

Superseding Map No. 123 of October 31, 1941. Please destroy old issue.



THE FIRE INSURANCE RATING  
ORGANIZATION OF N. J.  
ENGINEERING DEPARTMENT  
NEWARK 2, N. J.

**Town  
of  
Nutley**  
**Essex County, New Jersey**  
APRIL 29, 1950

- KEY**  
PROTECTED FIRE ZONE: Shown in Green.  
Note.—For description of fire protection, etc., see other side.
- Elevations range from 5 to 182 feet above mean sea level.
- Water mains 8 inches and larger in diameter
- Water mains 6 inches in diameter
- Water mains 4 inches in diameter
- Fire hydrants shown thus
- Gate valves shown thus
- Fire house shown thus
- Fire apparatus designated by symbols thus:
- Ⓢ Pumping engine and hose car
  - Ⓛ Ladder truck
  - Ⓢ Booster tank or tanks on above
  - Ⓢ Chemical tank or tanks on above

April 29, 1950.

## TOWN OF NUTLEY, ESSEX COUNTY, NEW JERSEY.

Population — 1940 Census — 21,954.

**IN GENERAL:** Located on the west bank of the Passaic River between the City of Clifton and the Town of Belleville, about 2½ miles north of the City of Newark. It is mainly a substantial suburban community with about 32 industrial establishments normally employing about 2,850. Area 3.4 square miles. Elevations range from 5 to 182 feet with moderate to severe grades in the residential areas. Streets are mainly paved and in good condition. Railroad crossings at grade and traffic congestion should not seriously affect the response of fire apparatus.

**WATER SUPPLY:** The Town of Nutley owns and operates the distribution system which was installed in 1890 and supplies water for domestic and fire protection purposes to Nutley only. Supply is purchased under a ten-year contract, executed in 1945, from the Passaic Valley Water Commission. **Municipal Water Department—Organization:** Department is well organized under the direct supervision of the town engineer who is also superintendent of public works and is in charge of an experienced superintendent who has held his position about 22 years. Appointments and promotions are made by the commissioners from eligible lists furnished by the State Civil Service Commission. There are 10 regular employees including one foreman, one meter repair man, one truck driver, and seven laborers. Two well-equipped trucks are available. The meter repair man, who is familiar with distribution system details and who is a volunteer fireman, responds to all alarms of fire, and the superintendent and an emergency crew are available on short notice. Records consist of detailed sheets of hydrant and valve locations. A yard and shop are provided at water department office. **Passaic Valley Water Commission:** The supply is obtained from the Wanaque watershed development which embraces 94.4 square miles, with a safe yield of 100 m.g.d. and a storage reservoir with an available capacity of 27.6 billion gallons at overflow elevation 300. The supply is delivered through the Wanaque aqueduct, which extends about 20.6 miles to the Belleville distributing reservoir with connections enroute to the Passaic Valley Water Commission Pumping Station and the various systems supplied. The connection to the system at the Passaic Valley Water Commission Pumping Station at Little Falls consists of double gated connections and a 48-inch suction line from the twin 74-inch lock bar steel conduits comprising the aqueduct at this point. Domestic pumping equipment consists of 4 units, with an aggregate capacity of 60 m.g.d. which discharge under about 89 pounds head to a 42-inch transmission line extending to Paterson and a 51-inch transmission line which, in conjunction with a booster station at the Great Notch Reservoir, supplies higher areas and extends to supply Clifton, Nutley, and other municipalities beyond. **Elevated Storage:** The Great Notch Reservoir, with a capacity of 151.7 million gallons at overflow elevation 425, is maintained as reserve high service storage, and the New Street Low Service Reservoir in Paterson, with a capacity of 56.0 million gallons at overflow elevation 300, would be available to high service in conjunction with booster pumping equipment of 12.0 m.g.d. capacity. **Nutley Supply:** The Nutley distribution system is normally supplied through one 8-inch and two 12-inch metered connections equipped with pressure regulators from the 51-inch Passaic Valley Water Commission transmission main. For details and location, see map. In addition as a standby source of supply there are duplicate connections to the 42-inch and 48-inch Newark supply conduits which parallel the 51-inch line and formerly furnished entire Nutley supply. **Distribution System:** In two services with a system of valves and pressure regulators at about elevation 150 which effect the low service for the major portion of the town. See map. **Consumption:** The average and

maximum daily consumption on the Nutley system during 1948 was estimated to be 1.611 and 1.95 million gallons. On December 31, 1948 there were 5,541 services, all of which were metered. **Pipe:** Cast iron, tar coated, of which about 80% is bell and spigot joint, and the balance is Universal joint; all is Class "C," laid with about a 4½-foot cover. Total length, 313,396 feet; 1.9% 12-inch, 12.0% 8-inch, 84.7% 6-inch and 0.4% 4-inch. No recent trouble from frozen mains or electrolysis. **Gate Valves:** There are 1,115 valves of Smith, Ludlow, and Eddy makes, set in iron boxes to grade. Direction of operation is uniform. Valves are inspected twice a year. **Hydrants:** There are 619 of Eddy, Ludlow, Smith, and Mathews makes of standard type. All except dead end hydrants used as blow-offs have two 2½-inch and one 4½-inch outlets and 6-inch gated branches. Hose and steamer outlet threads are National Standard. Hydrants are inspected twice a year. Those operated during resurvey were in good condition. **Pressures:** A direct reading gauge located in municipal building showed an average pressure of about 75 pounds. Readings taken at 11 well distributed hydrants showed pressures ranging from 46 to 81 pounds with an average of 68½ pounds. Master pressure regulators are set to limit static pressure to approximately 20 pounds below the conduit head. **Fire Flow Tests:** Probable supply available for fire protection purposes was measured on October 26, 1949 by means of Pitot tube. Location of hydrant, discharge in gallons per minute, pressure before flow, and pressure during flow were as follows:

Franklin Ave. and Centre St., 2,460—80—36.  
 Passaic Ave. and Grove St., 660—46—27.  
 Centre St. and Washington Ave., 880—68—29.  
 McKinley and Oak Sts., 660—61—9.  
 Pershing Ave. and Walnut St., 680—81—18.  
 Franklin Ave. at E. Plaza and E. High St., 1,830—81—31.  
 Passaic Ave. and Chestnut St., 1,060—73—35.  
 Kingsland Rd. near Brookdale Ave., 1,000—64—38.  
 High St. and Stanley Ave., 1,060—49—28.  
 Plymouth and Cook Rds., 620—68—7.  
 Bloomfield Ave. and Jefferson St., 1,040—81—33.

**FIRE DEPARTMENT:** A part-paid organization of three companies under the supervision of the commissioner of public safety. The town owns houses, apparatus, and equipment and appropriated \$52,900 for the support of the department in 1948. There are 14 paid firemen including a captain and a lieutenant. Appointments and promotions of paid men are from eligible lists furnished by the State Civil Service Commission. Paid men are divided into two platoons and are on duty 24 hours and off duty 24 hours, allowed two weeks' vacation, during which period substitutes are not provided. A pension fund for the paid men established by state law is supported by assessments from salaries of members and by town. Members may retire on half salary in case of total disability or after twenty-five years of service if fifty-three years of age. There is a total volunteer membership of 65 including a chief, 4 assistant chiefs, 3 foremen, and 3 assistant foremen who are elected by their respective companies and confirmed by commissioner. Chief and 4 assistant chiefs are appointed by commissioner of public safety and confirmed by commissioners. There are a minimum of 8 volunteer members available at all times. **Companies—Yanticaw Chemical Company No. 1:** Membership 14 paid men and 25 volunteers. Located in the municipal building on Chestnut Street near Warren Street. Building is a 2-story brick structure with a slate roof, concrete apparatus floor, steam heat, electric lights, and two telephones. **Equipment:** A 1949

## TOWN OF NUTLEY, ESSEX COUNTY, NEW JERSEY.

### *Continued.*

American La France 750-g.p.m. triple combination pumping engine carrying a 100-gallon booster tank, 200 feet of booster hose, 400 feet of 1½-inch hose, 1,000 feet of 2½-inch hose, 2 gas masks, 3 short ladders, 1 mechanical foam nozzle, and fair minor equipment. A 1927 American La France 55-foot city service ladder truck carrying 9 ladders ranging from 12 to 55 feet and totaling 227 feet, a cellar pipe, 8 salvage covers, 5 gas masks, self-contained oxygen breathing apparatus, 2 asbestos suits, one 3-way deluge set, 1 mechanical foam nozzle, and good minor equipment. A 1924 American La France 400-g.p.m. triple combination pumping engine carrying a 135-gallon booster tank, 200 feet of booster hose, 200 feet of 1½-inch hose, 800 feet of 2½-inch hose, 1 gas mask, 2 short ladders, and fair minor equipment. A 1946 G.M.C.-Barton 500-g.p.m. triple combination pumping engine carrying a 200-gallon booster tank, 200 feet of booster hose, a 4-k.v.a. electric generator, 14 flood lights, 1 small ladder, 1 smoke ejector, 2 asbestos suits, 4 gas masks, 2 salvage covers, and good minor equipment. **Hose Company No. 1:** Membership 20 volunteers. Located on Park Avenue near Hampton Street. Building is a 2-story stuccoed frame structure with a slate roof, concrete apparatus floor, steam heat, electric lights, and two telephones. **Equipment:** A 1929 American La France 750-g.p.m. triple combination pumping engine carrying a 65-gallon chemical tank, 200 feet of chemical hose, 300 feet of 1½-inch hose, 3 gas masks, 2 short ladders, 1 mechanical foam nozzle, and fair minor equipment. **Hose Company No. 2:** Membership 20 volunteers. Located on High Street near Bloomfield Avenue. Building is a 2½-story stuccoed frame structure with a slate roof, concrete apparatus floor, steam heat, electric lights, and two telephones. **Equipment:** A 1943 American La France 750-g.p.m. triple combination pumping engine carrying a 100-gallon booster tank, 200 feet of booster hose, 400 feet of 1½-inch hose, 1,200 feet of 2½-inch hose, 2 gas masks, 2 short ladders, 1 mechanical foam nozzle, and fair minor equipment. **Hose:** All 2½-inch hose is C.R.L. with National Standard screw couplings. It is tested once a year at 250 pounds, shifted at fires and drills, and dried on apparatus floor. There is a total supply of 7,100 feet of 2½-inch hose, of which 6,300 feet is over five years old and 3,650 feet is held in reserve. **Operations:** Department is governed by town ordinances. Chief has control of apparatus and paid men at all times, and of volunteers at fires and drills. Chief may suspend members pending a hearing before commissioner of public safety and civil service commission. Motors are started occasionally. Paid men drive apparatus. **Drills and Training:** Drills, held weekly during fall and spring under supervision of chief, consist of hose laying, ladder raising, pump operation, and use of equipment. **Fire Methods:** Booster or chemical streams used on incipient fires reinforced by engine or hydrant lines with shut-off nozzles. Gas masks, salvage equipment, and heavy stream appliances are provided. **Response to Alarms:** Engine and ladder company from Yanticaw Chemical Company No. 1 respond to all alarms of fire and engine from Hose Company No. 2 responds west of Franklin Avenue and hose car from Hose Company No. 1 responds east of Franklin Avenue. Outside aid may be secured from Clifton, Belleville, Bloomfield, and Lyndhurst. **Building Inspection:** Chief makes inspections twice a year of all factories, schools, and mercantile buildings. **Records and Reports:** A journal is kept at each station of all company operations. Records of all fires are kept in regular fire department log book and an annual report is submitted by chief to commissioner of public safety. **Fire Alarms:** Fire alarm system is part of the fire department and is under the supervision of and maintained by the paid captain. Headquarters equipment is located in a small room adjoining the apparatus floor in fire headquarters. Apparatus is of Gamewell automatic type and consists of a 6-circuit slate operating board with the necessary switches for testing and operation and a 6-circuit non-interfering repeater. Cir-

cuits are protected by ½-ampere fuses and inert gas lightning arresters at entrance of circuits to headquarters. Current for operation of system is supplied by 5 oxide film rectifiers serviced from the 110-volt lighting circuit with 6 banks of storage batteries of from 10 to 17 cells each floating. Batteries are protected by 15-ampere fuses and rectifiers by 1-ampere and 3-ampere cartridge fuses. They are well mounted on standard rack and are located in cut-off section of basement of fire headquarters. Some open wiring in fire alarm headquarters. There are a punch register and gong in each fire house, 2 street gongs and a tower bell at Hose Company No. 1, air horns at Hose Company No. 2 and at fire headquarters and a breakwheel transmitter at police headquarters. System is divided into 5 circuits, 4 circuits carrying all boxes and alarm instruments and 1 local circuit carrying all alarm instruments at fire headquarters. There are 3 Harrington-Seaberg non-interfering type boxes, 6 Gamewell-Peerless non-interfering type boxes and 70 Gamewell three-fold succession type boxes mounted on utility company poles with red and white indicating bands at or near street intersections. Total length of circuits is about 30 miles, of which about 0.5 miles is underground and the remainder above ground. Overhead circuits are No. 10 hard drawn, triple braided, weatherproofed copper weld wire mounted below power wires on utility company poles. Underground circuits are No. 14, rubber covered copper wire in lead sheaths. Circuits are tested daily for grounds, voltage, and amperage. No records are kept of tests. Tests of fire alarm boxes are made monthly. Alarms of fire may be telephoned to the police headquarters through one of three trunks from public exchange and are sounded by means of a breakwheel transmitter at police desk.

**POLICE DEPARTMENT:** Consists of a chief, a captain, a lieutenant, 5 sergeants, 25 patrolmen, and 10 specials working in eight-hour shifts. Three radio cars equipped with two-way radio, 2 motorcycles, and 1 ambulance are provided. Patrolmen respond to alarms of fire and report unauthorized construction to building inspector.

**BUILDING LAWS:** Building department is well organized with a competent inspector. Building code adopted June, 1925 and revised in 1931, requires that plans be submitted and permit secured before building operations may begin. Code closely follows that recommended by the National Board of Fire Underwriters. Fire limits are established and wood shingle roofs are prohibited throughout the town. State laws provide some good regulations for construction of factories, tenement houses, and public schools, and fire protection and safety features for hotels.

**FIRE PREVENTION LAWS:** Building code contains some regulations for garages, filling stations, and gasoline storage, also regulations on the installation of oil burning equipment and fuel tanks. State laws adequately cover the manufacture, storage and handling of explosives, and provide for regulations governing the intrastate transportation of explosives and flammable liquids. They also restrict the discharge of fireworks to responsible bonded parties and embody good requirements for motion picture booths and the hazard incident to the display of motion pictures except that flammable film and portable booths are permitted for temporary exhibitions, and enclosures for projection equipment are not required in schools. The State Tenement House Act restricts keeping and handling of certain combustible materials in tenements.

**ZONING ORDINANCE:** Adopted in 1922.