



PENNS GROVE BOROUGH, SALEM COUNTY, NEW JERSEY.

Population—Census of 1940—6,488.

IN GENERAL: Located along the West Jersey and Seashore Branch of the Pennsylvania Railroad on the east bank of the Delaware River opposite Wilmington, about 30 miles southwest of Camden. It is a residential community and business center for the surrounding agricultural and industrial area. There are a few small local industries and extensive industrial employment is provided by the plants of the E. I. du Pont de Nemours & Company located in the adjoining township to the southwest. Area about one square mile. Borough is practically level at about elevation 10. Main thoroughfares are concrete or macadam in good condition with some secondary streets in fair condition. Railroad crossings at grade are such that they should not seriously delay the response of fire apparatus; but traffic congestion and parked vehicles in narrow streets could seriously delay fire department operations in the business district.

WATER SUPPLY: The Penns Grove Water Supply Company, which is a subsidiary of the Colonial Utilities Corporation, owns and operates the supply works, pumping stations, distribution system, and appurtenances and supplies water for domestic and fire protection purposes to Penns Grove, Pedricktown, and portions of Upper Penns Neck Township adjacent to Penns Grove, and sells water at wholesale to the Delaware Ordnance Depot and a nearby housing project. **Organization:** The local company organization consists of a superintendent who supervises all duties, an office manager, a part time clerk, one plant operator living at the Pedricktown plant, a foreman, and 2 or 3 laborers. Office in Penns Grove. Pipe yard and shop at Pedricktown pumping station. A small truck is provided and emergency repair equipment is available, but there is no regular response to alarms of fire. Records are incomplete, consisting of a distribution map which was not compiled to date at time of inspection, and general operating data. **Supply Works:** The supply is obtained from a well field at Pedricktown pumping station in Oldmans Township about 2½ miles northeast of Penns Grove, and from a Ranney collector with supplementary wells located in Upper Penns Neck Township about 3,000 feet southeast of the municipal limits. **Pedricktown Supply:** This supply is obtained from three 12-inch wells 146.5 to 178 feet deep yielding about 0.43 m.g.d. These wells are operated under direct suction by low lift pumps which discharge through a coke-tray aerator to a two-section concrete sedimentation basin with a capacity of 93,750 gallons, whence the supply flows through two gravity rapid sand filters rated at 0.36 and 0.43 m.g.d. to one 21,600- and one 14,400-gallon clear water basins, from which the high lift pumps take suction, discharging through about 16,000 feet of 8-inch main to the Penns Grove distribution system with a standpipe and elevated tank acting as equalizers. The supply to Pedricktown is delivered through an 8-inch main near the pumping station. **Ranney Supply:** This supply consists of a Ranney collector 13 feet in diameter, 30 feet deep, yielding about 215 g.p.m. at time of inspection, having been capable of 700 g.p.m. when constructed in 1939. Due to the reduction in yield of this installation, the supply is being supplemented by additional deep wells one of which, about 1,500 distant, was in operation at time of inspection, and other wells nearer the collector are contemplated. Well No. 2B in service at time of inspection is 12-inch, 60 feet deep, yielding about 215 g.p.m. This well is equipped with a Deming deep well turbine driven by a 7.5-h.p. electric motor discharging to an 8-inch header terminating in the Ranney well. Pump is set below ground level in concrete vault. High lift pumps mounted over Ranney collector discharge to distribution system with the standpipe and elevated tanks acting as equalizers. **Pedricktown Pumping Station:** Located in Oldmans Township south of Perkinstown Road about 2½ miles northeast of Penns Grove and about 1½ miles west of Pedricktown. Building is a 1-story brick structure with a metal and slate covered wood roof, cement floor, oil stove, plain glass windows and unprotected communications. Oil is stored in outside buried tanks. Exposure is mild from woods and 1-story frame buildings about 100 feet distant. General condition and housekeeping poor. One hydrant and hand extinguisher provided. Telephone in operator's dwelling nearby. Elevation of floor about 20. **Equipment:** One 1932 2-cylinder 25-h.p. Fairbanks-Morse Diesel engine shaft connected through a bevel gear to a vertical Fairbanks-Morse 600-g.p.m. low lift centrifugal pump, and one 1938 45-h.p. Fairbanks-Morse Diesel engine direct connected to the 450-g.p.m. Fairbanks-Morse high lift centrifugal pump. One 25-h.p. F. M. Diesel engine belt connected to shaft driving one Gould 500-g.p.m. low lift centrifugal pump and one 8 x 10 Gould 400-g.p.m. triplex high lift pump is held in reserve. Due to well yield and arrangement the capacity of the station is approximately 300 g.p.m. **Ranney Collector Pumping Equipment:** Located over Ranney well in Upper Penns Neck Township as shown on map No. 389 in an unexposed brick building with concrete floor and roof, electric unit heater. **Equipment:** One 700-g.p.m. Pomona deep well turbine pump driven by a 40-h.p. Westinghouse motor. One 100-g.p.m. Sterling deep well turbine driven by a 7½-h.p. electric motor. One Deming 450-g.p.m. deep well turbine throttled to 215-g.p.m. driven by a 20-h.p. electric motor. **Distribution System:** In one service consisting of incomplete 8-inch arteries and supply mains connecting with the two pumping stations supplying incomplete 4-inch and 6-inch gridiron and dead ends. See map. **Elevated Tank:** Located in Penns Grove west of State Street between Railroad and Sacks Avenues as shown on map. It is steel, 28 feet in diameter by 24 feet high with a hemispherical bottom on an 80.5-foot steel tower, with a capacity of 150,000 gallons. Elevation of base 9.21. Elevation of overflow 113.71 feet. **Standpipe:** Located north of the municipal limits on North Broad Street in Upper Penns Neck Township as shown on map. It is steel, 12 feet in diameter by 110 feet high with a capacity of 93,000 gallons. Elevation of base 10. Elevation of overflow 120 feet. **Consumption:** The average and maximum daily consumption during 1943 was 0.562 and 1.017 million gallons. At time of inspection there were 2.155 services in the entire territory served in addition to the Delaware Ordnance Depot and housing development master services. About 50% of the company owned services are metered. **Pipe:** All cast iron, tar coated, bell and spigot joint, laid with a 3-foot minimum cover. No trouble reported from frozen mains or electrolysis. Total length within the municipal limits 51,750 feet: 31.9% 4-inch, 36.5% 6-inch, 31.6% 8-inch. **Gate Valves:** There are 69 on this system in Penns Grove of R. D. Wood make set with iron boxes at grade. Direction of operation is uniform with the exception of 8 valves. Inspection is limited to that necessitated by system maintenance, except that boxes are occasionally checked for grade. **Hydrants:** There are 88 on the system in Penns Grove of Mathews and Mueller makes of standard type, about 40% of which have two 2½-inch and

one 4½-inch outlets. The balance have one 4½-inch and one 2½-inch outlet. Branches are 4-inch and 6-inch, about 50% of which are gated. Hydrant hose outlets are National Standard and steamer outlets are 5-9/16 inches outside diameter with 7 threads per inch. Hydrants are inspected twice annually and were in fair to good condition at time of inspection. **Pressures:** Recording gauge in Pedricktown pumping station at about elevation 24 showed 64 pounds at time of inspection and a direct reading gauge at Ranney Collector showed 57 pounds with station operating at 570 g.p.m. and a 44-pound static pressure with the tank about 1½ feet below the full level. Due to heavy recent demand and the reduced capacity of the supply works, pressures have not been well maintained during peak demands. Readings taken at 7 well distributed hydrants showed pressures ranging from 47 to 49 pounds with an average of 48.14 pounds. A reading taken September 1st, 1944 at noon showed pressures to be down about 10 pounds. **Fire Flow Tests:** Probable supply available for fire protection purposes was measured on June 15th, 1937 and March 8th, 1940 by means of Pitot tube. Location of hydrant, discharge in gallons per minute, pressure before flow, and pressure during flow were as follows:

June 15, 1937:

Broad and E. Main Sts., 920—47—38.
W. Harmony and Franklin St., 530—48—30.
W. Main St. and Delaware Ave., 440—49—27.
Delaware Ave. and W. Line St., 590—49—16.
Railroad and Airy Aves., 240—48—*.
S. Broad St. and Maple Ave., 310—48—10.
Virginia Ave. N. of Shell Rd., 840—48—16.

March 8, 1940:

Broad and E. Main Sts., 710—46—40.

*No reading taken.

FIRE DEPARTMENT: A volunteer organization of one company with two full paid drivers who serve as desk men for the police headquarters at the rear of the apparatus room. The department is under the control of the borough which owns quarters, apparatus, and equipment and appropriated \$4,800 for the support of the department during 1944. Total active membership 32 including a chief, 2 assistant chiefs, and the paid drivers who alternate duty on 12-hour shifts. A minimum of 12 members are available at all times. The chief is elected for a three-year term and other officers are elected annually subject to confirmation by the mayor and council. **Companies—Headquarters:** Located in borough hall at Main and State Streets as shown on map. Building is a 2-story ordinary brick structure with slate roof, concrete apparatus floor, steam heat, telephone, hose tower, and electric lights. **Equipment:** One 1942 Seagrave 750-g.p.m. triple combination pumping engine carrying one 300-gallon booster tank, 200 feet of booster hose, 1,000 feet of 2½-inch hose, 300 feet of 1½-inch hose, 2 short ladders, and some minor equipment. One 1926 American La France 600-g.p.m. quadruple combination pumping engine and 50-foot city service ladder truck carrying one 100-gallon booster tank, 200 feet of booster hose, 900 feet of 2½-inch hose, a life net, ladders ranging from 12 to 50 feet, totaling 228 feet, and fairly complete minor equipment. **Auxiliary Fire Station:** Located in lumber yard between West Main Street and Railroad Avenue east of Oak Street as shown on map. Building is a 1-story cinder block extension to a frame lumber shed with composition covered wood roof, concrete floor, and stove. **Equipment:** One 1921 American La France 750-g.p.m. triple combination pumping engine carrying one 180-gallon booster tank, 200 feet of booster hose, 700 feet of 2½-inch hose, one 30-foot extension ladder, and some minor equipment. **Hose:** All 2½-inch hose is C.R.L. with National Standard screw couplings. Hose is shifted monthly unless otherwise used and is dried in tower at fire headquarters. There is a total supply of 3,400 feet, 800 feet of which is kept in reserve at fire station. Hose is tested annually at 200 pounds. Of the total supply 2,500 feet is more than 5 years old. **Operations:** Department is governed by borough ordinance and company by-laws. The chief has full control of apparatus at all times and of men at fires and drills. Motors are started daily. Paid men drive and operate the apparatus. In addition there are 6 appointed volunteer operators for each piece of equipment. **Drills and Training:** Company drills are held monthly in charge of the chief officers. They consist of pump operation, hose and ladder work, and use of equipment. **Fire Methods:** Booster streams are used on incipient fires supported by engine streams with shut-off nozzles. One all-service gas mask is provided. No flood light equipment, heavy stream appliances, nor salvage covers are installed. **Response to Alarms:** The entire department responds to all borough alarms and provides response under contract to Upper Penns Neck Township. Aid may be secured from the surrounding volunteer departments at Salem, Woodstown, Lower Penns Neck Township, and Swedesboro at distances of from 9 to 12 miles. **Building Inspection:** The chief makes continuous inspections of buildings in the mercantile district, about two of which are visited each week. Flammable liquid tank installations are subject to inspection and approval of the chief of the department. **Records and Reports:** Records consisting of fire reports including nature of alarm, losses, and equipment used, are fairly complete. Reports are made monthly to the county fire association and annually to the mayor and council. **Fire Alarms:** Telephoned through the local exchange in the business district over a reserved trunk to police desk in fire headquarters where a breakwheel transmitter operating a siren is located. Coded siren is mounted on tower at the rear of the fire station.

POLICE DEPARTMENT: Consists of a chief and 6 uniformed officers, 2 of whom are on duty at all times. In addition there are about 35 special officers. One motorcycle and a radio equipped patrol car are provided.

BUILDING LAWS: Building code adopted in July, 1918 provides for the annual appointment of a building inspector, requires permits for building operations and embodies some recommended structural requirements, but is not sufficiently comprehensive from a fire protection standpoint. Fire limits including the business district have been established and an amendment to the ordinance requires fire resistive roofs on new buildings and where replacement exceeds 10%.

EXPLOSIVES AND FLAMMABLES: An ordinance adopted in March, 1927 requires the approval of the fire chief for the installation of flammable liquid tanks and gasoline station equipment. In general the local regulations are inadequate. 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.