	8	8	2	2	2	2	2	2	2	2
6	6	6	6	6	6	6	6	6	9	9	9	9	9	9	9	9	3	3	3	3	3	3	3	3
7	7	7	7	7	7	7	7	7	10	10	10	10	10	10	10	10	4	4	4	4	4	4	4	4
14	5	5	5	5	5	5	5	5	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2
6	6	6	6	6	6	6	6	6	9	9	9	9	9	9	9	9	3	3	3	3	3	3	3	3
7	7	7	7	7	7	7	7	7	10	10	10	10	10	10	10	10	4	4	4	4	4	4	4	4
15	6	6	6	6	6	6	6	6	1	1	1	1	1	1	1	1	3	3	3	3	3	3	3	3
7	7	7	7	7	7	7	7	7	9	9	9	9	9	9	9	9	4	4	4	4	4	4	4	4
8	8	8	8	8	8	8	8	8	10	10	10	10	10	10	10	10	5	5	5	5	5	5	5	5
16	6	6	6	6	6	6	6	6	1	1	1	1	1	1	1	1	3	3	3	3	3	3	3	3
7	7	7	7	7	7	7	7	7	2	2	2	2	2	2	2	2	4	4	4	4	4	4	4	4
8	8	8	8	8	8	8	8	8	10	10	10	10	10	10	10	10	5	5	5	5	5	5	5	5
17	7	7	7	7	7	7	7	7	1	1	1	1	1	1	1	1	4	4	4	4	4	4	4	4
8	8	8	8	8	8	8	8	8	2	2	2	2	2	2	2	2	5	5	5	5	5	5	5	5
9	9	9	9	9	9	9	9	9	10	10	10	10	10	10	10	10	6	6	6	6	6	6	6	6
18	7	7	7	7	7	7	7	7	1	1	1	1	1	1	1	1	4	4	4	4	4	4	4	4
8	8	8	8	8	8	8	8	8	2	2	2	2	2	2	2	2	5	5	5	5	5	5	5	5
9	9	9	9	9	9	9	9	9	3	3	3	3	3	3	3	3	6	6	6	6	6	6	6	6
19	8	8	8	8	8	8	8	8	1	1	1	1	1	1	1	1	5	5	5	5	5	5	5	5
9	9	9	9	9	9	9	9	9	2	2	2	2	2	2	2	2	6	6	6	6	6	6	6	6
10	10	10	10	10	10	10	10	10	3	3	3	3	3	3	3	3	7	7	7	7	7	7	7	7
20	8	8	8	8	8	8	8	8	2	2	2	2	2	2	2	2	5	5	5	5	5	5	5	5
9	9	9	9	9	9	9	9	9	3	3	3	3	3	3	3	3	6	6	6	6	6	6	6	6
10	10	10	10	10	10	10	10	10	4	4	4	4	4	4	4	4	7	7	7	7	7	7	7	7

Vacations With Pay

All employees in the New York City fire department received vacations with pay which ranged in length from 15 to 30 days a year. The most usual vacation period was 21 days, nearly four-fifths of the department being entitled to 3 weeks of vacation. About 17 percent more received 25 days a year. The average for the entire department was 21.7 days of vacation per year.

TABLE 2.—*Distribution of employees in the New York City fire department, by days of vacation with pay, July 1, 1938*

Number of days of vacation with pay	Employees	
	Number	Percentage
Total.....	10,489	100.0
15.....	100	1.0
16.5.....	75	.7
18.....	38	.4
21.....	8,332	79.4
25.....	1,761	16.8
30.....	183	1.7

Distribution of Employees and Salaries

In New York City 93 percent of the fire-department employees were in the fire-fighting division and they received 94 percent of all the salaries paid. Privates constituted over 77 percent of all employees, but received less than 71 percent of the total salaries. Although supervisory personnel comprised little more than 14 percent of all employees, they received over 21 percent of the total salary expenditures as of July 1, 1938. In general, larger cities have relatively fewer officers than smaller cities, but a comparison of New York City with other cities in the Middle Atlantic region shows that the New York City department had a larger proportion of officers than the three other Middle Atlantic cities with a population of 500,000 or more. The proportion of supervisory employees in New York City, however, was lower than it was in the cities comprising groups II, III, and IV in this region.

The 7 percent of the employees outside the fire-fighting division were engaged in fire-prevention, clerical, and miscellaneous work or in operating and maintaining apparatus and the fire-alarm system. New York City had a proportionately larger fire-prevention division than any of the city groups in the Middle Atlantic region.

TABLE 3.—Percentage distributions of employees and total salaries in specified divisions of the New York City fire department, July 1, 1938

Division and occupation	Percentage distribution of—		Division and occupation	Percentage distribution of—	
	Em- ploy- ees	Total salaries		Em- ploy- ees	Total salaries
All divisions.....	100.0	100.0	Fire fighting—Continued.		
Fire fighting.....	93.0	94.0	Privates:		
Chiefs.....	(1)	.1	1st grade.....	42.3	45.0
Assistant or deputy chiefs.....	(1)	.1	2d grade.....	7.1	6.3
Assistant deputy chiefs.....	.5	.9	3d grade.....	16.8	11.9
Battalion chiefs.....	1.3	2.4	4th grade.....	8.4	5.9
Captains.....	3.4	5.4	Probationary.....	2.6	1.8
Lieutenants.....	8.9	12.3	Miscellaneous.....	.4	.4
Pilots.....	.3	.4	Fire prevention.....	1.8	1.6
Engineers, fire engine.....	.4	.4	Apparatus.....	1.3	1.1
Engineers, marine.....	.6	.7	Fire alarm.....	2.3	2.1
			Clerical.....	1.1	.8
			Miscellaneous.....	.5	.4

¹ Less than 1/10 of 1 percent.

Part II
Sixty-seven Middle Atlantic Cities

Annual Salaries

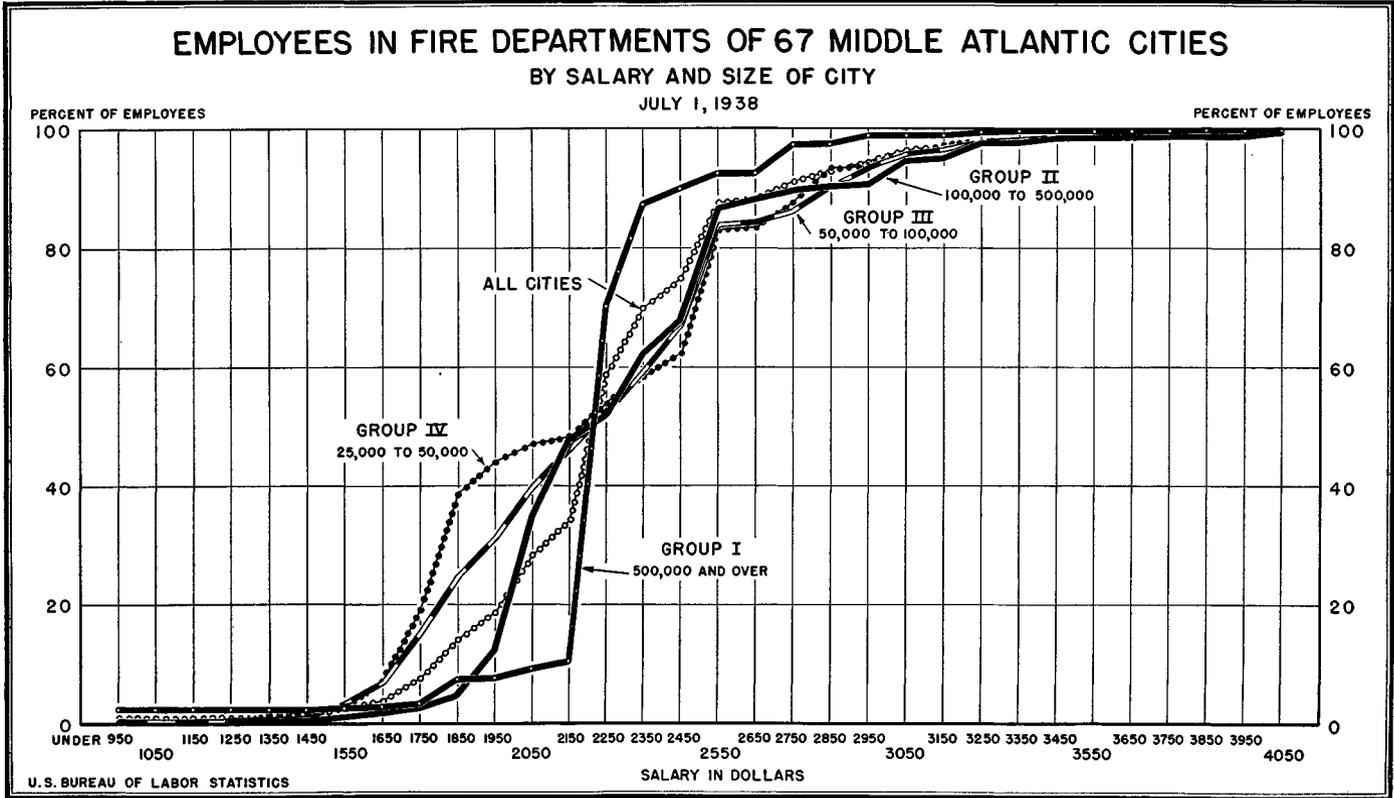
General Level of Salaries

Annual salaries in the 67 Middle Atlantic cities with a population of 25,000 or more ranged from \$600 received by a charwoman in Rochester, N. Y., to \$7,500 received by the fire chief in Philadelphia, Pa. Most of the salaries, however, were concentrated within a smaller range; approximately 86 percent were from \$1,550 to \$2,550. This concentration was due primarily to the high proportion of employees in the one occupational category of privates, and also to the small differences in the salaries of privates and some of the other major occupational groups.

Although the range of salaries was wider in the large than in the small cities, the concentration of salaries was more pronounced in the larger places than in the ones with less population. This is clearly illustrated in the cumulative chart on page 18. The steepness of the curve for cities with a population of 500,000 or more indicates that three-fifths of all fire-department employees in these cities received annual salaries within the \$100 interval beginning at \$2,150. There were only 3 cities in this population group, and first-grade privates in 2 of them—Buffalo and Philadelphia—were paid \$2,200 and \$2,190 a year, respectively. In all of the other population groups there were larger numbers of cities, so that even though within each city there was a similar concentration at the salary rate for privates, the combination of salaries for the several cities resulted in a more even distribution for the entire population group than was the case in cities of group I.

In cities with a population of 100,000 to 500,000 there were 2 points of almost equal concentration in the distribution, i. e., 22 percent of all salaries were between \$1,950 and \$2,050 and nearly 19 percent, between \$2,450 and \$2,550. This latter salary interval was also the point of maximum concentration in the distributions for the 2 groups of smaller cities, containing 17 percent of all salaries in group III and nearly 21 percent of all those in group IV. Practically as many of the salaries in group IV, however, were in the \$100 interval beginning at \$1,750.

The salary distributions shown in the chart are rather unusual in that the median salary was about the same for all population groups. Regardless of the size of the city, approximately half of the firemen in the Middle Atlantic cities were paid less than \$2,200 a year and half were paid more than that amount. Below the \$2,200 mark there was a noticeable correlation between population group and salary rate—



the larger the city, the higher the salary. This is indicated by the position of the cumulative curves on the chart; the curves for the cities having the higher salary scales appear toward the right of the chart. Thus, for salaries below \$2,200, cities in group I are at the extreme right and the other curves appear to the left as the cities decrease in size, so that at the extreme left are the cities of 25,000 to 50,000 which composed group IV.

TABLE 4.—*Distribution of employees in fire departments of 67 Middle Atlantic cities, by salary and size of city, July 1, 1938*¹

Salary class	Number of employees					Percentage of employees				
	All cities	City group ²				All cities	City group ²			
		I	II	III	IV		I	II	III	IV
All salaries.....	3 10,770	3, 778	3, 385	2, 303	1, 304	100. 0	100. 0	100. 0	100. 0	100. 0
Under \$950.....	85	78	1	6	.....	. 8	2. 1	(⁴)	. 3	.....
\$950 and under \$1,050.....	2	.....	.....	2	.....	(⁴)	.....	.....	. 1	.....
\$1,050 and under \$1,150.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
\$1,150 and under \$1,250.....	9	.....	6	.....	3	. 1	.....	. 2	.....	. 3
\$1,250 and under \$1,350.....	20	.....	2	6	12	. 2	.....	. 1	. 3	. 9
\$1,350 and under \$1,450.....	10	4	4	2	.....	. 1	. 1	. 1	. 1	.....
\$1,450 and under \$1,550.....	105	10	20	56	19	1. 0	. 3	. 6	2. 4	1. 4
\$1,550 and under \$1,650.....	167	7	19	82	59	1. 6	. 2	. 6	3. 6	4. 5
\$1,650 and under \$1,750.....	403	21	35	192	155	3. 7	. 5	1. 0	8. 3	11. 9
\$1,750 and under \$1,850.....	702	159	71	217	255	6. 5	4. 2	2. 1	9. 4	19. 5
\$1,850 and under \$1,950.....	497	12	261	152	72	4. 6	. 3	7. 7	6. 6	5. 5
\$1,950 and under \$2,050.....	1, 048	55	752	201	40	9. 7	1. 4	22. 2	8. 7	3. 0
\$2,050 and under \$2,150.....	662	48	446	150	18	6. 1	1. 3	13. 2	6. 5	1. 4
\$2,150 and under \$2,250.....	2, 616	2, 266	138	140	72	24. 3	60. 0	4. 1	6. 1	5. 5
\$2,250 and under \$2,350.....	1, 204	644	343	160	57	11. 2	17. 0	10. 1	6. 9	4. 4
\$2,350 and under \$2,450.....	523	98	197	177	51	4. 9	2. 6	5. 8	7. 7	3. 9
\$2,450 and under \$2,550.....	1, 394	93	639	391	271	12. 9	2. 5	18. 9	17. 0	20. 8
\$2,550 and under \$2,650.....	69	2	50	11	6	. 6	. 1	1. 5	. 5	. 5
\$2,650 and under \$2,750.....	327	180	51	41	55	3. 0	4. 7	1. 5	1. 8	4. 2
\$2,750 and under \$2,850.....	190	1	22	91	76	1. 8	(⁴)	. 6	4. 0	5. 8
\$2,850 and under \$2,950.....	155	62	14	74	5	1. 4	1. 6	. 4	3. 2	. 4
\$2,950 and under \$3,050.....	211	.....	132	54	25	2. 0	.....	3. 9	2. 3	1. 9
\$3,050 and under \$3,150.....	52	.....	16	16	20	. 5	.....	. 5	. 7	1. 5
\$3,150 and under \$3,250.....	141	18	83	29	11	1. 3	. 5	2. 4	1. 3	. 8
\$3,250 and under \$3,350.....	24	11	3	8	2	. 2	. 3	. 1	. 3	. 2
\$3,350 and under \$3,450.....	40	.....	25	13	2	. 4	.....	. 7	. 6	. 2
\$3,450 and under \$3,550.....	16	.....	2	8	6	. 2	.....	. 1	. 3	. 5
\$3,550 and under \$3,650.....	11	1	6	1	3	. 1	(⁴)	. 2	(⁴)	. 2
\$3,650 and under \$3,750.....	4	.....	2	.....	2	(⁴)	.....	. 1	.....	. 2
\$3,750 and under \$3,850.....	8	2	1	5	.....	. 1	. 1	(⁴)	. 2	.....
\$3,850 and under \$3,950.....	1	.....	.....	1	1	(⁴)	.....	.....	.....	. 1
\$3,950 and under \$4,050.....	32	.....	26	5	1	. 3	.....	. 8	. 2	. 1
\$4,050 and over.....	42	6	18	13	5	. 4	. 2	. 5	. 6	. 4

¹ For a more detailed analysis of data, see appendix tables D, E, F, and G.

² Group I includes cities having a population of 500,000 or more; group II, cities of 100,000 and under 500,000; group III, cities of 50,000 and under 100,000; and group IV, cities of 25,000 and under 50,000, based on U. S. Census of Population for 1930.

³ Includes only regular, full-time employees.

⁴ Less than 1/10 of 1 percent.

⁵ Includes 2 at \$4,200, 1 at \$4,500, 1 at \$5,970, 1 at \$6,300, and 1 at \$7,500.

⁶ Includes 4 at \$4,200, 1 at \$4,400, 5 at \$4,500, 1 at \$4,900, 4 at \$5,000, 1 at \$5,200, 1 at \$6,000 and 1 at \$6,500.

⁷ Includes 1 at \$4,200, 1 at \$4,250, 2 at \$4,280, 1 at \$4,300, 1 at \$4,625, 1 at \$4,750, 4 at \$5,000, 1 at \$5,500, and 1 at \$6,000.

⁸ Includes 1 at \$4,250, 1 at \$4,312, 1 at \$4,500, 1 at \$4,700, and 1 at \$4,833.

For salaries above \$2,200, on the other hand, this relationship disappears. For example, less than 8 percent of all fire-department

employees in cities of group I received as much as \$2,550 a year, as compared with about 13 percent in group II, 16 percent in group III, and 17 percent in group IV. There are several possible explanations for this situation. It is partially accounted for by the fact that in the smaller cities the supervisory employees, such as chiefs, captains, and lieutenants, who were paid the highest salaries, constituted a greater proportion of all employees than they did in the larger cities. The proximity of a city to a much larger city also appeared in some cases to affect the rates of pay in the smaller cities. For example, first-grade privates in Yonkers, N. Y. (group II), and Mount Vernon, N. Y. (group III), both of which were suburbs of New York City, were paid the same salary as privates in New York City, \$3,000 a year, while privates in a third suburb, New Rochelle (group III), received \$2,900. Numerous local factors, such as the financial condition of the various cities, which cannot be evaluated from the information at hand, also affect this intercity comparison of salary rates.

Salaries in Selected Occupations

Although there was no consistent relationship in the Middle Atlantic region between size of city and rates of pay for fire-department employees, there was some tendency for officers in the large cities to receive higher salaries than those having the same rank in smaller cities. This is brought out by the average salaries shown in table 5. For example, the average annual salaries of chiefs in cities of group I was 45 percent higher than the average in group II, 78 percent higher than in group III, and 106 percent higher than in group IV. The differences among the averages for the four city groups narrowed as the officers decreased in rank. For the rank of captain and all ranks or occupations below that level, except lieutenants, there was no clearly defined relationship between salaries and size of city. Although average salaries for lieutenants decreased systematically from the groups of largest to smallest cities, the average for cities in group I was little more than 8 percent higher than the average in group IV.

The greatest differences in salaries in the Middle Atlantic fire departments resulted from differences in the occupation or rank of the employee rather than from the size or location of the city in which he worked. For example, the highest salary reported in the 67 cities surveyed was \$7,500 for the chief in Philadelphia, who had more than 2,000 employees under his supervision; yet in this same city the annual salary rate reported for cleaners was \$900. On the other hand, the chief in York, Pa., where the entire department numbered only 33 employees in 1938, was paid only \$2,000. This was the lowest salary reported for the head of a fire department in the Middle Atlantic cities.

TABLE 5.—Distribution of employees in fire departments of 67 Middle Atlantic cities, by selected occupation and salary, July 1, 1938 ¹

Salary class	All occupations				Chiefs				Assistant or deputy chiefs				Assistant deputy chiefs						
	All cities	City group ²				All cities	City group ²				All cities	City group ²				All cities ³	City group ²		
		I	II	III	IV		I	II	III	IV		I	II	III	IV		II	III	IV
Number of cities reporting indicated occupations.....	67	3	12	23	29	63	3	12	22	26	49	3	10	17	19	7	1	5	1
All salaries.....	\$10,770	3,778	3,385	2,303	1,304	63	3	12	22	26	77	5	19	27	26	9	3	5	1
Under \$950.....	85	78	1	6	6														
\$950 and under \$1,050.....	2			2	2														
\$1,050 and under \$1,150.....																			
\$1,150 and under \$1,250.....	9		6		3														
\$1,250 and under \$1,350.....	20		2	6	12														
\$1,350 and under \$1,450.....	10	4	4	2															
\$1,450 and under \$1,550.....	105	10	20	56	19														
\$1,550 and under \$1,650.....	167	7	19	82	59														
\$1,650 and under \$1,750.....	403	21	35	192	155														
\$1,750 and under \$1,850.....	702	159	71	217	255											1		1	
\$1,850 and under \$1,950.....	497	12	261	152	72					1									
\$1,950 and under \$2,050.....	1,048	55	752	201	40	2		1	1	5			2	3					
\$2,050 and under \$2,150.....	662	48	446	150	18					5			1	4	1				1
\$2,150 and under \$2,250.....	2,616	2,266	138	140	72					3				3					
\$2,250 and under \$2,350.....	1,204	644	343	160	57					2			1	1					
\$2,350 and under \$2,450.....	523	98	197	177	51	5			5	3			3		1			1	1
\$2,450 and under \$2,550.....	1,394	93	639	391	271	2		1	1	8			6	1	1	1		1	1
\$2,550 and under \$2,650.....	69	2	50	11	6	2		2	2										
\$2,650 and under \$2,750.....	327	180	51	41	55	2		1	1	2			2						
\$2,750 and under \$2,850.....	190	1	22	91	76	4		1	2	5			2		3				
\$2,850 and under \$2,950.....	155	62	14	74	5	1			1	2			1	1					
\$2,950 and under \$3,050.....	211		132	54	25	4			4	8			2	2	4				
\$3,050 and under \$3,150.....	52		16	16	20	1			1										
\$3,150 and under \$3,250.....	141	18	83	29	11	2			1	1	2				2				
\$3,250 and under \$3,350.....	24	11	3	8	2	3			1	2	5			5		1		1	
\$3,350 and under \$3,450.....	40		25	13	2	2		1		1	1			1					
\$3,450 and under \$3,550.....	16		2	8	6	4			3	1	4			1	3				
\$3,550 and under \$3,650.....	11	1	6	1	3	2			1	1	4			4					
\$3,650 and under \$3,750.....	4		2		2	1				1	2			1	1				
\$3,750 and under \$3,850.....	8	2	1	5						7		2		5					
\$3,850 and under \$3,950.....	1				1														
\$3,950 and under \$4,050.....	32		26	5	1	3		2		1				1					
\$4,050 and over.....	42	6	18	13	5	23	3	8	8	11	4	7	12	13	14	4	15	16	1
Average annual salary.....	\$2,242	\$2,219	\$2,302	\$2,224	\$2,186	\$3,788	\$6,590	\$4,530	\$3,696	\$3,200	\$3,043	\$4,080	\$3,244	\$3,098	\$2,638	\$3,271	\$4,200	\$2,940	\$2,136

See footnotes at end of table.

TABLE 5.—Distribution of employees in fire departments of 67 Middle Atlantic cities, by selected occupation and salary, July 1, 1938 ¹—Con.

Salary class	Battalion chiefs				Captains					Lieutenants				Engineers, fire engine					
	All cities ⁴	City group ²			All cities	City group ²				All cities	City group ²				All cities	City group ²			
		I	II	III		I	II	III	IV		I	II	III	IV		I	II	III	IV
Number of cities reporting indicated occupations.....	19	3	10	6	55	3	12	18	22	35	2	9	9	15	12	1	4	6	1
All salaries.....	105	39	51	15	945	263	310	253	119	511	146	194	98	73	82	6	22	51	3
Under \$950.....																			
\$950 and under \$1,050.....																			
\$1,050 and under \$1,150.....																			
\$1,150 and 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.....					8			8											
\$1,650 and under \$1,750.....										8				8					
\$1,750 and under \$1,850.....					26				26	21			17	4					
\$1,850 and under \$1,950.....					40			13	27	39			12	27	1			1	
\$1,950 and under \$2,050.....	5			5	51			41	10	11			11						
\$2,050 and under \$2,150.....					11			8	3	34		34			31		19	12	
\$2,150 and under \$2,250.....	2			2	75		56	17	2	64		51	13		9	6	3		
\$2,250 and under \$2,350.....	8		8		41		26	13	2	35		17	18		12			12	
\$2,350 and under \$2,450.....	2			2	25		24		1	131	94	36		1	22			22	
\$2,450 and under \$2,550.....	2		2		143	90	33	12	8	24		24			3				3
\$2,550 and under \$2,650.....	4		4		41		36		5	7									
\$2,650 and under \$2,750.....	8		8		134	122	12			80	52	14		14	3			3	
\$2,750 and under \$2,850.....					97		15	82		6				6					
\$2,850 and under \$2,950.....	11	11			55	51				9			9						
\$2,950 and under \$3,050.....	4		4		35		9	16	10	7					1				
\$3,050 and under \$3,150.....	10		10		31		4	15	12	6				6					
\$3,150 and under \$3,250.....	19	18	1		109		77	25	7									1	
\$3,250 and under \$3,350.....	12	10	2																
\$3,350 and under \$3,450.....	5		5							29		18	11						
\$3,450 and under \$3,550.....	4			4															
\$3,550 and under \$3,650.....					2					2									
\$3,650 and under \$3,750.....	1		1																
\$3,750 and under \$3,850.....																			
\$3,850 and under \$3,950.....							18	3											
\$3,950 and under \$4,050.....	6		6		21														
\$4,050 and over.....	2			17	2														
Average annual salary.....	\$3, 012	\$3, 122	\$3, 000	\$2, 769	\$2, 614	\$2, 652	\$2, 736	\$2, 559	\$2, 333	\$2, 392	\$2, 484	\$2, 404	\$2, 305	\$2, 290	\$2, 244	\$2, 200	\$2, 107	\$2, 296	\$2, 460

Salary class	Drivers				Privates, all grades				Automobile mechanics				Fire-alarm operators						
	All cities ³	City group ²			All cities	City group ²			All cities	City group ²			All cities	City group ²					
		II	III	IV		I	II	III		IV	I	II		III	IV	I	II	III	IV
Number of cities reporting indicated occupations.....	23	7	7	9	60	3	12	21	24	28	2	7	10	9	19	2	8	6	3
All salaries.....	346	87	143	116	7,918	3,048	2,427	1,583	860	70	22	22	17	9	⁶ 133	51	50	18	14
Under \$950.....															2				2
\$950 and under \$1,050.....															2				2
\$1,050 and under \$1,150.....																			
\$1,150 and under \$1,250.....																			1
\$1,250 and under \$1,350.....					4				4						10		3		7
\$1,350 and under \$1,450.....					1			1							1		1		
\$1,450 and under \$1,550.....	4			4	71		6		13						11		7	4	
\$1,550 and under \$1,650.....	65		30	35	74		14	39	21	1			1						
\$1,650 and under \$1,750.....	15		15		348		33	174	141	1				1		3			3
\$1,750 and under \$1,850.....	43			43	522	100	63	187	172	2			1	1	49	43	3	3	
\$1,850 and under \$1,950.....	20		20		358	8	242	105	3	5		2	1	2	12		12		
\$1,950 and under \$2,050.....	77	77			843	50	640	133	20	5		3	1	1	16	4	12		
\$2,050 and under \$2,150.....	18		18		517	24	379	105	9	7	4	1	2						
\$2,150 and under \$2,250.....	23			23	2,384	2,236	11	98	39	22	18		2	2	1			1	
\$2,250 and under \$2,350.....	32	10	18	4	1,034	630	261	96	47	2		2		10	4	6			
\$2,350 and under \$2,450.....	16		9	7	304		133	138	33	3			2	1					
\$2,450 and under \$2,550.....					1,148		531	361	256	7			7		9	6	3		
\$2,550 and under \$2,650.....					7		5	2		1				1					
\$2,650 and under \$2,750.....	33		33		36				36	4		4		3					3
\$2,750 and under \$2,850.....					66				66										
\$2,850 and under \$2,950.....					69		9	60											
\$2,950 and under \$3,050.....					132		100	32		10		10							
\$3,050 and under \$3,150.....																			
\$3,150 and under \$3,250.....																			
\$3,250 and under \$3,350.....																			
\$3,350 and under \$3,450.....																			
\$3,450 and under \$3,550.....																			
\$3,550 and under \$3,650.....																			
\$3,650 and under \$3,750.....																			
\$3,750 and under \$3,850.....																			
\$3,850 and under \$3,950.....																			
\$3,950 and under \$4,050.....																			
\$4,050 and over.....																			
Average annual salary.....	\$1,995	\$2,049	\$2,080	\$1,849	\$2,188	\$2,200	\$2,212	\$2,140	\$2,169	\$2,318	\$2,176	\$2,610	\$2,249	\$2,081	\$1,833	\$1,855	\$1,938	\$1,589	\$1,687

See footnotes at end of table.

TABLE 5.—Distribution of employees in fire departments of 67 Middle Atlantic cities, by selected occupation and salary, July 1, 1938 ¹—Con.

Salary class	Electricians				Linemen and other construction employees				Others					
	All cities ³	City group ²			All cities	City group ²			All cities	City group ²				
		II	III	IV		I	II	III		IV	I	II	III	IV
Number of cities reporting indicated occupations.....	14	4	4	6	22	2	10	5	5	67	3	12	23	29
All salaries.....	17	5	5	7	770	14	40	9	7	424	181	143	57	43
Under \$950.....										83	78	1	4	
\$950 and under \$1,050.....														
\$1,050 and under \$1,150.....														
\$1,150 and under \$1,250.....					2				2					
\$1,250 and under \$1,350.....										3			3	1
\$1,350 and under \$1,450.....										6				
\$1,450 and under \$1,550.....										8				
\$1,550 and under \$1,650.....										19				
\$1,650 and under \$1,750.....					3			2	1	10				
\$1,750 and under \$1,850.....					1				1	16				
\$1,850 and under \$1,950.....	4			2	10	8			2	27	21	5	2	2
\$1,950 and under \$2,050.....	3	1		2	4		3		1	24	8	5	6	6
\$2,050 and under \$2,150.....	3		1	2	10		8			14	1	1	4	3
\$2,150 and under \$2,250.....	2				12	4				20	4	12	4	3
\$2,250 and under \$2,350.....	1	2			9	6	2			24	16	5	2	2
\$2,350 and under \$2,450.....	1	1	1		9	9				23	6	8	6	3
\$2,450 and under \$2,550.....					3	2			1	24	10	10	2	2
\$2,550 and under \$2,650.....	2		1	1	2	2				9	2	4	4	3
\$2,650 and under \$2,750.....					12		11	1		33	3	26	3	1
\$2,750 and under \$2,850.....										7	2	5		
\$2,850 and under \$2,950.....										22	6	13	2	1
\$2,950 and under \$3,050.....										12	1	4	7	
\$3,050 and under \$3,150.....					1					7		4	3	
\$3,150 and under \$3,250.....					1		1	1		9		4	3	
\$3,250 and under \$3,350.....										2		2		2
\$3,350 and under \$3,450.....										4		2		1
\$3,450 and under \$3,550.....										0		5	3	
\$3,550 and under \$3,650.....										3	1	1	1	1
\$3,650 and under \$3,750.....										3		1		
\$3,750 and under \$3,850.....										3		1		
\$3,850 and under \$3,950.....	1	1								3		1		2
\$3,950 and under \$4,050.....										3	1	2		
\$4,050 and over.....										1		1		
										1				1
										1			1	
										6		18 4	19 1	19 1
Average annual salary.....	\$2, 118	\$2, 388	\$2, 042	\$1, 980	\$2, 098	\$1, 950	\$2, 232	\$2, 047	\$1, 689	(20)	(20)	(20)	(20)	(20)

¹ For a more detailed analysis, see appendix tables D, E, F, and G.

² Group I includes cities having a population of 500,000 or more; group II, cities of 100,000 and under 500,000; group III, cities of 50,000 and under 100,000; and group IV, cities of 25,000 and under 50,000, based on U. S. Census of Population for 1930.

³ No employees in this occupation in cities of group I.

⁴ No employees in this occupation in cities of group IV.

⁵ Includes only regular, full-time employees.

⁶ Includes telephone operators, but not chief fire alarm operators.

⁷ Includes 2 cable splicers in group I and 1 in group II.

⁸ Includes 1 at \$5,970, 1 at \$6,300, and 1 at \$7,500.

⁹ Includes 1 at \$4,200, 1 at \$4,400, 2 at \$4,500, 1 at \$4,900, 1 at \$5,200, 1 at \$6,000, and 1 at \$6,500.

¹⁰ Includes 1 at \$4,200, 1 at \$4,300, 1 at \$4,265, 3 at \$5,000, 1 at \$5,500, and 1 at \$6,000.

¹¹ Includes 1 at \$4,312, 1 at \$4,500, 1 at \$4,700, and 1 at \$4,833.

¹² Includes 1 at \$4,200 and 2 at \$4,500.

¹³ Includes 2 at \$4,500 and 1 at \$5,000.

¹⁴ Receives \$5,000.

¹⁵ Each receives \$4,200.

¹⁶ Receives \$4,750.

¹⁷ Each receives \$4,280.

¹⁸ Includes 1 at \$4,500 and 3 at \$5,000.

¹⁹ Receives \$4,250.

²⁰ No average computed because such a heterogeneous group of occupations.

Salaries of Privates

Of the 67 cities included in part II of this study, 7 had volunteers in place of privates. Privates constituted approximately three-fourths of all employees in the remaining 60 cities, and received a little less than three-fourths of the total salaries. Furthermore, since over 90 percent of all privates were in the first grade, the salary rates applicable to first-grade privates in the 60 cities had a marked effect on the distribution of salaries for all fire-department employees in the Middle Atlantic area.

Rates of pay in effect for privates on July 1, 1938, ranged from \$1,300 to \$3,000 a year. However, the salaries of almost four-fifths of the privates shown in table 6 were in the \$600 range beginning at \$1,950. The maximum salary paid to privates in the 3 cities comprising group I was \$2,310, and the lowest reported in these cities was \$1,825; 94 percent of all privates in group I were in the \$200 interval beginning at \$2,150. In all 3 groups of smaller cities, not only were the ranges of salaries for privates wider, but the concentration of salaries was less intense. Some privates in cities of both group II and group III of the Middle Atlantic region were paid as much as \$3,000. As has already been pointed out, these are cities adjacent to New York City, where the scale for first-grade privates was also \$3,000. The maximum salary of \$2,750 for privates in the cities with a population of 25,000 to 50,000 was reported by the department of White Plains, N. Y., which is also near New York City.

Despite the differences among the several population groups in ranges of salaries for privates, the average rate of pay was about the same in all city groups. The highest, \$2,212 per year, in cities of group II, was only about 3 percent above the average in group III which had the lowest average.

TABLE 6.—Distribution of privates in fire departments of 60¹ Middle Atlantic cities, by salary and grade, July 1, 1938

Salary class	All grades									
	Number					Percentage				
	All cities	City group ²				All cities	City group ²			
		I	II	III	IV		I	II	III	IV
All salaries.....	7,918	3,048	2,427	1,583	860	100.0	100.0	100.0	100.0	100.0
\$1,250 and under \$1,350.....	4				4	.1				.5
\$1,350 and under \$1,450.....	1			1		(⁴)			1	
\$1,450 and under \$1,550.....	71		6	52	13	.9		.2	3.3	1.5
\$1,550 and under \$1,650.....	74		14	39	21	.9		.6	2.5	2.4
\$1,650 and under \$1,750.....	348		33	174	141	4.4		1.4	11.0	16.4
\$1,750 and under \$1,850.....	522	100	63	187	172	6.6	3.3	2.6	11.8	20.0
\$1,850 and under \$1,950.....	358	8	242	105	3	4.5	.3	10.0	6.6	.4
\$1,950 and under \$2,050.....	843	50	640	133	20	10.6	1.6	26.4	8.4	2.3
\$2,050 and under \$2,150.....	517	24	379	105	9	6.5	.8	15.6	6.6	1.0
\$2,150 and under \$2,250.....	2,384	2,236	11	98	39	30.1	73.3	.4	6.2	4.5
\$2,250 and under \$2,350.....	1,034	630	261	96	47	13.1	20.7	10.7	6.1	5.5
\$2,350 and under \$2,450.....	304		133	138	33	3.8		5.5	8.7	3.8
\$2,450 and under \$2,550.....	1,148		531	361	256	14.5		21.9	22.8	29.8
\$2,550 and under \$2,650.....	7		5	2		.1		.2	.1	
\$2,650 and under \$2,750.....	36				36	.5				4.2
\$2,750 and under \$2,850.....	66				66	.8				7.7
\$2,850 and under \$2,950.....	69		9	60		.9		.4	3.8	
\$2,950 and under \$3,050.....	132		100	32		1.7		4.1	2.0	

Salary class	Number of privates by specified grade									
	First					Second				
	All cities	City group ²				All cities	City group ²			
		I	II	III	IV		I	II	III	IV
All salaries.....	7,245	2,866	2,190	1,424	765	172		99	44	29
\$1,250 and under \$1,350.....										
\$1,350 and under \$1,450.....										
\$1,450 and under \$1,550.....	52			52						
\$1,550 and under \$1,650.....					20				18	2
\$1,650 and under \$1,750.....	273			145	128	20			8	12
\$1,750 and under \$1,850.....	346			178	168	57		55		2
\$1,850 and under \$1,950.....	311		220	91	26			16	8	2
\$1,950 and under \$2,050.....	746		604	122	20	4			4	
\$2,050 and under \$2,150.....	445		357	88	6			6		
\$2,150 and under \$2,250.....	2,343	2,236		75	32	7		7		
\$2,250 and under \$2,350.....	1,006	630	249	90	37	6		6		
\$2,350 and under \$2,450.....	287		133	132	22	17			6	11
\$2,450 and under \$2,550.....	1,142		527	359	256					
\$2,550 and under \$2,650.....					36					
\$2,650 and under \$2,750.....	36				36					
\$2,750 and under \$2,850.....	66				66					
\$2,850 and under \$2,950.....	60			60		9		9		
\$2,950 and under \$3,050.....	132		100	32						

See footnotes at end of table.

TABLE 6.—Distribution of privates in fire departments of 60¹ Middle Atlantic cities, by salary and grade, July 1, 1938—Continued

Salary class	Number of privates by specified grade									
	Third					Fourth				
	All cities	City group ²				All cities	City group ²			
		I	II	III	IV		I	II	III	IV
All salaries	233	124	33	40	36	147	50	39	39	19
\$1, 250 and under \$1, 350										
\$1, 350 and under \$1, 450	1			1						
\$1, 450 and under \$1, 550	4				4	9				9
\$1, 550 and under \$1, 650	34			21	13	14		9		5
\$1, 650 and under \$1, 750	16		11	4	1	14		14		
\$1, 750 and under \$1, 850	116	100	8	6	2	3			3	
\$1, 850 and under \$1, 950	6			6						
\$1, 950 and under \$2, 050	9		9			55	50	5		
\$2, 050 and under \$2, 150	29	24	1		4	27		6	17	4
\$2, 150 and under \$2, 250	6		4		2	18			17	1
\$2, 250 and under \$2, 350	10				10					
\$2, 350 and under \$2, 450										
\$2, 450 and under \$2, 550						2			2	
\$2, 550 and under \$2, 650	2			2		5		5		
\$2, 650 and under \$2, 750										
\$2, 750 and under \$2, 850										
\$2, 850 and under \$2, 950										
\$2, 950 and under \$3, 050										

Salary class	Number of privates by specified grade							
	Fifth and below					Probationary		
	All cities	City group ²				All cities ³	City group ²	
		I	II	III	IV		III	IV
All salaries	112	8	66	28	10	9	8	1
\$1, 250 and under \$1, 350	4				4			
\$1, 350 and under \$1, 450								
\$1, 450 and under \$1, 550	6		6					
\$1, 550 and under \$1, 650	5		5			1		1
\$1, 650 and under \$1, 750	17		8		9	8	8	
\$1, 750 and under \$1, 850								
\$1, 850 and under \$1, 950	15	8	6		1			
\$1, 950 and under \$2, 050	29		22		7			
\$2, 050 and under \$2, 150	10		9		1			
\$2, 150 and under \$2, 250	10			6	4			
\$2, 250 and under \$2, 350	12		6		6			
\$2, 350 and under \$2, 450								
\$2, 450 and under \$2, 550	4		4					
\$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								

¹ Does not include 7 cities which had volunteers in place of privates.

² Group I includes cities having a population of 500,000 or more; group II, cities of 100,000 and under 500,000; group III, cities of 50,000 and under 100,000; and group IV, cities of 25,000 and under 50,000, based on U. S. Census of Population for 1930.

³ No probationary employees in cities of groups I and II.

⁴ Less than $\frac{1}{10}$ of 1 percent.

Hours and Working Conditions

Average Hours on Duty Per Week

In the 67 fire departments of the Middle Atlantic cities 93.2 percent of all the employees worked under some form of the 2-platoon system of rotating employees on duty. Of the remaining employees, 0.6 percent were on continuous duty, 0.4 percent worked under some form of the single-platoon system, and 5.8 percent had some other type of assignment, the hours of which usually corresponded with the hours observed by other municipal employees.

Chiefs and their immediate assistants comprised practically the entire group on continuous duty. In other words, these high-ranking officers were subject to call at any time.

The small fraction of the employees shown in table 7 as working under the single-platoon system had average hours on duty which varied from 108 to 144 per week. Under this system a fireman is on duty from two to six 24-hour days (depending upon the variation of the system in use in the particular locality) and then has from 1 to 2½ days off. The days a fireman is off duty are so arranged that the fire department is equally staffed at all hours.

Over 48 percent of all fire-department employees in the 67 Middle Atlantic cities worked under the regular 2-platoon system. Under this system, the firemen are equally divided into 2 platoons. One platoon is assigned to day duty and the other to night duty. In most cities those on day duty start at 8 in the morning and stay on duty for 10 hours, after which time they are relieved by the platoon on night duty which stays on duty for 14 hours, or until 8 the following morning. The variations under the regular 2-platoon system, which are outlined in table 7, result from differences in the number of days a fireman is on day duty before being shifted to night duty. An example of the 2-platoon system with a shift on the third day, as it operated in New York City in 1938, has been given on page 9. Although the hours each platoon goes on duty and the division of the 24 hours of the day differ from one fire department to another, the essential features of the operation of the regular 2-platoon system are illustrated in this chart.

Approximately 45 percent of the employees worked under variations of the 2-platoon system, which afforded more time off than was the case under the regular 2-platoon system. The 7 variations of the 2-platoon system with additional time off shown in table 7 resulted in workweeks which varied in length from an average of 67.0 to 73.5 hours per week. The average for all but about 10 percent of these employees was 72 hours per week. Two cities, both in the population group of 50,000 to 100,000, used the type of 2-platoon system with additional time off which eliminates entirely the 24-hour tours of

TABLE 7.—Distribution of employees in fire departments of 67 Middle Atlantic cities, by average hours on duty per week, July 1, 1938

System of operation	Average hours on duty per week	Number of cities reporting various systems				Number of employees ¹					Percentage of employees					
		All cities	City group ²				All cities	City group ²				All cities	City group ²			
			I	II	III	IV		I	II	III	IV		I	II	III	IV
All systems.....						³ 10,770	3,778	3,385	2,303	1,304	100.0	100.0	100.0	100.0	100.0	
Continuous duty.....	168.0	45	3	9	17	59	5	13	20	21	.6	.1	.4	.9	1.6	
Single-platoon ⁴						44	12	5	15	12	.4	.3	.1	.7	.9	
On 2 days, off 1 day.....	112.0	1		1		4		4			(⁵)					
On 3 days, off 1 day.....	126.0	1				8				8	.1				.7	
On 4.5 days, off 2.5 days.....	108.0	1			1	2				2	(⁵)				.1	
On 5 days, off 2 days.....	120.0	1	1			11	11				.1	.3				
On 5.5 days, off 1.5 days.....	132.0	1		1		1		1			(⁵)	(⁵)				
On 6 days, off 1 day.....	144.0	3	1		1	18	1		15	2	.2	(⁵)	.7		.1	
2-platoon—regular: ⁶						5,180	12	2,785	1,390	993	48.1	.3	82.3	60.3	76.2	
On 24 hours, off 24 hours.....	84.0	19	1	4	7	1,640	12	602	746	280	15.2	.3	17.8	32.4	21.5	
Shift 3d day.....	84.0	17		3	3	1,884		1,017	305	562	17.5		30.1	13.2	43.1	
Shift 4th day.....	84.0	5		1	2	525		167	248	110	4.9		4.9	10.8	8.4	
Shift 5th day.....	84.0	1		1		64		64			.6		1.9			
Shift 6th day.....	84.0	3		2	1	1,026		935	91		9.5		27.6	3.9		
Shift 7th day.....	84.0	1			1	41				41	.4				3.2	
2-platoon—with additional time off duty: ⁷						4,857	3,520	340	777	220	45.1	93.2	10.0	33.7	16.9	
Shift 3d day, off 1 day per week.....	72.0	5	2		2	2,812	2,642		147	23	26.1	69.9		6.4	1.8	
Shift 4th day, off 1 day per week.....	72.0	3			1	186			154	32	1.7			6.7	2.4	
Shift 6th day, off 1 day per week.....	72.0	1		1		200		200			1.9		5.9			
Shift 7th day, off 1 day per week.....	72.0	9		1	3	526		140	221	165	4.9		4.1	9.6	12.7	
Shift 8th day, off 0.9 days per week.....	73.5	1	1			878	878				8.1	23.3				
10-group elimination system, shift 7th day, off 1.5 days per week.....	72.0	1			1	64			64		.6			2.7		
10-group system, shift 5th day, off 1.4 days per week.....	67.0	1			1	191			191		1.8			8.3		
Other ⁸	43.8	55	3	12	21	630	229	242	101	58	5.8	6.1	7.2	4.4	4.4	

¹ For a more detailed analysis of data, see appendix table H.

² Group I includes cities having a population of 500,000 or more; group II, cities of 100,000 and under 500,000; group III, cities of 50,000 and under 100,000; and group IV, cities of 25,000 and under 50,000, based on U. S. Census of Population for 1930.

³ Includes only regular, full-time employees.

⁴ 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.

⁵ Less than $\frac{1}{10}$ of 1 percent.

⁶ Under each variation of the regular 2-platoon system the employees work in 2 platoons, 1 platoon being on duty while the other is off duty. Over a period of days, therefore, each platoon is on duty as many hours as the other, or an average of 12 hours a day and 84 hours a week.

⁷ Under the 2-platoon system with additional time off duty, the employees are on duty less than an average of 84 hours per week. The average number of hours on duty per week is arrived at by deducting the number of additional weekly hours off duty from 84.

⁸ The average number of hours per week is arrived at by dividing the total weekly man-hours by the total number of employees classified as "other."

duty. This is accomplished by dividing the firemen into 10 groups and is known as the 2-platoon, 10-group system. The rotation of firemen under such a system in New York City has been described on pages 9 and 10.

The trend has been away from the 2-platoon to the 3-platoon system with shorter individual tours of duty and consequently shorter average weekly hours. The costliness of the latter system, however, has limited its use to a few cities. At the time this survey was made, the 3-platoon system had not been adopted by any city in the Middle Atlantic region except New York City, where the department was in the process of transition from the 2-platoon to the 3-platoon system. (See page 10.)

Items Supplied to Firemen

In connection with his work, a fireman has to have sleeping quarters whenever he is on night duty; bed, bedding, linen, and laundry; a street uniform, rubber boots, rubber coat, helmet, and various other minor items of equipment. In cities where a fireman has to pay for these facilities and items, his annual net income is decreased proportionately.

All of the fire departments in the 67 Middle Atlantic cities supplied sleeping quarters to men on night duty, but only 40 of them supplied the necessary furnishings and laundry. As can be seen from table 8, 49 cities supplied neither street uniforms nor the cloth and trimmings for uniforms. More than two-thirds of the cities did not supply rubber coats, rubber boots, or helmets.

TABLE 8.—*Distribution of 67 Middle Atlantic cities according to items supplied to firemen, July 1, 1933*

City group ¹	Total number of cities	Number of cities supplying—							
		Sleeping quarters for men on night duty	Beds, bedding, linen, and laundry	Helmets	Rubber coats	Rubber boots	Cloth and trimmings for uniforms	Uniforms	Minor items ²
All cities.....	67	67	40	29	26	21	10	8	48
Group I.....	3	3	2	—	—	—	—	—	2
Group II.....	12	12	7	4	4	2	4	1	8
Group III.....	23	23	12	11	9	8	5	3	19
Group IV.....	29	29	19	14	13	11	1	4	19

¹ Group I includes cities having a population of 500,000 or more; group II, cities of 100,000 and under 500,000; group III, cities of 50,000 and under 100,000; and group IV, cities of 25,000 and under 50,000, based on U. S. Census of Population for 1930.

² Includes badges, caps, work clothing, and toilet articles.

Vacations With Pay

All but 10 of the 10,770 employees in the fire departments of the 57 Middle Atlantic cities received vacations with pay. The vacation periods shown in table 9 ranged between 7 and 33 days a year, but 85 percent of the employees received between 14 and 17 days. Two-week vacation periods were the most popular and were given to almost 47 percent of all employees. The average vacation period for all employees was about 16 days. Fire-department employees in cities of group I had the shortest average vacation period, 14.2 days, as compared with 16.6 days in group II, 16.3 days in group III, and 15.8 days in group IV.

TABLE 9.—*Distribution of employees in fire departments of 67 Middle Atlantic cities, according to days of vacation with pay, July 1, 1938*

City group ¹	Number of cities	Total member of employees	Number of employees having—								
			No vacation	7 days	10 days	14 days	15 days	16 days	17 days	18 days	19 days
All cities.....	67	² 10,770	10	5	17	5,022	2,764	883	519	271	177
Group I.....	3	3,778				2,896	881				
Group II.....	12	3,385		4		796	1,219	378	129	148	140
Group III.....	23	2,308	8		17	786	356	411	224	45	34
Group IV.....	29	1,304	2	1		544	308	94	166	78	3

City group ¹	Number of employees having—											
	20 days	21 days	22 days	23 days	24 days	25 days	26 days	27 days	28 days	30 days	31 days	33 days
All cities.....	228	253	13	329	81	99	43	23	7	24	1	1
Group I.....		1										
Group II.....	102	24	5	297	35	42	42	16	2	5		1
Group III.....	121	197	2	24	44	8		6	4	16		
Group IV.....	5	31	6	8	2	49	1	1	1	3	1	

¹ Group I includes cities having a population of 500,000 or more; group II, cities of 100,000 and under 500,000; group III, cities of 50,000 and under 100,000; and group IV, cities of 25,000 and under 50,000, based on U. S. Census of Population for 1930.

² Includes only regular, full-time employees.

Promotions of Lower-Grade Privates

The annual income of a fireman just entering the service is substantially affected not only by the number of grades he has to go through before becoming a full-fledged, first-grade private, but also by the length of time it takes him to go through these lower grades. As is shown in table 10, all but 3 of the 60 cities which had regular, full-time privates, had classifications of more than 1 grade. Some of the cities had as many as 8 grades of privates.⁵ The fire departments of 7 cities (all in the 2 smallest population groups) which did

⁵ See appendix tables D, E, F, and G.

not have privates, had only small staffs, usually officers and drivers, which were supplemented by volunteers or call men. Only the regular full-time employees in these 7 departments have been included in this survey.

All but 1 of the 57 cities maintaining several grades of privates had a definite promotion system for their lower-grade privates. One city automatically promoted its lower-grade privates after 6 months of service, 51 cities after a year of service, and 4 after a civil-service examination.

TABLE 10.—*Distribution of 60¹ Middle Atlantic cities according to method of promoting lower-grade privates, July 1, 1938*

City group ²	Total number of privates	Number of cities					
		Total cities	With automatic promotion after—		With promotion by—		With privates all in 1 grade
			6 months	1 year	Civil service	Appointment	
All cities.....	7,918	60	1	51	4	1	3
Group I.....	3,048	3		3			
Group II.....	2,427	12		11	1		
Group III.....	1,583	21	1	16	1	1	2
Group IV.....	860	24		21	2		1

¹ Does not include 7 cities which had volunteers in place of privates.

² Group I includes cities having a population of 500,000 or more; group II, cities of 100,000 and under 500,000; group III, cities of 50,000 and under 100,000; and group IV, cities of 25,000 and under 50,000, based on U. S. Census of Population for 1930.

³ Probationary to third grade, 6 months; third grade to second grade, 1 year; second grade to first grade, 2 years.

Distribution of Employees and Salaries

Division and Occupation

Practically 94 percent of all employees in the 67 fire departments of the Middle Atlantic cities were in the fire-fighting divisions, and they received a slightly higher proportion of the total salaries in 1938. The personnel of the fire-fighting divisions in these 67 cities was distributed among the various ranks or occupations as follows: Chiefs, assistants to chiefs, and battalion chiefs, who formed 2.4 percent of all employees; captains and lieutenants, 13.5 percent; privates, drivers, and engineers, 77.6 percent; and all others, 0.3 percent. The corresponding proportions of total salaries paid to these groups, which are also shown in table 11, were 3.4 percent, 15.3 percent, 75.5 percent, and 0.3 percent, respectively.

In these comparisons the data for privates, drivers, and engineers were combined because some cities do not distinguish among these occupations but classify all such employees as privates. For example, of 3,778 fire-department employees reported in the cities with a population of 500,000 or more, there were only 6 fire-engine engineers

and no drivers reported. In these 3 cities the firemen performing these functions were classed as privates. The data for captains and lieutenants were combined for the same reason. Some cities do not have any lieutenants but have a proportionately greater number of captains, or vice versa.

In actual operation the fire-fighting divisions are not so large relatively as the above percentages indicate because: (1) All fire departments assign firemen from the fire-fighting divisions to the other divisions and carry these assigned men on the fire-fighting list; (2) some fire departments contract their maintenance work to private concerns; (3) a few have the local telephone company or a separate city bureau handle their fire-alarm work; and (4) some depend on the building inspectors' offices for most of their fire-prevention work. The employees outside the fire-fighting divisions were distributed among other divisions as follows: Apparatus, 1.6 percent; fire prevention, 0.5 percent; fire alarm, 2.7 percent; clerical, 0.5 percent; and miscellaneous, 0.9 percent. In terms of salary payments, these last 3 divisions were slightly less important than they were in terms of personnel.

TABLE 11.—Percentage distribution ¹ of employees and salaries in fire departments of 67 Middle Atlantic cities, by division, July 1, 1938

Division and occupation	Percentage of all employees					Percentage of total salaries				
	All cities	City group ²				All cities	City group ²			
		I	II	III	IV		I	II	III	IV
All divisions.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Fire fighting.....	93.8	94.0	92.5	95.5	94.0	94.5	95.7	92.5	95.7	94.3
Chiefs.....	.6	.1	.4	1.0	2.0	1.0	.2	.7	1.6	2.9
Assistant or deputy chiefs.....	.7	.1	.6	1.2	2.0	1.0	.2	.8	1.6	2.4
Assistant deputy chiefs.....	.1	.1	.1	.2	.1	.1	.2	.3	.3	.1
Battalion chiefs.....	1.0	1.0	1.5	.7	.7	1.3	1.5	2.0	.8	.8
Captains.....	8.8	7.0	9.2	11.0	9.1	10.2	8.3	10.9	12.7	9.7
Lieutenants.....	4.7	3.9	5.7	4.2	5.6	5.1	4.3	6.0	4.4	5.9
Pilots.....	.1	.2	(3)			.1	.3	(3)		
Engineers, fire engine.....	.8	.2	.6	2.2	.2	.8	.2	.6	2.3	.3
Engineers, marine.....	.1	.3	(3)			.1	.3	(3)		
Drivers.....	3.2		2.6	6.2	8.9	2.8		2.3	5.8	7.5
Privates, all grades.....	73.5	80.7	71.7	68.7	66.0	71.8	80.0	68.9	66.1	65.4
Miscellaneous.....	.2	.5	.1	.1	.1	.2	.4	.1	.1	.1
Fire prevention.....	.5		1.1	.4	.5	.5		1.2	.4	.5
Apparatus.....	1.6	1.6	1.9	1.4	1.2	1.6	1.4	2.1	1.5	1.2
Fire alarm.....	2.7	2.0	3.6	2.1	3.4	2.5	1.8	3.3	1.9	3.1
Clerical.....	.5	.2	.6	.4	.6	.4	.2	.6	.4	.6
Miscellaneous.....	.9	2.2	.3	.2	.3	.5	.9	.3	.1	.3

¹ Based on figures in appendix table I.

² Group I includes cities with a population of 500,000 or more; group II, cities of 100,000 and under 500,000; group III, cities of 50,000 and under 100,000; and group IV, cities of 25,000 and under 50,000, based on U. S. Census of Population for 1930.

³ Less than ¹/₁₀ of 1 percent.

The fire-fighting divisions constituted approximately the same percentages of all employees in each of the 4 groups of cities: The lowest was 92.5 percent in cities of group II, as opposed to the highest of 95.5 percent in group III. The same generalization could be made

with reference to the percentage of total salaries going to employees in the fire-fighting divisions in each of the population groups.

The percentage of employees in the various occupations within the fire-fighting divisions, however, varied among the 4 city groups. Officers in the larger cities supervised a relatively greater number of subordinates than those in the smaller cities, and, as a result, constituted a smaller percentage of all employees. Chiefs, for example, constituted 0.1 percent of all employees in cities of group I, 0.4 percent in group II, 1.0 percent in group III, and 2.0 percent in group IV. Privates, on the other hand, constituted 81 percent of all employees in cities comprising group I, 72 percent in group II, 69 percent in group III, and 66 percent in group IV. It does not follow from this relationship, of course, that the officers in small cities have less to do than those in the larger centers of population.⁶ Officers in small cities have more varied duties, such as doing their own secretarial work and being directly in charge of such divisions as fire-prevention, apparatus, or fire-alarm.

TABLE 12.—Number and salaries of supervisory employees¹ as percentages of total fire department employees and total salaries in 67 Middle Atlantic cities, July 1, 1938

Item	All cities	City group ²			
		I	II	III	IV
A. Supervisory employees as percentage of all employees.....	16.9	12.3	18.7	19.5	20.5
B. Supervisory salaries as percentage of total salaries.....	19.8	14.9	22.1	22.8	22.9
C. Ratio of B to A.....	1.17	1.21	1.18	1.17	1.12

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

² Group I includes cities having a population of 500,000 or more; group II, cities of 100,000 and under 500,000; group III, cities of 50,000 and under 100,000; and group IV, cities of 25,000 and under 50,000; based on U. S. Census of Population for 1930.

The ratios of supervisory employees to all employees varied in inverse relation to the size of city. In other words, these ratios rose from 12.3 percent in cities with a population of 500,000 and over to 20.5 percent in cities with only 25,000 to 50,000 inhabitants. Likewise, similar ratios for pay rolls also rose from close to 15 percent in cities of group I to nearly 23 percent in group IV. The increase from large to small cities in the ratios of supervisory personnel to total employees was greater than the increase in the ratios of salaries of supervisory employees to all salaries. This fact is brought out by the ratios in line C of table 12, which decreased from 1.21 in cities of group I to 1.12 in cities of group IV. In other words, in the smaller

⁶ The ratio of privates, drivers, and engineers to total fire-department employees was higher in the 67 Middle Atlantic cities than in cities of most other geographic regions because the Middle Atlantic States have a disproportionate number of large cities.

cities the differences between the salaries of supervisory and non-supervisory employees were of less magnitude than was the case in fire departments in the larger cities.

Per Capita Distribution

The number of fire-department employees per 10,000 persons protected in each of the 60 fire departments in the Middle Atlantic cities which maintained complete, full-time staffs ranged from 6 employees in Sharon, Pa., to 33 in Atlantic City, N. J. The average for all 60 cities combined was 14 fire-department employees per 10,000 population.

The group of smallest cities, 25,000 to 50,000, had 14 fire department employees for every 10,000 population, as compared with 15 in group III and 16 in group II. However, in the Middle Atlantic division the 3 cities in group I reported fewer employees in relation to population than any of the other city-size groups. The comparatively small number of 12 employees per 10,000 of population in group I was due mainly to the Philadelphia department, which had only 10 employees per 10,000 of population. Although Philadelphia was about 3 times as populous as either Buffalo or Pittsburgh, it had only a little over twice as many firemen as did each of these other cities of group I.

It does not necessarily follow from this discussion that the cities with a relatively large number of firemen provide more adequate protection nor that those with a relatively small number of firemen are understaffed. Many other factors, such as the strictness of building regulations, the effectiveness of the fire-prevention division, and the quantity and quality of the equipment of the fire department, affect the adequacy of a fire department and the number of firemen necessary for efficient operation. Also, in some cities, such as Atlantic City, N. J., the number of firemen shown for every 10,000 of population is higher because the city has a large transient population which is not reflected in the population data.

The per capita salary cost of fire protection to the community in the same 60 cities having complete, full-time staffs ranged between \$1.11 in Sharon, Pa., and \$8.11 in Atlantic City, N. J. The average for all 60 cities was \$3.13.

Per capita salary costs tended to increase with the size of city, rising from \$3.06 per capita in the group of smallest cities, group IV, to \$3.41 in group III, and \$3.71 in group II. This relationship did not obtain in the 3 cities of group I, however. The relatively low rate of \$2.63 per capita in the group of largest cities was due primarily to the relatively small number of employees and low salaries in Philadelphia. Per capita salary costs in each of the Middle Atlantic cities are shown in table C of the appendix.

Part III
Appendix

Appendix

The tables in the appendix present detailed information on some of the subjects discussed in the body of the report. Table A shows the number of employees, salary rates, and total salaries in each occupation in the New York City fire department. Table B supplements table A by showing the number of employees and salary rates for occupations in which the salaries were over wide ranges.

Table C and the following tables cover in detail information presented in part II of the report. Table C not only lists the cities covered by part II but shows the population for each city and the relationship of number of fire-department employees and their salary costs to population. The number of fire-department employees in each city and salary rates for individual occupations are shown in tables D through G, according to size of city. Table H shows weekly hours on duty under each system of operation, by occupational division for all cities and for each size group. Table I summarizes total employment and total salaries paid in each division and occupation for all cities and for each size group. All data, except population, are as of July 1, 1938.

TABLE A.—*Number, salary rates, and total salaries of New York City fire-department employees, by occupation, July 1, 1938*

Division and occupation	Number	Salary rate	Total salary
Total.....	10, 489		\$29, 592, 234
Fire fighting:			
Commissioners 1.....	1	\$12, 500	12, 500
Assistant or deputy commissioners.....	2	7, 500	23, 000
Assistant deputy commissioners.....	1	8, 000	
Battalion chiefs.....	44	6, 300	277, 200
Captains.....	135	5, 300	715, 500
Lieutenants.....	354	4, 500	1, 593, 000
Pilots.....	931	3, 900	3, 630, 900
Engineers, fire engine.....	30	3, 500	105, 000
Engineers, marine.....	38	3, 400	129, 200
Privates:			
1st grade.....	64	3, 400	217, 600
2d grade.....	4, 440	3, 000	13, 320, 000
3d grade.....	750	2, 500	1, 875, 000
4th grade.....	1, 763	2, 000	3, 526, 000
Probationary.....	879	2, 000	1, 758, 000
Miscellaneous:			
Stokers.....	268	2, 000	536, 000
Fire prevention:			
Marshals or wardens.....	43	2, 548	109, 564
Assistant marshals or wardens.....	1	7, 300	7, 300
Chief inspectors.....	23	1, 800 to 3, 600	59, 680
Inspectors.....	1	4, 000	4, 000
Miscellaneous:			
Automobile enginemn.....	161	1, 800 to 4, 260	397, 892
Cashiers.....	1	2, 040	2, 040
Chief examiners.....	1	3, 720	3, 720
Plan examiners.....	1	3, 780	3, 780
Special investigators.....	1	3, 120	3, 120
	3	2, 880	8, 640

See footnotes at end of table.

TABLE A.—Number, salary rates, and total salaries of New York City fire-department employees, by occupation, July 1, 1938—Continued

Division and occupation	Number	Salary rate	Total salary
Apparatus:			
Machinists.....	2 45	\$2, 294 to 2, 600	\$105, 582
Master mechanics.....	5	2, 818	14, 090
Auto mechanics.....	11	2, 438	35, 035
	3	2, 739	
General mechanics:			
Battery constructors.....	3	2, 000	6, 000
Blacksmiths.....	4	2, 375	9, 500
Carpenters.....	2	2, 800	5, 600
Coremakers.....	1	2, 125	2, 125
Hose repairmen.....	4	1, 875	7, 500
Letterers.....	1	2, 938	2, 938
Nickel platers.....	1	1, 938	1, 938
Painters, carriage.....	5	2, 375	11, 875
Pattern makers.....	2	2, 250	4, 500
Rubber-tire repairmen.....	2	1, 938	3, 876
Stripers.....	2	2, 938	5, 876
Upholsterers, carriage.....	1	2, 500	2, 500
Welders.....	1	2, 800	2, 800
Wheelwrights.....	5	2, 250	11, 250
Woodworkers.....	1	2, 500	5, 250
	1	2, 750	
Mechanics' helpers:			
Blacksmiths' helpers.....	3	1, 750	5, 250
Machinists' helpers.....	2	1, 750	3, 500
Miscellaneous:			
Cleaners.....	2	960	1, 920
Elevator operators.....	4	1, 410	5, 640
Engineers, stationary.....	1	3, 468	3, 468
Licensed firemen.....	3	1, 993	5, 979
Laborers.....	14	1, 489	20, 846
Watchmen.....	4	1, 740	6, 960
Fire alarm:			
Superintendents.....	1	6, 300	6, 300
Assistant superintendents.....	2 4	3, 840 to 5, 460	18, 540
Chief fire-alarm operators.....	19	3, 300	80, 200
Fire alarm operators.....	5	3, 500	
	2 72	1, 560 to 3, 000	179, 760
Inspectors.....	2 18	1, 800 to 2, 600	39, 780
Electricians.....	2	2, 912	5, 824
Linemen.....	35	2, 217	92, 595
Linemen's helpers.....	6	2, 500	
	8	1, 573	12, 584
Miscellaneous:			
Attendants.....	1	1, 200	1, 200
Automobile engineers.....	2 12	1, 740 to 2, 280	25, 200
Automobile machinists.....	1	2, 340	2, 340
Batterymen.....	11	2, 022	22, 242
Cable splicers.....	13	2, 574	33, 462
Cable splicers' helpers.....	2	1, 573	3, 146
Cable testers.....	8	2, 080	16, 640
Carpenters.....	1	2, 912	2, 912
Clerks.....	2 4	1, 740 to 3, 000	10, 200
Fire-alarm experts.....	1	5, 220	5, 220
Foremen cable splicers.....	1	2, 860	2, 860
House painters.....	4	2, 470	9, 880
Instrument makers.....	3	2, 080	6, 240
Laborers.....	5	1, 573	15, 965
Machinists.....	5	1, 620	
	1	2, 340	2, 340
Machinists' helpers:			
Mechanical draftsmen.....	1	1, 820	1, 820
Stenographers and typists.....	3	3, 120	9, 360
Wiremen.....	1	2, 040	2, 040
	3	2, 015	6, 045
Clerical:			
Secretaries.....	1	5, 250	5, 250
Accountants.....	2	2, 820	5, 640
Clerks.....	2 75	840 to 6, 000	153, 830
Bookkeepers.....	2 3	2, 200 to 2, 400	6, 960
Stenographers.....	2 17	1, 320 to 2, 820	31, 260
Typists.....	2 15	960 to 2, 340	28, 220

See footnotes at end of table.

TABLE A.—*Number, salary rates, and total salaries of New York City fire-department employees, by occupation, July 1, 1938—Continued*

Division and occupation	Number	Salary rate	Total salary
Miscellaneous:			
Inspectors of buildings	{ 1	\$2,460	} \$5,040
Inspectors of heating	1	2,580	
Architectural draftsmen	{ 1	2,400	} 8,640
Foremen mechanics	2	3,120	
Automobile enginemen	{ 2	1,740	} 5,760
Laborers	1	2,280	
Cleaners	{ 8	1,573	} 17,444
Watchmen	3	1,620	
Electricians	4	960	3,840
Carpenters	1	1,740	1,740
House painters	3	2,912	8,736
Blacksmiths	7	2,912	20,384
Bricklayers	8	2,470	19,760
Steamfitters	1	2,470	2,470
Plumbers	1	3,120	3,120
Sheet-metal workers	2	2,912	5,824
Plasterers	4	3,120	12,480
	3	2,912	8,736
	1	3,120	3,120

¹ The fire commissioner is the administrative head of the department.

² See table B for individual salary rates.

TABLE B.—Number and salary rates of New York City fire-department employees in selected occupations, July 1, 1938

Fire prevention				Apparatus		Fire alarm					
Assistant marshals or wardens		Inspectors		Machinists		Assistant superintendents		Fire-alarm operators		Inspectors	
Number	Salary rate	Number	Salary rate	Number	Salary rate	Number	Salary rate	Number	Salary rate	Number	Salary rate
23	-----	161	-----	45	-----	4	-----	72	-----	18	-----
2	\$1,800	2	\$1,800	13	\$2,294	1	\$3,840	1	\$1,560	2	\$1,800
2	2,040	12	1,920	31	2,360	1	4,260	4	1,680	6	2,140
2	2,240	3	2,000	1	2,600	1	4,980	6	1,740	5	2,240
5	2,280	1	2,160	-----	-----	1	5,460	5	1,800	1	2,340
1	2,340	14	2,240	-----	-----	-----	-----	5	2,040	3	2,400
2	2,400	1	2,250	-----	-----	-----	-----	1	2,220	1	2,600
1	2,580	1	2,280	-----	-----	-----	-----	2	2,280	-----	-----
1	3,000	23	2,340	-----	-----	-----	-----	3	2,340	-----	-----
1	3,120	62	2,400	-----	-----	-----	-----	11	2,400	-----	-----
2	3,240	2	2,415	-----	-----	-----	-----	1	2,640	-----	-----
2	3,360	4	2,460	-----	-----	-----	-----	33	3,000	-----	-----
1	3,480	7	2,580	-----	-----	-----	-----	-----	-----	-----	-----
1	3,600	2	2,700	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	1	2,760	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	1	2,880	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	1	2,920	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	1	2,940	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	1	2,952	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	9	3,000	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	1	3,060	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	3	3,120	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	5	3,240	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	1	3,660	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	1	4,200	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	2	4,260	-----	-----	-----	-----	-----	-----	-----	-----

Fire alarm—Continued				Clerical							
Automobile enginemmen		Clerks		Clerks		Bookkeepers		Stenographers		Typists	
Number	Salary rate	Number	Salary rate	Number	Salary rate	Number	Salary rate	Number	Salary rate	Number	Salary rate
12	-----	4	-----	75	-----	3	-----	17	-----	15	-----
1	\$1,740	1	\$1,740	4	\$840	1	\$2,220	1	\$1,320	1	\$960
1	1,980	1	2,640	1	960	1	2,340	4	1,440	1	1,140
5	2,040	1	2,820	1	1,080	1	2,400	3	1,560	1	1,560
2	2,220	1	3,000	5	1,140	-----	-----	2	1,740	2	1,620
3	2,280	-----	-----	2	1,440	-----	-----	1	1,920	2	1,680
-----	-----	-----	-----	7	1,560	-----	-----	2	2,160	4	1,740
-----	-----	-----	-----	3	1,620	-----	-----	1	2,280	2	2,160
-----	-----	-----	-----	4	1,680	-----	-----	2	2,340	2	2,340
-----	-----	-----	-----	13	1,740	-----	-----	1	2,820	-----	-----
-----	-----	-----	-----	1	2,120	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	3	2,160	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	1	2,220	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	1	2,280	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	4	2,340	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	2	2,400	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	2	2,520	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	4	2,640	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	2	2,820	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	3	3,000	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	1	3,060	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	2	3,120	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	1	3,220	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	2	3,240	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	2	3,360	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	1	3,420	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	1	3,480	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	1	3,600	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	1	6,000	-----	-----	-----	-----	-----	-----

TABLE C.—Fire-department employees and salary costs in relation to population in 67 Middle Atlantic cities with a population of 25,000 or more,¹ July 1, 1938

City	Population ²	Em- ploy- ees per 10,000	Per capita salary costs	City	Popula- tion ²	Em- ploy- ees per 10,000	Per capita salary costs
All cities.....	7,927,667	14	\$3.13	Group III—cities of 50,000 to 100,000— Continued.			
Group I—cities of 500, 000 or more.....	3,193,854	12	2.63	Schenectady, N. Y.....	95,692	14	\$3.06
Buffalo, N. Y.....	573,076	16	3.67	Troy, N. Y.....	72,763	20	3.55
Philadelphia, Pa.....	1,950,961	10	2.19	Union City, N. J.....	58,659	20	5.19
Pittsburgh, Pa.....	669,817	13	3.00	Wilkes-Barre, Pa.....	86,626	14	2.68
Group II—cities of 100, 000 to 500,000.....	2,098,151	16	3.71	York, Pa.....	55,254	(3)	(3)
Albany, N. Y.....	127,412	18	3.65	Group IV—cities of 25, 000 to 50,000.....	1,043,311	14	3.06
Camden, N. J.....	118,700	14	2.90	Aliquippa, Pa.....	27,116	(4)	(4)
Elizabeth, N. J.....	114,589	15	3.62	Amsterdam, N. Y.....	34,817	16	2.78
Erie, Pa.....	115,967	13	2.45	Auburn, N. Y.....	36,652	15	2.79
Newark, N. J.....	442,337	16	4.32	Belleville, N. J.....	26,974	9	2.33
Paterson, N. J.....	138,513	15	3.63	Bloomfield, N. J.....	38,077	17	4.02
Rochester, N. Y.....	328,132	16	3.45	Clifton, N. J.....	46,875	13	3.43
Scranton, Pa.....	143,433	15	3.04	Easton, Pa.....	34,468	10	1.81
Syracuse, N. Y.....	209,326	18	3.88	Elmira, N. Y.....	47,397	16	2.92
Trenton, N. J.....	123,356	18	4.40	Hazleton, Pa.....	36,765	(3)	(3)
Utica, N. Y.....	101,740	18	3.80	Jamestown, N. Y.....	45,155	15	2.60
Yonkers, N. Y.....	134,646	14	4.16	Kearny, N. J.....	40,716	19	5.06
Group III—cities of 50,000 to 100,000.....	1,592,351	15	3.41	Kingston, N. Y.....	28,088	10	2.09
Allentown, Pa.....	92,563	9	1.68	Montclair, N. J.....	42,017	16	4.54
Altoona, Pa.....	82,054	11	1.92	Nanticoke, Pa.....	26,043	(3)	(3)
Atlantic City, N. J.....	66,198	33	8.11	New Brunswick, N. J.....	34,555	14	3.33
Bayonne, N. J.....	88,979	22	5.90	Newburgh, N. Y.....	31,275	14	2.43
Bethlehem, Pa.....	57,892	7	1.36	New Castle, Pa.....	48,674	10	1.73
Binghamton, N. Y.....	76,662	19	3.89	Orange, N. J.....	35,399	12	2.95
Chester, Pa.....	59,164	(3)	(3)	Perth Amboy, N. J.....	43,516	(4)	(4)
East Organge, N. J.....	68,020	14	3.66	Plainfield, N. J.....	34,422	17	4.35
Harrisburg, Pa.....	80,339	9	1.47	Poughkeepsie, N. Y.....	40,288	10	2.18
Hoboken, N. J.....	59,261	24	5.76	Rome, N. Y.....	32,338	11	2.05
Irvington, N. J.....	56,733	13	3.37	Sharon, Pa.....	25,908	6	1.11
Johnstown, Pa.....	66,993	13	2.40	Watertown, N. Y.....	32,205	15	2.76
Lancaster, Pa.....	59,949	11	1.65	West New York, N. J.....	37,107	20	5.22
McKeesport, Pa.....	54,632	12	2.37	White Plains, N. Y.....	35,830	22	6.16
Mount Vernon, N. Y.....	61,499	8	2.16	Wilkinsburg, Pa.....	29,639	10	1.89
New Rochelle, N. Y.....	54,000	18	5.20	Williamsport, Pa.....	45,729	11	1.95
Niagara Falls, N. Y.....	75,460	17	3.41	Woodbridge, N. J. ⁵	25,266	(4)	(4)
Passaic, N. J.....	62,959	14	3.82				

¹ Includes all Middle Atlantic cities and urban townships having populations of 25,000 or more, except New York City, which is covered by part I of this bulletin; Jersey City, N. J. (316,715), Reading, Pa. (111,171), Lebanon, Pa. (25,561), and North Bergen Township, N. J. (40,714), for which data were not available; Garfield, N. J. (29,739), which had a system of call men; Lower Merion Township, Pa. (35,166), and Upper Darby Township, Pa. (46,626), both of which had volunteer systems; and Norristown, Pa. (35,853), which had a combination system of call men and volunteers.

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

³ Not computed, since fire department consists of small full-time staff supplemented by call men and volunteers; full-time staff included elsewhere in this report. This city not included in computation of ratio of employees per 10,000 or per capita cost for city group or for all cities.

⁴ Not computed, since fire department consists of small full-time staff supplemented by volunteers; full-time staff included elsewhere in this report. This city not included in computation of ratio of employees per 10,000 or per capita cost for city group or for all cities.

⁵ Township classified as urban by special rule of the U. S. Bureau of the Census.

TABLE D.—Distribution of salaries and employees in fire departments of each of 3 Middle Atlantic cities of group I,¹ by occupation, July 1, 1938

Division and occupation	Total number of employees	New York		Pennsylvania			
		Buffalo		Philadelphia		Pittsburgh	
		Number	Salary	Number	Salary	Number	Salary
All occupations.....	3, 778	916	.....	2, 009	.....	853	.....
Fire fighting:							
Chiefs.....	3	1	\$6, 300	1	\$7, 500	1	\$5, 970
Assistant or deputy chiefs.....	5	2	4, 200	1	4, 500	2	3, 750
Battalion or district chiefs.....	39	18	3, 150	11	2, 915	10	3, 300
Captains.....	263	51	2, 850	90	2, 475	122	2, 700
Lieutenants.....	146	52	2, 700	94	2, 365	.....	.....
Pilots.....	9	3	2, 700	6	2, 200	.....	.....
Engineers, fire engine.....	6	6	2, 200	.....	.....	.....	.....
Engineers, marine.....	12	{	{ 2, 340	{ 6	{ 2, 255	.....	.....
.....		3	2, 700				
.....		3	.....		.....
Privates:							
1st grade.....	2, 866	736	2, 200	1, 500	2, 190	630	2, 310
2d grade.....	.....	.....	.....	.....	.....	.....	.....
3d grade.....	124	.....	.....	100	1, 825	24	2, 090
4th grade.....	50	.....	.....	.....	.....	50	1, 980
5th grade.....	8	.....	.....	.....	.....	8	1, 870
Miscellaneous:							
Marine pipemen.....	12	.....	.....	12	1, 650	.....	.....
Stokers.....	6	6	2, 101	.....	.....	.....	.....
Fire prevention.....		(2)	.....	(2)	.....	.....	.....
Apparatus: ²							
Superintendents of machinery.....	2	1	3, 301	1	2, 600	.....	.....
Assistant superintendents of machinery.....	2	1	2, 101	1	2, 300	.....	.....
Machinists.....	8	1	2, 070	7	1, 800	.....	.....
Auto mechanics.....	22	4	2, 070	18	2, 200	.....	.....
General mechanics:							
Blacksmiths.....	5	2	2, 070	3	1, 700	.....	.....
Carpenters.....	3	.....	.....	3	1, 700	.....	.....
Metal workers.....	2	.....	.....	2	1, 900	.....	.....
Painters.....	6	2	2, 070	4	1, 600	.....	.....
Upholsterers.....	1	.....	.....	1	1, 700	.....	.....
Mechanics' helpers:							
Auto mechanics' helpers.....	11	2	1, 620	9	1, 450	.....	.....
Fire alarm: ³							
Superintendents.....	2	1	3, 601	1	2, 500	.....	.....
Assistant superintendents.....	2	1	2, 781	1	2, 400	.....	.....
Operators, fire alarm.....	20	4	2, 300	16	1, 900	.....	.....
Operators, telephone.....	31	4	2, 000	27	1, 800	.....	.....
Linemen.....	12	4	2, 101	8	1, 800	.....	.....
Linemen's helpers.....	3	.....	.....	3	1, 400	.....	.....
Miscellaneous:							
Box testers and battery men.....	1	.....	.....	1	1, 600	.....	.....
Cable splicers.....	1	1	2, 401	.....	.....	.....	.....
Cable splicers' helpers.....	1	1	2, 101	.....	.....	.....	.....
Construction foremen or supervisors.....	1	1	2, 401	.....	.....	.....	.....
Instrument repairmen.....	1	1	2, 401	.....	.....	.....	.....
Superintendents of signal boxes.....	1	.....	.....	1	2, 550	.....	.....
Assistant superintendents of signal boxes.....	1	.....	.....	1	2, 100	.....	.....
Clerical:							
Secretaries.....	2	1	2, 460	1	1, 950	.....	.....
Chief clerks.....	1	.....	.....	.....	.....	1	2, 530
Clerks.....	2	1	1, 480	.....	.....	1	1, 780
Stenographers.....	4	2	2, 101	1	1, 350	1	1, 670
Miscellaneous:							
Cleaners.....	78	.....	.....	78	900	.....	.....
Instructors.....	2	.....	.....	.....	.....	2	1, 920
Storekeepers.....	1	.....	.....	.....	.....	1	1, 650

¹ Includes cities of 500,000 or more, based on U. S. Census of Population for 1930.² Men from uniformed force assigned to this work.³ Work of this division performed by separate city bureau in Pittsburgh.

TABLE E.—Distribution of salaries and employees in fire departments of

Division and occupation	Total number of employees	New Jersey									
		Camden		Elizabeth		Newark		Paterson		Trenton	
		Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary
All occupations ²	3,385	168		174		727		214		224	
Fire fighting:											
1 Chiefs.....	12	1 \$4,000	1 \$4,500	1 \$5,200	1 \$4,200	1 \$4,400					
2 Assistant or deputy chiefs.....	19	2 2,840	1 3,700	1 5,000		2 3,600					
3 Assistant deputy chiefs.....	3			3 4,200							
4 Battalion or district chiefs.....	51	2 2,520	1 3,200	12 } to } 4,000 } 3,000 } to } 3,200 }	4 3,000	2 3,300					
5 Captains.....	310	{ 9 2,280 } 7 2,400 }	12 2,742	90 } 3,000 } to } 3,200 }	33 2,500	15 2,800					
6 Lieutenants.....	194		24 2,464			14 2,700					
7 Pilots.....	1			1 3,500							
8 Engineers, fire engine.....	22	1 2,220									
9 Engineers, marine.....	1			1 3,180							
10 Drivers.....	87	21 2,040	4 2,325			6 2,300					
Privates:											
11 1st grade.....	2,190	105 2,040	106 2,325	527 2,500	143 2,300	133 2,400					
12 2d grade.....	99		6 2,116		7 2,200	6 2,300					
13 3d grade.....	33	6 1,680	9 1,991		1 2,100	4 2,200					
14 4th grade.....	39	3 1,560			5 2,000	6 2,100					
15 5th grade.....	37	6 1,500				19 2,000					
16 6th grade.....	14					3 1,950					
17 7th grade.....	9										
18 8th grade.....	6										
Miscellaneous:											
19 Superintendents of hose.....	1										
20 Assistant superintendents of hose.....	1										
21 Stokers.....	2				2 3,000						
Fire prevention: ⁴											
22 Marshals or wardens.....	4	1 2,400	1 2,464								
23 Chief inspectors.....	1			1 3,200							
24 Inspectors.....	32	1 2,040	1 2,325	22 2,500	4 2,300						
Apparatus: ⁵											
25 Superintendents of machinery.....	9		1 2,742	1 5,000	1 2,700	1 3,200					
26 Assistant superintendents of machinery.....	8		1 2,464		2 2,600	1 2,900					
27 Machinists.....	1			1 3,020							
28 Master mechanics.....	3										
29 Auto mechanics.....	22			10 3,020		4 2,700					
General mechanics:											
30 Blacksmiths.....	2			1 3,020							
31 Carpenters.....	5			{ 2 3,099 } 1 3,600 }	1 2,700						
32 Electricians.....	1			1 3,542							
33 General mechanics' helpers.....	3			{ 1 1,409 } 2 2,024 }							
34 Painters.....	4			2 2,657							
35 Plumbers.....	1			1 3,600							
36 Woodworkers.....	1										
Miscellaneous:											
37 Garagemen.....	2			2 2,000							
38 Laborers.....	2										

See footnotes at end of table.

each of 12 Middle Atlantic cities of group II,¹ by occupation, July 1, 1938

New York										Pennsylvania				
Albany		Rochester		Syracuse		Utica		Yonkers		Erie		Scranton		
Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	
235		527		385		188		184		145		214		
1	\$4,500	1	\$4,900	1	\$6,000	1	\$4,000	1	\$6,500	1	\$3,360	1	\$2,800	1
		2	3,600	2	3,000	4	2,500	2	4,500	1	2,940	2	2,460	2
4	2,600	10	3,100	8	2,740					2	2,280	6	2,260	4
17	2,350	36	2,600	32	2,220	17	2,300	18	4,000	12	2,160	12	2,160	5
17	2,250	36	2,400	32	2,200	19	2,200	18	3,400	12	2,100	22	2,100	6
				2	2,170	2	2,050					17	2,100	7
				2	2,040	1	2,000					31	1,980	8
												22	2,040	9
165	1,900	357	2,100	279	2,040	121	2,000	100	3,000	55	1,920	99	2,040	11
10	1,800	45	1,785			5	1,850	9	2,875	3	1,860	8	1,920	12
4	1,700					1	1,700			4	1,800	4	1,800	13
						6	1,550			8	1,740	6	1,680	14
										4	2,500			15
										6	2,300			16
										9	2,100			17
										6	1,940			18
		1	2,700											19
		1	2,100											20
														21
				1	2,740	1	2,900							22
														23
										1	2,100	3	2,040	24
1	2,600	1	2,730	1	2,740					1	2,280	1	2,200	25
		1	2,410	2	2,190							1	2,100	26
				1	2,240	1	2,500	1	3,400					27
2	1,900	2	2,258			1	2,050	(*)		1	1,980	2	2,040	28
		1	2,000											29
				1	2,240									30
														31
														32
		1	2,000	1	2,240									33
														34
		1	2,000											25
														36
		1	1,500											37
		1	1,800											38

TABLE E.—Distribution of salaries and employees in fire departments of each of

Division and occupation	Total number of employees	New Jersey									
		Camden		Elizabeth		Newark		Paterson		Trenton	
		Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary
Fire alarm: 7											
39 Superintendents.....	9		1	\$2,742	1	\$5,000	1	\$2,800			
40 Assistant superintendents.....	6		1	2,464	1	2,920					
41 Operators, chief fire alarm.....	2										
42 Operators, fire alarm.....	37				{ 7 1,500				6	\$1,900	
43 Operators, telephone.....	13		2	2,325	{ 6 2,500		4	2,300	1	1,425	
44 Inspectors.....	2								{ 1 2,850		
									{ 1 3,325		
45 Electricians.....	4										
46 Linemen.....	39		1	2,325	{ 8 2,200		1	2,300	{ 1 1,900		
47 Linemen's helpers.....	2				{ 11 2,500				{ 1 2,090		
Miscellaneous:					1	2,080					
48 Cable splicers.....	1										
49 Laborers.....	5				1	1,872					
50 Superintendents of buildings.....	1										
Clerical:											
51 Secretaries.....	4		1	2,800							
52 Chief clerks.....	3	1	\$1,800		1	5,000					
53 Bookkeepers.....	2				1	2,000					
54 Clerks.....	9	{ 1 1,300			{ 1 2,700				1	2,400	
55 Stenographers.....	2	{ 1 1,440			{ 1 3,000						
56 Typists.....	2				1	1,580					
Miscellaneous:											
57 Instructors.....	1										
Ambulance division:											
58 Chauffeurs.....	2										
59 Orderlies.....	2										
60 Building inspectors.....	1								1	4,500	
61 Charwomen.....	1										
62 Experts, anhydrous.....	1										
63 Janitors.....	2										
64 Surgeons.....									(⁶)		

¹ Includes cities with a population of 100,000 and under 500,000, 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 Does not include 18 extra privates hired for 3 months during vacation period at \$125 per month.

⁴ Work of this division performed by men assigned from fire-fighting division in Rochester.

12 Middle Atlantic cities of group II, by occupation, July 1, 1938—Continued

New York										Pennsylvania				
Albany		Rochester		Syracuse		Utica		Yonkers		Erie		Scranton		
Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	
1	\$2,750	1	\$3,800	1	\$2,740	1	\$2,300	1	\$3,200			1	\$2,400	
1	2,200	1	2,800	1	2,240	1	2,050							
		1	2,300									1	1,500	
3	1,900	4	2,000	8	2,040			(⁶)				3	1,200	
3	1,900	3	1,800											
1	1,900	2	2,100				1	2,300						
2	1,900								1	3,000				
1	2,100	2	2,100	5	2,040	3	1,950	{	1	2,100			1	2,220
									1	2,100			1	1,740
		1	2,100											
		3	1,248											
		1	1,500											
1	1,500													
1	1,700			1	2,700							1	1,500	
		1	2,600											
				1	2,300									
		1	1,600			1	2,300	1	3,200					
		1	1,800											
				1	1,500									
				1	1,300	1	1,350							
				1	2,640									
		2	1,600											
		2	1,800											
		1	600											
		1	1,500											
		1	1,600											
(⁹)								(⁹)						

⁵ Work of this division performed by separate city bureau or private company in Camden.

⁶ Work done by men assigned from fire-fighting division.

⁷ Work of this division performed by separate city bureau or private company in Camden and Erie.

⁸ Work performed by separate city bureau.

⁹ On call.

TABLE F.—Distribution of salaries and employees in fire departments of each of 23 Middle Atlantic cities of group III,¹ by occupation, July 1, 1938

Division and occupation	Total number of employees	New Jersey														
		Atlantic City		Bayonne		East Orange		Hoboken		Irvington		Passaic		Union City		
		Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	
All occupations ²	2,303	219	---	198	---	97	---	144	---	75	---	90	---	120	---	
Fire fighting:			<i>Dol.</i>													
Chiefs.....	22	1	4,625	1	5,500	1	5,000	1	5,000	1	3,200	1	3,600	1	4,200	
Assistant deputy chiefs.....	27	2	3,793	1	5,000	1	4,000	3	3,750	2	3,000	1	3,400	2	3,300	
Battalion or district chiefs.....	5	---	---	1	4,750	---	---	---	---	---	---	1	3,300	---	---	
Lieutenants.....	15	4	3,515	---	---	---	---	---	---	---	---	---	---	---	---	
Captains.....	253	34	2,775	25	3,200	16	3,000	20	2,750	8	2,800	15	3,100	20	2,800	
Engineers, fire engine.....	98	15	---	---	---	---	---	---	---	---	---	---	---	---	---	
Senior engineers, fire engine.....	25	11	2,359	---	---	---	---	12	2,250	---	---	---	---	---	---	
Assistant engineers, fire engine.....	11	11	2,359	---	---	---	---	---	---	---	---	---	---	---	---	
Drivers.....	143	9	2,359	33	2,700	---	---	18	2,250	---	---	---	---	---	---	
Privates:																
1st grade.....	1,424	132	2,359	110	2,500	66	2,500	90	2,250	51	2,500	60	2,500	72	2,500	
2d grade.....	44	1	1,896	---	---	---	---	---	---	2	2,400	---	---	4	2,400	
3d grade.....	40	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
4th grade.....	39	---	---	17	2,100	---	---	---	---	---	---	---	---	17	2,200	
5th grade.....	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
6th grade.....	13	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Probationary.....	8	---	---	---	---	8	1,700	---	---	---	---	---	---	---	---	
Miscellaneous: Drill masters.....	2	1	2,960	---	---	---	---	---	---	---	---	---	---	---	---	
Fire prevention: ⁶																
Marshals or wardens.....	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Chief inspectors.....	---	(7)	---	---	---	---	---	---	---	(7)	---	---	---	---	---	
Inspectors.....	7	---	---	---	---	---	---	(7)	---	1	2,500	---	---	---	---	
Apparatus: ⁸																
Superintendents of machinery.....	5	---	---	1	3,200	---	---	(7)	---	1	2,200	---	---	1	2,800	
Assistant superintendents of machinery.....	1	---	---	1	3,200	---	---	---	---	---	---	---	---	---	---	
Machinists.....	2	---	---	---	---	---	---	(7)	---	---	---	---	---	---	---	
Master mechanics.....	4	---	1,868	---	---	---	---	---	---	---	---	---	---	---	---	
Auto mechanics.....	17	{	3,2,451	---	---	---	---	---	---	---	---	(7)	---	1	2,500	
General mechanics: Blacksmiths.....	1	---	---	1	2,800	---	---	---	---	---	---	---	---	---	---	
Mechanics' helpers: Auto mechanics' helpers.....	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Fire alarm: ⁹																
Superintendents.....	10	---	---	1	4,250	1	4,000	---	---	(7)	---	---	---	---	1	2,800
Assistant superintendents.....	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Operators, chief fire alarm.....	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Operators, fire alarm.....	16	---	---	---	---	---	1	2,150	---	---	---	3	2,500	---	---	
Operators, telephone.....	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Inspectors.....	---	---	---	---	---	---	---	---	---	---	---	(7)	---	---	---	
Electricians.....	5	---	---	---	---	---	---	---	---	---	---	---	---	---	1	2,500
Linemen.....	9	---	---	---	---	---	{	1,2,500	---	1	1,600	---	---	---	---	
Clerical: ¹⁰																
Secretaries.....	4	1	2,868	1	3,200	---	---	---	---	1	2,700	---	---	---	---	
Clerks.....	4	---	---	---	---	---	1	1,650	---	---	---	---	---	---	---	
Stenographers.....	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Miscellaneous:																
Custodians.....	1	1	2,775	---	---	---	---	---	---	---	---	---	---	---	---	
Surgeons.....	---	(3)	---	---	---	---	---	---	---	---	---	---	---	---	---	
Chaplains.....	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Matrons.....	4	4	833	---	---	---	---	---	---	---	---	---	---	---	---	

See footnotes at end of table.

TABLE F.—Distribution of salaries and employees in fire departments of each of 23 Middle Atlantic cities of group III,¹ by occupation, July 1, 1938—Continued

Division and occupation	New York						Pennsylvania									
	Bing-hamton		Mount Vernon		New Rochelle		Niagara Falls		Schenec-tady		Troy		Allen-town		Altoona	
	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary
All occupations ²	144		48		95		125		131		147		86		87	
Fire fighting:		<i>Dol.</i>		<i>Dol.</i>		<i>Dol.</i>		<i>Dol.</i>		<i>Dol.</i>		<i>Dol.</i>		<i>Dol.</i>		<i>Dol.</i>
Chiefs.....	1	3,500	1	5,000	1	6,000	1	3,300	1	4,300	1	3,050	1	2,800	1	2,580
Assistant or deputy chiefs.....	12	850	1	3,500			2	2,700	3	3,300						12,260
Assistant deputy chiefs.....	1	2,500														
Battalion or district chiefs.....	2	2,350			2	4,280					4	1,950				
Captains.....	13	2,250			3	3,950	17	2,200	12	2,500	13	1,850	2	2,100	8	1,980
Lieutenants.....	13	2,175			11	3,400			18	2,325	17	1,750	11	1,950	8	1,884
Engineers, fire engine.....			1	3,000												
Senior engineers, fire engine.....							1	2,100								
Assistants, engineers, fire engine.....																
Drivers.....															20	1,860
Privates:																
1st grade.....	88	2,060	32	3,000	60	2,900	89	2,000	75	2,150	91	1,700	68	1,800	28	1,800
2d grade.....	5	1,928					2	1,900	4	2,000	9	1,600	4	1,725	4	1,680
3d grade.....	6	1,856	1	2,625	1	2,376			6	1,800			4	1,650	14	1,560
4th grade.....	3	1,784			2	2,463										
5th grade.....	9	1,700			6	2,336										
6th grade.....			7	2,025	6	2,218										
Probationary.....																
Miscellaneous: Drill masters.....																
Fire prevention: ⁶																
Marshals or wardens.....	1	2,250							1	3,300	1	2,800				
Chief inspectors.....							(?)									
Inspectors.....							(?)		2	2,200	1	2,000	(?)		1	1,680
Apparatus: ⁷																
Superintendents of machinery.....											1	3,000				
Assistant superintendents of machinery.....																
Machinists.....																
Master mechanics.....	1	2,250	(?)		1	3,400										
Auto mechanics.....							1	2,200	2	2,400						1,920
General mechanics: Blacksmiths.....																
Mechanics' helpers: Auto mechanics' helpers.....																
Fire alarm: ⁸																
Superintendents.....			(?)		1	2,978			1	2,900	1	2,700	(?)			
Assistant superintendents.....			1	1,800					1	2,150	1	2,100				
Operators, chief fire alarm.....														1	1,380	
Operators, fire alarm.....			3	1,800					(?)		4	1,500		3	1,320	
Operators, telephone.....																
Inspectors.....																
Electricians.....									1	2,150				2	1,800	
Linemen.....									2	1,950						
Clerical: ¹⁰																
Secretaries.....																
Clerks.....			(?)		1	1,800	1	2,200	1	1,300						
Stenographers.....			1	1,300					1	1,600						
Miscellaneous:																
Custodians.....																
Surgeons.....																
Chaplains.....																
Matrons.....																

See footnotes at end of table.

TABLE F.—Distribution of salaries and employees in fire departments of each of 23 Middle Atlantic cities of group III,¹ by occupation, July 1, 1933—Continued

Division and occupation	Pennsylvania—Continued																
	Bethlehem		Chester		Harrisburg		Johnstown		Lancaster		McKeesport		Wilkes-Barre		York		
	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	
All occupations ²	43	.....	17	.....	70	.....	85	.....	63	.....	64	.....	122	.....	33	.....
Fire fighting:		<i>Dol.</i>		<i>Dol.</i>		<i>Dol.</i>		<i>Dol.</i>		<i>Dol.</i>		<i>Dol.</i>		<i>Dol.</i>		<i>Dol.</i>	
Chiefs.....		12,640	(³)		12,700		12,820		13,500		12,500		13,500		12,000		
Assistant or deputy chiefs.....		22,040	(³)		12,100		22,400		12,400				12,530		(⁴)		
Assistant deputy chiefs.....					11,800								12,350				
Battalion or district chiefs.....									12,000		22,208						
Captains.....							16,204		81,620		62,117		17,202				
Lieutenants.....													41,941				
Engineers, fire engine.....																	
Senior engineers, fire engine.....																	
Assistant engineers, fire engine.....																	
Drivers.....			15	1,695							18	2,062			30	1,560	
Privates:																	
1st grade.....	36	1,800	(³)		54	1,680	56	1,848	52	1,500	33	1,971	91	1,890	(³)		
2d grade.....					9	1,560											
3d grade.....					1	1,440		7	1,584								
4th grade.....																	
5th grade.....																	
6th grade.....																	
Probationary.....																	
Miscellaneous: Drill masters.....								1	1,968								
Fire prevention: ⁶																	
Marshals or wardens.....																	
Chief inspectors.....																	
Inspectors.....	(⁷)										2	1,971	(⁷)				
Apparatus: ⁸																	
Superintendents of machinery.....	1	1,800							(⁴)								
Assistant superintendents of machinery.....																	
Machinists.....													1	2,146			
Master mechanics.....																	
Auto mechanics.....	1	1,620		1	2,080	1	2,240	{	11,980							1	1,800
General mechanics: Blacksmiths.....								{	12,100								
Mechanics' helpers: Auto mechanics' helpers.....						1	1,800										
Fire alarm: ⁹																	
Superintendents.....	1	2,160		1	1,800									1	2,520	1	2,500
Assistant superintendents.....	1	1,620												1	1,800		
Operators, chief fire alarm.....																	
Operators, fire alarm.....														2	960		
Operators, telephone.....														2	840		
Inspectors.....																	
Electricians.....									(⁴)		1	1,962					
Linemen.....									(⁴)		1	1,620					
Clerical: ¹⁰																	
Secretaries.....						1	1,320										
Clerks.....																	
Stenographers.....																	

See footnotes at end of table.

TABLE F.—Distribution of salaries and employees in fire departments of each of 23 Middle Atlantic cities of group III,¹ by occupation, July 1, 1938—Continued

Division and occupation	Pennsylvania—Continued																	
	Bethlehem		Chester		Harrisburg		Johnstown		Lancaster		McKeesport		Wilkes-Barre		York			
	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary		
Miscellaneous:																		
Custodians.....		Dol.		Dol.		Dol.		Dol.		Dol.		Dol.		Dol.		Dol.		Dol.
Surgeons.....																		
Chaplains.....																		
Matrons.....																		

¹ Includes cities with a population of 50,000 and under 100,000, based on U. S. Census of Population for 1930.
² Totals include full-time employees but do not include part-time employees, call men, or volunteers.
³ On call.
⁴ Part-time.
⁵ Volunteers.
⁶ Work of this division performed by men assigned from fire-fighting division in East Orange, Passaic, Mount Vernon, New Rochelle, and Johnstown.
⁷ Work done by men assigned from fire-fighting division.
⁸ Work of this division performed by separate city bureau or private company in East Orange, Allentown, and McKeesport.
⁹ Work of this division performed by separate city bureau or private company in Atlantic City, Binghamton, Niagara Falls, Altoona, and Johnstown, and by men assigned from fire-fighting division in Hoboken.
¹⁰ In cities which report no employees in this division, clerical work is usually done by members assigned from fire-fighting division.

TABLE G.—Distribution of salaries and employees in fire departments in each of 29 Middle Atlantic cities of group IV,¹ by occupation, July 1, 1938

Division and occupation	Total number of employees	New Jersey																	
		Belleville		Bloomfield		Clifton		Kearny		Montclair		New Brunswick		Orange		Perth Amboy		Plainfield	
		Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary
All occupations ¹	1,304	25		64		63		79		69		47		44		25		59	
Fire fighting:																			
Chiefs.....	26	1	\$3,500	1	\$3,700	1	\$3,200	1	\$4,312	1	\$4,700	1	\$3,600	1	\$3,360	1	\$3,000	1	\$4,500
Assistant or deputy chiefs.....	26	2	3,000	1	3,200	2	2,990	1	3,710	2	3,500	2	2,800	1	2,780			1	3,200
Assistant deputy chiefs.....	1																		
Captains.....	119			4	3,000			6	3,008	7	3,200	8	2,520	5	2,592			4	2,900
Lieutenants.....	73	3	2,700	4	2,700	6	2,750	3	2,707	7	2,950							4	2,700
Engineer, fire engine.....	3											3	2,460						
Drivers.....	116											7	2,400			23	2,200		
Privates:																			
1st grade.....	765	16	2,500	28	2,500	53	2,500	67	2,507	36	2,700	22	2,400	37	2,304	(*)		41	2,500
2d grade.....	29			10	2,400													1	2,350
3d grade.....	36			2	2,300					8	2,300							2	2,200
4th grade.....	19	1	2,100							1	2,200							3	2,100
5th grade.....	10	1	1,900							1	2,100								
Probationary.....	1									1	1,600								
Miscellaneous: Drill masters.....	1																		
Fire prevention:⁵																			
Marshals or wardens.....	1									1	3,200								
Chief inspectors.....	1																		
Inspectors.....	5																		
Apparatus:⁷																			
Superintendents of machinery.....	3																		
Assistant superintendents of machinery.....	1																		
Machinists.....	1																		
Master mechanics.....	1																		
Auto mechanics.....	9					1	2,600					1	2,400	(*)					
Mechanics' helpers: Auto mechanics' helpers.....	1																		

Fire alarm: ⁸																			
Superintendents.....	11	(9)		1	4,250			1	3,911	1	3,400	1	1,500						
Assistant superintendents.....	4	(9)																	
Operators, fire alarm.....	10			7	1,300	(9)				3	2,700			(9)					
Operators, telephone.....	4			1	1,200														
Electricians.....	7			1	2,500														
Linemen.....	7	1	1,200	{	1	1,248											1	2,300	
Linemen's helpers.....	1			}	1	1,620													
Clerical: ¹⁰																			
Secretaries.....	2													(9)					
Clerks.....	6					(9)			(11)			2	2,400						
Bookkeepers.....																			(9)
Miscellaneous:																			
Building inspectors.....	2			1	2,700														1
Assistant building inspectors.....	2			1	2,000														1
																			2,400
																			1,528

See footnotes at end of table.

TABLE G.—Distribution of salaries and employees in fire departments in each of 29 Middle Atlantic cities of group IV,¹ by occupation, July 1, 1938—Continued

Division and occupation	New Jersey—Continued				New York															
	West New York		Woodbridge		Amsterdam		Auburn		Elmira		Jamestown		Kingston		Newburgh		Poughkeepsie		Rome	
	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary
All occupations ²	73		6		54		56		75		67		28		45		40		36	
Fire fighting:																				
Chiefs.....	1	\$4,000	(3)		1	\$2,400	1	\$2,880	1	\$3,000	1	\$2,400	1	\$3,250	1	\$2,400	1	\$3,000	1	\$2,800
Assistant or deputy chiefs.....	1	3,500			1	2,040			2	2,220	2	1,978	1	2,520	1	2,100	(3)		2	2,050
Assistant deputy chiefs.....																	(3)			
Captains.....	12	3,100	1	\$2,400	5	1,860	6	1,950	7	1,920	13	1,818			6	1,900	2	2,250	4	1,900
Lieutenants.....			1	2,350			6	1,860	7	1,860					7	1,850			4	1,840
Engineer, fire engine.....																				
Drivers.....			4	2,300	15	1,800														
Privates:																				
1st grade.....	51	2,500	(3)		27	1,740	35	1,800	47	1,800	43	1,711	20	2,040	6	1,800	32	2,190	21	1,780
2d grade.....							1	1,667	1	1,680	3	1,657	2	1,920			2	1,760		
3d grade.....	4	2,106					4	1,533	4	1,560	1	1,604	2	1,800	8	1,600			1	1,560
4th grade.....															9	1,500				
5th grade.....															4	1,300				
Probationary.....																				
Miscellaneous: Drill masters.....	1	3,100																		
Fire prevention: ⁵																				
Marshals or wardens.....	(9)																			
Chief inspectors.....									1	1,800	1	1,711			1	1,900			1	2,250
Inspectors.....																				
Apparatus: ⁷																				
Superintendents of machinery.....	1	3,500							1	2,160			1	2,160						
Assistant superintendents of machinery.....									1	1,920										
Machinists.....																				
Master mechanics.....																				
Auto mechanics.....							1	1,920			1	1,818			(9)		1	2,190	1	1,980
Mechanics' helpers: Auto mechanics' helpers.....																				

Fire alarm:																				
Superintendents.....	1	3,500			1	2,040	(6)		1	2,160			1	2,520	1	1,800	1	2,250	(6)	
Assistant superintendents.....	1	3,100			1	1,920			1	1,920										
Operators, fire alarm.....									(6)									(6)		
Operators, telephone.....					3	1,740														
Electricians.....							1	1,920			1	1,818							1	1,860
Linemen.....									(6)										1	1,780
Linemen's helpers.....																				
Clerical:¹⁰																				
Secretaries.....															1	1,300				
Clerks.....							1	1,925	1	1,860	1	1,766								
Bookkeepers.....																				
Miscellaneous:																				
Building inspectors.....							(6)													
Assistant building inspectors.....							(6)													

See footnotes at end of table.

TABLE G.—Distribution of salaries and employees in fire departments in each of 29 Middle Atlantic cities of group IV,¹ by occupation, July 1, 1938—Continued

Division and occupation	New York—Continued				Pennsylvania															
	Watertown		White Plains		Aliquippa		Easton		Hazleton		Nanticoke		New Castle		Sharon		Wilkinsburg		Williamsport	
	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary
All occupations ²	48		79		8		34		23		12		49		15		30		51	
Fire fighting:																				
Chiefs.....	1	\$3,000	1	\$4,833	1	\$3,300	1	\$2,700	(4)		(4)		1	\$2,016	1	\$2,400	1	\$2,520	1	\$2,424
Assistant or deputy chiefs.....	1	2,256					1	2,100			(4)		1	1,891			1	2,220		
Assistant deputy chiefs.....	1	2,136																		
Captains.....	5	1,944	2	3,625	3	2,100							6	1,761	2	2,220	4	2,040	7	1,836
Lieutenants.....	5	1,872	6	3,093									8	1,704			2	1,920		
Engineer, fire engine.....																				
Drivers.....					4	1,500			23	\$1,560	12	\$1,620					10	1,800	18	1,752
Privates:																				
1st grade.....	23	1,800	66	2,750	(5)		25	1,800	(3)		(3)		26	1,704	11	1,800	10	1,740	22	1,680
2d grade.....	3	1,728					4	1,700					2	1,579						
3d grade.....	1	1,656																		
4th grade.....	4	1,584																		
5th grade.....			4	2,150																
Probationary.....																				
Miscellaneous: Drill masters.....																				
Fire prevention: ³																				
Marshals or wardens.....													(6)				(6)			
Chief inspectors.....																				
Inspectors.....							1	2,000											1	1,836
Apparatus: ⁷																				
Superintendents of machinery.....																				
Assistant superintendents of machinery.....																				
Machinists.....													1	1,920						
Master mechanics.....	1	2,088																		
Auto mechanics.....							1	1,920					1	1,680	1	2,220				
Mechanics' helpers: Auto mechanics' helpers.....													1	1,577						

TABLE H.—Distribution of employees in specified divisions of fire departments of 67 Middle Atlantic cities, by average hours on duty per week, July 1, 1938

System of operation	Average hours on duty per week	Number of employees				
		All divisions				
		All cities	City group ²			
I	II		III	IV		
All systems.....		⁴ 10,770	3,778	3,385	2,303	1,304
Continuous duty.....	168.0	59	5	13	20	21
Single platoon ⁵		44	12	5	15	12
On 2 days, off 1 day.....	112.0	4		4		
On 3 days, off 1 day.....	126.0	8				8
On 4.5 days, off 2.5 days.....	108.0	2				2
On 5 days, off 2 days.....	120.0	11	11			
On 5.5 days, off 1.5 days.....	132.0	1		1		
On 6 days, off 1 day.....	144.0	18	1		15	2
2-platoon—regular ⁶		5,180	12	2,785	1,390	993
On 24 hours, off 24 hours.....	84.0	1,640	12	602	746	280
Shift 3d day.....	84.0	1,884		1,017	305	562
Shift 4th day.....	84.0	525		167	248	110
Shift 5th day.....	84.0	64		64		
Shift 6th day.....	84.0	1,026		935	91	
Shift 7th day.....	84.0	41				41
2-platoon—with additional time off duty ⁷		4,857	3,520	340	777	220
Shift 3d day, off 1 day per week.....	72.0	2,812	2,642		147	23
Shift 4th day, off 1 day per week.....	72.0	186			154	32
Shift 6th day, off 1 day per week.....	72.0	200		200		
Shift 7th day, off 1 day per week.....	72.0	526		140	221	165
Shift 8th day, off 0.9 day per week.....	73.5	878	878			
10-group elimination system, shift 7th day, off 1.5 days per week.....	72.0	64			64	
10-group system, shift 5th day, off 1.4 days per week.....	67.0	191			191	
Other ⁸	43.8	630	229	242	101	58

System of operation	Number of employees									
	Fire fighting									
	All cities	Chiefs				Assistants to chiefs ¹				
		City group ²				All cities	City group ²			
I		II	III	IV	I		II	III	IV	
All systems.....	63	3	12	22	26	86	5	22	32	27
Continuous duty.....	44	3	9	16	16	10	2	3	4	1
Single platoon ⁵	4		1			3	1			2
On 3 days, off 1 day.....	1				1					
On 4.5 days, off 2.5 days.....	1				1					1
On 5.5 days, off 1.5 days.....	1		1							
On 6 days, off 1 day.....	1				1	2	1			1
2-platoon—regular ⁶	7		1	2	4	61	2	17	20	22
On 24 hours, off 24 hours.....	2				2	24	2	6	11	5
Shift 3d day.....	2		1	1		27		6	6	15
Shift 4th day.....	3			1	2	5		1	3	1
Shift 6th day.....						4		4		
Shift 7th day.....						1				1
2-platoon—with additional time off duty ⁷	3			3		12		2	8	2
Shift 3d day, off 1 day per week.....	1			1		2			2	
Shift 4th day, off 1 day per week.....	1			1		2			2	
Shift 6th day, off 1 day per week.....						2		2		
Shift 7th day, off 1 day per week.....						4			2	2
10-group system, shift 5th day, off 1.4 days per week.....	1			1		2			2	
Other ⁸	5		1	1	3					

See footnotes at end of table.

TABLE H.—*Distribution of employees in specified divisions of fire departments of 67 Middle Atlantic cities, by average hours on duty per week, July 1, 1938—Continued*

System of operation	Number of employees								
	Fire fighting					Fire prevention			
	Others								
	All cities	City group ¹				All cities ³	City group ²		
I		II	III	IV	II		III	IV	
All systems.....	9,955	3,541	3,097	2,145	1,172	54	37	10	7
Continuous duty.....						1	1		
Single platoon ⁶	37	11	4	15	7				
On 2 days, off 1 day.....	4		4						
On 3 days, off 1 day.....	7				7				
On 5 days, off 2 days.....	11	11							
On 6 days, off 1 day.....	15			15					
2-platoon—regular ⁶	5,084	10	2,755	1,368	951	1			1
On 24 hours, off 24 hours.....	1,604	10	592	735	267				
Shift 3d day.....	1,845		1,010	298	537	1			1
Shift 4th day.....	63		162	244	107				
Shift 5th day.....	64		64						
Shift 6th day.....	1,018		927	91					
Shift 7th day.....	40				40				
2-platoon—with additional time off duty ⁷	4,831	3,520	336	761	214	4		2	2
Shift 3d day, off 1 day per week.....	2,809	2,642		144	23				
Shift 4th day, off 1 day per week.....	177			148	29	1			1
Shift 6th day, off 1 day per week.....	196		196						
Shift 7th day, off 1 day per week.....	519		140	217	162	3		2	1
Shift 8th day, off 0.9 day per week.....	878	878							
10-group elimination system, shift 7th day, off 1.5 days per week.....	64			64					
10-group system, shift 5th day, off 1.4 days per week.....	188			188					
Other ⁸	3		2	1		48	36	8	4

System of operation	Number of employees									
	Apparatus					Fire alarm				
	City group ²									
	All cities	City group ²				All cities	City group ²			
I		II	III	IV	I		II	III	IV	
All systems.....	173	62	64	31	16	290	77	121	48	44
Continuous duty.....						4				4
2-platoon—regular ⁶	4				4	17		8		9
On 24 hours, off 24 hours.....	1				1	9		4		5
Shift 3d day.....	3				3	4				4
Shift 4th day.....						4		4		
2-platoon—with additional time off duty ⁷	4		2	1	1	2			2	
Shift 4th day, off 1 day per week.....	2			1	1	2			2	
Shift 6th day, off 1 day per week.....	2		2							
Other ⁸	165	62	62	30	11	267	77	113	46	31

See footnotes at end of table.

TABLE H.—*Distribution of employees in specified divisions of fire departments of 67 Middle Atlantic cities, by average hours on duty per week, July 1, 1938—Continued*

System of operation	Number of employees									
	Clerical					Miscellaneous				
	All cities	City group ²				All cities	City group ²			
		I	II	III	IV		I	II	III	IV
All systems.....	49	9	22	10	8	100	81	10	5	4
2-platoon—regular ⁶	2				2	4		4		
Shift 3d day.....	2				2			4		
Shift 6th day.....						4		4		
2-platoon—with additional time off duty ⁷	1				1					
Shift 4th day, off 1 day per week.....	1				1					
Other ⁸	46	9	22	10	5	96	81	6	5	4

¹ Includes assistant or deputy chiefs and assistant deputy chiefs.

² Group I includes cities having a population of 500,000 or more; group II, cities of 100,000 and under 500,000; group III, cities of 50,000 and under 100,000; and group IV, cities of 25,000 and under 50,000, based on U. S. Census of Population for 1930.

³ No employees in this division in group I.

⁴ Includes only full-time employees.

⁵ 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.

⁶ Under each variation of the regular 2-platoon system the employees work in two platoons, one platoon being on duty while the other is off duty. Over a period of days, therefore, each platoon is on duty as many hours as the other, or an average of 12 hours a day and 84 hours a week.

⁷ Under the 2-platoon system with additional time off duty, the employees are on duty less than an average of 84 hours per week. The average number of weekly hours on duty under this system is arrived at by deducting the number of additional weekly hours off from 84.

⁸ The average number of hours per week is arrived at by dividing the total weekly man-hours by the total number of employees classified as "other."

TABLE I.—Distribution of employees and salaries in fire departments of 67 Middle Atlantic cities, by occupation, July 1, 1938

Division and occupation	Number of employees					Total salaries				
	All cities	City group ¹				All cities	City group ¹			
		I	II	III	IV		I	II	III	IV
All occupations ²	10, 770	3, 778	3, 385	2, 303	1, 304	\$24, 148, 455	\$8, 384, 875	\$7, 790, 669	\$5, 121, 987	\$2, 850, 924
Fire fighting:	10, 104	3, 549	3, 131	2, 199	1, 225	22, 821, 115	8, 023, 821	7, 206, 830	4, 901, 081	2, 689, 383
Chiefs.....	63	3	12	22	26	238, 640	19, 770	54, 360	81, 315	83, 195
Assistant or deputy chiefs.....	77	5	19	27	26	234, 289	20, 400	61, 640	83, 656	68, 593
Assistant deputy chiefs.....	9		3	5	1	29, 436		12, 600	14, 700	2, 136
Battalion chiefs.....	105	39	51	15		316, 281	121, 765	152, 980	41, 536	
Captains.....	945	263	310	253	119	2, 470, 666	697, 500	848, 054	647, 482	277, 630
Lieutenants.....	511	146	194	98	73	1, 222, 158	362, 710	466, 386	225, 861	167, 201
Pilots.....	10	9	1			24, 800	21, 900	3, 500		
Engineers, fire engine.....	82	6	22	51	3	184, 034	13, 200	46, 360	117, 094	7, 380
Engineers, marine.....	13	12	1			31, 830	28, 650	3, 180		
Drivers.....	346		87	143	116	690, 108		178, 280	297, 372	214, 456
Privates:										
1st grade.....	7, 245	2, 866	2, 190	1, 424	765	16, 042, 423	6, 359, 500	4, 908, 170	3, 085, 459	1, 689, 294
2d grade.....	172		99	44	29	333, 252		196, 286	79, 796	57, 170
3d grade.....	233	124	33	40	36	430, 396	232, 660	61, 799	68, 105	67, 832
4th grade.....	147	50	39	39	19	288, 079	99, 000	73, 705	83, 378	31, 996
5th grade and below.....	112	8	66	28	10	218, 289	14, 960	128, 730	56, 799	17, 800
Probationary.....	9			8		15, 200			13, 600	1, 600
Miscellaneous.....	25	18	4	2	1	51, 234	32, 406	10, 800	4, 928	3, 100
Fire prevention	54		37	10	7	128, 058		90, 489	22, 872	14, 697
Marshals or wardens.....	8		4	3		22, 054		10, 504	8, 350	3, 200
Chief inspectors.....	2		1		1	5, 100		3, 200		1, 900
Inspectors.....	44		32	7	5	100, 904		76, 785	14, 522	9, 597
Apparatus	173	62	64	31	16	394, 307	119, 522	165, 443	75, 289	34, 053
Superintendents of machinery.....	19	2	9	5	3	52, 913	5, 901	26, 192	13, 000	7, 820
Assistant superintendents of machinery.....	12	2	8	1	1	28, 975	4, 401	19, 454	3, 200	1, 920
Machinists.....	12	8	1	2	1	25, 210	14, 670	3, 020	5, 600	1, 920
Master mechanics.....	8		3	4	1	20, 892		8, 140	10, 664	2, 088
Auto mechanics ³	70	22	22	17	9	162, 259	47, 880	57, 426	38, 225	18, 728
General mechanics.....	32	17	13	1	1	69, 669	30, 380	34, 012	2, 800	1, 577
Electricians.....	1		1			3, 542		3, 542		
Mechanics' helpers ⁴	15	11	3	1		23, 547	16, 290	5, 457	1, 800	
Miscellaneous.....	4		4			7, 300		7, 300		

See footnotes at end of table.

TABLE I.—Distribution of employees and salaries in fire departments of 67 Middle Atlantic cities, by occupation, July 1, 1938—Continued

Division and occupation	Number of employees					Total salaries				
	All cities	City group ¹				All cities	City group ¹			
		I	II	III	IV		I	II	III	IV
Fire alarm.....	290	77	121	48	44	\$593,199	\$148,420	\$259,417	\$96,700	\$88,662
Superintendents.....	32	2	9	10	11	91,608	6,101	27,732	28,608	29,167
Assistant superintendents.....	17	2	6	5	4	37,925	5,161	14,674	9,470	8,620
Chief fire-alarm operators.....	3		2	1		5,180		3,800	1,380	
Fire-alarm operators.....	83	20	37	16	10	152,650	38,000	70,520	26,930	17,200
Telephone operators.....	50	31	13	2	4	91,075	56,600	26,375	1,680	6,420
Inspectors.....	2		2			6,175		6,175		
Electricians.....	16		4	5	7	32,470		8,400	10,212	13,858
Linemen and other construction employees ²	70	14	40	9	7	146,831	27,306	89,285	18,420	11,820
Linemen's helpers.....	6	3	2		1	9,597	4,200	3,820		1,577
Miscellaneous.....	11	5	6			19,668	11,052	8,616		
Clerical.....	49	9	22	10	8	100,733	17,422	47,870	19,938	15,503
Secretaries.....	12	2	4	4	2	26,418	4,410	8,700	10,088	3,220
Chief clerks and accountants.....	4	1	3			11,930	2,530	9,400		
Clerks and bookkeepers.....	23	2	11	4	6	46,533	3,260	24,040	6,950	12,283
Stenographers and typists.....	10	4	4	2		15,852	7,222	5,730	2,900	
Miscellaneous.....	100	81	10	5	4	111,063	75,690	20,640	6,107	8,626
Department of building inspection.....	5		1		4	13,126		4,500		8,626
Medical division.....	4		4			6,800		6,800		
Instruction division.....	3	2	1			6,480	3,840	2,640		
Others.....	88	79	4	5		84,657	71,850	6,700	6,107	

¹ Group I includes cities having a population of 500,000 or more; group II cities of 100,000 and under 500,000; group III, cities of 50,000 and under 100,000; and group IV, cities of 25,000 and under 50,000, based on U. S. Census of Population for 1930.

² Includes only regular, full-time employees.

³ Includes assistants.

⁴ Includes machinists', auto mechanics', and general mechanics' helpers.

⁵ Includes a cable splicer and his helper in Buffalo and a cable splicer in Rochester.