



August 15, 1944.

## UNION TOWNSHIP, UNION COUNTY, NEW JERSEY.

Including Townley, Unionville, and Vauxhall.

Population — Census of 1940 — 24,730.

**IN GENERAL**—Located on the Lehigh Valley and Rahway Valley Railroads along State Highway Route No. 39, adjoining the northwesterly limits of the City of Elizabeth. It is a developing residential community with about 20 industries employing about 1,200. Area 9.04 square miles. Elevations range from 60 to 200 feet. Main thoroughfares are concrete or macadam in good condition with some secondary streets of gravel in fair to poor condition. Railroad crossings at grade and traffic conditions on main highways could effect delays in the response of the fire department to some sections.

**WATER SUPPLY:** The Elizabethtown Water Company, Consolidated furnishes water for domestic and fire protection purposes to Union and to all or part of 13 other communities in Middlesex and Union Counties, and sells water at wholesale to the City of Elizabeth and to Camp Kilmer near New Brunswick. For information on supply works, distribution system, and appurtenances see report with Map No. 343. Union Township is in the Elizabeth District supplied from the Springfield and Hammocks Pumping Stations located respectively in Springfield Township adjoining the Union Township limits, and on Morris Avenue near Dawes Avenue in Union Township. The supply is delivered from a 20-inch transmission main extending through Morris Avenue in the center of the distribution system. **Consumption:** The average daily pumpage in this district from the Hammocks and Springfield Pumping Stations during 1943 was 6.45 m.g.d. It is estimated that the maximum daily pumpage is 9.0 m.g.d. At time of inspection there were 16,793 services in this district, of which 7,567 are in Union Township. Services are 100% metered. **Distribution System:** Mainly in one service supplied from the 20-inch supply main in Morris Avenue except that a few hydrants and services in the northeast section of the township adjoining Maplewood are supplied by the Commonwealth Water Company. Arterial system is fair, but lacks secondary feeders for some sections. **Pipe:** All cast iron, tar coated, bell and spigot joint, laid with about a 3-foot cover. Total length, exclusive of 20-inch transmission main, 433,500 feet; 8.7% 12-inch, 0.5% 10-inch, 2.8% 8-inch, 85.4% 6-inch, 2.6% 4-inch. No serious trouble reported from frozen mains or electrolysis. **Gate Valves:** There are 927 on the distribution system in Union, mainly of Rensselaer make set with valve boxes at grade. Direction of operation is uniform. Inspection and repair of valves is continuous resulting in at least one annual inspection of all valves. Fire department is notified when valves affecting hydrant supply are operated. Repair work is continuous until service is restored. **Hydrants:** There are 345 on the distribution system in Union Township of Corey and Wood makes, of standard type; about 5% have two 2½-inch outlets; about 70% have one 2½-inch and one 4½-inch outlet, and the balance have two 2½-inch and one 4½-inch outlets. Branches are 4-inch and 6-inch, all of which are gated. Hydrants are inspected every four months and after use, by the chief of the fire department. They are owned by the township and are serviced by the water company and were found to be in good condition at time of inspection. Hose outlet threads are 3 inches outside diameter with 8 threads per inch and steamer outlets are National Standard. **Pressures:** Readings

taken at 6 well distributed hydrants showed pressures ranging from 75 to 100 pounds with an average of 87 pounds. **Fire Flow Tests:** Probable supply available for fire protection purposes was measured on March 7th, 1935 by means of Pitot tube. Location of hydrant, discharge in gallons per minute, pressure before flow, and pressure during flow were as follows:

Morris and Stuyvesant Aves., 1,960—80—58.  
Chestnut St. and Park Terrace, 980—100—84.  
Walton and Mercer Aves., 700—82—36.  
Colonial Ave. and Twin Oaks Rd.—1,370—82—64.  
Springfield Ave. and Vauxhall Rd., 870—75—60.  
Burkley Pl. and Elm Ave., 680—100—10.

**Note:** Quantities shown above can be materially increased by the operation of additional pumps, the use of emergency connections, and the closing of the Elizabeth City connection.

**FIRE DEPARTMENT:** A part paid and volunteer organization of 3 companies under the supervision of the chairman of the fire committee of the township committee. The township owns all apparatus and equipment and fire headquarters and appropriated \$70,483.75 for the support of the department during 1944. There are 21 paid members including a chief, 2 deputy chiefs, and one captain. The volunteer force consists of 39 active members in three companies with a foreman and assistant foreman in each company, of whom a minimum of 18 members are available at all times. All appointments and promotions of paid men are made under Civil Service Law which has been locally enacted. Paid men are protected by Tenure of Office Act and are entitled to pensions on retirement. Paid men work on two platoons on duty alternately for 24 hours. Meal periods are allowed and one man is off duty from each station between 4 and 7 p.m. daily. Men are allowed 15 days annual vacation with 2 men off at a time from May 1st to October 1st. Paid men off duty respond to all alarms. No desk watch is maintained at headquarters after 11 p.m. Volunteer members are elected by the various companies and confirmed by the chief and township committee. **Companies—Headquarters:** Membership 12 paid men and 17 active volunteers. Located on Bond Drive southwest of Morris Avenue as shown on map. Building is a modern fire resistive 2-story structure with concrete apparatus floor, slag roof, oil fired hot water heat, telephone switchboard, headquarters fire alarm equipment, and air horn equipment. **Engine Company No. 1: Equipment:** One 1927 American La France 1,000-g.p.m. triple combination pumping engine carrying one 60-gallon booster tank, 150 feet of booster hose, 1,200 feet of 2½-inch hose, 2 short ladders, and fair minor equipment. **Truck Company No. 1: Equipment:** One 1941 Seagrave 65-foot junior type aerial ladder truck carrying one 100-g.p.m. booster pump, one 100-gallon booster tank, 150 feet of booster hose, ground ladders from 14 to 50 feet, totaling 200 feet, 300 feet of 2½-inch hose, one 1,250-watt flood light generator with two 500-watt flood lights, and fairly complete minor equipment. **Engine Company No. 4: Equipment:** One 1931 Sanford 300-g.p.m. triple combination pumping engine carrying one 150-gallon booster tank, 1,100 feet of 2½-inch hose, one Eastman portable deck

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gun, 2 short ladders, and fair minor equipment. Chief is provided with one 1940 radio equipped Dodge coupe. **Engine Company No. 2:** Membership 4 paid men including a captain on one shift, and 12 active volunteers. Located in the Vauxhall Section on Vauxhall Road and Farrington Street as shown on map. Building is a 2-story cement block and frame structure with concrete apparatus floor, composition covered wood roof, electric lights, steam heat, siren, and telephone. **Equipment:** One 1927 American La France 1,000-g.p.m. triple combination pumping engine carrying one 40-gallon booster tank, 150 feet of booster hose, 1,300 feet of 2½-inch hose, 2 short ladders, and fair minor equipment. **Engine Company No. 3:** Membership 4 paid men and 10 active volunteers. Located in the Townley Section at Morris Avenue and Arnet Avenues as shown on map. Building is a 1-story frame structure with composition covered roof, hot water heat, wood apparatus floor, electric lights, telephone, punch register, and siren. **Equipment:** One 1931 Sanford 300-g.p.m. triple combination pumping engine carrying one 150-gallon booster tank, 150 feet of booster hose, 1,100 feet of 2½-inch hose, 2 short ladders, and fair minor equipment. **Additional Equipment:** At headquarters there is one O.C.D. 500-g.p.m. trailer unit with standard minor equipment, and one O.C.D. front end type 500-g.p.m. pump mounted on a department owned Chevrolet panel bodied truck carrying 1,000 feet of 2½-inch hose, one 100-gallon booster tank, 150 feet of booster hose, 150 feet of 1½-inch hose, and some minor equipment. At Engine Company No. 2 there is one O.C.D. 500-g.p.m. skid type unit mounted on a Chevrolet truck chassis carrying one 150-gallon booster tank, 150 feet of booster hose, 1,000 feet of 2½-inch hose, 150 feet of 1½-inch hose, and standard minor equipment. In addition at this station there are three 500-g.p.m. O.C.D. trailer units with standard minor equipment and 2 standard 500-g.p.m. O.C.D. skid units which have not been put in service. One O.C.D. 500-g.p.m. trailer unit with standard equipment and one emergency van type truck is housed in a local garage near Morris Avenue. **Hose:** All 2½-inch hose is C.R.L. with screw couplings, 3 inches outside diameter with 8 threads per inch. Hose is tested twice a year at 225 pounds and shifted every 2 months unless otherwise used. No drying facilities provided. There is a total supply of 9,600 feet, of which 5,100 feet is carried on the apparatus and 4,500 feet is kept rolled on racks at headquarters and Station No. 2. Of the total supply about 50% is more than 5 years old and 30% is more than 7 years old. **Operations:** Department is governed by township ordinance. The chief has control of apparatus and paid men at all times and of volunteers at fires and drills. Motors are started twice daily and all paid men drive and operate equipment. **Drills and Training:** Volunteer members are drilled four times each year under a deputy chief. Paid men do not drill regularly. Drills consist of pump operation, hose and ladder work and use of appliances. **Fire Methods:** Booster streams and hand equipment are used on incipient fires supported by engine streams with shut-off nozzles. Five gas masks are provided. A 1,250-watt generator with two 500-watt flood lights, one deck gun, one cellar pipe, 3 distributing nozzles, and 6 salvage covers are provided. **Response to Alarms.** Two engine companies and a ladder company respond to all alarms in the mercantile and industrial districts

and to other special districts. One outlying company moves in to headquarters when headquarters equipment has been dispatched. One engine company from the respective district and the truck company respond to all other alarms. Outside aid may be secured from the surrounding paid departments at Elizabeth, Hillside, Irvington, Millburn, and Maplewood, and from the part-paid or volunteer departments at Springfield, Kenilworth, and Roselle Park. **Building Inspection:** Occasional inspections are made by the chief of the department, who investigates complaints. Inspections of new installations required under the municipal regulations are made by a deputy chief. **Records and Reports:** Records are incomplete consisting of a journal and fire reports. Monthly and annual reports are made to the township committee. **Fire Alarms:** Alarms of fire are telephoned to fire headquarters over one of two telephones and are sounded on an air whistle by means of a breakwheel transmitter which codes 140 phantom locations. Alarms from the Townley Section are transmitted from headquarters to the fire station where they are received on a tape register and where coded signal is sounded. Alarms from the Vauxhall Section are similarly sounded on a siren at that station which is operated from a breakwheel transmitter coding 19 phantom locations. Headquarters equipment includes 6 battery cells and rectifiers, a telephone switchboard with 2 trunk and direct lines to each fire station and police telephone switchboard. The fire chief's car is equipped with radio operating in conjunction with a local police system.

**POLICE DEPARTMENT:** Consists of a chief, 1 lieutenant, 4 sergeants, 1 detective and 29 patrolmen working in 8-hour shifts. There are 5 patrol cars, 3 of which are radio equipped, 2 motorcycles and an ambulance. There are 10 police signaling boxes over which street patrolmen report to headquarters occasionally. Desk watch is constantly maintained. Patrolmen respond to alarms of fire and assist in maintaining fire lines.

**BUILDING LAWS:** Building code amended to November 10th, 1936 provides for the appointment of a building inspector, requires permits for building operations and embodies a few provisions of value from a fire protection standpoint. No fire limits are established and there are no regulations prohibiting wood shingle roofs. In general the regulations are entirely inadequate from a fire protection standpoint.

**EXPLOSIVES AND FLAMMABLES:** An ordinance adopted January 25th, 1938 closely follows the Code of Suggested Ordinances for Small Municipalities recommended by the National Board of Fire Underwriters. Enforcement of these regulations is only fair. The state laws adequately cover the storage and shipment of explosives and flammables and the construction of motion picture booths. They also restrict the discharge of fireworks to responsible bonded parties.

**ZONING ORDINANCE:** Adopted December 10th, 1929.