
UNITED STATES DEPARTMENT OF LABOR

Frances Perkins, *Secretary*

BUREAU OF LABOR STATISTICS

Isador Lubin, *Commissioner*

In cooperation with

WORK PROJECTS ADMINISTRATION

Salaries and Hours of Labor in Municipal Fire Departments

July 1, 1938

VOLUME VI

East South Central Cities

+

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HERMAN B. BYER, *Chief*



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STATE, COUNTY, AND MUNICIPAL SURVEY

JESSE M. HADLEY, *Director*

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Letter of Transmittal

UNITED STATES DEPARTMENT of LABOR,
BUREAU of LABOR STATISTICS,
Washington, D. C., October 16, 1940.

The SECRETARY OF LABOR:

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

ISADOR LUBIN, *Commissioner.*

HON. FRANCES PERKINS,
Secretary of Labor.

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

**Salaries and Hours of Labor in Municipal Fire
Departments, East South Central Cities, July 1,
1938¹**

Summary

On July 1, 1938, the fire departments² in 16 East South Central cities³ employed 2,140 persons with annual salaries amounting to \$3,784,000. The six largest cities accounted for about three-fourths of both personnel and salaries. The cities studied included all cities in Kentucky, Tennessee, Alabama, and Mississippi having populations of 25,000 or more in 1930. They ranged in size from Louisville, Ky., with 307,745 inhabitants to Johnson City, Tenn., with 25,080. Mobile and Lexington, each with 18 fire-department employees per 10,000 population, led in the relative size of fire departments. In proportion to population, Johnson City had the smallest department, having only 9 employees per 10,000 inhabitants. Johnson City also had the lowest per capita cost for salaries, an annual expenditure of only \$1.15 per inhabitant. Mobile and Lexington, which led in the number of firemen per 10,000 population, reported per capita salary costs of \$2.42 and \$2.98, respectively. Their per capita salary costs, however, were exceeded by the salary cost of \$3.20 per inhabitant in Nashville. For the 16 cities, fire-department employment averaged 13 per 10,000 population and fire-department salaries \$2.30 per capita.

Ninety-two out of every hundred employees were in the fire-fighting divisions of the departments. Of every 92 engaged on fire-fighting work, 52 were privates, 11 engineers, 7 drivers, 12 captains, and 8 lieutenants, and the rest were battalion chiefs, chiefs, and their assistants. The remaining 8 percent of the employees were engaged in such activ-

¹ Analysis and presentation by Arthur Dadian, Gerald M. Whitright, and M. F. Thurston. Editing and tabulation of 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 on the "Salaries and Working Conditions of Fire Department Employees, 1934" was made by the Bureau of Labor Statistics and was published in the Monthly Labor Review of November 1935. In the present study the Bureau of Labor Statistics, in cooperation with the Work Projects Administration, has undertaken 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 16 East South Central cities is one of a series which will be issued by geographic divisions.

³ See appendix for list of the cities included in this bulletin. The cities have been divided into three size groups designated as group I, II, and III. The first group includes 6 cities of over 100,000 population; the second, 3 cities with populations between 50,000 and 100,000; and the third, 7 cities between 25,000 and 50,000. The United States Census of Population for 1930 was used to determine the size of the cities.

ities as fire prevention, fire alarm, maintenance, and clerical work. Half of the cities promoted privates of lower grades automatically after 1 year of service, but in 5 departments promotion was made by special appointment. Practically all employees received from 10 to 15 days' vacation with pay.

Individual salaries varied from the \$4,998 paid the chief of the fire department in Birmingham to the \$552 paid a janitor in the same city; but 83 percent of all employees received salaries between \$1,250 and \$2,050. The spread between salaries paid to most grades of supervisory personnel and those paid to other employees was not wide.

More than nine-tenths of all fire-department employees worked under some form of the two-platoon system, and 43 out of every 100 worked under a variation of this system which provided for 24 consecutive hours on duty, followed by a full 24-hour day off. The length of the workweek for this system and most of the other variations used was 84 hours per week.

Annual Salaries

General Level of Salaries

Nearly half of the salaries in the fire departments of the 16 East South Central cities were between \$1,550 and \$1,950. In group I cities, however, only 20 percent were below \$1,550 as compared with 69 percent in group II cities and 42 percent in group III cities. There are comparatively few cities in each of the three groups, and the distributions are considerably affected by the salaries paid in one or two cities in the group. Maximum salaries for the three groups in order were \$4,998, \$3,000 and \$2,904.

Table 1 shows in detail the distribution of salaries for all cities and for each city group, and the chart on page 4 illustrates the differences in the salaries paid in the three groups of cities.

TABLE 1.—*Distribution of employees in fire departments of 16 East South Central cities, by salary group and size of city, July 1, 1938*

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

Salary group	Number				Percentage			
	City group ¹				City group ¹			
	All cities	I	II	III	All cities	I	II	III
All groups.....	2,144	1,542	288	314	100.0	100.0	100.0	100.0
Under \$1,250.....	68	5	47	16	3.2	.3	16.3	5.1
\$1,250 and under \$1,350.....	144	.....	106	38	6.7	.....	36.8	12.1
\$1,350 and under \$1,450.....	174	81	24	69	8.1	5.3	8.3	22.0
\$1,450 and under \$1,550.....	254	223	23	8	11.9	14.5	8.0	2.6
\$1,550 and under \$1,650.....	227	129	3	95	10.6	8.4	1.0	30.3
\$1,650 and under \$1,750.....	136	91	1	44	6.3	5.9	.4	14.0
\$1,750 and under \$1,850.....	251	185	44	22	11.7	12.0	15.3	7.0
\$1,850 and under \$1,950.....	423	393	17	13	19.7	25.5	5.9	4.2
\$1,950 and under \$2,050.....	163	152	10	1	7.6	9.9	3.5	.3
\$2,050 and under \$2,150.....	135	131	3	1	6.3	8.5	1.0	.3
\$2,150 and under \$2,250.....	43	43	.....	.....	2.0	2.8	.....	.....
\$2,250 and under \$2,350.....	72	64	6	2	3.4	4.2	2.1	.6
\$2,350 and under \$2,450.....	15	13	.....	.....	.7	.8	.....	.6
\$2,450 and under \$2,550.....	5	4	.....	1	.2	.3	.....	.3
\$2,550 and under \$2,650.....	1	1	.....	.....	(²)	(²)	.....	.....
\$2,650 and under \$2,750.....	4	2	2	.....	.2	.1	.7	.....
\$2,750 and under \$2,850.....	10	10	.....	.....	.5	.6	.....	.....
\$2,850 and under \$2,950.....	4	2	.....	2	.2	.1	.....	.6
\$2,950 and under \$3,050.....	4	2	2	.....	.2	.1	.7	.....
\$3,050 and over.....	11	11	.....	.....	.5	.7	.....	.....

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

² Includes only regular full-time employees.

³ Less than 1/10 of 1 percent.

⁴ Includes 4 at \$3,120, 1 at \$3,150, 1 at \$3,540, 1 at \$3,600, 1 at \$4,061, 1 at \$4,080, 1 at \$4,200, 1 at \$4,998.

Salaries in Selected Occupations

Salaries were distributed over a wider range in the large cities, which paid higher salaries than the smaller cities. Also, the differences between the salaries for different occupations were greater in the cities paying the higher salaries. Most of the captains in group I cities had salaries between \$1,950 and \$2,350, but in the other two groups most captains received salaries less than \$1,750. There were, however, certain exceptions—8 captains in group II and 4 in group III received higher salaries than 30 of the 176 captains in group I. Three hundred and thirty-two privates out of 814 in group I cities had salaries of \$1,850 and over, but 361 privates in the same group of cities and the majority of privates in the other groups had salaries of less than \$1,650. In group I cities nearly all of the highest ranking officers such as chiefs and their immediate assistants had salaries of \$2,550 or more, and 6 out of 16 battalion chiefs had salaries above that figure. Salaries of all chiefs in group II cities were also above \$2,550, but most chiefs in group III cities had salaries below that level.

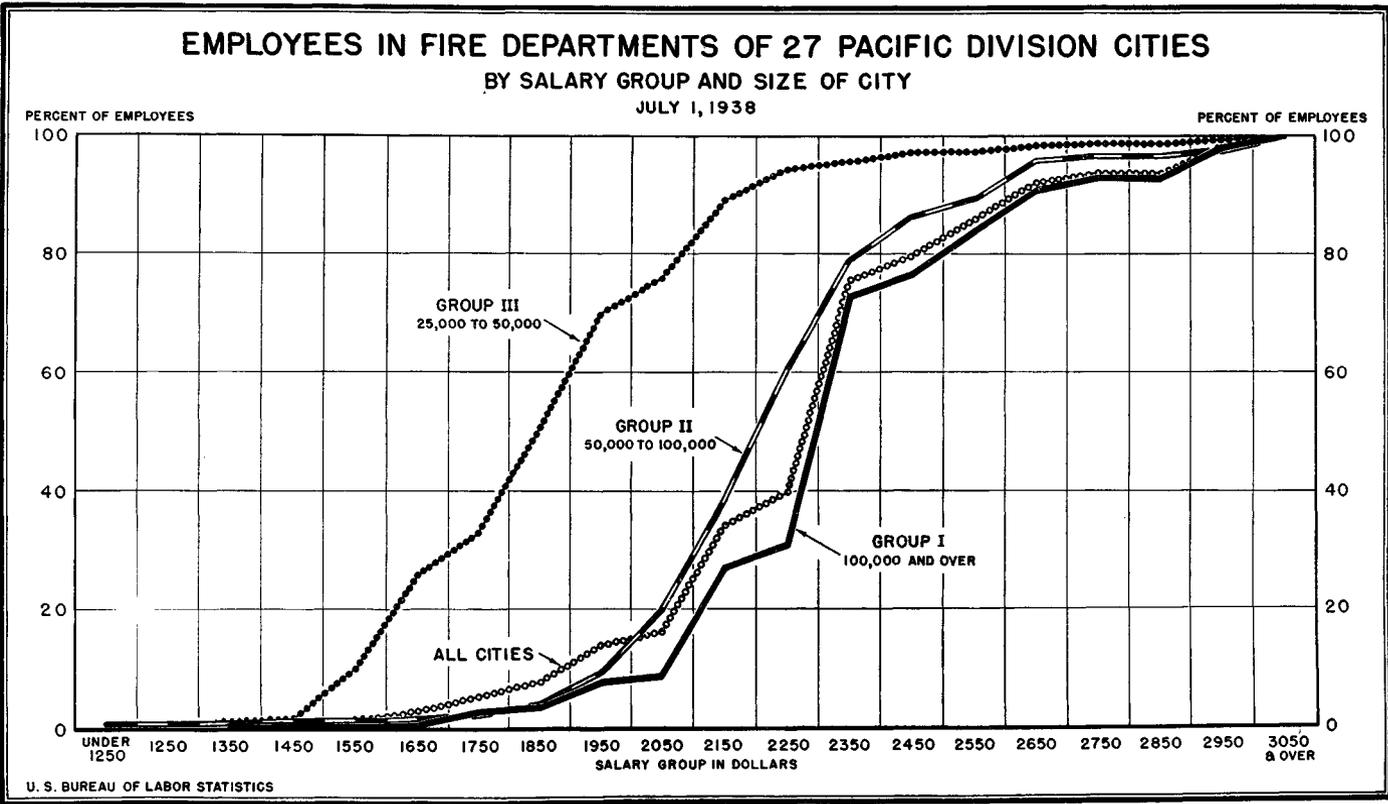


TABLE 2.—Distribution of fire-department employees in 16 East South Central cities by selected occupations and salary group, July 1, 1933

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

Salary group	All occupations				Chiefs				Assistant or deputy chiefs			
	All cities	City group ¹			All cities	City group ¹			All cities	City group ¹		
		I	II	III		I	II	III		I	II	III
Number of cities reporting.	16	6	3	7	16	6	3	7	15	6	3	6
Total number of employees ²	2, 144	1, 542	288	314	16	6	3	7	19	6	3	10
Under \$1,250	68	5	47	16								
\$1,250 and under \$1,350	144		106	38								
\$1,350 and under \$1,450	174	81	24	69					1			1
\$1,450 and under \$1,550	254	223	23	8								
\$1,550 and under \$1,650	227	129	3	95					3			3
\$1,650 and under \$1,750	136	91	1	44	1			1	3			3
\$1,750 and under \$1,850	251	185	44	22	1			1	2			2
\$1,850 and under \$1,950	423	393	17	13								
\$1,950 and under \$2,050	163	152	10	1								
\$2,050 and under \$2,150	135	131	3	1	1			1				
\$2,150 and under \$2,250	43	43										
\$2,250 and under \$2,350	72	64	6	2					3		3	
\$2,350 and under \$2,450	15	13		2	2			2				
\$2,450 and under \$2,550	5	4		1					1			1
\$2,550 and under \$2,650	1	1										
\$2,650 and under \$2,750	4	2	2		1			1				
\$2,750 and under \$2,850	10	10							1	1		
\$2,850 and under \$2,950	4	2		2	2			2	1	1		
\$2,950 and under \$3,050	4	2	2		2		2		1	1		
\$3,050 and over	11	11			6	6			3	7		
Average annual salary ³	\$1, 765	\$1, 860	\$1, 482	\$1, 559	\$3, 054	\$4, 010	\$2, 890	\$2, 305	\$2, 256	\$3, 087	\$2, 310	\$1, 742

Salary group	Assistant deputy chiefs				Battalion chiefs	Captains			
	All cities	City group ¹				City group I ¹	All cities	City group ¹	
		I	II	III	I			II	III
Number of cities reporting...	7	4	2	1	3	16	6	3	7
Total number of employees ³	10	4	4	2	16	259	176	29	54
Under \$1,250						2			2
\$1,250 and under \$1,350						24		12	12
\$1,350 and under \$1,450						9		9	
\$1,450 and under \$1,550						2			2
\$1,550 and under \$1,650									
\$1,650 and under \$1,750						34			34
\$1,750 and under \$1,850	1		1			30	30		
\$1,850 and under \$1,950	1		1			4			4
\$1,950 and under \$2,050	1		1			35	27	8	
\$2,050 and under \$2,150	1		1			53	53		
\$2,150 and under \$2,250						39	39		
\$2,250 and under \$2,350	2			2		27	27		
\$2,350 and under \$2,450	1	1			6				
\$2,450 and under \$2,550					4				
\$2,550 and under \$2,650	1	1							
\$2,650 and under \$2,750									
\$2,750 and under \$2,850						6			
\$2,850 and under \$2,950	1	1							
\$2,950 and under \$3,050	1	1							
\$3,050 and over									
Average annual salary ³	\$2, 340	\$2, 745	\$1, 955	\$2, 300	\$2, 601	\$1, 936	\$2, 088	\$1, 586	\$1, 628

See footnotes at end of table.

6 SALARIES AND HOURS IN MUNICIPAL FIRE DEPARTMENTS

TABLE 2.—Distribution of fire-department employees in 16 East South Central cities by selected occupations and salary group, July 1, 1938—Continued

Salary group	Lieutenants				Engineers, fire engine				Drivers			
	All cities	City group ¹			All cities	City group ¹			All cities	City group ¹		
		I	II	III		I	II	III		I	II	III
Number of cities reporting.	9	5	3	1	10	6	2	2	10	4	2	4
Total number of employees ³	168	139	23	6	4 224	184	26	14	144	85	26	33
Under \$1,250					8			8	7			7
\$1,250 and under \$1,350	12		12		7		7		26		26	
\$1,350 and under \$1,450	6			6	7		7					
\$1,450 and under \$1,550	9		9		6		6		11	9		2
\$1,550 and under \$1,650	22	22			20	20			16			16
\$1,650 and under \$1,750												
\$1,750 and under \$1,850	51	51			52	52						
\$1,850 and under \$1,950	2		2		57	45	12		13	5		8
\$1,950 and under \$2,050					45	45			71	71		
\$2,050 and under \$2,150	39	39			22	22						
\$2,150 and under \$2,250												
\$2,250 and under \$2,350	27	27										
\$2,350 and under \$2,450												
\$2,450 and under \$2,550												
\$2,550 and under \$2,650												
\$2,650 and under \$2,750												
\$2,750 and under \$2,870												
\$2,850 and under \$2,950												
\$2,950 and under \$3,050												
\$3,050 and over												
Average annual salary ⁵	\$1,869	\$1,962	\$1,426	\$1,433	\$1,829	\$1,896	\$1,613	\$1,349	\$1,752	\$1,978	\$1,263	\$1,556

Salary group	Privates, all grades				Automobile mechanics				Fire-alarm operators			
	All cities	City group ¹			All cities	City group ¹			All cities	City group ¹		
		I	II	III		I	II	III		I	II	III
Number of cities reporting.	16	6	3	7	10	3	2	5	11	6	2	3
Total number of employees ³	1,106	814	134	158	4 17	4	5	8	4 52	31	12	9
Under \$1,250	44		43	1								
\$1,250 and under \$1,350	85		52	33	4		3	1	4		4	
\$1,350 and under \$1,450	113		71	42	2			2	20	9	5	6
\$1,450 and under \$1,550	210		210									
\$1,550 and under \$1,650	146		80	66	3		2	1	7	4		3
\$1,650 and under \$1,750	80		79	1	4	1		3	6	6		
\$1,750 and under \$1,850	96		42	38	16				3		3	
\$1,850 and under \$1,950	332		332		1			1	6	6		
\$1,950 and under \$2,050									6	6		
\$2,050 and under \$2,150					2	2			6	6		
\$2,150 and under \$2,250												
\$2,250 and under \$2,350												
\$2,350 and under \$2,450					1	1						
\$2,450 and under \$2,550												
\$2,550 and under \$2,650												
\$2,650 and under \$2,750												
\$2,750 and under \$2,850												
\$2,850 and under \$2,950												
\$2,950 and under \$3,050												
\$3,050 and over												
Average annual salary ⁵	\$1,648	\$1,719	\$1,392	\$1,499	\$1,648	\$2,070	\$1,404	\$1,590	\$1,618	\$1,719	\$1,445	\$1,500

See footnotes at end of table.

TABLE 2.—Distribution of fire-department employees in 16 East South Central cities by selected occupations and salary group, July 1, 1938—Continued

Salary group	Electricians			Linemen			Others				
	All cities ²	City group ¹		All cities	City group ¹		All cities	City group ¹			
		I	III		I	II		III	I	II	III
Number of cities reporting.	3	2	1	4	2	1	1	13	6	3	4
Total number of employees ³	6	4	2	8	3	3	2	99	70	20	9
Under \$1,250				1		1		8	5	3	
\$1,250 and under \$1,350				1		1		3		1	2
\$1,350 and under \$1,450								1	1		
\$1,450 and under \$1,550				1		1		8	4	4	
\$1,550 and under \$1,650	2		2					6	3	1	2
\$1,650 and under \$1,750				4	2		2	4	3		1
\$1,750 and under \$1,850								15	10	2	3
\$1,850 and under \$1,950								7	5	2	
\$1,950 and under \$2,050								5	3	1	1
\$2,050 and under \$2,150	4	4		1	1			12	10	2	
\$2,150 and under \$2,250								4	4		
\$2,250 and under \$2,350								13	10	3	
\$2,350 and under \$2,450								5	5		
\$2,450 and under \$2,550											
\$2,550 and under \$2,650											
\$2,650 and under \$2,750								3	2	1	
\$2,750 and under \$2,850								3	3		
\$2,850 and under \$2,950											
\$2,950 and under \$3,050											
\$3,050 and over								2	⁸ 2		
Average annual salary ⁹	\$1,940	\$2,100	\$1,620	\$1,590	\$1,860	\$1,260	\$1,680	(10)	(10)	(10)	(10)

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

² No persons in this occupation in cities of group II.

³ Includes only regular full-time employees.

⁴ Includes assistants.

⁵ Includes telephone operators, but not chief fire alarm operators.

⁶ Includes 1 at \$3,120, 1 at \$3,600, 1 at \$4,061, 1 at \$4,080, 1 at \$4,200, and 1 at \$4,998.

⁷ Includes 1 at \$3,120, 1 at \$3,159, and 1 at \$3,540.

⁸ Each receives \$3,120.

⁹ Average annual salary is derived by dividing the total salaries received by the number of employees. See appendix table F.

¹⁰ No average computed because such a heterogeneous group of occupations.

Salaries of Privates

Seventy-eight percent of all privates received salaries between \$1,450 and \$1,950 and the rest salaries between \$1,050 and \$1,450. Salaries of privates in group I cities were mostly in the higher brackets shown in table 3. Ninety-one percent of all privates in this group received between \$1,450 and \$1,950 a year, as compared with 29 percent in group II and 52 percent in group III. In group II cities, more than two-thirds received salaries under \$1,350.

By far the greater part of the privates (83 percent) were first grade, and the rest mostly second and third grade. The proportion of first-grade privates was lowest in group I cities; where they constituted 79 percent of the total, as against 96 percent for group II and 91 percent for group III cities. This was due to the fact that in several of the smaller cities all privates were classified as first grade. While group I cities had a considerably larger proportion of lower-grade privates,

the salaries for these grades were higher in the larger cities. Only 9 percent of all lower-grade privates in group I cities had salaries lower than \$1,450 a year as compared with 95 percent in the other two city groups.

TABLE 3.—Distribution of privates in fire departments of 16 East South Central cities, by salary group and grade, July 1, 1938

Salary group	All grades									Number of privates by specified grade		
	Number			Percentage			First					
	All cities	City group ²			All cities	City group ²			All cities	City group ²		
		I	II	III		I	II	III		I	II	III
All groups	1, 106	814	134	158	100. 0	100. 0	100. 0	100. 0	913	640	129	144
\$1,050 and under \$1,150	5	4	1	1	. 5	3. 0	. 6	1				1
\$1,150 and under \$1,250	39	39			3. 5	29. 1		39		39		
\$1,250 and under \$1,350	85	52	33		7. 7	38. 8	20. 9	73		52	21	
\$1,350 and under \$1,450	113	71	42		10. 2	8. 7	26. 6	40			40	
\$1,450 and under \$1,550	210	210			19. 0	25. 8		210	210			
\$1,550 and under \$1,650	146	80		66	13. 2	9. 8	41. 8	66				66
\$1,650 and under \$1,750	80	79	1		7. 2	9. 7	. 7	68	68			
\$1,750 and under \$1,850	96	42	38	16	8. 7	5. 2	28. 4	10. 1	94	40	38	16
\$1,850 and under \$1,950	332	332			30. 0	40. 8			322	322		

Salary group	Number of privates by specified grade															
	Second			Third			Fourth			Fifth ¹						
	All cities	City group ²			All cities	City group ²			All cities	City group ²			All cities	City group ²		
		I	II	III		I	II	III		I	II	III		I	II	III
All groups	66	61	2	3	94	81	3	10	28	28			5	4		1
\$1,050 and under \$1,150	1		1		3		3									
\$1,150 and under \$1,250																
\$1,250 and under \$1,350	1			1	10			10					1			1
\$1,350 and under \$1,450	30	28		2	15	15			24	24			4	4		
\$1,450 and under \$1,550																
\$1,550 and under \$1,650	14	14			64	64			2	2						
\$1,650 and under \$1,750	10	9	1						2	2						
\$1,750 and under \$1,850					2	2										
\$1,850 and under \$1,950	10	10														

¹ Includes 1 probationary private in city group III at \$1,260.

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

Hours and Working Conditions¹

Hours and other working conditions in fire departments are determined by custom and the size and financial status of the city, and sometimes by legislative enactment. The question of finances is particularly important, since the ability of the city to maintain a force of adequate size and to purchase modern equipment directly affects hours of duty, vacations, and promotions. Operating costs and the necessity of having enough men on duty at the fire houses for protection

at any hour of the day or night, largely determine the systems of hours worked. These two factors accounted for the predominance of two-platoon systems in the cities studied.

Platoon Systems

The fire-fighting force of a department is ordinarily divided into two or more groups or platoons. In the simpler systems a platoon is a group of firemen who are on duty during a stated period of hours, after which they are relieved by another group. In the simplest form of the two-platoon system, one platoon works a full 24-hour day and is then relieved by the second platoon which works the next 24 hours. Each platoon is on duty seven 24-hour periods during a period of 14 days, or an average of 3.5 such periods a week. The hours on duty for this and other two-platoon systems which do not provide for extra days off are 84 per week.

A second type of two-platoon system that is generally used divides the day into two periods—a day tour of duty and a night tour of duty. The day tour is usually 9, 10, or 11 hours long, with a corresponding night tour of 15, 14, or 13 hours, respectively. A 10-hour day and 14-hour night two-platoon system, with the platoons shifting from day duty to night duty every third day, is illustrated below.

Two-Platoon Systems (Shift on Third Day)

Day	First platoon	Second platoon
1	XXXXXXXXXXXXX -----	----- XXXXXXXXXXXXXXXX
2	XXXXXXXXXXXXX -----	----- XXXXXXXXXXXXXXXX
3	XXXXXXXXXXXXXXXXXXXXXXXXX	-----
4	----- XXXXXXXXXXXXXXXX	XXXXXXXXXXXXX -----
5	----- XXXXXXXXXXXXXXXX	XXXXXXXXXXXXX -----
6	-----	XXXXXXXXXXXXXXXXXXXXXXXXX

NOTE.—Each X represents 1 hour on duty. Each - represents 1 hour off duty.

It will be noted that on the third day the members of the first platoon work a full 24 hours, and the second platoon is off duty 24 hours. This 24-hour period of time on and off duty results in the first platoon changing to the night tour on the fourth day, and the second platoon changing to day duty. Thus, the 24-hour tours are always a signal for a shift in the platoons.

Chattanooga, Tenn., used a method of shifting platoons which did not require a full 24-hour tour. Members of the force in this department had an 11-hour day platoon and a 13-hour night platoon. The method of shifting is shown below.

Day before change			Day of change			Day after change	
7 a. m.	6 p. m.	7 a. m.	Noon	6 p. m.	7 a. m.	6 p. m.	7 a. m.
AAAAAAAAAA	BBBBBBBBBB	AAAAA	BBBBB	AAAAAAAAAA	BBBBBBBBBB	AAAAAAAAAA	

In this case the A platoon comes on duty at 7 a. m. the day of the shift, but works only until noon, when the B platoon goes on duty for the remaining 6 hours of the day tour. The A platoon returns to duty on the regular night tour at 6 p. m., thus completing the change. At the next shift, conditions for each platoon are reversed. Under this system no employee is on duty more than 13 hours consecutively or more than 19 hours in any 24-hour period.

Average Hours and Days on Duty Per Week

Daily and weekly hours varied considerably, but most systems used in the East South Central Division provided daily employment averaging 12 hours a day, or 84 hours per week. Average hours worked per week, as shown in table 4, are based on figures for a complete year of employment, and are computed to the nearest tenth of an hour. Average days per week are similarly computed. Days off are the average number of 24-hour days during which the employees did not report for duty. The fractional days off reported on the table represent an average based on the number of days off per year. For example, 1 day off in 2 weeks would be shown as 0.5 day off per week.

TABLE 4.—Average hours and days on duty per week in fire departments of 16 East South Central cities, July 1, 1938

[For a more detailed analysis of data, see appendix table E]

System of operation	Average hours on duty per week	Average days on duty per week	Number of cities reporting			Number of employees			Percentage of employees					
			All cities	City group ¹			All cities	City group ¹			All cities	City group ¹		
				I	II	III		I	II	III		I	II	III
All systems.....							² 2,144	1,542	288	314	100.0	100.0	100.0	100.0
Continuous duty.....	168	7.0	8	3	2	3	9	4	2	3	.4	.3	.7	1.0
Single platoon; ³ on 6 days, off 1 day.....	144	6.0	1	1			6	4			.3	.4		
2-platoon—regular ⁴							1,969	1,436	268	265	91.9	93.1	93.1	84.4
On 24 hours, off 24 hours.....	84	3.5	8	2	2	4	931	593	155	183	43.4	38.5	53.8	58.3
Shift 7th day.....	84	6.5	1		1		113		113		5.3		39.3	
Shift 8th day.....	84	6.6	3	2		1	310	287		23	14.5	18.6		7.3
Shift twice each month (no full day off).....	84	7.0	1	1			241	241			11.2	15.6		
Shift every 15th day.....	84	6.8	2	1		1	374	315		59	17.5	20.4		18.8
2-platoon—with additional time off; ⁶ on 24 hours, off 24 hours; off 0.2 days per week.....	78	3.3	1			1	33			33	1.5			10.5
Other ⁷	50.5	6.0	13	6	3	4	127	96	18	13	5.9	6.2	6.2	4.1

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

² Includes only regular, full-time employees.

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

⁴ Includes 1 chief, 1 assistant chief, and 4 battalion chiefs in Memphis, Tenn. The rest of the department operates under the 2-platoon system.

⁵ Under each variation of the 2-platoon system the employees are divided into 2 groups, 1 group being on duty while the other is off duty. Over a period of days, therefore, each group is on duty as many hours as the other, or an average of 12 hours a day and 84 hours a week. Each variation of the 2-platoon system, however, spreads these 84 hours over a different number of days on duty per week. The average number of days on duty per week for each variation is arrived at by dividing the number of days on duty per year by 52.143.

⁶ Under the 2-platoon system with additional time off, the employees are on duty less than an average of 84 hours per week. The average number of hours on duty per week under this system is arrived at by deducting the number of additional weekly off hours from 84. The average number of days on duty is arrived at by dividing the number of days on duty per year by 52.143.

⁷ The average number of hours and days per week is arrived at by dividing the total weekly man-hours and man-days by the total number of employees under "other."

12 SALARIES AND HOURS IN MUNICIPAL FIRE DEPARTMENTS

Ninety-two percent of the employees of the East South Central fire departments worked under forms of the two-platoon system which provided for an average work week of 84 hours, and 2 percent on a variation which provided additional days off, reducing the weekly hours to 78. About 6 percent worked an average period of 50.5 hours a week, but these were miscellaneous employees engaged in clerical and maintenance work.

The average number of hours on duty per week was the same in the small as in the large cities although the systems of operation differed. Half of the cities used the simplest form of the two-platoon system—alternate 24-hour periods of duty and of leave. Four cities using this system were in group III and two in each of the other groups. This system accounted for 43 percent of all employees, but the proportion was greater for group II and III cities than for group I cities. In the largest cities 55 percent worked under platoon systems which required less frequent shifts and fewer 24-hour periods of duty or leave. For employees working under the two-platoon system the average number of days on duty varied from 3.3 to 7.0 days per week.

Nine chiefs were the only firemen reported to be on continuous duty, which means merely that they were subject to call at any hour.

Supplies and Equipment Furnished

All of the 16 cities supplied sleeping quarters, and 9 supplied the necessary beds, bedding, linen, and laundry service. Eleven cities supplied helmets, but uniforms and such items of uniform equipment as rubber coats and rubber boots, were supplied by only a few, generally the smaller cities, or those in which lower salaries were paid.

TABLE 5.—*Items supplied to firemen of 16 East South Central cities, July 1, 1938*

City group ¹	Number of cities	Number of cities supplying—						
		Sleeping quarters for men on night duty	Beds, bedding, linen, laundry	Helmets	Rubber coats	Rubber boots	Full uniform	Minor items
All cities.....	16	16	9	11	3	5	3	11
Group I.....	6	6	3	4	—	1	—	4
Group II.....	3	3	1	1	1	1	1	1
Group III.....	7	7	5	6	2	3	2	6

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

Vacations With Pay

Of the 2,144 employees, 96 percent were allowed vacations with pay, which averaged 12.5 days, and varied from 10 to 15 days. More than half of the paid vacations were either 14 or 15 days, and the rest 10 days. All except 1 of the 89 employees receiving no leave with pay were in group II cities. Cities in this group also allowed slightly shorter vacations than the other 2 groups.

TABLE 6.—Number of employees receiving specified vacations with pay in fire departments of 16 East South Central cities, July 1, 1938

City group ¹	Number of cities	Total number of employees	Number of employees having—			
			No vacation	10 days	14 days	15 days
All cities.....	16	2,144	89	896	597	562
Group I.....	6	1,542	-----	707	417	418
Group II.....	3	288	88	127	73	-----
Group III.....	7	314	1	62	107	144

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

² Includes only regular, full-time employees.

Promotions of Lower-Grade Privates

Half of the 16 cities promoted privates of lower grades after 1 year of service, and 5 made promotions by appointment. In the remaining 3 cities all employees were classed as first grade.

TABLE 7.—Promotion of lower-grade privates in fire departments of 16 East South Central cities, July 1, 1938

City group ¹	Total number of privates	Number of cities			
		All cities	Promotion after 1 year	No promotion system	All one grade
All cities.....	1,106	16	8	5	3
Group I.....	814	6	4	2	-----
Group II.....	134	3	1	1	1
Group III.....	158	7	3	2	2

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

Percentage Distribution of Employees and Salaries

All Employees

Nearly all employees of the 16 fire departments were in the fire-fighting divisions, which accounted for 92 out of every 100 employees. Of each 92 in fire-fighting divisions, 52 were privates, 17 were engineers

and drivers, 20 were captains and lieutenants, and 3 were battalion chiefs, fire department chiefs, and their assistants or deputies. Fire prevention, maintenance of apparatus and fire alarm systems, clerical work, and other miscellaneous activities accounted for the 8 percent not engaged directly in fire-fighting work.

Employees of the fire-fighting division received also 92 percent of total salaries, but the distribution among the various subgroups differed somewhat from that of employment; privates, who constituted 52 percent of all employees, received only 48 percent of total salaries. In cities of groups I, II, and III, privates represented 53 percent, 47 percent, and 50 percent, respectively, of total employment, and received 49, 44, and 48 percent of total salaries. On the other hand, chiefs, battalion chiefs, and their assistants in group I cities constituted 2.1 percent of total employment, and received 3.3 percent of total salaries; in group II cities they were 3.4 percent of all employees, and received 5.5 percent of total salaries; and for group III cities the corresponding percentages were 6.1 and 7.8, respectively.

TABLE 9.—Percentage distributions of employees and salaries in specified divisions in fire departments of 16 East South Central cities, July 1, 1938

Division ¹ and occupation	Percentage of employees				Percentage of salaries			
	All cities	City group ²			All cities	City group ²		
		I	II	III		I	II	III
All divisions.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Fire fighting.....	91.8	92.9	86.8	91.1	91.7	92.7	85.9	90.9
Chiefs.....	.7	.4	1.0	2.3	1.3	.8	2.1	3.3
Assistant or deputy chiefs.....	.9	.4	1.0	3.2	1.1	.6	1.6	3.6
Assistant deputy chiefs.....	.5	.3	1.4	.6	.6	.4	1.8	.9
Battalion chiefs.....	.7	1.0	.....	.....	1.1	1.5	.....	.....
Captains.....	12.1	11.4	10.1	17.2	13.3	12.8	10.8	13.0
Lieutenants.....	7.8	9.0	8.0	1.9	8.3	9.5	7.7	1.7
Engineers, fire engine.....	10.5	11.9	9.0	4.5	10.8	12.2	9.8	3.8
Drivers.....	6.7	5.5	9.0	10.5	6.7	5.9	7.7	10.5
Privates, all grades.....	51.6	52.8	46.6	50.3	48.2	48.8	43.7	48.4
Miscellaneous.....	.3	.2	.7	.6	.3	.2	.7	.7
Fire prevention.....	1.1	1.3	1.4	.....	1.2	1.4	1.4	.....
Apparatus.....	2.0	1.4	3.8	2.9	2.0	1.6	4.2	2.9
Fire alarm.....	4.0	3.2	7.0	5.1	4.0	3.2	7.3	5.2
Clerical.....	.7	.7	1.0	.6	.7	.6	1.2	.7
Miscellaneous.....	.4	.5	.....	.3	.4	.5	.....	.3

¹ All fire departments assign men from the fire-fighting division to the other divisions and carry these assigned men on the fire-fighting division list. This is done to provide the fire department with a reserve for cases of emergency. As a result of this method of assignment, the fire-fighting division is always shown to be larger than it actually is on a routine day. Some other factors are also responsible for the small size of the non-fire-fighting divisions. In some cities, the maintenance work is let to private contractors; part of the fire-prevention work is done by the building inspector's office; and the fire alarm work is done by the local telephone company or by a separate city bureau.

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

Supervisory Employees

Approximately a fourth of all fire-department employees were supervisory employees of various grades, such as chiefs, assistant chiefs, captains, lieutenants, and chief engineers. These supervisory employees constituted 24.6 percent of all employees, and received 28.0 percent of total salaries. The difference between these two percentages was somewhat less for group III cities than for the other two groups.

TABLE 10.—*Number and salaries of supervisory employees¹ as percentage of total fire-department employees and total salaries in 16 East South Central cities, July 1, 1938*

Item	All cities	City group ²		
		I	II	III
Supervisory employees as percentage of all employees.....	24.6	24.3	24.7	26.1
Supervisory salaries as percentage of total salaries.....	28.0	27.8	28.2	28.6
Ratio of salaries to employees.....	1.14	1.14	1.14	1.10

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 fire-alarm operators, assistants to these officers who supervise the activities of others, and others who direct other employees.

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

Appendix

The East South Central Division consists of the States of Alabama, Kentucky, Mississippi, and Tennessee.

The appendix contains a table of the 16 East South Central cities with their 1930 populations, the number of employees per 10,000 inhabitants, and per capita salary costs. It also contains five other tables giving additional detailed information on some of the subjects discussed in the body of the report. Tables B, C, and D give the number of persons employed and the individual occupational salaries in each of the cities of groups I, II, and III, respectively. Table E summarizes total employment and total salaries paid in each functional division and occupation for all cities and for each size group. Table F shows average weekly hours and days on duty under various systems of operation, by functional divisions for all cities and for each size group. All data in the tables, except population, are as of July 1, 1938.

TABLE A.—*Fire department employees and salary costs in relation to population in East South Central cities with a population of 25,000 or more,¹ July 1, 1938*

City	Population ¹	Employees per 10,000	Per capita salary costs
All cities.....	1, 642, 976	13	\$2. 30
Group I—cities of 100,000 and over	1, 200, 032	13	2. 39
Birmingham, Ala.....	259, 678	11	2. 23
Chattanooga, Tenn.....	119, 798	14	2. 89
Knoxville, Tenn.....	105, 802	13	2. 42
Louisville, Ky.....	307, 745	12	1. 85
Memphis, Tenn.....	253, 143	14	2. 47
Nashville, Tenn.....	153, 866	16	3. 20
Group II—cities of 50,000 to 100,000.....	199, 533	14	2. 14
Covington, Ky.....	65, 252	11	2. 11
Mobile, Ala.....	68, 202	18	2. 42
Montgomery, Ala.....	66, 079	14	1. 88
Group III—cities of 25,000 to 50,000.....	243, 411	13	2. 01
Ashland, Ky.....	29, 074	10	1. 87
Jackson, Miss.....	48, 282	13	2. 02
Johnson City, Tenn.....	25, 080	9.	1. 15
Lexington, Ky.....	45, 736	18	2. 98
Meridian, Miss.....	31, 954	13	1. 83
Newport, Ky.....	29, 744	13	1. 92
Paducah, Ky.....	33, 541	11	1. 71

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

TABLE B.—Number of employees and annual salaries in fire departments of each of 6 East South Central cities with a population of 100,000 or over,¹ by occupations, July 1, 1938

Division and occupation	Total number of employees	Alabama		Kentucky		Tennessee							
		Birmingham		Louisville		Chattanooga		Knoxville		Memphis		Nashville	
		Number	Salary rate	Number	Salary rate	Number	Salary rate	Number	Salary rate	Number	Salary rate	Number	Salary rate
All occupations ²	1,542	280		358		172		136		350		246	
Fire fighting:													
Chiefs.....	6	1	\$4,998	1	\$4,061	1	\$3,120	1	\$3,600	1	\$4,080	1	\$4,200
Assistant or deputy chiefs.....	6	1	3,120	1	3,159	1	3,000	1	2,880	1	2,820	1	3,540
Assistant deputy chiefs.....	4	1	3,000			1	2,400	1	2,640			1	2,940
Battalion or district chiefs.....	16	6	2,820	6	2,437					4	2,520		
Captains.....	176	27	2,340	30	1,805	17	2,160	27	2,046	53	2,088	22	2,160
Lieutenants.....	139	27	2,280	22	1,617	17	2,100			51	1,836	22	2,100
Engineers, fire engine.....	142	3	2,040	20	1,617	17	2,040	28	1,914	52	1,776	22	2,100
Assistant engineers, fire engine.....	42	3	2,040			17	1,920					22	2,040
Drivers.....	85	68	2,040	9	1,540	5	1,920					3	1,980
Privates:													
1st grade.....	640	102	1,920	210	1,540	84	1,920	40	1,800	68	1,704	136	1,920
2d grade.....	61	10	1,860	28	1,445			9	1,710	14	1,596		
3d grade.....	81	2	1,800	15	1,350			11	1,620	53	1,596		
4th grade.....	28	2	1,740					2	1,560	24	1,440		
5th grade.....	4							4	1,440				
Miscellaneous: Drill masters.....	3			1	1,805	1	2,340	1	2,343				
Fire prevention:													
Marshals or wardens.....	6	1	2,340	1	1,805	1	2,220	1	2,220	1	2,400	1	2,400
Assistant marshals or wardens.....	5							1	1,914	1	1,704	1	2,100
Inspectors.....	9	4	2,340	3	1,540			2	1,800	1	2,076		
Apparatus:													
Superintendents of machinery.....	5	1	2,700	1	2,028			1	2,751	1	2,400	1	2,280
Assistant superintendents of machinery.....	2							1	1,800	1	2,100		
Mechanists.....	3	1	2,100							1	2,160	1	2,100
Auto mechanics.....	3	1	2,100			1	2,376			1	2,100		
Assistant auto mechanics.....	1									1	1,704		

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

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

TABLE B.—Number of employees and annual salaries in fire departments of each of 6 East South Central cities with a population of 100,000 or over, by occupations, July 1, 1938—Continued

Division and occupation	Total number of employees	Alabama		Kentucky		Tennessee							
		Birmingham		Louisville		Chattanooga		Knoxville		Memphis		Nashville	
		Number	Salary rate	Number	Salary rate	Number	Salary rate	Number	Salary rate	Number	Salary rate	Number	Salary rate
Apparatus—Continued.													
General mechanics:													
Painters.....	5	1	1,560			1	1,920			1	1,800		
Carpenters.....	2	1	1,560							1	1,908		
Miscellaneous: Hydrant repairman.....	1									1	2,100		
Fire alarm:										1	1,800		
Superintendents.....	5	1	2,820	1	2,708	1	3,120			1	2,400	1	2,760
Assistant superintendents.....	2	1	2,280			1	2,100						
Chief fire alarm operators.....	2	1	2,340							1	1,836		
Operators, fire alarm.....	28	6	2,040	4	1,625	3	1,920	3	1,860	6	1,704	6	1,440
Operators, telephone.....	3			3	1,444								
Electricians.....	4									3	2,100	1	2,100
Linemen.....	3	2	1,740									1	2,100
Electricians helpers.....	1									1	1,960		
Miscellaneous: Watchmen, fire alarm.....	1											1	1,500
Clerical:													
Secretaries.....	5			1	1,625	1	2,040	1	1,914	1	2,184	1	2,100
Assistant secretaries.....	1											1	1,800
Clerks.....	1			1	1,354								
Stenographers.....	2	1	2,400							1	960		
Miscellaneous: Assistant personnel directors.....	1									1	1,740		
Miscellaneous:													
Building inspectors.....	1			(3)		1	3,120						
Assistant building inspectors.....	1			(8)		1	2,100						
Hydrant inspectors.....	1	1	1,920										
Hydrant inspectors' helpers.....	2	2	1,140										
Watchmen, central station.....	1	1	936										
Departmental instructors.....	1							1	2,100				
Janitors.....	1	1	552										
Physicians.....										(4)			

³ Work performed by separate city bureau.
⁴ Call man.

TABLE C.—Number of employees and annual salaries in fire departments of each of 3 East South Central cities with a population of 50,000 and under 100,000,¹ by occupations, July 1, 1938

Division and occupation	Total number of employees	Alabama				Kentucky	
		Mobile		Montgomery		Covington	
		Number	Salary rate	Number	Salary rate	Number	Salary rate
All occupations.....	288	124		91		73	
Fire fighting:							
Chiefs.....	3	1	\$2,700	1	\$2,970	1	\$3,000
Assistant or deputy chiefs.....	3	1	2,250	1	2,340	1	2,340
Assistant deputy chiefs.....	4	1	1,800	1	1,998		
Captains.....	29	12	1,380	9	1,512	8	1,980
Lieutenants.....	23	12	1,320	9	1,458	2	1,920
Engineers, fire engine.....	26			7	1,296	12	1,920
Drivers.....	26	24	1,260	2	1,296		
Privates:							
1st grade.....	129	52	1,260	39	1,188	38	1,800
2d grade.....	2			1	1,134	1	1,700
3d grade.....	3			3	1,128		
Miscellaneous:							
Drill masters.....	1			1	1,620		
Plugmen.....	1	1	1,260				
Fire prevention:							
Marshals or wardens.....	1			1	1,512		
Assistant marshals or wardens.....	1			1	1,458		
Inspectors.....	2			1	1,188	1	1,980
Apparatus:							
Superintendents of machinery.....	2	1	2,100			1	2,280
Assistant superintendents of machinery.....	1	1	1,500				
Auto mechanics.....	5	3	1,260	2	1,620		
General mechanics:							
Painters.....	1					1	1,920
Carpenters.....	1					1	1,920
Miscellaneous: Laborers.....	1	1	1,200				
Fire alarm:							
Superintendents.....	3	1	2,250	1	2,700	1	2,280
Assistant superintendents.....	1					1	2,100
Operators, fire alarm.....	5	5	1,380				
Operators, telephone.....	7	4	1,260			3	1,800
Linemen.....	3	1	960				
Linemen's helpers.....	1	1	1,500	1	1,320		
Clerical: Secretaries.....	3	1	1,500	1	780		
				1	1,800	1	1,800

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

TABLE D.—Number of employees and annual salaries in fire departments of each of 7 East South Central cities with a population of 25,000 and under 50,000,¹ by occupations, July 1, 1938

Division and occupation	Total number of employees	Kentucky								Mississippi				Tennessee	
		Ashland		Lexington		Newport		Paducah		Jackson		Meridian		Johnson City	
		Number	Salary rate	Number	Salary rate	Number	Salary rate	Number	Salary rate	Number	Salary rate	Number	Salary rate	Number	Salary rate
All occupations.....	314	29		83		38		38		62		41		23	
Fire fighting:															
Chiefs.....	7	1	\$2,904	1	\$2,850	1	\$1,800	1	\$2,400	1	\$2,400	1	\$2,100	1	\$1,680
Assistant or deputy chiefs.....	10			1	2,500	3	1,572	1	1,680	2	1,800	2	1,740	1	1,440
Assistant deputy chiefs.....	2			2	2,300										
Captains.....	54	4	1,925	14	1,680	2	1,608	5	1,680	15	1,680	12	1,440	2	1,290
Lieutenants.....	6							6	1,433						
Engineers, fire engine.....	14					6	1,548							8	1,200
Drivers.....	33	8	1,861			2	1,548			16	1,560			7	1,200
Privates:															
1st grade.....	144	16	1,798	52	1,560	20	1,440	20	1,444	14	1,560	21	1,320	1	1,080
2d grade.....	3							1	1,296	2	1,440				
3d grade.....	10									10	1,320				
Probationary.....	1			1	1,260										
Miscellaneous: Drill masters.....	2			2	1,800										
Fire prevention.....		(²)		(²)		(²)				(²)				(²)	
Apparatus: ⁴															
Auto mechanics.....	8			{	1	1,680			1	1,680	{	2	1,440		
Miscellaneous: Inspectors.....	1				1	1,860						1	1,620		
Fire alarm: ⁵															
Superintendents.....	3			1	2,000	1	1,800			1	1,680				
Operators, fire alarm.....	6			3	1,620			3	1,440						
Operators, telephone.....	3					3	1,440								
Electricians.....	2											2	1,620		
Linemen and construction employees.....	2			2	1,680										
Clerical: Secretaries.....	2	(²)		2	1,620	(²)				(²)		(²)		1	1,320
Miscellaneous: Building inspectors.....	1	(²)										(²)			

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

² Men from fire-fighting force assigned to this division.

³ Under State supervision.

⁴ Work of this division performed by men assigned from fire-fighting force in Ashland and by separate city bureau in Newport.

⁵ Work of this division performed by private company in Ashland.

⁶ Inspection of buildings made by chief.

TABLE E.—Average hours and days on duty per week in fire departments of 16 East South Central cities, by occupational division, July 1, 1938

System of operation	Average hours on duty per week	Average days on duty per week	All divisions							
			All cities	City group ¹			I	II	III	
				I	II	III				
Total number of employees ²			2, 144	1, 542	288	314				
Continuous duty.....	168.0	7.0	9	4	2	3				
Single platoon: ³ On 6 days, off 1 day.....	144.0	6.0	6	6						
2-platoon—regular ⁴			1, 969	1, 436	268	265				
On 24 hours, off 24 hours.....	84.0	3.5	931	593	155	183				
Shift 7th day.....	84.0	6.5	113		113					
Shift 8th day.....	84.0	6.6	310	287		23				
Shift twice each month.....	84.0	7.0	241	241						
Shift every 15th day.....	84.0	6.8	374	315		59				
2-platoon—with additional time off: ⁵ On 24 hours, off 24 hours, off 0.2 days per week.....	78.0	3.3	33			33				
Other ⁶	50.5	6.0	127	96	18	13				

System of operation	Division											
	Fire fighting				Fire prevention				Apparatus			
	All cities	City group ¹			All cities	City group ¹			All cities	City group ¹		
		I	II	III		I	II	III		I	II	III
Total number of employees ²	1, 969	1, 433	250	286	24	20	4		42	22	11	9
Continuous duty.....	9	4	2	3								
Single platoon: ³ On 6 days, off 1 day.....	6	6										
2-platoon—regular ⁴	1, 915	1, 417	248	250	3	3		14	2	4	8	
On 24 hours, off 24 hours.....	908	593	144	171	3	3		10		4	6	
Shift 7th day.....	104		104									
Shift 8th day.....	300	280		20				2			2	
Shift twice each month.....	229	229						2	2			
Shift every 15th day.....	374	315		59								
2-platoon—with additional time off: ⁵ On 24 hours, off 24 hours, off 0.2 days per week.....	33			33								
Other ⁶	6	6			21	20	1	28	20	7	1	

See footnotes at end of table.

TABLE E.—Average hours and days on duty per week in fire departments of 16 East South Central cities, by occupational division, July 1, 1938—Continued

System of operation	Division											
	Fire alarm				Clerical				Miscellaneous			
	All cities	City group ¹			All cities	City group ¹			All cities	City group ¹		
		I	II	III		I	II	III		I	II	III
Total number of employees ²	85	49	20	16	15	10	3	2	9	8	.....	1
Continuous duty.....												
Single platoon: ³ On 6 days, off 1 day.....												
2-platoon—regular ⁴	32	17	11	4	4	.....	2	2	1	.....	.....	1
On 24 hours, off 24 hours.....	6	.....	2	4	4	.....	2	2	.....	.....	.....	.....
Shift 7th day.....	9	.....	9	.....	.....	.....	.....	.....	.....	.....	.....	.....
Shift 8th day.....	7	7	.....	.....	.....	.....	.....	.....	1	.....	.....	1
Shift twice each month.....	10	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Shift every 15th day.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2-platoon—with additional time off: ⁵ On 24 hours, off 24 hours, off 0.2 days per week.....												
Other ⁶	53	32	9	12	11	10	1	.....	8	8	.....	.....

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

² Includes only regular, full-time employees.

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

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

⁵ Under the 2-platoon system with additional time off, the employees are on duty less than an average of 84 hours per week. The average number of hours on duty per week under this system is arrived at by deducting the number of additional weekly off hours from 84. The average number of days on duty is arrived at by dividing the number of days on duty per year by 52.143.

⁶ The average number of hours and days per week is arrived at by dividing the total weekly man-hours and man-days by the total number of employees under "other."

TABLE F.—Total salaries and total number of employees of fire departments in 16 East South Central cities, July 1, 1938

Division and occupation	Number of employees				Total salaries			
	All cities	City group ¹			All cities	City group ¹		
		I	II	III		I	II	III
All occupations ²	2, 144	1, 542	288	314	\$3, 784, 406	\$2, 868, 148	\$426, 758	\$489, 500
Fire fighting.....	1, 969	1, 433	250	286	3, 470, 027	2, 658, 357	366, 350	445, 320
Chiefs.....	16	6	3	7	48, 863	24, 059	8, 670	16, 134
Assistant or deputy chiefs.....	19	6	3	10	42, 865	18, 519	6, 930	17, 416
Assistant deputy chiefs.....	10	4	4	2	23, 398	10, 980	7, 818	4, 600
Battalion chiefs.....	16	16	—	—	41, 622	41, 622	—	—
Captains.....	259	176	29	54	501, 380	367, 476	46, 008	87, 896
Lieutenants.....	168	139	23	6	314, 070	272, 670	32, 802	8, 598
Engineers, fire engine.....	224	184	26	14	409, 752	348, 924	41, 940	18, 888
Drivers.....	144	85	26	33	252, 296	168, 120	32, 832	51, 344
Privates:								
1st grade.....	913	640	129	144	1, 527, 972	1, 129, 512	180, 252	218, 208
2d grade.....	66	61	2	3	103, 804	96, 794	2, 834	4, 176
3d grade.....	94	81	3	10	142, 857	126, 273	3, 384	13, 200
4th grade.....	28	28	—	—	41, 160	41, 160	—	—
5th grade.....	5	4	—	1	7, 020	5, 760	—	1, 260
Miscellaneous.....	7	3	2	2	12, 968	6, 488	2, 880	3, 600
Fire prevention.....	24	20	4	—	46, 673	40, 535	6, 138	—
Marshals or wardens.....	7	6	1	—	14, 897	13, 385	1, 512	—
Assistant marshals or wardens.....	6	5	1	—	11, 028	9, 570	1, 458	—
Inspectors.....	11	9	2	—	20, 748	17, 580	3, 168	—
Apparatus.....	42	22	11	9	77, 081	45, 051	17, 940	14, 040
Superintendents of machinery.....	7	5	2	—	16, 539	12, 159	4, 380	—
Assistant superintendents of machinery.....	3	2	1	—	5, 400	3, 900	1, 500	—
Machinists.....	3	3	—	—	6, 360	6, 360	—	—
Auto mechanics.....	17	4	5	8	28, 020	8, 280	7, 020	12, 720
General mechanics.....	9	7	2	—	16, 488	12, 648	3, 840	—
Miscellaneous.....	3	1	1	1	4, 224	1, 704	1, 200	1, 320
Fire alarm.....	85	49	20	16	149, 890	93, 080	31, 230	25, 580
Superintendents.....	11	5	3	3	26, 518	13, 808	7, 230	5, 480
Assistant superintendents.....	3	2	1	—	6, 480	4, 380	2, 100	—
Chief fire alarm operators.....	2	2	—	—	4, 176	4, 176	—	—
Fire alarm operators.....	52	31	12	9	84, 116	53, 276	17, 340	13, 500
Electricians.....	6	4	—	2	11, 640	8, 400	—	3, 240
Linemen.....	8	3	3	2	12, 720	5, 580	3, 780	3, 360
Linemen's helpers.....	2	1	1	—	2, 740	1, 960	780	—
Miscellaneous: Watchmen.....	1	1	—	—	1, 500	1, 500	—	—
Clerical.....	15	10	3	2	26, 457	18, 117	5, 100	3, 240
Secretaries.....	10	5	3	2	18, 203	9, 863	5, 100	3, 240
Assistant secretaries.....	1	1	—	—	1, 800	1, 800	—	—
Clerks and bookkeepers.....	1	1	—	—	1, 354	1, 354	—	—
Stenographers and typists.....	2	2	—	—	3, 360	3, 360	—	—
Miscellaneous.....	1	1	—	—	1, 740	1, 740	—	—
Miscellaneous.....	9	8	—	1	14, 328	13, 098	—	1, 320
Building inspectors.....	3	2	—	1	6, 540	5, 220	—	1, 320
Instructors.....	1	1	—	—	2, 100	2, 100	—	—
Inspectors other than building inspectors.....	1	1	—	—	1, 920	1, 920	—	—
Other.....	4	4	—	—	3, 768	3, 768	—	—

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

² Includes only regular full-time employees.