

---

---

**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 IX**

**Pacific Cities**

+

**Prepared by**

**Division of Construction and Public Employment**

**HERMAN B. BYER, Chief**



**Bulletin No. 684**

**UNITED STATES  
GOVERNMENT PRINTING OFFICE  
WASHINGTON : 1941**

---

---

UNITED STATES DEPARTMENT OF LABOR

FRANCES PERKINS, *Secretary*

+

BUREAU OF LABOR STATISTICS

ISADOR LUBIN, *Commissioner*

A. F. HINRICHS, *Assistant Commissioner*

|   |   |
|---|---|
| Donald Davenport, Chief,<br>Employment and Occupa-<br>tional Outlook Branch | Aryness Joy, Chief, Prices and<br>Cost of Living Branch                               |
| Henry J. Fitzgerald, Chief,<br>Business Management<br>Branch                | N. Arnold Tolles, Chief, Work-<br>ing Conditions and Indus-<br>trial Relations Branch |
| Hugh S. Hanna, Chief, Edi-<br>torial and Research                           | Sidney W. Wilcox, Chief Stat-<br>istician   |

CHIEFS OF DIVISIONS

|   |  |
|---|--|
| Herman B. Byer, Construction<br>and Public Employment | Charles F. Sharkey, Labor Law<br>Information |
| J. M. Cutts, Wholesale Prices                         | Boris Stern, Labor Informa-<br>tion Bulletin |
| Sven Kjaer, Industrial Acci-<br>dents                 | Stella Stewart, Retail Prices                |
| John J. Mahaney, Machine<br>Tabulation                | Lewis E. Talbert, Employment<br>Statistics   |
| Robert J. Myers, Wage and<br>Hour Statistics          | Emmett H. Welch, Occupa-<br>tional Outlook   |
| Florence Peterson, Industrial<br>Relations            | Faith M. Williams, Cost of<br>Living         |

STATE, COUNTY, AND MUNICIPAL SURVEY

JESSE M. HADLEY, *Director*

## CONTENTS

---

|  | Page |
|--|------|
| Summary.....   | 1    |
| Annual salaries:   |      |
| General level of salaries.....   | 2    |
| Salaries in selected occupations.....  | 3    |
| Salaries of privates.....  | 7    |
| Hours and working conditions:  |      |
| Average hours and days on duty per week.....   | 9    |
| Items supplied firemen.....  | 13   |
| Vacations with pay.....  | 13   |
| Promotion of lower-grade privates.....   | 13   |
| Percentage distribution of employees and salaries:   |      |
| All employees.....   | 14   |
| Supervisory employees.....   | 15   |
| Appendix:  |      |
| TABLE A.—Cities covered by this report.....  | 17   |
| TABLE B.—Number of employees and annual salaries in cities of<br>100,000 or more, by occupation.....   | 18   |
| TABLE C.—Number of employees and annual salaries in cities of<br>50,000 to 100,000, by occupation..... | 21   |
| TABLE D.—Number of employees and annual salaries in cities of<br>25,000 to 50,000, by occupation.....  | 22   |
| TABLE E.—Average hours and days on duty, by occupational di-<br>visions.....                           | 24   |
| TABLE F.—Total salaries and total number of employees.....   | 26   |



## 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 last of a series of nine reports on Salaries and Hours of Labor in Municipal Fire Departments. This report covers cities in the Pacific Division 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.*

v



---

---

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

---

---

**Salaries and Hours of Labor in Municipal Fire  
Departments, Pacific Cities, July 1, 1938<sup>1</sup>**

**Summary**

Employment in the fire departments<sup>2</sup> of the 27 Pacific cities having a population of 25,000<sup>3</sup> or more was 6,580 persons on July 1, 1938, and the total annual salaries amounted to \$15,623,000. Four-fifths of the persons employed and salaries paid were in the 9 largest cities and nearly half in the 2 largest, Los Angeles and San Francisco.

The cities studied included all cities in California, Washington, and Oregon which had a population in excess of 25,000, except the urban township of Belvedere, which had a volunteer department. They ranged in size from Los Angeles, with about one and a quarter million inhabitants, to Bakersfield, Calif., with just over 26,000. Los Angeles had a department of 1,782 persons, or 14 for each 10,000 residents, and the annual expenditures for fire department salaries amounted to \$3.63 per capita.

The smallest city, Bakersfield, in an oil-producing district, spent a relatively large amount for fire protection. The per capita cost for salaries was \$4.78, and the fire department employed 23 persons per 10,000 residents. In San Bernardino, Calif., with the smallest department consisting of 31 employees the comparable figures were 8 employees and \$1.43. For the entire 27 cities the average figures were \$3.76 per capita and 16 employees per 10,000 inhabitants.

Ninety-four out of every one hundred employees were in the fire-fighting divisions. Of the 94, 63 were privates, 7 were engineers, 4 were drivers, 11 were captains, and 6 were lieutenants; the rest were

---

<sup>1</sup> 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.

<sup>2</sup> 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, by the Bureau of Labor Statistics 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 the cities in the Pacific States is one of a series which is being issued by geographic divisions.

<sup>3</sup> The U. S. Census of Population for 1930 was used to determine the size of the cities. See appendix for list of the States in the Pacific Division and the cities included in this bulletin.

battalion chiefs, chiefs, and their assistants. The 6 percent not in the fire-fighting divisions were engaged in such activities as fire-alarm operation, fire prevention, maintenance, and clerical work.

Sixteen of the twenty-seven cities promoted privates of lower grades automatically after 1 year of service, 10 made promotions on the basis of civil-service appointments, and 1 had no system of promotions. Vacations with pay were granted to nearly all employees, and the average length of the vacation was 14.5 days.

The highest individual salary was the \$7,200 received by the chiefs of the Los Angeles and San Francisco Fire Departments, and the lowest was \$1,200 paid to fire-alarm operators in Glendale, Calif., and a stenographer in Oakland, Calif. More than nine-tenths of all salaries were between \$1,650 and \$2,750. The spread between the salaries for most grades of supervisory officers and those of privates was relatively narrow.

About 94 out of every 100 employees worked under some form of the two-platoon system requiring periods of duty totaling from 70 to 84 hours per week.

## Annual Salaries

### General Level of Salaries

Almost three-fifths of the fire-department salaries in the 27 Pacific cities were between \$2,150 and \$2,450. Most of the salaries in and above this range were received by employees in the larger cities. These cities had only 9 percent of their fire department employees receiving below \$2,150 as compared with 20 percent in the medium-sized cities and 76 percent in the small cities.

For the sake of brevity the large cities having 100,000 or more in population will be designated in this report as group I;<sup>4</sup> cities from 50,000 to 100,000 will be designated group II; and 25,000 to 50,000, group III. The cities with their groupings are shown in appendix table A.

Maximum salaries were \$7,200 for group I cities, \$4,800 for group II, and \$3,600 for group III, and in all cases these were salaries paid to department chiefs. The differences in salaries paid according to size of city are shown in table 1 and in chart on page 4.

<sup>4</sup> Except for Los Angeles and San Francisco, the populations of the cities in group I were below 500,000. Los Angeles, with 1,238,048 inhabitants, and San Francisco with 634,394 inhabitants have been included in group I because the data for these cities did not vary sufficiently from the data for the other cities to justify separate treatment.

TABLE 1.—Distribution of employees in fire departments of 27 Pacific 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 |                         |        |        |
|--------------------------------|---------------------|-------------------------|-----------------|----------------|------------|-------------------------|--------|--------|
|                                | All cities          | City group <sup>1</sup> |                 |                | All cities | City group <sup>1</sup> |        |        |
|                                |                     | I                       | II              | III            |            | I                       | II     | III    |
| All groups.....                | <sup>2</sup> 6, 576 | 5, 254                  | 735             | 587            | 100. 0     | 100. 0                  | 100. 0 | 100. 0 |
| Under \$1,250.....             | 6                   | 1                       | 5               | -----          | . 1        | ( <sup>3</sup> )        | . 7    | -----  |
| \$1,250 and under \$1,350..... | 10                  | 2                       | 1               | 7              | . 2        | ( <sup>3</sup> )        | . 1    | 1. 2   |
| \$1,350 and under \$1,450..... | 18                  | 12                      | 3               | 3              | . 3        | . 2                     | . 4    | . 5    |
| \$1,450 and under \$1,550..... | 49                  | -----                   | -----           | 49             | . 7        | -----                   | -----  | 8. 3   |
| \$1,550 and under \$1,650..... | 106                 | 11                      | 2               | 93             | 1. 6       | . 2                     | . 3    | 15. 8  |
| \$1,650 and under \$1,750..... | 164                 | 117                     | 7               | 40             | 2. 5       | 2. 2                    | . 9    | 6. 8   |
| \$1,750 and under \$1,850..... | 159                 | 43                      | 11              | 105            | 2. 4       | . 8                     | 1. 5   | 17. 9  |
| \$1,850 and under \$1,950..... | 379                 | 226                     | 39              | 114            | 5. 8       | 4. 3                    | 5. 3   | 19. 4  |
| \$1,950 and under \$2,050..... | 163                 | 51                      | 77              | 35             | 2. 5       | 1. 0                    | 10. 5  | 6. 0   |
| \$2,050 and under \$2,150..... | 1, 185              | 967                     | 140             | 78             | 18. 0      | 18. 4                   | 19. 0  | 13. 3  |
| \$2,150 and under \$2,250..... | 380                 | 190                     | 160             | 30             | 5. 8       | 3. 6                    | 21. 8  | 5. 1   |
| \$2,250 and under \$2,350..... | 2, 343              | 2, 200                  | 135             | 8              | 35. 6      | 41. 9                   | 18. 4  | 1. 4   |
| \$2,350 and under \$2,450..... | 284                 | 200                     | 55              | 9              | 4. 0       | 3. 8                    | 7. 5   | 1. 5   |
| \$2,450 and under \$2,550..... | 420                 | 397                     | 22              | 1              | 6. 4       | 7. 6                    | 3. 0   | . 2    |
| \$2,550 and under \$2,650..... | 402                 | 350                     | 47              | 5              | 6. 1       | 6. 7                    | 6. 4   | . 9    |
| \$2,650 and under \$2,750..... | 114                 | 107                     | 5               | 2              | 1. 7       | 2. 0                    | . 7    | . 3    |
| \$2,750 and under \$2,850..... | -----               | -----                   | -----           | -----          | -----      | -----                   | -----  | -----  |
| \$2,850 and under \$2,950..... | 278                 | 265                     | 9               | 4              | 4. 2       | 5. 1                    | 1. 2   | . 7    |
| \$2,950 and under \$3,050..... | 136                 | <sup>4</sup> 115        | <sup>5</sup> 17 | <sup>6</sup> 4 | 2. 1       | 2. 2                    | 2. 3   | . 7    |
| \$3,050 and over.....          | -----               | -----                   | -----           | -----          | -----      | -----                   | -----  | -----  |

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

<sup>2</sup> Includes only regular full-time employees.

<sup>3</sup> Less than 1/10 of 1 percent.

<sup>4</sup> Includes 14 at \$3,060, 1 at \$3,120, 1 at \$3,180, 2 at \$3,300, 2 at \$3,360, 40 at \$3,600, 1 at \$3,708, 1 at \$3,780, 1 at \$3,900, 1 at \$4,050, 26 at \$4,200, 2 at \$4,500, 18 at \$4,800, 1 at \$5,000, 2 at \$5,400, and 2 at \$7,200.

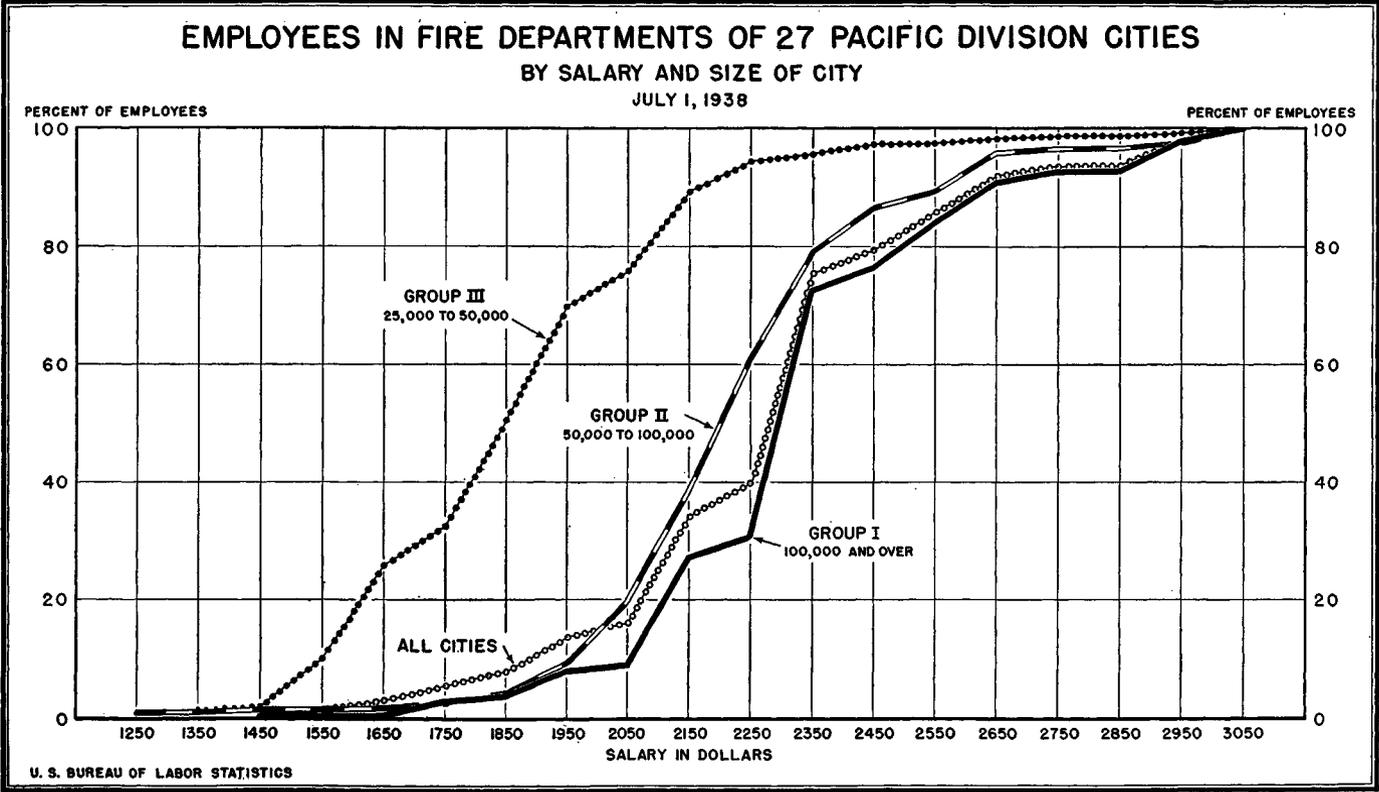
<sup>5</sup> Includes 3 at \$3,120, 2 at \$3,180, 3 at \$3,420, 2 at \$3,600, 1 at \$3,840, 4 at \$4,200, 1 at \$4,500, and 1 at \$4,800.

<sup>6</sup> Includes 1 at \$3,300 and 3 at \$3,600.

### Salaries in Selected Occupations

Salaries were distributed over a wider range in those cities which paid the higher salaries, and in most instances these were the larger cities. Spreads between the salaries for different occupations were also wider and the range of salaries for the same occupation greater in the cities with higher average salary levels.

Salaries of all chiefs and nearly all of their immediate assistants in group I and group II cities were above \$2,950, but 4 out of 12 chiefs in group III cities had lower salaries. Of 495 captains in the largest cities 220 had salaries between \$2,950 and \$3,050, and 245 had salaries between \$2,550 and \$2,850. A majority of the captains in group II cities and all of those in the smallest cities had salaries lower than \$2,550. Salaries of privates varied from \$1,380 to \$2,400 but were generally concentrated in the upper part of this range, except in the smallest cities. Differences between the average salaries of privates and captains were fairly wide. For example, salaries of first grade privates averaged \$494, \$278 and \$195 lower, respectively, than captains' salaries in the 3 groups of cities.



**TABLE 2.—Distribution of fire department employees in 27 Pacific cities, by selected occupations and salary group, July 1, 1938**

[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 <sup>1</sup> |          |          | All cities | City group <sup>1</sup> |          |          | All cities                 | City group <sup>1</sup> |          |          |
|  |                 | I                       | II       | III      |            | I                       | II       | III      |                            | I                       | II       | III      |
| Number of cities reporting             | 27              | 9                       | 6        | 12       | 27         | 9                       | 6        | 12       | 24                         | 8                       | 5        | 11       |
| Total number of employees <sup>2</sup> | 6, 876          | 5, 254                  | 735      | 587      | 27         | 9                       | 6        | 12       | 39                         | 17                      | 6        | 16       |
| Under \$1,250                          | 6               | 1                       | 5        |          |            |                         |          |          |                            |                         |          |          |
| \$1,250 and under \$1,350              |                 |                         |          |          |            |                         |          |          |                            |                         |          |          |
| \$1,350 and under \$1,450              | 10              | 2                       | 1        | 7        |            |                         |          |          |                            |                         |          |          |
| \$1,450 and under \$1,550              | 18              | 12                      | 3        | 3        |            |                         |          |          |                            |                         |          |          |
| \$1,550 and under \$1,650              | 49              |                         |          | 49       |            |                         |          |          |                            |                         |          |          |
| \$1,650 and under \$1,750              | 106             | 11                      | 2        | 93       |            |                         |          |          |                            |                         |          |          |
| \$1,750 and under \$1,850              | 164             | 117                     | 7        | 40       |            |                         |          |          |                            |                         |          |          |
| \$1,850 and under \$1,950              | 159             | 43                      | 11       | 106      |            |                         |          |          | 1                          |                         |          | 1        |
| \$1,950 and under \$2,050              | 379             | 226                     | 39       | 114      |            |                         |          |          | 3                          |                         |          | 3        |
| \$2,050 and under \$2,150              | 163             | 51                      | 77       | 35       |            |                         |          |          | 3                          |                         |          | 3        |
| \$2,150 and under \$2,250              | 1, 185          | 967                     | 140      | 78       |            |                         |          |          |                            |                         |          |          |
| \$2,250 and under \$2,350              | 390             | 190                     | 160      | 30       |            |                         |          |          | 1                          |                         |          | 1        |
| \$2,350 and under \$2,450              | 2, 343          | 2, 200                  | 135      | 8        | 3          |                         |          | 3        | 1                          |                         |          | 1        |
| \$2,450 and under \$2,550              | 264             | 200                     | 55       | 9        |            |                         |          |          | 8                          | 6                       |          | 2        |
| \$2,550 and under \$2,650              | 420             | 397                     | 22       | 1        |            |                         |          |          |                            |                         |          |          |
| \$2,650 and under \$2,750              | 402             | 350                     | 47       | 5        | 1          |                         |          | 1        | 3                          |                         |          | 3        |
| \$2,750 and under \$2,850              | 114             | 107                     | 5        | 2        |            |                         |          |          | 2                          |                         |          | 2        |
| \$2,850 and under \$2,950              |                 |                         | 9        |          | 4          |                         |          | 4        | 1                          |                         |          | 1        |
| \$2,950 and under \$3,050              | 278             | 265                     |          | 4        | 19         | 9                       | 7        | 6        | 4                          | 16                      | 9        | 11       |
| \$3,050 and over                       | 136             | 115                     | 17       | 4        |            |                         |          |          |                            |                         |          | 5        |
| Average annual salary <sup>17</sup>    | \$2, 376        | \$2, 428                | \$2, 326 | \$1, 972 | \$3, 980   | \$5, 042                | \$4, 350 | \$2, 998 | \$3, 111                   | \$3, 702                | \$3, 480 | \$2, 344 |

| Salary group                           | Assistant deputy chiefs |                         |          |          | Battalion chiefs |                         |          |          | Captains   |                         |          |          |
|--|-------------------------|-------------------------|----------|----------|------------------|-------------------------|----------|----------|------------|-------------------------|----------|----------|
|  | All cities              | City group <sup>1</sup> |          |          | All cities       | City group <sup>1</sup> |          |          | All cities | City group <sup>1</sup> |          |          |
|  |                         | I                       | II       | III      |                  | I                       | II       | III      |            | I                       | II       | III      |
| Number of cities reporting             | 10                      | 2                       | 4        | 4        | 13               | 8                       | 4        | 1        | 27         | 9                       | 6        | 12       |
| Total number of employees <sup>2</sup> | 21                      | 11                      | 5        | 5        | 98               | 88                      | 8        | 2        | 710        | 495                     | 107      | 108      |
| Under \$1,250                          |                         |                         |          |          |                  |                         |          |          |            |                         |          |          |
| \$1,250 and under \$1,350              |                         |                         |          |          |                  |                         |          |          |            |                         |          |          |
| \$1,350 and under \$1,450              |                         |                         |          |          |                  |                         |          |          |            |                         |          |          |
| \$1,450 and under \$1,550              |                         |                         |          |          |                  |                         |          |          |            |                         |          |          |
| \$1,550 and under \$1,650              |                         |                         |          |          |                  |                         |          |          |            |                         |          |          |
| \$1,650 and under \$1,750              |                         |                         |          |          |                  |                         |          |          | 8          |                         |          | 8        |
| \$1,750 and under \$1,850              |                         |                         |          |          |                  |                         |          |          | 7          |                         |          | 7        |
| \$1,850 and under \$1,950              | 1                       |                         |          | 1        |                  |                         |          |          | 23         |                         |          | 23       |
| \$1,950 and under \$2,050              | 1                       |                         |          | 1        |                  |                         |          |          | 19         | 13                      |          | 6        |
| \$2,050 and under \$2,150              |                         |                         |          |          |                  |                         |          |          | 12         |                         |          | 12       |
| \$2,150 and under \$2,250              | 1                       |                         |          | 1        |                  |                         |          |          | 28         |                         |          | 28       |
| \$2,250 and under \$2,350              | 2                       |                         |          | 2        |                  |                         |          |          | 50         | 17                      | 16       | 17       |
| \$2,350 and under \$2,450              |                         |                         |          |          | 6                | 4                       |          | 2        | 20         |                         | 20       |          |
| \$2,450 and under \$2,550              |                         |                         |          |          |                  |                         |          |          | 34         |                         | 27       | 7        |
| \$2,550 and under \$2,650              |                         |                         |          |          |                  |                         |          |          | 107        | 107                     |          |          |
| \$2,650 and under \$2,750              |                         |                         |          |          |                  |                         |          |          |            |                         |          |          |
| \$2,750 and under \$2,850              | 1                       |                         | 1        |          | 2                |                         | 2        |          | 76         | 32                      | 44       |          |
| \$2,850 and under \$2,950              |                         |                         |          |          | 2                |                         | 2        |          | 106        | 106                     |          |          |
| \$2,950 and under \$3,050              | 2                       |                         | 2        |          | 31               | 29                      | 2        |          | 220        | 220                     |          |          |
| \$3,050 and over                       | 13                      | 11                      | 12       |          | 57               | 13                      | 55       | 14       | 2          |                         |          |          |
| Average annual salary <sup>17</sup>    | \$3, 669                | \$4, 664                | \$3, 024 | \$2, 124 | \$3, 431         | \$3, 503                | \$2, 895 | \$2, 400 | \$2, 659   | \$2, 811                | \$2, 536 | \$2, 087 |

See footnotes at end of table.

6 SALARIES AND HOURS IN MUNICIPAL FIRE DEPARTMENTS

TABLE 2.—Distribution of fire department employees in 27 Pacific cities, by selected occupations and salary group, July 1, 1938—Continued

| Salary group                           | Lieutenants |                         |         |         | Engineers, fire engine |                         |         |         | Drivers    |                         |         |         |
|--|-------------|-------------------------|---------|---------|------------------------|-------------------------|---------|---------|------------|-------------------------|---------|---------|
|  | All cities  | City group <sup>1</sup> |         |         | All cities             | City group <sup>1</sup> |         |         | All cities | City group <sup>1</sup> |         |         |
|  |             | I                       | II      | III     |                        | I                       | II      | III     |            | I                       | II      | III     |
| Number of cities reporting.            | 11          | 7                       | 3       | 1       | 18                     | 7                       | 4       | 6       | 9          | 5                       | 2       | 2       |
| Total number of employees <sup>2</sup> | 363         | 319                     | 37      | 7       | 415                    | 306                     | 60      | 49      | 268        | 246                     | 16      | 6       |
| Under \$1,250                          |             |                         |         |         |                        |                         |         |         |            |                         |         |         |
| \$1,250 and under \$1,350              |             |                         |         |         |                        |                         |         |         |            |                         |         |         |
| \$1,350 and under \$1,450              |             |                         |         |         |                        |                         |         |         |            |                         |         |         |
| \$1,450 and under \$1,550              |             |                         |         |         |                        |                         |         |         |            |                         |         |         |
| \$1,550 and under \$1,650              |             |                         |         |         |                        |                         |         |         |            |                         |         |         |
| \$1,650 and under \$1,750              |             |                         |         |         |                        |                         |         |         | 4          |                         |         | 4       |
| \$1,750 and under \$1,850              |             |                         |         |         | 10                     |                         |         | 10      |            |                         |         |         |
| \$1,850 and under \$1,950              | 23          | 23                      |         |         | 12                     | 2                       |         | 10      |            |                         |         |         |
| \$1,950 and under \$2,050              |             |                         |         |         |                        |                         |         |         |            |                         |         |         |
| \$2,050 and under \$2,150              |             |                         |         |         | 17                     |                         |         | 17      | 16         |                         | 14      | 2       |
| \$2,150 and under \$2,250              | 27          | 17                      | 10      |         | 26                     |                         | 14      | 12      | 2          | 2                       |         |         |
| \$2,250 and under \$2,350              | 22          |                         | 15      | 7       | 57                     | 47                      | 10      |         | 2          |                         | 2       |         |
| \$2,350 and under \$2,450              | 80          | 68                      | 12      |         | 14                     | 14                      |         |         |            |                         |         |         |
| \$2,450 and under \$2,550              | 57          | 57                      |         |         | 16                     |                         | 16      |         | 61         | 61                      |         |         |
| \$2,550 and under \$2,650              |             |                         |         |         | 106                    | 86                      | 20      |         | 183        | 183                     |         |         |
| \$2,650 and under \$2,750              | 154         | 154                     |         |         | 157                    | 157                     |         |         |            |                         |         |         |
| \$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 <sup>17</sup>    | \$2,476     | \$2,497                 | \$2,327 | \$2,340 | \$2,503                | \$2,602                 | \$2,400 | \$2,011 | \$2,516    | \$2,557                 | \$2,123 | \$1,860 |

| Salary group                           | Privates, all grades |                         |         |         | Auto mechanics |                         |         |         | Fire alarm operators |                         |         |         |
|--|----------------------|-------------------------|---------|---------|----------------|-------------------------|---------|---------|----------------------|-------------------------|---------|---------|
|  | All cities           | City group <sup>1</sup> |         |         | All cities     | City group <sup>1</sup> |         |         | All cities           | City group <sup>1</sup> |         |         |
|  |                      | I                       | II      | III     |                | I                       | II      | III     |                      | I                       | II      | III     |
| Number of cities reporting.            | 27                   | 9                       | 6       | 12      | 7              | 4                       | 2       | 1       | 17                   | 6                       | 5       | 6       |
| Total number of employees <sup>2</sup> | 4,158                | 3,412                   | 413     | 333     | 16             | 11                      | 3       | 2       | 478                  | 35                      | 28      | 15      |
| Under \$1,250                          |                      |                         |         |         |                |                         |         |         | 5                    |                         | 5       |         |
| \$1,250 and under \$1,350              |                      |                         |         |         |                |                         |         |         |                      |                         |         |         |
| \$1,350 and under \$1,450              | 3                    |                         |         | 3       |                |                         |         |         | 4                    |                         |         | 4       |
| \$1,450 and under \$1,550              | 10                   | 7                       |         | 3       |                |                         |         |         |                      |                         |         |         |
| \$1,550 and under \$1,650              | 49                   |                         |         | 49      |                |                         |         |         |                      |                         |         |         |
| \$1,650 and under \$1,750              | 76                   | 2                       |         | 74      |                |                         |         |         | 3                    |                         |         | 3       |
| \$1,750 and under \$1,850              | 121                  | 101                     |         | 20      |                |                         |         |         | 9                    | 1                       | 6       | 2       |
| \$1,850 and under \$1,950              | 74                   | 4                       | 10      | 60      | 2              |                         |         | 2       | 4                    |                         |         | 4       |
| \$1,950 and under \$2,050              | 332                  | 201                     | 39      | 92      |                |                         |         |         | 2                    |                         |         | 2       |
| \$2,050 and under \$2,150              | 106                  | 46                      | 60      |         |                |                         |         |         |                      |                         |         |         |
| \$2,150 and under \$2,250              | 1,038                | 902                     | 104     | 32      | 6              | 6                       |         |         | 10                   | 4                       | 6       |         |
| \$2,250 and under \$2,350              | 206                  | 98                      | 108     |         | 2              |                         | 2       |         | 13                   | 9                       | 4       |         |
| \$2,350 and under \$2,450              | 2,143                | 2,051                   | 92      |         |                |                         |         |         | 10                   | 10                      |         |         |
| \$2,450 and under \$2,550              |                      |                         |         |         | 4              | 4                       |         |         | 14                   | 7                       | 7       |         |
| \$2,550 and under \$2,650              |                      |                         |         |         | 1              | 1                       |         |         | 4                    | 4                       |         |         |
| \$2,650 and under \$2,750              |                      |                         |         |         |                |                         |         |         |                      |                         |         |         |
| \$2,750 and under \$2,850              |                      |                         |         |         | 1              |                         | 1       |         |                      |                         |         |         |
| \$2,850 and under \$2,950              |                      |                         |         |         |                |                         |         |         |                      |                         |         |         |
| \$2,950 and under \$3,050              |                      |                         |         |         |                |                         |         |         |                      |                         |         |         |
| \$3,050 and over                       |                      |                         |         |         |                |                         |         |         |                      |                         |         |         |
| Average annual salary <sup>17</sup>    | \$2,253              | \$2,294                 | \$2,220 | \$1,865 | \$2,298        | \$2,329                 | \$2,460 | \$1,884 | \$2,126              | \$2,378                 | \$2,016 | \$1,742 |

See footnotes at end of table.

TABLE 2.—Distribution of fire department employees in 27 Pacific cities, by selected occupations and salary group, July 1, 1938—Continued

| Salary group                                     | Linemen                 |                         |         | Others     |                         |      |      |
|--|-------------------------|-------------------------|---------|------------|-------------------------|------|------|
|  | All cities <sup>2</sup> | City group <sup>1</sup> |         | All cities | City group <sup>1</sup> |      |      |
|  |                         | I                       | II      |            | I                       | II   | III  |
| Number of cities reporting . . . . .             | 8                       | 7                       | 1       | 27         | 9                       | 6    | 12   |
| Total number of employees <sup>3</sup> . . . . . | 20                      | 18                      | 2       | 363        | 287                     | 44   | 32   |
| Under \$1,250 . . . . .                          |                         |                         |         | 1          | 1                       |      |      |
| \$1,250 and under \$1,350 . . . . .              |                         |                         |         |            |                         |      |      |
| \$1,350 and under \$1,450 . . . . .              |                         |                         |         | 3          | 2                       | 1    |      |
| \$1,450 and under \$1,550 . . . . .              |                         |                         |         | 8          | 5                       | 3    |      |
| \$1,550 and under \$1,650 . . . . .              |                         |                         |         |            |                         |      |      |
| \$1,650 and under \$1,750 . . . . .              |                         |                         |         | 15         | 9                       | 2    | 4    |
| \$1,750 and under \$1,850 . . . . .              |                         |                         |         | 16         | 15                      | 1    |      |
| \$1,850 and under \$1,950 . . . . .              | 2                       | 2                       |         | 18         | 12                      | 1    | 5    |
| \$1,950 and under \$2,050 . . . . .              |                         |                         |         | 22         | 12                      |      | 10   |
| \$2,050 and under \$2,150 . . . . .              |                         |                         |         | 9          | 5                       | 3    | 1    |
| \$2,150 and under \$2,250 . . . . .              | 2                       |                         | 2       | 45         | 36                      | 4    | 5    |
| \$2,250 and under \$2,350 . . . . .              | 7                       | 7                       |         | 18         | 12                      | 3    | 3    |
| \$2,350 and under \$2,450 . . . . .              |                         |                         |         | 66         | 53                      | 11   | 2    |
| \$2,450 and under \$2,550 . . . . .              |                         |                         |         | 70         | 65                      | 5    |      |
| \$2,550 and under \$2,650 . . . . .              | 9                       | 9                       |         | 10         | 7                       | 2    | 1    |
| \$2,650 and under \$2,750 . . . . .              |                         |                         |         | 8          | 7                       |      | 1    |
| \$2,750 and under \$2,850 . . . . .              |                         |                         |         | 3          | 1                       | 2    |      |
| \$2,850 and under \$2,950 . . . . .              |                         |                         |         |            |                         |      |      |
| \$2,950 and under \$3,050 . . . . .              |                         |                         |         | 20         | 16                      | 4    |      |
| \$3,050 and over . . . . .                       |                         |                         |         | 31         | 15 29                   | 10 2 |      |
| Average annual salary <sup>17</sup> . . . . .    | \$2,375                 | \$2,399                 | \$2,160 | (18)       | (18)                    | (18) | (18) |

<sup>1</sup> 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.

<sup>2</sup> No persons in this occupation in cities of group III.

<sup>3</sup> Includes only regular full-time employees.

<sup>4</sup> Includes 7 telephone operators and 1 radio operator in city group I. Does not include chief operators.

<sup>5</sup> Does not include helpers.

<sup>6</sup> Includes 1 at \$3,180, 1 at \$3,600, 2 at \$4,500, 1 at \$4,800, 1 at \$5,000, 1 at \$5,400, and 2 at \$7,200.

<sup>7</sup> Includes 4 at \$4,200, 1 at \$4,500, and 1 at \$4,800.

<sup>8</sup> Includes 1 at \$3,300 and 3 at \$3,600.

<sup>9</sup> Includes 2 at \$3,600, 1 at \$3,708, 1 at \$4,056, 2 at \$4,200, 4 at \$4,800, and 1 at \$5,400.

<sup>10</sup> Includes 2 at \$3,420, 2 at \$3,600, and 1 at \$3,840.

<sup>11</sup> Includes 1 at \$3,300 and 10 at \$4,800.

<sup>12</sup> Includes 1 at \$3,120 and 1 at \$3,180.

<sup>13</sup> Includes 32 at \$3,600 and 23 at \$4,200.

<sup>14</sup> Each receives \$3,120.

<sup>15</sup> Includes 14 at \$3,060, 1 at \$3,120, 1 at \$3,300, 2 at \$3,360, 5 at \$3,600, 1 at \$3,780, 1 at \$3,900, 1 at \$4,200, and 3 at \$4,800.

<sup>16</sup> Includes 1 at \$3,180 and 1 at \$3,420.

<sup>17</sup> Average annual salary is derived by dividing the total salaries received by the number of employees. See table F.

<sup>18</sup> No average computed because such a heterogeneous group of occupations.

### Salaries of Privates

Privates constituted 63 percent of all the employees and received 60 percent of salary payments. In most cities there were several grades, each having different salary ranges. Only 3 privates were paid a salary as low as \$1,380 and none received more than \$2,400. While this \$1,000 range represented a fairly large spread, 8 out of every 10 salaries were concentrated in the \$300 salary range, \$2,150 to \$2,450. In group I cities, nine-tenths were in this range, in group II, three-fourths, and in group III, one tenth.

As a rule, the larger cities had more grades of privates and a larger number in the lower grades. Salaries for the lower grades averaged definitely lower than for the first grade, though some second- and

8 SALARIES AND HOURS IN MUNICIPAL FIRE DEPARTMENTS

third-grade privates in the largest group I cities received higher salaries than some first-grade privates in the smaller cities of the same group.

TABLE 3.—Distribution of privates in fire departments of 27 Pacific cities, by salary group and grade, July 1, 1938

| Salary group                   | All grades |                         |       |       |            |                         |       |       |
|--------------------------------|------------|-------------------------|-------|-------|------------|-------------------------|-------|-------|
|                                | Number     |                         |       |       | Percentage |                         |       |       |
|                                | All cities | City group <sup>1</sup> |       |       | All cities | City group <sup>1</sup> |       |       |
|                                |            | I                       | II    | III   |            | I                       | II    | III   |
| All groups.....                | 4, 158     | 3, 412                  | 413   | 333   | 100.0      | 100.0                   | 100.0 | 100.0 |
| \$1,350 and under \$1,450..... | 3          | .....                   | ..... | 3     | .1         | .....                   | ..... | .9    |
| \$1,450 and under \$1,550..... | 10         | 7                       | ..... | 3     | .2         | .....                   | ..... | .9    |
| \$1,550 and under \$1,650..... | 49         | .....                   | ..... | 49    | 1.2        | .....                   | ..... | 14.7  |
| \$1,650 and under \$1,750..... | 76         | 2                       | ..... | 74    | 1.8        | .....                   | ..... | 22.2  |
| \$1,750 and under \$1,850..... | 121        | 101                     | ..... | 20    | 2.9        | .....                   | ..... | 6.0   |
| \$1,850 and under \$1,950..... | 74         | 4                       | 10    | 60    | 1.8        | .....                   | 2.4   | 18.0  |
| \$1,950 and under \$2,050..... | 332        | 201                     | 39    | 92    | 8.0        | 5.9                     | 9.4   | 27.7  |
| \$2,050 and under \$2,150..... | 106        | 46                      | 60    | ..... | 2.5        | 1.3                     | 14.5  | ..... |
| \$2,150 and under \$2,250..... | 1,038      | 902                     | 104   | 32    | 25.0       | 26.4                    | 25.2  | 9.6   |
| \$2,250 and under \$2,350..... | 206        | 98                      | 108   | ..... | 5.0        | 2.9                     | 26.2  | ..... |
| \$2,350 and under \$2,450..... | 2, 143     | 2, 051                  | 92    | ..... | 51.5       | 60.1                    | 22.3  | ..... |

| Salary group                   | Number of privates by specified grade |                         |       |       |            |                         |       |       |            |                         |       |       |
|--------------------------------|---------------------------------------|-------------------------|-------|-------|------------|-------------------------|-------|-------|------------|-------------------------|-------|-------|
|                                | All cities                            | First                   |       |       | Second     |                         |       | Third |            |                         |       |       |
|                                |                                       | City group <sup>1</sup> |       |       | All cities | City group <sup>1</sup> |       |       | All cities | City group <sup>1</sup> |       |       |
|                                |                                       | I                       | II    | III   |            | I                       | II    | III   |            | I                       | II    | III   |
| All groups.....                | 3, 583                                | 2, 990                  | 329   | 264   | 212        | 149                     | 28    | 35    | 224        | 187                     | 14    | 23    |
| \$1,350 and under \$1,450..... | .....                                 | .....                   | ..... | ..... | .....      | .....                   | ..... | ..... | .....      | .....                   | ..... | ..... |
| \$1,450 and under \$1,550..... | .....                                 | .....                   | ..... | ..... | 3          | .....                   | ..... | 3     | 7          | 7                       | ..... | ..... |
| \$1,550 and under \$1,650..... | 36                                    | .....                   | ..... | ..... | 36         | 7                       | ..... | 7     | 5          | .....                   | ..... | 5     |
| \$1,650 and under \$1,750..... | 63                                    | .....                   | ..... | ..... | 63         | 2                       | 2     | ..... | 4          | .....                   | ..... | 4     |
| \$1,750 and under \$1,850..... | 93                                    | 93                      | ..... | ..... | 7          | .....                   | ..... | 7     | 17         | 4                       | ..... | 13    |
| \$1,850 and under \$1,950..... | 43                                    | .....                   | ..... | ..... | 43         | 17                      | 1     | 16    | 1          | .....                   | ..... | 1     |
| \$1,950 and under \$2,050..... | 207                                   | 115                     | ..... | ..... | 92         | 1                       | ..... | ..... | 14         | 8                       | 6     | ..... |
| \$2,050 and under \$2,150..... | 59                                    | .....                   | 59    | ..... | 39         | 39                      | ..... | ..... | 7          | 6                       | 1     | ..... |
| \$2,150 and under \$2,250..... | 841                                   | 781                     | 80    | 30    | 28         | 9                       | 17    | 2     | 169        | 162                     | 7     | ..... |
| \$2,250 and under \$2,350..... | 98                                    | .....                   | 98    | ..... | 108        | 98                      | 10    | ..... | .....      | .....                   | ..... | ..... |
| \$2,350 and under \$2,450..... | 2, 143                                | 2, 051                  | 92    | ..... | .....      | .....                   | ..... | ..... | .....      | .....                   | ..... | ..... |

| Salary group                   | Number of privates by specified grade—Continued |                         |       |       |            |                         |       |       |            |                         |       |       |
|--------------------------------|---|-------------------------|-------|-------|------------|-------------------------|-------|-------|------------|-------------------------|-------|-------|
|                                | All cities                                      | Fourth                  |       |       | All cities | Fifth                   |       |       | All cities | Probationary            |       |       |
|                                |   | City group <sup>1</sup> |       |       |            | City group <sup>1</sup> |       |       |            | City group <sup>1</sup> |       |       |
|                                |   | I                       | II    | III   | I          | II                      | III   | I     | II         | III                     |       |       |
| All groups.....                | 108   | 66                      | 32    | 10    | 27         | 16                      | 10    | 1     | 4          | 4                       | ..... | ..... |
| \$1,350 and under \$1,450..... | 3   | .....                   | ..... | ..... | .....      | .....                   | ..... | ..... | .....      | .....                   | ..... | ..... |
| \$1,450 and under \$1,550..... | .....   | .....                   | ..... | ..... | .....      | .....                   | ..... | ..... | .....      | .....                   | ..... | ..... |
| \$1,550 and under \$1,650..... | .....   | .....                   | ..... | ..... | 1          | .....                   | ..... | ..... | .....      | .....                   | ..... | ..... |
| \$1,650 and under \$1,750..... | 7   | .....                   | ..... | ..... | .....      | .....                   | ..... | ..... | .....      | .....                   | ..... | ..... |
| \$1,750 and under \$1,850..... | .....   | .....                   | ..... | ..... | .....      | .....                   | ..... | ..... | .....      | .....                   | ..... | ..... |
| \$1,850 and under \$1,950..... | 8   | .....                   | 8     | ..... | 5          | 2                       | 2     | ..... | 4          | 4                       | ..... | ..... |
| \$1,950 and under \$2,050..... | 89  | 65                      | 24    | ..... | 21         | 13                      | 8     | ..... | .....      | .....                   | ..... | ..... |
| \$2,050 and under \$2,150..... | 1   | 1                       | ..... | ..... | .....      | .....                   | ..... | ..... | .....      | .....                   | ..... | ..... |
| \$2,150 and under \$2,250..... | .....   | .....                   | ..... | ..... | .....      | .....                   | ..... | ..... | .....      | .....                   | ..... | ..... |
| \$2,250 and under \$2,350..... | .....   | .....                   | ..... | ..... | .....      | .....                   | ..... | ..... | .....      | .....                   | ..... | ..... |
| \$2,350 and under \$2,450..... | .....   | .....                   | ..... | ..... | .....      | .....                   | ..... | ..... | .....      | .....                   | ..... | ..... |

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

## Hours and Working Conditions

### Average Hours and Days on Duty Per Week

A large majority of the employees in a fire department—all of the uniformed men except a few officers—work under a platoon system of assignment. The rest of the employees are either on “continuous” duty or have the working hours prevailing in the other city bureaus.

A platoon is a system of assignment to duty at stated hours, so as to provide equal protection at all times. It is analogous to the systems of shifts in industries operating 24 hours a day, and the platoon itself corresponds to the group working a given set of hours.

The single-platoon system operates 24 hours a day on a single tour. Each fireman remains continuously on duty for 2 or more days and then has a day off. The off days are so arranged that the department is equally staffed at all times. Under the single-platoon system the average weekly days and hours on duty are determined by the frequency of days off. The shortest workweek under this system averages 112 hours and 4.7 days on duty; this occurs in the variation in which the fireman has 2 days on duty with the third day off. As the period between days off increases, the length of the workweek also increases and approaches the limit of 168 hours, or the length of a full week of continuous duty. The only variation of the single-platoon system occurring in the Pacific Division is the one with 144 hours and 6 days on duty per week.

The single-platoon system was formerly the most prevalent, but most cities in the United States now operate under the double-platoon system. In the simplest form of the double-platoon system one group or 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 in 14 days, or an average of 3.5 such periods per week. Hours on duty for this and other two-platoon systems which do not provide for extra or additional days off average 84 per week. Under improved forms of the double-platoon system the day is divided into 2 periods or tours of duty—a day tour of 10 or 11 hours and a corresponding night tour of 14 or 13 hours. While one group is on duty the other is off duty. The firemen, however, do not work the same tour constantly but are shifted at regular intervals from day to night duty and vice versa. To effect the shift, the platoon working the day tour continues on duty through the night, working a full 24-hour day, after which it goes off duty until the following night, when it begins the night tour and continues to work nights until the next shift. The other platoon meanwhile has 24 consecutive hours off duty, reporting on the day tour the following day. Thus one platoon has a 24-hour period of duty and the other a 24-hour period of leave at each shift.

The frequency of shifts under this type of double-platoon system varies from as often as once in 3 days to once in 30 days, resulting in average number of days on duty varying from 5.8 to 6.8 days per week; the less frequent the shifts, the larger the number of days or work periods per week. The following illustrates the variation used in Seattle, Wash.

**Two-Platoon System (Shift on Fourth Day)**

| Day | First platoon             | Second platoon            |
|-----|---------------------------|---------------------------|
| 1   | XXXXXXXXXXXX - - - - -    | - - - - - XXXXXXXXXXXXXXX |
| 2   | XXXXXXXXXXXX - - - - -    | - - - - - XXXXXXXXXXXXXXX |
| 3   | XXXXXXXXXXXX - - - - -    | - - - - - XXXXXXXXXXXXXXX |
| 4   | XXXXXXXXXXXXXXXXXXXXXXXX  | - - - - -                 |
| 5   | - - - - - XXXXXXXXXXXXXXX | XXXXXXXXXXXX - - - - -    |
| 6   | - - - - - XXXXXXXXXXXXXXX | XXXXXXXXXXXX - - - - -    |
| 7   | - - - - - XXXXXXXXXXXXXXX | XXXXXXXXXXXX - - - - -    |
| 8   | - - - - -                 | XXXXXXXXXXXXXXXXXXXXXXXX  |

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

It will be noted that on the fourth 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 fifth day, and the second platoon changing to day duty. Thus, the 24-hour tours are always a signal for a shift in the platoons.

Some variations of the two-platoon system eliminate 24-hour periods of duty, and the present trend is toward the three-platoon system, which divides the day into three 8-hour tours of duty in order to make the hours on duty shorter and to avoid the long 24-hour tours. However, there were no instances of this system in the Pacific cities.

In most departments, the entire fire-fighting division operates wholly under one of the three general types of platoon systems, but certain officers—mainly chiefs or other high ranking officers—are reported on “continuous duty,” which simply means that they are subject to call at any time. There are other employees not in the uniformed force, such as clerks and maintenance men, who usually work the hours prevailing in private industry or in the other departments of the city government.

Average days on duty in the Pacific cities ranged from 3 to 7 days per week, according to the type of system used. Ninety-four out of one hundred employees worked under some form of the two-platoon system. Sixty of these worked under variations of the system which required from 3.5 to 6.8 days on duty in a workweek averaging 84 hours. The remaining 34 were employed under systems which varied from 3 to 6 days, and averaged fewer than 84 hours per week. The other 6 percent of the employees were engaged in clerical, main-

tenance, and similar types of work, with an average workweek of 5.5 days and 44.5 hours.

A considerable number of cities in the Pacific Division, including some of the largest, were using the form of double-platoon system which required firemen to be on duty a full 24 hours, followed by 24 hours off, either with or without additional time off. Nineteen of the twenty-seven cities reported this arrangement of hours. Fire department employees in these cities constituted 58 percent of total employees in the cities studied. The remaining employees worked under two-platoon systems in which the day was divided into day and night tours of duty.



**Items Supplied Firemen**

All cities supplied sleeping quarters for men on night duty and all except two cities furnished the necessary beds, bedding, linen, and laundry service. Fire helmets were supplied by 12 cities and 1 or more minor items by 19. The smaller cities, which paid lower salaries, generally supplied more items than the larger cities, and a group III city, Stockton, Calif., was the only one to supply uniforms or material for uniforms.

**TABLE 5.**—*Items supplied to firemen of 27 Pacific cities, July 1, 1938*

| City group <sup>1</sup> | Number of cities | Number of cities supplying              |                               |         |              |              |                                 |             |
|-------------------------|------------------|---|-------------------------------|---------|--------------|--------------|---------------------------------|-------------|
|                         |                  | Sleeping quarters for men on night duty | Beds, bedding, linen, laundry | Helmets | Rubber coats | Rubber boots | Cloth and trimmings for uniform | Minor items |
| All cities.....         | 27               | 27                                      | 25                            | 12      | 3            | 1            | 1                               | 19          |
| Group I.....            | 9                | 9                                       | 9                             | 3       | 1            | -----        | -----                           | 5           |
| Group II.....           | 6                | 6                                       | 5                             | 2       | -----        | -----        | -----                           | 4           |
| Group III.....          | 12               | 12                                      | 11                            | 7       | 2            | 1            | 1                               | 10          |

<sup>1</sup> 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**

All but 42 of the 6,576 employees of Pacific cities fire departments received vacations with pay. More than half had vacations of 15 days and more than a third had 14-day vacations. There were no significant differences between the 3 groups of cities in the average length of vacation granted.

**TABLE 6.**—*Number of employees receiving specified vacation with pay in fire departments of 27 Pacific cities, July 1, 1938*

| City group <sup>1</sup> | Number of cities | Total number of employees | Number of employees having— |         |         |         |         |         |
|-------------------------|------------------|---------------------------|-----------------------------|---------|---------|---------|---------|---------|
|                         |                  |                           | No vacation                 | 12 days | 14 days | 15 days | 16 days | 21 days |
| All cities.....         | 27               | <sup>2</sup> 6,576        | 42                          | 205     | 2,322   | 3,779   | 200     | 28      |
| Group I.....            | 9                | 5,254                     | 42                          | -----   | 1,747   | 3,237   | 200     | 28      |
| Group II.....           | 6                | 735                       | -----                       | 205     | 387     | 143     | -----   | -----   |
| Group III.....          | 12               | 587                       | -----                       | -----   | 188     | 399     | -----   | -----   |

<sup>1</sup> 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.

<sup>2</sup> Includes only regular full-time employees.

**Promotion of Lower Grade-Privates**

Promotion of lower-grade privates after 1 year of service took place automatically in 16 cities; while in 10 others promotion was by civil-service appointment, and in 1 by non-civil-service appointment.

Promotion from grade to grade is to be distinguished from increases in pay based upon length of service within a given grade. Where promotions were not automatic civil service was the general rule, with group III cities making the greatest use of this mode of promotion.

TABLE 7.—*Promotion of lower-grade privates in fire departments of 27 Pacific cities, July 1, 1938*

| City group <sup>1</sup> | Total number of privates | Total number of cities | Number of cities with promotion— |                              |                |
|-------------------------|--------------------------|------------------------|----------------------------------|------------------------------|----------------|
|                         |                          |                        | After 1 year                     | By civil-service examination | By appointment |
| All cities .....        | 4,158                    | 27                     | 16                               | 10                           | 1              |
| Group I .....           | 3,412                    | 9                      | 6                                | 3                            | —              |
| Group II .....          | 413                      | 6                      | 5                                | 1                            | —              |
| Group III .....         | 333                      | 12                     | 5                                | 6                            | 1              |

<sup>1</sup> 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

Ninety-four percent of the employees of fire departments in the 27 Pacific cities studied were in the fire-fighting divisions; and these divisions accounted for almost exactly the same percentage of total salaries.

Of each 94 men engaged in fire-fighting work, 63 were privates, 11 engineers and drivers, 16 were captains and lieutenants, 3 chiefs, assistants to chiefs, and battalion chiefs; the remainder were engaged on miscellaneous work. The higher ranking officers were a larger proportion of all employees in the smaller cities than in group I cities. This situation was due to the fact that in the larger cities each officer was in charge of a greater number of men.

As would be expected, the officers and administrative staffs received a somewhat larger share of total salaries than would be indicated by the percentage of their number to the total number of employees. For example, chiefs were 0.2 percent of the employees in group I cities and received 0.4 percent of the salaries; for group II the corresponding figures were 0.8 and 1.5; and for group III cities they were 2.1 and 3.1 percent. These differences between the personnel and salary percentages were less for the small cities, where the total range of salaries was narrower; and the salary differences were also less for officers of lower grades. Captains and lieutenants were 16 percent of all employees in group I cities, and received 17 percent of the salaries. In the other two groups of cities they constituted 20 percent of the total personnel and received 21 percent of the salaries. In contrast, all privates, who constituted 63 percent of total employees, received 60 percent of the salaries.

**TABLE 8.**—Percentage distributions of employees and salaries in specified divisions in fire departments of 27 Pacific cities, July 1, 1938

| Division <sup>1</sup> and occupation | Percentage of employees |                         |       |       | Percentage of salaries |                         |       |       |
|--------------------------------------|-------------------------|-------------------------|-------|-------|------------------------|-------------------------|-------|-------|
|                                      | All cities              | City group <sup>2</sup> |       |       | All cities             | City group <sup>2</sup> |       |       |
|                                      |                         | 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                        | 93.8                    | 94.5                    | 90.1  | 91.7  | 94.0                   | 94.6                    | 90.6  | 91.7  |
| Chiefs                               | .4                      | .2                      | .8    | 2.1   | .7                     | .4                      | 1.5   | 3.1   |
| Assistant or deputy chiefs           | .6                      | .3                      | .8    | 2.7   | .8                     | .5                      | 1.2   | 3.2   |
| Assistant deputy chiefs              | .3                      | .2                      | .7    | .9    | .5                     | .4                      | .9    | .9    |
| Battalion chiefs                     | 1.5                     | 1.7                     | 1.1   | .3    | 2.1                    | 2.4                     | 1.4   | .4    |
| Captains                             | 10.8                    | 9.4                     | 14.6  | 18.4  | 12.1                   | 10.9                    | 15.9  | 19.5  |
| Lieutenants                          | 5.5                     | 6.1                     | 5.0   | 1.2   | 5.8                    | 6.2                     | 5.0   | 1.4   |
| Pilots and first mates               | .4                      | .4                      | .4    | .4    | .5                     | .5                      | .5    | .5    |
| Engineers, fire engine               | 6.3                     | 5.8                     | 8.2   | 8.4   | 6.6                    | 6.2                     | 8.4   | 8.5   |
| Engineers, marine                    | .3                      | .3                      | .3    | .3    | .3                     | .4                      | .4    | .4    |
| Drivers                              | 4.1                     | 4.7                     | 2.2   | 1.0   | 4.3                    | 4.9                     | 2.0   | 1.0   |
| Privates, all grades                 | 63.2                    | 65.0                    | 56.2  | 56.7  | 60.0                   | 61.4                    | 53.7  | 53.7  |
| Miscellaneous                        | .4                      | .4                      | .5    | .5    | .4                     | .4                      | .6    | .5    |
| Fire prevention                      | 1.3                     | 1.1                     | 2.2   | 2.4   | 1.3                    | 1.1                     | 2.3   | 2.5   |
| Apparatus                            | 1.6                     | 1.6                     | 1.6   | 1.7   | 1.6                    | 1.6                     | 1.8   | 1.8   |
| Fire alarm                           | 2.1                     | 1.5                     | 4.6   | 3.7   | 2.0                    | 1.5                     | 4.2   | 3.5   |
| Clerical                             | .9                      | 1.0                     | 1.0   | .5    | .8                     | .9                      | .7    | .5    |
| Miscellaneous                        | .3                      | .3                      | .5    | .5    | .3                     | .3                      | .4    | .5    |

<sup>1</sup> 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.

<sup>2</sup> 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

Supervisory employees included 19 percent of the total in group I cities, 25 percent in group II, and 29 percent in group III cities. Percentages of total salaries were in all cases somewhat higher, but the ratio of the salary percentage to the percentage of personnel was smallest in group III cities.

**TABLE 9.**—Number and salaries of supervisory employees <sup>1</sup> as percentage of total fire-department employees and total salaries in 27 Pacific cities, July 1, 1938

| Item   | All cities | City group <sup>2</sup> |      |      |
|--|------------|-------------------------|------|------|
|  |            | I                       | II   | III  |
| Supervisory employees as percentage of all employees | 20.1       | 18.5                    | 25.3 | 28.8 |
| Supervisory salaries as percentage of total salaries | 23.1       | 21.6                    | 28.5 | 32.1 |
| Ratio of salaries to employees                       | 1.15       | 1.17                    | 1.13 | 1.11 |

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

<sup>2</sup> 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 Pacific Division includes the States of California, Oregon, and Washington.

Table A shows cities covered by this report with their populations in 1930, the proportion of firemen to each 10,000 population, and the per capita salary costs. 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 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 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 Pacific cities with a population of 25,000 or more<sup>1</sup>, July 1, 1938*

| City                                      | Population <sup>2</sup> | Employees per 10,000 | Per capita salary cost |
|---|-------------------------|----------------------|------------------------|
| All cities.....                           | 4, 155, 503             | 16                   | \$3. 76                |
| Group I—cities of 100,000 and over.....   | 3, 336, 261             | 16                   | 3. 82                  |
| Long Beach, Calif.....                    | 142, 032                | 16                   | 4. 02                  |
| Los Angeles, Calif.....                   | 1, 238, 048             | 14                   | 3. 63                  |
| Oakland, Calif.....                       | 284, 063                | 15                   | 3. 78                  |
| Portland, Oreg.....                       | 301, 815                | 17                   | 3. 90                  |
| San Diego, Calif.....                     | 147, 995                | 14                   | 3. 16                  |
| San Francisco, Calif.....                 | 634, 394                | 19                   | 4. 71                  |
| Seattle, Wash.....                        | 365, 683                | 16                   | 3. 61                  |
| Spokane, Wash.....                        | 115, 514                | 13                   | 2. 45                  |
| Tacoma, Wash.....                         | 106, 817                | 17                   | 3. 58                  |
| Group II—cities of 50,000 to 100,000..... | 424, 845                | 17                   | 4. 02                  |
| Berkeley, Calif.....                      | 82, 109                 | 14                   | 3. 18                  |
| Fresno, Calif.....                        | 52, 513                 | 27                   | 6. 07                  |
| Glendale, Calif.....                      | 62, 736                 | 14                   | 3. 00                  |
| Pasadena, Calif.....                      | 76, 086                 | 16                   | 3. 74                  |
| Sacramento, Calif.....                    | 93, 750                 | 20                   | 4. 99                  |
| San Jose, Calif.....                      | 57, 651                 | 14                   | 3. 29                  |
| Group III—cities of 25,000 to 50,000..... | 394, 397                | 15                   | 2. 94                  |
| Alameda, Calif.....                       | 35, 033                 | 15                   | 3. 37                  |
| Alhambra, Calif.....                      | 29, 472                 | 13                   | 2. 73                  |
| Bakersfield, Calif.....                   | 26, 015                 | 23                   | 4. 78                  |
| Bellingham, Wash.....                     | 30, 823                 | 15                   | 2. 59                  |
| Everett, Wash.....                        | 30, 567                 | 14                   | 2. 70                  |
| Riverside, Calif.....                     | 29, 696                 | 12                   | 2. 11                  |
| Salem, Oreg.....                          | 26, 266                 | 18                   | 3. 04                  |
| San Bernardino, Calif.....                | 37, 481                 | 8                    | 1. 43                  |
| Santa Ana, Calif.....                     | 30, 322                 | 12                   | 2. 17                  |
| Santa Barbara, Calif.....                 | 33, 613                 | 16                   | 3. 08                  |
| Santa Monica, Calif.....                  | 37, 146                 | 10                   | 2. 06                  |
| Stockton, Calif.....                      | 47, 963                 | 23                   | 4. 81                  |

<sup>1</sup> Includes all cities with a population of 25,000 or more. Belvedere Township (33,023), Calif., classified as urban by special rule of the U. S. Bureau of the Census, has not been included because the fire department for Belvedere is composed of volunteers.

<sup>2</sup> Based on U. S. Census of Population for 1930.

**TABLE B.**—Number of employees and annual salaries in fire departments of each of 9 Pacific cities with a population of 100,000 or more<sup>1</sup> by occupations, July 1, 1938

| Division and occupation            | Total number of employees | California |             |                  |             |         |             |           |             |               |             | Oregon   |             | Washington |             |         |             |        |             |
|------------------------------------|---------------------------|------------|-------------|------------------|-------------|---------|-------------|-----------|-------------|---------------|-------------|----------|-------------|------------|-------------|---------|-------------|--------|-------------|
|                                    |                           | Long Beach |             | Los Angeles      |             | Oakland |             | San Diego |             | San Francisco |             | Portland |             | Seattle    |             | Spokane |             | Tacoma |             |
|                                    |                           | Number     | Salary rate | Number           | Salary rate | Number  | Salary rate | Number    | Salary rate | Number        | Salary rate | Number   | Salary rate | Number     | Salary rate | Number  | Salary rate | Number | Salary rate |
| All occupations <sup>2</sup> ..... | 5, 254                    | 228        | -----       | 1, 782           | -----       | 426     | -----       | 200       | -----       | 1, 190        | -----       | 509      | -----       | 586        | -----       | 153     | -----       | 180    | -----       |
| <b>Fire fighting:</b>              |                           |            |             |                  |             |         |             |           |             |               |             |          |             |            |             |         |             |        |             |
| Chiefs.....                        | 9                         | 1          | \$4, 500    | 1                | \$7, 200    | 1       | \$5, 400    | 1         | \$4, 500    | 1             | \$7, 200    | 1        | \$4, 800    | 1          | \$5, 000    | 1       | \$3, 180    | 1      | \$3, 600    |
| Assistant or deputy chiefs.....    | 17                        | 2          | 3, 600      | 1                | 5, 400      | 2       | 4, 200      | 1         | 3, 708      | 4             | 4, 800      | 1        | 4, 056      | 4          | 2, 484      | 2       | 2, 520      |        |             |
| Assistant deputy chiefs.....       | 11                        |            |             | 10               | 4, 800      |         |             |           |             |               |             | 1        | 3, 300      |            |             |         |             |        |             |
| Battalion or district chiefs.....  | 88                        | 4          | 3, 000      | 24               | 3, 600      | 8       | 3, 600      | 4         | 2, 964      | 23            | 4, 200      | 8        | 3, 000      | 13         | 3, 000      |         |             | 4      | 2, 400      |
| Captains.....                      | 495                       | 32         | 2, 700      | 220              | 3, 000      | 31      | 2, 820      | 22        | 2, 592      | 75            | 2, 820      | 38       | 2, 640      | 47         | 2, 640      | 13      | 1, 992      | 17     | 2, 280      |
| Lieutenants.....                   | 319                       |            |             |                  |             | 31      | 2, 670      | 22        | 2, 412      | 123           | 2, 670      | 57       | 2, 496      | 46         | 2, 400      | 23      | 1, 860      | 17     | 2, 160      |
| Pilots.....                        | 21                        |            |             | 2                | 3, 000      |         |             |           |             | 5             | 3, 060      | 6        | 2, 520      | 5          | 2, 400      |         |             | 3      | 2, 280      |
| First mates.....                   | 2                         |            |             | 2                | 2, 700      |         |             |           |             |               |             |          |             |            |             |         |             |        |             |
| Engineers, fire engine.....        | 306                       | 25         | 2, 580      | 157              | 2, 700      | 47      | 2, 640      | 47        | 2, 328      | 10            | 2, 640      | 10       | 2, 400      | 4          | 2, 400      | 2       | 1, 932      |        |             |
| Engineers, marine.....             | 18                        |            |             |                  |             |         |             |           |             | 9             | 3, 060      | 6        | 2, 400      | 4          | 2, 640      |         |             | 3      | 2, 280      |
| Drivers.....                       | 246                       | 21         | 2, 460      | 183              | 2, 580      | 12      | 2, 520      |           |             | 28            | 2, 520      | 2        | 2, 232      |            |             |         |             |        |             |
| <b>Privates:</b>                   |                           |            |             |                  |             |         |             |           |             |               |             |          |             |            |             |         |             |        |             |
| 1st grade.....                     | 2, 990                    | 113        | 2, 400      | 901              | 2, 400      | 224     | 2, 400      | 66        | 2, 220      | 813           | 2, 400      | 296      | 2, 232      | 369        | 2, 160      | 93      | 1, 800      | 115    | 2, 040      |
| 2d grade.....                      | 149                       | 2          | 2, 340      | 63               | 2, 280      | 1       | 2, 280      | 3         | 2, 136      | 32            | 2, 280      | 9        | 2, 160      | 36         | 2, 100      | 2       | 1, 662      | 1      | 1, 920      |
| 3d grade.....                      | 187                       | 6          | 2, 220      | 104              | 2, 160      | 17      | 2, 160      | 3         | 2, 052      | 35            | 2, 160      | 3        | 2, 100      | 8          | 2, 040      | 7       | 1, 512      | 4      | 1, 800      |
| 4th grade.....                     | 66                        | 1          | 2, 100      | 38               | 2, 040      |         |             | 5         | 1, 956      |               |             | 22       | 2, 040      |            |             |         |             |        |             |
| 5th grade.....                     | 16                        | 2          | 2, 040      |                  |             |         |             | 3         | 1, 872      |               |             | 11       | 1, 980      |            |             |         |             |        |             |
| Probationary.....                  | 4                         |            |             |                  |             |         |             | 4         | 1, 776      |               |             |          |             |            |             |         |             |        |             |
| <b>Miscellaneous:</b>              |                           |            |             |                  |             |         |             |           |             |               |             |          |             |            |             |         |             |        |             |
| Drillmasters.....                  | 2                         | 1          | 3, 000      |                  |             |         |             |           |             |               |             |          | 1           | 3, 000     |             |         |             |        |             |
| Foremen of volunteers.....         |                           |            |             | ( <sup>3</sup> ) |             |         |             |           |             |               |             |          |             |            |             |         |             |        |             |
| Hosemen.....                       | 2                         |            |             |                  |             |         |             |           |             |               |             |          | 2           | 1, 920     |             |         |             |        |             |
| Oilers.....                        | 4                         |            |             |                  |             |         |             |           |             |               |             |          |             | 1          | 2, 040      |         |             |        |             |
| Stokers.....                       | 13                        |            |             |                  |             |         |             |           |             | 9             | 2, 460      |          |             | 3          | 2, 160      |         |             |        |             |
| <b>Fire prevention:</b>            |                           |            |             |                  |             |         |             |           |             |               |             |          |             |            |             |         |             |        |             |
| Marshals or wardens.....           | 7                         | 1          | 3, 000      |                  |             | 1       | 3, 600      | 1         | 2, 964      | 1             | 4, 800      | 1        | 3, 000      | 1          | 3, 000      | 1       | 1, 992      |        |             |
| Assistant marshals or wardens..... | 3                         | 1          | 2, 700      |                  |             |         |             | 1         | 2, 592      | 1             | 2, 820      |          |             |            |             |         |             |        |             |
| Inspectors.....                    | 45                        | 3          | 2, 400      |                  |             | 7       | 2, 400      |           |             | 13            | 2, 400      | 13       | 2, 232      | 8          | 2, 160      |         |             | 1      | 2, 040      |
| <b>Miscellaneous:</b>              |                           |            |             |                  |             |         |             |           |             |               |             |          |             |            |             |         |             |        |             |
| Fire prevention engineers.....     | 3                         |            |             |                  |             |         |             | 3         | 2, 328      |               |             |          |             |            |             |         |             |        |             |



**TABLE B.**—Number of employees and annual salaries in fire departments of each of 9 Pacific cities with a population of 100,000 or more by occupations, July 1, 1938—Continued

| Division and occupation            | Total number of employees | California |             |                              |             |         |             |           |             |                    |             | Oregon    |             | Washington |             |         |             |        |             |           |  |
|------------------------------------|---------------------------|------------|-------------|------------------------------|-------------|---------|-------------|-----------|-------------|--------------------|-------------|-----------|-------------|------------|-------------|---------|-------------|--------|-------------|-----------|--|
|                                    |                           | Long Beach |             | Los Angeles                  |             | Oakland |             | San Diego |             | San Francisco      |             | Portland  |             | Seattle    |             | Spokane |             | Tacoma |             |           |  |
|                                    |                           | Number     | Salary rate | Number                       | Salary rate | Number  | Salary rate | Number    | Salary rate | Number             | Salary rate | Number    | Salary rate | Number     | Salary rate | Number  | Salary rate | Number | Salary rate |           |  |
| Clerical—Continued.                |                           |            |             |                              |             |         |             |           |             |                    |             |           |             |            |             |         |             |        |             |           |  |
| Bookkeepers.....                   | 4                         |            |             | { 1 \$1,800<br>2 1,980       |             |         |             |           |             | 1 \$2,700          |             |           |             |            |             |         |             |        |             |           |  |
| Stenographers.....                 | 19                        |            |             | { 1 \$1,440<br>9 to<br>2,040 | 1 \$1,200   |         |             |           |             | 2 1,980<br>1 2,100 |             | 2 \$1,500 | 3 \$1,788   |            |             |         |             |        |             |           |  |
| Typists.....                       | 2                         |            |             |                              | 1 2,220     |         |             |           |             | 1 2,040            |             |           |             |            |             |         |             |        |             |           |  |
| Miscellaneous:                     |                           |            |             |                              |             |         |             |           |             |                    |             |           |             |            |             |         |             |        |             |           |  |
| Telephone operators.....           | 1                         |            |             | 1 1,500                      |             |         |             |           |             |                    |             |           |             |            |             |         |             |        |             |           |  |
| Multigraph operators.....          | 1                         |            |             |                              |             |         |             |           |             | 1 2,040            |             |           |             |            |             |         |             |        |             |           |  |
| Miscellaneous:                     |                           |            |             |                              |             |         |             |           |             |                    |             |           |             |            |             |         |             |        |             |           |  |
| Building inspectors.....           | 2                         |            |             |                              |             | 1 3,780 |             |           |             |                    |             |           |             |            |             |         |             |        |             | 1 \$3,000 |  |
| Assistant building inspectors..... | 6                         |            |             |                              |             | 5 2,460 |             |           |             |                    |             |           |             |            |             |         |             |        |             | 1 1,920   |  |
| Building plans engineers.....      | 2                         |            |             |                              |             | 2 3,360 |             |           |             |                    |             |           |             |            |             |         |             |        |             |           |  |
| Draftsmen.....                     | 2                         | 1 \$2,580  |             | (1) 2,400                    |             |         |             |           |             |                    |             |           |             |            |             |         |             |        |             |           |  |
| Physicians.....                    |                           |            |             | (?)                          |             |         |             |           |             |                    |             |           |             |            |             |         |             |        |             |           |  |
| Physiotherapists.....              |                           |            |             | (?)                          |             |         |             |           |             |                    |             |           |             |            |             |         |             |        |             |           |  |
| Supply drivers.....                | 3                         |            |             |                              |             |         |             |           |             |                    |             | 2 2,232   |             | 1 2,280    |             |         |             |        |             |           |  |

<sup>1</sup> Based on U. S. Census of Population for 1930.  
<sup>2</sup> Totals include regular full-time employees, but do not include part-time employees, call men, or volunteers.  
<sup>3</sup> Call men.  
<sup>4</sup> Except for duties of superintendent of machinery, work in this division performed by a separate city bureau.  
<sup>5</sup> Work of this division performed by a separate city bureau in Los Angeles and San Francisco.  
<sup>6</sup> Includes 6 at \$1,680, 3 at \$1,800, 2 at \$1,920, and 1 at \$2,040.  
<sup>7</sup> Includes 2 at \$1,440, 2 at \$1,680, 4 at \$1,800, and 1 at \$2,040.

TABLE C.—Number of employees and annual salaries in fire departments of each of 6 Pacific cities with a population of 50,000 and under 100,000,<sup>1</sup> by occupations, July 1, 1938

| Division and occupation                     | Total number of employees | California |             |        |             |          |             |          |             |            |             |          |             |
|---|---------------------------|------------|-------------|--------|-------------|----------|-------------|----------|-------------|------------|-------------|----------|-------------|
|   |                           | Berkeley   |             | Fresno |             | Glendale |             | Pasadena |             | Sacramento |             | San Jose |             |
|   |                           | Number     | Salary rate | Number | Salary rate | Number   | Salary rate | Number   | Salary rate | Number     | Salary rate | Number   | Salary rate |
| All occupations <sup>2</sup> .....          | 735                       | 115        | <i>Dol.</i> | 143    | <i>Dol.</i> | 87       | <i>Dol.</i> | 118      | <i>Dol.</i> | 191        | <i>Dol.</i> | 81       | <i>Dol.</i> |
| <b>Fire fighting:</b>                       |                           |            |             |        |             |          |             |          |             |            |             |          |             |
| Chiefs.....                                 | 6                         | 1          | 4,500       | 1      | 4,200       | 1        | 4,200       | 1        | 4,800       | 1          | 4,200       | 1        | 4,200       |
| Assistant or deputy chiefs.....             | 6                         | 1          | 3,420       | 1      | 3,420       | ---      | ---         | 1        | 3,840       | 2          | 3,600       | 1        | 3,000       |
| Assistant deputy chiefs.....                | 5                         | 2          | 3,000       | 1      | 3,120       | ---      | ---         | 1        | 3,180       | ---        | ---         | 1        | 2,820       |
| Battalion or district chiefs.....           | 3                         | ---        | ---         | 2      | 2,700       | 2        | 2,760       | 2        | 3,000       | 2          | 3,120       | ---      | ---         |
| Captains.....                               | 107                       | 15         | 2,460       | 20     | 2,400       | 16       | 2,340       | 14       | 2,700       | 30         | 2,700       | 12       | 2,520       |
| Lieutenants.....                            | 37                        | 15         | 2,340       | 10     | 2,220       | ---      | ---         | ---      | ---         | ---        | ---         | 12       | 2,400       |
| Engineers, fire engine.....                 | 60                        | 10         | 2,280       | 14     | 2,160       | ---      | ---         | 16       | 2,460       | 20         | 2,580       | ---      | ---         |
| Drivers.....                                | 16                        | 2          | 2,280       | 14     | 2,100       | ---      | ---         | ---      | ---         | ---        | ---         | ---      | ---         |
| Privates:                                   |                           |            |             |        |             |          |             |          |             |            |             |          |             |
| 1st grade.....                              | 329                       | 30         | 2,220       | 59     | 2,100       | 50       | 2,160       | 58       | 2,280       | 92         | 2,400       | 40       | 2,280       |
| 2d grade.....                               | 28                        | 7          | 2,160       | ---    | ---         | 1        | 2,040       | 5        | 2,160       | 10         | 2,280       | 5        | 2,150       |
| 3d grade.....                               | 14                        | 1          | 2,100       | ---    | ---         | ---      | ---         | 3        | 2,040       | 7          | 2,160       | 3        | 2,040       |
| 4th grade.....                              | 32                        | 15         | 2,040       | ---    | ---         | ---      | ---         | 4        | 1,920       | 9          | 2,040       | 4        | 1,920       |
| 5th grade.....                              | 10                        | 2          | 1,920       | ---    | ---         | ---      | ---         | ---      | ---         | ---        | ---         | ---      | ---         |
| 8   | 1,980                     | ---        | ---         | ---    | ---         | ---      | ---         | ---      | ---         | ---        | ---         | ---      | ---         |
| Miscellaneous:                              |                           |            |             |        |             |          |             |          |             |            |             |          |             |
| Drill masters.....                          | 2                         | ---        | ---         | 1      | 2,400       | ---      | ---         | ---      | ---         | 1          | 3,000       | ---      | ---         |
| Assistant drill masters.....                | 2                         | ---        | ---         | ---    | ---         | ---      | ---         | ---      | ---         | 2          | 2,820       | ---      | ---         |
| <b>Fire prevention:</b> <sup>3</sup>        |                           |            |             |        |             |          |             |          |             |            |             |          |             |
| Marshals or wardens.....                    | 3                         | ---        | ---         | 1      | 3,420       | ---      | ---         | 1        | 3,000       | ---        | ---         | 1        | 2,520       |
| Assistant marshals.....                     | 2                         | ---        | ---         | 1      | 2,400       | ---      | ---         | 1        | 2,460       | ---        | ---         | ---      | ---         |
| Chief inspectors.....                       | 1                         | ---        | ---         | ---    | ---         | 1        | 2,340       | ---      | ---         | ---        | ---         | ---      | ---         |
| Inspectors.....                             | 10                        | ---        | ---         | 3      | 2,100       | 2        | 2,160       | ---      | ---         | 4          | 2,400       | 1        | 2,520       |
| <b>Apparatus:</b> <sup>4</sup>              |                           |            |             |        |             |          |             |          |             |            |             |          |             |
| Superintendents of machinery.....           | 4                         | ---        | ---         | 1      | 3,000       | 1        | 2,340       | 1        | 3,000       | 1          | 2,640       | ---      | ---         |
| Assistant superintendents of machinery..... | 3                         | ---        | ---         | 1      | 2,400       | ---      | ---         | 1        | 2,460       | 1          | 2,580       | ---      | ---         |
| Auto mechanics.....                         | 3                         | 1          | 2,700       | 2      | 2,340       | ---      | ---         | ---      | ---         | ---        | ---         | ---      | ---         |
| Blacksmiths.....                            | 1                         | ---        | ---         | 1      | 2,340       | ---      | ---         | ---      | ---         | ---        | ---         | ---      | ---         |
| Hydrant men.....                            | 1                         | ---        | ---         | 1      | 2,400       | ---      | ---         | ---      | ---         | ---        | ---         | ---      | ---         |
| <b>Fire alarm:</b> <sup>4</sup>             |                           |            |             |        |             |          |             |          |             |            |             |          |             |
| Superintendents.....                        | 2                         | ---        | ---         | ---    | ---         | 1        | 2,460       | 1        | 3,180       | ---        | ---         | ---      | ---         |
| Chief fire-alarm operators.....             | 2                         | ---        | ---         | 1      | 2,400       | ---      | ---         | ---      | ---         | 1          | 2,400       | ---      | ---         |
| Operators, fire alarm.....                  | 28                        | 4          | 2,280       | 6      | 2,220       | 5        | 1,200       | 7        | 2,460       | 6          | 1,800       | ---      | ---         |
| Linemen.....                                | 2                         | ---        | ---         | ---    | ---         | 2        | 2,160       | ---      | ---         | ---        | ---         | ---      | ---         |
| <b>Clerical:</b>                            |                           |            |             |        |             |          |             |          |             |            |             |          |             |
| Secretaries.....                            | 5                         | 1          | 1,500       | 1      | 1,920       | 1        | 1,500       | 1        | 1,440       | 1          | 2,400       | ---      | ---         |
| Clerks.....                                 | 2                         | ---        | ---         | 1      | 1,800       | ---      | ---         | ---      | ---         | 1          | 1,500       | ---      | ---         |
| <b>Miscellaneous:</b>                       |                           |            |             |        |             |          |             |          |             |            |             |          |             |
| Officers, ambulance corps.....              | 2                         | ---        | ---         | ---    | ---         | 2        | 2,160       | ---      | ---         | ---        | ---         | ---      | ---         |
| Drivers, ambulance corps.....               | 2                         | ---        | ---         | ---    | ---         | 2        | 1,680       | ---      | ---         | ---        | ---         | ---      | ---         |

<sup>1</sup> Based on U. S. Census of Population for 1930.

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

<sup>3</sup> Men from fire-fighting force assigned to this work in Berkeley.

<sup>4</sup> Work of this division performed by a separate city bureau in San Jose.

TABLE D.—Number of employees and annual salaries in fire departments of each of 12 Pacific cities with a population of 25,000 and under 50,000,<sup>1</sup> by occupations, July 1, 1938

| Division and occupation                     | Total number of employees | California |             |          |             |             |             |           |             |                |             |           |             |               |             | Oregon       |             | Washington |             |        |             |            |             |         |             |       |
|---|---------------------------|------------|-------------|----------|-------------|-------------|-------------|-----------|-------------|----------------|-------------|-----------|-------------|---------------|-------------|--------------|-------------|------------|-------------|--------|-------------|------------|-------------|---------|-------------|-------|
|   |                           | Alameda    |             | Alhambra |             | Bakersfield |             | Riverside |             | San Bernardino |             | Santa Ana |             | Santa Barbara |             | Santa Monica |             | Stockton   |             | Salem  |             | Bellingham |             | Everett |             |       |
|   |                           | Number     | Salary rate | Number   | Salary rate | Number      | Salary rate | Number    | Salary rate | Number         | Salary rate | Number    | Salary rate | Number        | Salary rate | Number       | Salary rate | Number     | Salary rate | Number | Salary rate | Number     | Salary rate | Number  | Salary rate |       |
|   |                           |            | Dol.        |          | Dol.        |             | Dol.        |           | Dol.        |                | Dol.        |           | Dol.        |               | Dol.        |              | Dol.        |            | Dol.        |        | Dol.        |            | Dol.        |         | Dol.        |       |
| All occupations <sup>2</sup> .....          | 587                       | 51         |             | 38       |             | 59          |             | 35        |             | 31             |             | 36        |             | 53            |             | 36           |             | 112        |             | 48     |             | 45         |             | 43      |             |       |
| <b>Fire fighting:</b>                       |                           |            |             |          |             |             |             |           |             |                |             |           |             |               |             |              |             |            |             |        |             |            |             |         |             |       |
| Chiefs.....                                 | 12                        | 1          | 3,600       | 1        | 3,300       | 1           | 3,600       | 1         | 2,700       | 1              | 2,400       | 1         | 2,970       | 1             | 3,000       | 1            | 3,000       | 1          | 3,600       | 1      | 2,400       | 1          | 2,400       | 1       | 3,000       |       |
| Assistant chiefs.....                       | 16                        | 2          | 2,760       |          |             | 2           | 2,700       | 1         | 2,100       | 1              | 1,920       | 2         | 2,100       | 1             | 2,400       | 2            | 2,520       | 1          | 2,700       | 1      | 1,980       | 2          | 1,980       | 1       | 2,280       |       |
| Assistant deputy chiefs.....                | 5                         |            |             |          |             |             |             | 1         | 1,980       | 1              | 1,800       |           |             |               |             |              |             | 2          | 2,340       |        |             | 1          |             | 1       | 2,160       |       |
| Battalion chiefs.....                       | 2                         |            |             | 2        | 2,400       |             |             |           |             |                |             |           |             |               |             |              |             |            |             |        |             |            |             |         |             |       |
| Captains.....                               | 108                       | 7          | 2,460       | 9        | 2,280       | 8           | 2,340       | 6         | 1,920       | 8              | 1,740       | 10        | 1,884       | 12            | 2,100       | 8            | 2,220       | 20         | 2,190       | 7      | 1,800       | 7          | 1,860       | 6       | 2,040       |       |
| Lieutenants.....                            | 7                         | 7          | 2,340       |          |             |             |             |           |             |                |             |           |             |               |             |              |             |            |             |        |             |            |             |         |             |       |
| Engineers, fire engine.....                 | 49                        |            |             | 9        | 2,100       | 12          | 2,160       | 4         | 1,800       |                |             | 6         | 1,752       | 10            | 1,920       | 8            | 2,100       |            |             |        |             |            |             |         |             |       |
| Drivers.....                                | 6                         |            |             |          |             | 2           | 2,100       | 4         | 1,740       |                |             |           |             |               |             |              |             |            |             |        |             |            |             |         |             |       |
| Privates:                                   |                           |            |             |          |             |             |             |           |             |                |             |           |             |               |             |              |             |            |             |        |             |            |             |         |             |       |
| 1st grade.....                              | 264                       | 30         | 2,220       | 8        | 1,920       | 19          | 2,040       | 12        | 1,680       | 18             | 1,680       | 8         | 1,680       | 16            | 1,860       | 14           | 1,980       | 59         | 2,040       | 36     | 1,620       | 25         | 1,740       | 19      | 1,860       |       |
| 2d grade.....                               | 35                        | 2          | 2,160       | 1        | 1,860       | 2           | 1,920       | 3         | 1,560       | 1              | 1,620       | 3         | 1,620       | 1             | 1,800       |              |             | 13         | 1,920       | 3      | 1,500       |            |             | 6       | 1,800       |       |
| 3d grade.....                               | 23                        | 1          | 1,920       | 4        | 1,800       | 5           | 1,800       |           |             |                |             | 1         | 1,560       | 4             | 1,740       |              |             | 4          | 1,830       |        |             |            |             | 4       | 1,620       |       |
| 4th grade.....                              | 10                        |            |             |          |             |             |             |           |             |                |             |           |             | 1             | 1,680       |              |             | 6          | 1,710       |        |             | 3          | 1,380       |         |             |       |
| 5th grade.....                              | 1                         |            |             |          |             |             |             |           |             |                |             |           |             | 1             | 1,620       |              |             |            |             |        |             |            |             |         |             |       |
| <b>Fire prevention:<sup>3</sup></b>         |                           |            |             |          |             |             |             |           |             |                |             |           |             |               |             |              |             |            |             |        |             |            |             |         |             |       |
| Marshals or wardens.....                    | 6                         |            |             | 1        | 2,280       | 1           | 2,580       |           |             |                |             | 1         | 1,944       | 1             | 2,100       |              |             |            |             | 1      | 2,190       |            |             | 1       | 2,040       |       |
| Assistant marshals or wardens.....          | 1                         |            |             |          |             |             |             | 1         | 1,680       |                |             |           |             |               |             |              |             |            |             |        |             |            |             |         |             |       |
| Inspectors.....                             | 7                         | 1          | 2,400       |          |             | 2           | 2,220       |           |             | 1              | 1,740       |           |             |               |             |              |             | 2          | 2,040       |        |             | 1          | 1,740       |         |             |       |
| <b>Apparatus:<sup>4</sup></b>               |                           |            |             |          |             |             |             |           |             |                |             |           |             |               |             |              |             |            |             |        |             |            |             |         |             |       |
| Superintendents of machinery.....           | 5                         |            |             |          |             | 1           | 2,400       | 1         | 1,860       |                |             |           |             |               |             |              |             |            |             | 1      | 2,700       |            | 1           | 1,980   | 1           | 2,040 |
| Assistant superintendents of machinery..... | 1                         |            |             |          |             |             |             |           |             |                |             |           |             |               |             |              |             |            |             |        |             |            |             | 1       | 1,980       |       |
| Master mechanics.....                       | 1                         |            |             |          |             |             |             |           |             |                |             |           |             | 1             | 2,040       |              |             |            |             |        |             |            |             |         |             |       |
| Auto mechanics.....                         | 2                         |            |             |          |             |             |             |           |             |                |             | 2         | 1,884       |               |             |              |             |            |             |        |             |            |             |         |             |       |
| Miscellaneous:                              |                           |            |             |          |             |             |             |           |             |                |             |           |             |               |             |              |             |            |             |        |             |            |             |         |             |       |
| Superintendents, hydrants and water.....    | 1                         |            |             |          |             |             |             |           |             |                |             |           |             |               |             |              |             |            |             | 1      | 2,190       |            |             |         |             |       |



24 SALARIES AND HOURS IN MUNICIPAL FIRE DEPARTMENTS

TABLE E.—Average hours and days on duty per week in fire departments of 27 Pacific cities, by occupational division, July 1, 1933

| System of operation  | Average hours on duty per week | Average days on duty per week | All divisions |                         |     |     |
|--|--------------------------------|-------------------------------|---------------|-------------------------|-----|-----|
|  |                                |                               | All cities    | City group <sup>1</sup> |     |     |
|  |                                |                               |               | I                       | II  | III |
| Total number of employees <sup>2</sup> .....               |                                |                               | 6, 576        | 5, 254                  | 735 | 587 |
| Continuous duty.....                                       | 168. 0                         | 7. 0                          | 24            | 11                      | 5   | 8   |
| Single-platoon: <sup>6</sup><br>On 6 days, off 1 day.....  | 144                            | 6. 0                          | 4             | 1                       |     | 3   |
| 2-platoon—regular <sup>7</sup> .....                       |                                |                               | 3, 958        | 3, 010                  | 586 | 362 |
| On 24 hours, off 24 hours.....                             | 84                             | 3. 5                          | 2, 861        | 2, 462                  | 229 | 170 |
| Shift 3d day.....  | 84                             | 5. 8                          | 78            |                         | 78  |     |
| Shift 4th day.....   | 84                             | 6. 1                          | 548           | 548                     |     |     |
| Shift 6th day.....   | 84                             | 6. 4                          | 48            |                         |     | 48  |
| Shift 7th day.....   | 84                             | 6. 5                          | 318           |                         | 174 | 144 |
| Shift 15th day.....  | 84                             | 6. 8                          | 105           |                         | 105 |     |
| 2-platoon—with additional time off duty <sup>8</sup> ..... |                                |                               | 2, 211        | 1, 954                  | 75  | 182 |
| On 24 hours, off 24 hours, off 0.5 day per week.....       | 72                             | 3. 0                          | 334           | 211                     |     | 123 |
| Overlapping-group system, off 1 day per week.....          | 72                             | 6. 0                          | 1, 110        | 1, 110                  |     |     |
| On 24 hours, off 24 hours, off 0.2 day per week.....       | 78                             | 3. 3                          | 59            |                         |     | 59  |
| On 24 hours, off 24 hours, off 0.1 day per week.....       | 81                             | 3. 4                          | 542           | 467                     | 75  |     |
| 10-group system, off 1.2 days per week.....                | 70                             | 5. 8                          | 166           | 166                     |     |     |
| Other <sup>9</sup> .....                                   | 44. 5                          | 5. 5                          | 379           | 278                     | 69  | 32  |

| System of operation  | Division      |                         |     |     |                 |                         |    |     |            |                         |    |     |   |
|--|---------------|-------------------------|-----|-----|-----------------|-------------------------|----|-----|------------|-------------------------|----|-----|---|
|  | Fire fighting |                         |     |     | Fire prevention |                         |    |     | Apparatus  |                         |    |     |   |
|  | All cities    | City group <sup>1</sup> |     |     | All cities      | City group <sup>1</sup> |    |     | All cities | City group <sup>1</sup> |    |     |   |
|  |               | I                       | II  | III |                 | I                       | II | III |            | I                       | II | III |   |
| Total number of employees <sup>2</sup> .....               | 6, 165        | 4, 965                  | 662 | 538 | 88              | 58                      | 16 | 14  | 104        | 82                      | 12 | 10  |   |
| Continuous duty.....                                       | 21            | 8                       | 4   | 8   | 2               | 2                       |    |     | 1          | 1                       |    |     |   |
| Single-platoon: <sup>6</sup><br>On 6 days, off 1 day.....  | 4             | 1                       |     | 3   |                 |                         |    |     |            |                         |    |     |   |
| 2-platoon—regular <sup>7</sup> .....                       | 3, 928        | 2, 997                  | 581 | 350 | 10              | 1                       | 5  | 4   | 3          |                         |    | 3   |   |
| On 24 hours, off 24 hours.....                             | 2, 842        | 2, 457                  | 224 | 161 | 10              | 1                       | 5  | 4   | 3          |                         |    | 3   |   |
| Shift 3d day.....  | 78            |                         | 78  |     |                 |                         |    |     |            |                         |    |     |   |
| Shift 4th day.....   | 540           | 540                     |     |     |                 |                         |    |     |            |                         |    |     |   |
| Shift 6th day.....   | 48            |                         |     | 48  |                 |                         |    |     |            |                         |    |     |   |
| Shift 7th day.....   | 315           |                         | 174 | 141 |                 |                         |    |     |            |                         |    |     |   |
| Shift 15th day.....  | 105           |                         | 105 |     |                 |                         |    |     |            |                         |    |     |   |
| 2-platoon—with additional time off duty <sup>8</sup> ..... | 2, 195        | 1, 952                  | 69  | 174 | 2               |                         | 2  |     |            |                         |    |     |   |
| On 24 hours, off 24 hours, off 0.5 day per week.....       | 324           | 209                     |     | 115 |                 |                         |    |     |            |                         |    |     |   |
| Overlapping-group system, off 1 day per week.....          | 1, 110        | 1, 110                  |     |     |                 |                         |    |     |            |                         |    |     |   |
| On 24 hours, off 24 hours, off 0.2 day per week.....       | 59            |                         |     | 59  |                 |                         |    |     |            |                         |    |     |   |
| On 24 hours, off 24 hours, off 0.1 day per week.....       | 536           | 467                     | 69  |     | 2               |                         | 2  |     |            |                         |    |     |   |
| 10-group system, off 1.2 days per week.....                | 166           | 166                     |     |     |                 |                         |    |     |            |                         |    |     |   |
| Other <sup>9</sup> .....                                   | 17            | 10                      | 7   | 11  | 2               | 74                      | 55 | 9   | 10         | 100                     | 81 | 12  | 7 |

See footnotes at end of table.

**TABLE E.**—Average hours and days on duty per week in fire departments of 27 Pacific cities, by occupational division, July 1, 1928—Continued

| System of operation  | Division—Continued |                         |       |       |            |                         |       |       |               |                         |       |       |
|--|--------------------|-------------------------|-------|-------|------------|-------------------------|-------|-------|---------------|-------------------------|-------|-------|
|  | Fire alarm         |                         |       |       | Clerical   |                         |       |       | Miscellaneous |                         |       |       |
|  | All cities         | City group <sup>1</sup> |       |       | All cities | City group <sup>1</sup> |       |       | All cities    | City group <sup>1</sup> |       |       |
|  |                    | I                       | II    | III   |            | I                       | II    | III   |               | I                       | II    | III   |
| Total number of employees <sup>2</sup> .....               | 135                | 79                      | 34    | 22    | 65         | 55                      | 7     | 3     | 19            | 15                      | 4     | ..... |
| 2-platoon—regular <sup>7</sup> .....                       | 17                 | 12                      | ..... | 5     | .....      | .....                   | ..... | ..... | .....         | .....                   | ..... | ..... |
| On 24 hours, off 24 hours.....                             | 6                  | 4                       | ..... | 2     | .....      | .....                   | ..... | ..... | .....         | .....                   | ..... | ..... |
| Shift 4th day.....   | 8                  | 8                       | ..... | ..... | .....      | .....                   | ..... | ..... | .....         | .....                   | ..... | ..... |
| Shift 7th day.....   | 3                  | .....                   | ..... | 3     | .....      | .....                   | ..... | ..... | .....         | .....                   | ..... | ..... |
| 2-platoon—with additional time off duty <sup>8</sup> ..... | 10                 | 2                       | ..... | 8     | .....      | .....                   | ..... | ..... | 4             | .....                   | 4     | ..... |
| On 24 hours, off 24 hours, off 0.5 day per week.....       | 10                 | 2                       | ..... | 8     | .....      | .....                   | ..... | ..... | .....         | .....                   | ..... | ..... |
| On 24 hours, off 24 hours, off 0.1 day per week.....       | .....              | .....                   | ..... | ..... | .....      | .....                   | ..... | ..... | .....         | .....                   | 4     | ..... |
| Other <sup>9</sup> .....                                   | 108                | 65                      | 34    | 9     | 65         | 55                      | 7     | 3     | 15            | 15                      | ..... | ..... |

<sup>1</sup> 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 United States Census of Population for 1930.

<sup>2</sup> Includes only regular, full-time employees.

<sup>3</sup> Includes 7 chiefs and 1 assistant chief.

<sup>4</sup> Includes 2 chiefs, 1 assistant or deputy chief, and 2 assistant deputy chiefs.

<sup>5</sup> Includes 5 chiefs and 3 assistant chiefs.

<sup>6</sup> 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.

<sup>7</sup> Under each variation of the regular 2-platoon system the employees work in 2 groups, 1 group is on duty while the other is off duty. Over a period of days, therefore, each group is on duty as many hours as the other, or an average of 12 hours a day and 84 hours a week. Each variation of the 2-platoon system, however, spreads these 84 hours into different numbers of days on duty per week. The average number of days on duty per week for each variation is arrived at by dividing the number of days on duty per year by 52.143.

<sup>8</sup> 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 under this system is arrived at by deducting the number of additional weekly hours off duty from 84. The average number of days on duty per week is arrived at by dividing the number of days on duty per year by 52.143.

<sup>9</sup> 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."

<sup>10</sup> Includes 1 chief and 6 others.

<sup>11</sup> Includes 3 chiefs, 1 assistant chief, 1 assistant deputy chief, and 2 others.

<sup>12</sup> 3 chiefs.

26 SALARIES AND HOURS IN MUNICIPAL FIRE DEPARTMENTS

TABLE F.—Total salaries and total number of employees of fire departments in 27 Pacific cities, July 1, 1933

| Division 1 and occupation              | Number of employees |              |     |     | Total salaries |              |             |             |
|--|---------------------|--------------|-----|-----|----------------|--------------|-------------|-------------|
|  | All cities          | City group 2 |     |     | All cities     | City group 2 |             |             |
|  |                     | I            | II  | III |                | I            | II          | III         |
| All occupations 3                      | 6,576               | 5,254        | 735 | 587 | \$15,623,234   | \$12,755,716 | \$1,709,830 | \$1,157,688 |
| <b>Fire fighting</b>                   | 6,165               | 4,965        | 662 | 538 | 14,678,472     | 12,067,760   | 1,549,450   | 1,061,262   |
| Chiefs                                 | 27                  | 9            | 6   | 12  | 107,450        | 45,380       | 26,100      | 35,970      |
| Assistant or deputy chiefs             | 39                  | 17           | 6   | 16  | 121,320        | 62,940       | 20,880      | 37,500      |
| Assistant deputy chiefs                | 21                  | 11           | 5   | 5   | 77,040         | 51,300       | 15,120      | 10,620      |
| Battalion chiefs                       | 98                  | 88           | 8   | 2   | 336,216        | 308,256      | 23,160      | 4,800       |
| Captains                               | 710                 | 495          | 107 | 108 | 1,888,140      | 1,391,400    | 271,380     | 225,360     |
| Lieutenants                            | 363                 | 319          | 37  | 7   | 898,896        | 796,416      | 86,100      | 16,380      |
| Pilots                                 | 21                  | 21           |     |     | 55,260         | 55,260       |             |             |
| First mates                            | 2                   | 2            |     |     | 5,400          | 5,400        |             |             |
| Engineers, fire engine                 | 415                 | 306          | 60  | 49  | 1,038,852      | 796,320      | 144,000     | 98,532      |
| Engineers, marine                      | 18                  | 18           |     |     | 48,780         | 48,780       |             |             |
| Drivers                                | 268                 | 246          | 16  | 6   | 674,184        | 629,064      | 33,960      | 11,160      |
| Privates:                              |                     |              |     |     |                |              |             |             |
| 1st grade                              | 3,583               | 2,990        | 329 | 264 | 8,170,932      | 6,928,632    | 742,740     | 499,560     |
| 2d grade                               | 212                 | 149          | 28  | 35  | 455,002        | 330,252      | 61,510      | 63,240      |
| 3d grade                               | 224                 | 187          | 14  | 23  | 466,740        | 396,840      | 20,460      | 40,440      |
| 4th grade                              | 108                 | 66           | 32  | 10  | 214,680        | 134,280      | 64,320      | 16,080      |
| 5th grade and probationary             | 31                  | 20           | 10  | 1   | 59,880         | 38,580       | 19,680      | 1,620       |
| Miscellaneous                          | 25                  | 21           | 4   |     | 59,700         | 48,660       | 11,040      |             |
| <b>Fire prevention</b>                 | 88                  | 58           | 16  | 14  | 209,082        | 140,988      | 38,880      | 29,214      |
| Marshals or wardens                    | 16                  | 7            | 3   | 6   | 44,430         | 22,356       | 8,940       | 13,134      |
| Assistant marshals or wardens          | 6                   | 3            | 2   | 1   | 14,652         | 8,112        | 4,860       | 1,680       |
| Chief inspectors                       | 1                   | 1            |     |     | 2,340          |              | 2,340       |             |
| Inspectors                             | 62                  | 45           | 10  | 7   | 140,676        | 103,536      | 22,740      | 14,400      |
| Miscellaneous                          | 3                   | 3            |     |     | 6,984          |              |             |             |
| <b>Apparatus</b>                       | 104                 | 82           | 12  | 10  | 250,295        | 198,797      | 30,540      | 20,958      |
| Superintendents of machinery           | 16                  | 7            | 4   | 5   | 44,016         | 22,056       | 10,980      | 10,980      |
| Assistant superintendents of machinery | 7                   | 3            | 3   | 1   | 17,112         | 7,692        | 7,440       | 1,980       |
| Mechanists                             | 34                  | 34           |     |     | 82,720         | 82,720       |             |             |
| Master mechanics                       | 1                   |              |     | 1   | 2,040          |              |             | 2,040       |
| Auto mechanics                         | 16                  | 11           | 3   | 2   | 36,764         | 25,616       | 7,380       | 3,768       |
| General mechanics                      | 17                  | 16           | 1   |     | 40,305         | 37,965       | 2,340       |             |
| Mechanics helpers                      | 3                   | 3            |     |     | 5,721          | 5,721        |             |             |
| Miscellaneous                          | 10                  | 8            | 1   | 1   | 21,617         | 17,027       | 2,400       | 2,190       |
| <b>Fire alarm</b>                      | 135                 | 79           | 34  | 22  | 306,921        | 194,997      | 71,220      | 40,704      |
| Superintendents                        | 13                  | 7            | 2   | 4   | 34,848         | 20,868       | 5,640       | 8,340       |
| Assistant superintendents              | 3                   | 1            |     | 2   | 8,220          | 3,900        |             | 4,320       |
| Chief fire alarm operators             | 4                   | 2            | 2   |     | 10,440         | 5,640        | 4,800       |             |
| Fire alarm operators 4                 | 78                  | 35           | 28  | 15  | 165,828        | 83,244       | 56,460      | 26,124      |
| Inspectors                             | 5                   | 5            |     |     | 12,300         | 12,300       |             |             |
| Electricians                           | 8                   | 8            |     |     | 19,680         | 19,680       |             |             |
| Linemen                                | 20                  | 18           | 2   |     | 47,493         | 43,173       | 4,320       |             |
| Linemen helpers                        | 2                   | 2            |     |     | 3,792          | 3,792        |             |             |
| Miscellaneous                          | 2                   | 1            |     | 1   | 4,320          | 2,400        |             | 1,920       |
| <b>Clerical</b>                        | 65                  | 55           | 7   | 3   | 131,340        | 113,730      | 12,060      | 5,550       |
| Secretaries                            | 16                  | 8            | 5   | 3   | 37,728         | 23,418       | 8,760       | 5,550       |
| Assistant secretaries                  | 2                   | 2            |     |     | 6,192          | 6,192        |             |             |
| Chief clerks                           | 1                   | 1            |     |     | 3,300          | 3,300        |             |             |
| Accountants                            | 2                   | 2            |     |     | 4,620          | 4,620        |             |             |
| Clerks and bookkeepers                 | 21                  | 19           | 2   |     | 39,096         | 35,796       | 3,300       |             |
| Stenographers and typists              | 21                  | 21           |     |     | 36,864         | 36,864       |             |             |
| Miscellaneous                          | 2                   | 2            |     |     | 3,540          | 3,540        |             |             |
| <b>Miscellaneous</b>                   | 19                  | 15           | 4   |     | 47,124         | 39,444       | 7,680       |             |
| Building inspection                    | 10                  | 10           |     |     | 27,720         | 27,720       |             |             |
| Ambulance men                          | 4                   |              | 4   |     | 7,680          |              | 7,680       |             |
| Other miscellaneous employees          | 5                   | 5            |     |     | 11,724         | 11,724       |             |             |

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 division. 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; group III, cities having a population of 25,000 and under 50,000, based on U. S. Census of Population for 1930.

3 Includes only regular, full-time employees.

4 Includes 7 telephone operators and 1 radio operator in city group I.