



Superseding Map No. 376 of March 10, 1940. Please destroy old issue.

KEY
 PROTECTION RISK Class 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30
 Note:—Fire protection rated on this map is Engineering Department of Fire Service Rating (AS) where shown and not where shown in red.
 Where shown in red and not in blue, it is in blue.
 Where shown in blue and not in red, it is in red.
 Fire hydrant shown in blue.
 Fire hydrant shown in red.
 Fire hydrant shown in green.
 Fire hydrant shown in yellow.
 Fire hydrant shown in orange.
 Fire hydrant shown in purple.
 Fire hydrant shown in pink.
 Fire hydrant shown in brown.
 Fire hydrant shown in grey.
 Fire hydrant shown in white.
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 Fire hydrant shown in light blue.
 Fire hydrant shown in light green.
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 Fire hydrant shown in light orange.
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 Fire hydrant shown in light brown.
 Fire hydrant shown in light grey.
 Fire hydrant shown in light white.
 Fire hydrant shown in light black.

THE FIRE INSURANCE RATING
 ENGINEERING DEPARTMENT
 NEWARK 5, N. J.
Sparta Township
 Including Lake Monark, Sparta, Monro
 Sussex County, New Jersey
 FEBRUARY 26, 1952

March 15, 1940.

SPARTA TOWNSHIP, SUSSEX COUNTY, NEW JERSEY.

Including Lake Mohawk, Sparta, Monroe and Edison.

Population—Township Census of 1930 was 1,316. Summer Population at Lake Mohawk approximately 3,000.

IN GENERAL: Located on the N. Y. S. & W. R. R. about 30 miles northwest of Paterson. It is principally a rural area with a large development of approximately 1,000 seasonal and permanent homes located at Lake Mohawk about 1 mile southwest of Sparta Center. Area of township about 37 square miles, of which about 3.6 square miles is included in the Lake Mohawk Development. Elevations range from 580 to 1,382 feet. Main thoroughfares are macadam or concrete in good condition. Secondary streets are dirt in fair to poor condition except that at Lake Mohawk streets in developed sections are crushed stone with bitulithic binder.

WATER SUPPLY: Water for domestic and fire protection purposes is supplied to the Lake Mohawk Development by the Lake Mohawk-Sparta Water Company which is operated by employees of the Arthur D. Crane Company at Lake Mohawk. Water supply for fire protection purposes in other sections of the township is obtained from natural sources by the use of pumping engines. **Lake Mohawk-Sparta Water Company:** Organization consists of a construction engineer who serves as president and superintendent assisted by a part-time foreman and a crew of 8 employees of the Arthur D. Crane Company. The system is in charge of the superintendent who designed it and supervised the installation. Superintendent's office is located at development entrance. A pipe yard is provided and trucks and emergency equipment are available. Records are fairly complete as to operating data, but are incomplete in that no complete detailed distribution map is available. **Supply Works:** Installed progressively since 1926. Water is obtained by deep well pumps from 4 driven wells and by direct suction from a well point system. Pumps discharge to the distribution system with 3 well distributed low service standpipes acting as equalizers. A booster pump in conjunction with a high service standpipe supplies a high service along the southerly ridge. A smaller booster pump without storage facilities supplies a few domestic services in the higher developed portion of the northerly side of the lake. **Well Stations:** Four wells are located near the east end of the lake and one well is located at the extreme west end of the lake. Pump houses are small one-story structures of concrete block with concrete roofs, wood scuttles and electric or oil heating equipments. Exposures are negligible and wiring is well installed. Pumps are equipped with Mercoild automatic controls operating on a variation of 10 pounds except that during the winter months Well No. 5 is manually operated and supplies the entire system. **Well No. 1:** Well is 10 inches in diameter with a depth of 118 feet and a capacity of 270 g.p.m. Pump is a Fairbanks-Morse deep well turbine driven by a 30-h.p. Fairbanks-Morse electric motor. **Layne Well No. 2:** Well is 8-inch with a depth of 61 feet 3 inches and a capacity of 70 g.p.m. Pump is a Layne turbine unit driven by a 15-h.p. G. E. motor. **Layne Well No. 3:** Well is 8-inch with a depth of 50 feet 8 inches and the capacity is 80 g.p.m. Pump is a Layne turbine unit driven by a 15-h.p. G. E. motor. **Well Station No. 5:** Well is 10-inch with a depth of 42 feet 6 inches and a capacity of 440 g.p.m. Pump is a Fairbanks-Morse turbine driven by a 60-h.p. Fairbanks-Morse electric motor. **Well Station No. 6:** Wells consist of a number of driven well points coupled to a common suction header with a capacity of about 290 g.p.m. Pump is a Fairbanks-Morse 3-stage centrifugal unit driven by a 40-h.p. Fairbanks-Morse electric motor. **Booster Station No. 1:** Located on Springbrook Trail west of Spear Trail as shown on map. Building is a small one-story brick structure with concrete roof and electric heating. Exposure negligible. **Equipment:** One 180-g.p.m. Fairbanks-Morse centrifugal pump driven by a 15-h.p. Fairbanks-Morse electric motor. Unit is automatically controlled at 126 and 140 pounds head. **Booster Station No. 2:** Located on Alpine Trail west of South Shore Trail as shown on map. Building is a small concrete block structure with concrete roof and oil heating. Exposure negligible. **Equipment:** One 100 g.p.m. Fairbanks-Morse horizontal duplex pump driven by a 15 h.p. Fairbanks-Morse electric motor. Unit operates automatically on supply demands. **Distribution System:** In two services consisting primarily of 6-inch lines extending on either side of the lake with 6-inch extension to a high service in conjunction with booster station. See map and description above. The high service lies along Hillside Road and Glenside Trail. The balance of the territory with fire protection is on low service. **Standpipes:** Three steel low service standpipes are located as shown on map with bases at elevation 910.40. One located on Hilltop Trail is 20 feet in diameter by 36 feet in height with a capacity of 84,600 gallons. One located north of West Shore Trail is 30 feet in diameter by 36 feet in height with a capacity of 190,300 gallons. One located south of Ranger Trail is 41 feet 6 inches in diameter by 36 feet in height with a capacity of 364,260 gallons. One steel high service standpipe with base at elevation 1,049.60 is located on Longview Road as shown on map. It is 20 feet in diameter by 36 feet in height with a capacity of 84,600 gallons. A reserve standpipe located on Hilltop Trail 6 feet in diameter and 25 feet in height with a capacity of 6,000 gallons with base at elevation 910.40 is to be replaced with a steel unit 30 feet in diameter by 45 feet 6 inches in height with a capacity of 365,000 gallons. **Consumption:** The average daily consumption during 1939 was 0.20 million gallons. It is estimated that the maximum daily consumption during this period was 0.60 million gallons with excessive hourly rates exceeding 1.5 million gallons per day. At time of inspection there were 1,001 domestic services none of which were metered. **Pipe:** All cast iron, tar coated, laid with about 4 foot cover. About 80% of pipe is Universal Joint and balance is bell and spigot joint. No trouble reported from electrolysis, but some freezing has been experienced during recent severe winters. Total length, 112,000 feet; 0.2% 8 inch, 78.9% 6-inch and 20.9% 4-inch. **Gate Valves:** There are 118 on the system of Ludlow make set in valve boxes at grade. Direction of operation is uniform and valves are said to be inspected annually. **Hydrants:** There are 87 on the system of Ludlow make

of standard type with two 2½-inch outlets and 4 and 6-inch un gated branches. Hydrants are inspected twice annually and were found to be in good condition at time of inspection. **Pressures:** No recording or direct reading pressure gauges on the system. Readings taken on the low service at 6 well distributed hydrants showed pressures ranging from 31.5 to 93 pounds with an average of 63.7 pounds. Readings taken on the high service at 2 well distributed hydrants showed pressures of 65 and 73 pounds with an average of 69 pounds. **Fire Flow Tests:** Probable supply available for fire protection purposes was measured on April 3, 1934 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:

White Deer Plaza S. of Winona Parkway, 990—93—53.
Indian Trail 700 feet W. of Mohawk Trail, 430—56 5—*.
S. Shore Trail N. of Alpine Trail, 540—41—*.
Road to Club House West of West Shore Trail, 420—73—10
W. Shore Trail 2,050 feet N. W. of Byram Township Limits,
390—76—13 5
Shawnee and Seneca Trails, 395—37—*.
E. Shore Trail 900 feet E. of Meadowbrook Trail, 1,140—82—50
Glenside Trail 1,600 feet S. of Fairview Trail, 280—31 5—*.

High Service:

Springbrook Trail 800 feet S. W. of Fairview Trail, 290—73—*
Hillside Rd. E. of Woodlawn Rd., 230—65—*.

* No reading taken.

FIRE DEPARTMENT: Volunteer organization of two companies under partial control of the township. Township owns houses, apparatus and equipment and appropriates about \$2,000 annually for the support of the department. Total active membership 35 of whom about 20 are available during the day and 30 during the night. Officers including the chief, assistant chief, 2 foremen, 2 assistant foremen, and 2 engineers are elected annually in rotation. **Companies—Sparta Engine Company No. 1:** Membership 18. Located in the municipal building on Main Street in Sparta. Building is 2½-story brick, with concrete apparatus floor, slate roof, electric lights, steam heat, and telephone. Siren located on roof. **Equipment:** A 1938 Buffalo-Hale 500 g.p.m. triple combination pumping engine carrying a 250-gallon booster tank, 200 feet of booster hose, 1,000 feet of 2½ inch hose, 200 feet of 1½-inch hose, 2 lengths of suction hose, 2 short ladders, and fair minor equipment. **Lake Mohawk Engine Company No. 2:** Membership 17. Located on west Shore Trail as shown on map. Building is a one story brick structure with concrete apparatus floor, slate roof, electric lights, steam heat, and telephone. **Equipment:** One 1934 Buffalo 500 g.p.m. triple combination pumping engine carrying one 200 gallon booster tank, 200 feet of booster hose, 700 feet of 2½ inch hose, 200 feet of 1½-inch hose, 2 lengths of suction hose, 2 short ladders, and fair minor equipment. **Hose:** All 2½-inch hose is C.R.L. with National Standard screw couplings. It is dried on the apparatus floor and shifted four or five times a year. No hose is over 5 years old and it is tested at drills at normal pump pressure. There is no reserve hose. **Operations:** Department governed by own by-laws which have been approved by the township committee. Chief has control of apparatus at all times and of men at fires and drills. He may suspend members pending a hearing before the township committee. The engineers are appointed as drivers and pump operators, but in their absence any man may drive or operate pump. Motors are started once a week. **Drills and Training:** Drills are held at least once a month under the supervision of the chief officers and consist of pump operation, hose laying, and use of equipment, but little or no ladder work. Both companies drill as a department. **Fire Methods:** Booster lines are used and reinforced with engine lines where necessary and where water is available. There are 3 all-service gas masks, but little or no salvage equipment or heavy stream appliances are provided. **Response to Alarms:** Both companies respond to all alarms within the township and outside aid may be secured from the surrounding volunteer departments. **Building Inspection:** Occasional surveys are made of the schools by the chief. **Records and Reports:** Fairly complete records of all fires and drills are kept by the secretary of the department, but no report is made to the township committee. **Fire Alarms:** Alarms are received by phone at police headquarters in the municipal building where there is someone in attendance at all times. They are sounded on an electric siren on the roof of the municipal building. Automatic telephone exchange without attendant is located in a one-story brick building in the business district of Lake Mohawk. Siren is tested once a week.

POLICE DEPARTMENT: There are 6 active police consisting of a chief and 5 patrolmen of whom one is on duty during the day and two during the night. A police automobile is provided. Sixteen members of the department are graduates of the State Fire Police School.

BUILDING LAWS: There is no township building code, but the Lake Mohawk development company approves plans and specifications and supervises construction of buildings in Lake Mohawk area.

EXPLOSIVES AND FLAMMABLES: No regulations, but state laws adequately regulate the storage and shipment of explosives and flammables and the construction of motion picture booths and restrict the use of fireworks to responsible bonded parties.

ZONING ORDINANCE: None.