



June 30, 1948.

## TOWN OF WEST ORANGE, ESSEX COUNTY, NEW JERSEY.

Population—1940 Census—25,662.

**IN GENERAL:** Located on the Orange Branch of the Erie Railroad about 5 miles northwest of Newark. It is mostly a residential community with ten major industries employing about 1,500. Area is about 12.6 square miles. Elevations range from 140 to 660 feet. Streets are mainly concrete, macadam, or gravel in fair to good condition. There are several railroad crossings at grade which are reported as never having interfered with the response of fire apparatus. Steep grades in the western section of town might seriously impede response of fire apparatus.

**WATER SUPPLY:** Water for domestic and fire protection purposes is furnished by the Commonwealth Water Company. The eastern section of the town is supplied from the Canoe Brook Low Service and the western sections of the town are supplied from the West Orange High Service. These supplies are through two 16-inch mains, one to the high service in Northfield Road, and one to the low service in Gregory Avenue. The high service supply is normally delivered through the White Oak Ridge Booster Station in Millburn Township and may be supplied through the West Orange Booster Station from the 16-inch low service main in Gregory Avenue. The low service supply is delivered through the Luddington Road Booster Station from the 16-inch main in Gregory Avenue. There is a normally closed 8-inch emergency connection to the Montclair distribution system at Harrison Avenue. The Wyoming and West Orange Reservoirs respectively in Millburn and West Orange function as equalizers for the low service and provide 1.9 million gallons aggregate storage. The West Orange standpipes function as equalizers for the high service, provide 1.131 million gallons aggregate storage. For a detailed description of the Commonwealth Water Company system see report and map No. 245 **Distribution System:** In two services consisting of the Canoe Brook Low Service and the West Orange High Service. See map and description above. **Consumption:** The average and maximum daily pumpage in the entire territory served, 31,810 live services was 12.782 and 20.122 million gallons. There are no available statistics for the consumption in West Orange, but on December 31, 1945 there were 5,686 services in the town, all of which were metered, and on that date there was a total of 31,463 services in the entire territory served. **Pipe:** All pipe is cast iron, tar coated, with the exception of a small amount of Universal joint, it is bell and spigot, laid with a minimum 3½-foot cover. Total length in West Orange, 453,963 feet; 5.7% 16-inch, 3.4% 12-inch, 1.4% 10-inch, 9.8% 8-inch, 72.4% 6-inch, and 7.3% 4-inch. No trouble reported from frozen mains or electrolysis. **Gate Valves:** There are 849 in the town of Ludlow, Wood, Darling, and Smith makes set with boxes at or near grade. Direction of operation is uniform, but there are no regular inspections of valves at the present time. **Hydrants:** There are 620 in the town of Wood, Darling, and Ludlow makes of standard type; 239 have one 4½-inch and two 2½-inch outlets and the balance have two 2½-inch outlets. Hose outlets are 3-inches outside diameter with 8 threads per inch, and steamer outlets have National Standard threads; 258 have 6-inch branches, all of which are gated and 353 have 4-inch branches, of which 184 are gated. Hydrants are inspected semi-annually and at time of hydrant tests those operated were found to be in good condition. **Pressures:** Readings taken at 6 well distributed locations on the low service showed pressures ranging from 58 to 95 pounds with an average of 78.4 pounds. Twelve readings taken on the high service showed pressures ranging from 50 to 143 pounds with an average of 94.8 pounds. **Fire Flow Tests:** Probable supply available for fire protection purposes was measured on April 9, 1947 by means of Pitot

tube. Location of hydrant, discharge in gallons per minute, pressure before flow, and pressure during flow were as follows:

**Low Service:**

Watchung Ave. and Chestnut St., 504—58—16.  
Main and Washington Sts., 618—84—51.  
Glen Ave. opposite Brook La., 578—79—31  
Main St. and Valley Rd., 1,891—94—46.  
Valley Rd. and Freeman St., 1,114—95—49.  
Harvard Ter. N. of Walker Rd., 856—60—36.

**High Service:**

Dogwood Rd., S/E of Dogwood Dr., 550—78—28.  
Pleasant Valley Way 500 ft. S. of Mountain Ave., 770—135—38.  
Edgewood Ave. and Elf Rd., 750—75—46  
Maple and Hillcrest Aves., 276—50—10.  
Gilbert Pl. and Club Blvd., 1,370—126—55.  
Nottingham Rd. and Westminster Ter., 771—120—45  
Mt. Pleasant Ave., 600 ft. E. of Crestmont Rd., 319—51—3.  
Laurel Ave., 1,000 ft. W. of Eagle Rock Ave., 238—76—8.  
Fairway Ave., 250 ft. W. of Barbara Ave., 225—112—81.  
Robertson Rd. and Cassien Ter., 600—86—29.  
Mountain Ave. and Nutwood Ave., 477—86—16.  
Tulip Ave. and Oak Bend Ave., 805—143—37.

**FIRE DEPARTMENT:** A full paid department under the direct supervision of Director of Public Safety who is elected by popular vote for four years as a commissioner. There are 43 members including a chief, 1 assistant chief, a battalion chief, and 6 captains. Members are appointed after a physical and mental examination and serve a six months' probationary period. Men are divided into two platoons on duty alternately ten and fourteen hours every fourth day. No meal periods allowed. Firemen receive 15 days annual vacation. No substitutes provided. Off-shift men are not allowed to leave town without permission on their short day off, but may do so on their long day off. A pension fund for paid men established by state law is supported by assessments from salaries of members and by the town. Town owns all apparatus and appropriated \$128,000 for the support of the department in 1946. **Companies—Headquarters:** Located on Valley Road and Whittingham Place. Building is a 2-story joisted brick structure with a slag roof, wood floor, electric lights, steam heat, telephone, and hose tower. Membership 26 including 3 chiefs and 2 captains. **Equipment—Engine Company No. 1:** A 1929 American La France 1,000-g.p.m. triple combination pumping engine carrying a 160-gallon booster tank, 200 feet of booster hose, 1,300 feet of 2½-inch hose, 2 short ladders, and good minor equipment. **Ladder Company No. 1:** A 1937 American La France city service truck carrying ladders ranging from 12 to 50 feet and totaling 239 feet, 10 salvage covers, an Eastman deluge set, a life net, and good minor equipment. In reserve there is a 1915 American La France city service ladder truck carrying ladders ranging from 10 to 50 feet and totaling 255 feet, a life net, and some minor equipment. **Engine Company No. 2:** Located on